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Stepping stones

Michel Brazeau, MD, FRCPC

CJRM 1999;4(4):195-6.

Some of the recent actions taken by governments in Canada, including the sudden injection of funding for health care have finally confirmed what most physicians have known and decried for a number of years: that health care planning in this country has gone much askew. The realities have caught up with us. Alleged overfunding translates into underfunding, oversupply into shortages, reasonable accessibility into unreasonable delays. Health care planning is badly in need of care. Physicians are now challenged to come forward with appropriate physician-driven solutions. If they do it properly, physicians will probably be heard and their solutions implemented.

Two articles in this issue of the Canadian Journal of Rural Medicine tread in that direction. They examine the issue of advanced skills practised by rural family physicians. One describes, the other prescribes.

The article by Iglesias and colleagues ([page 227](#)) focuses on family physicians practising advanced skills and the physicians' contributions to the accessibility of these medical services in rural settings. The authors recognize that there is no single, simple, all-purpose Canadian model applicable to the provision of these services. They wisely point out that timely patient access to physicians with special skills differs from region to region. Furthermore, training for advanced skills has mostly been made available on an ad hoc basis and not within the framework of national standards.

One could discuss methodologic aspects of the article by Iglesias and colleagues, such as the need for more information about the patterns of procurement of specialized services by rural patients beyond their home base. The bottom line, however, is that patient access to appropriate care has been enhanced through the commitment and practice of family physicians with advanced skills in rural settings. It is reasonable to explore a broader application and sounder organization of this approach. There may be other or better ways of achieving the same end. But this one works! When applied, it should be fully supported in terms of people, money and the appropriate

infrastructures.

The second article, a joint position paper of the College of Family Physicians of Canada, the Society of Rural Physicians of Canada and the Society of Obstetricians and Gynaecologists of Canada ([page 209](#)), is of a more prescriptive nature. This very carefully drafted document clearly reviews the literature, the issues, the realities. It is a vibrant example of what the determination of a group of physicians and the cooperation among physician organizations can accomplish. It sets clear directions that may inspire others.

The article focuses on cesarean section. The many contributors -- family physicians and specialists alike -- could have been largely distracted by conflicts of interest. Quite the contrary, they transformed their initiative into an opportunity to define and strive toward adequate standards of care for rural settings. The medical community should be more willing to explore such avenues, given that needs can now be somewhat more reliably defined and that the results, outcomes and overall impact of our actions can now be more adequately monitored with the modern information technology available today. Proper follow-up is always necessary whether dealing with patients or processes.

The training of rural family physicians in advanced maternity skills and cesarean section is an excellent example of the integration of health services. It is a vivid reminder that other opportunities exist for interprofessional integration of services.

These opportunities should be seen as stepping stones, not as traps. Effectively integrated services can only thrive on strong leadership in the field (and not that proposed by bureaucrats or technocrats isolated from the daily conventions of pain and suffering encountered in health care facilities) and on adequate meshing and provision of resources.

Other far-reaching solutions will be needed to ensure the best access to optimal medical care. The procurement of advanced skills by family physicians practising in rural settings will not resolve the worsening physician shortages encountered in Canada today but it may help to alleviate the burden. More importantly, it provides an established and exciting method to adapt successfully to our rapidly changing health care environment.

The Royal College of Physicians and Surgeons of Canada (RCPSC) has agreed to cooperate with The College of Family Physicians of Canada, the party responsible for the accreditation of the training programs providing advanced skills to family physicians who practise in the rural setting. The RCPSC will seize this opportunity to better define and respond to the needs of the population, enhance the standards of specialty care and facilitate change.

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Hors des sentiers battus

Michel Brazeau, MD, FRCPC

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Les actions gouvernementales recensées au Canada au cours des derniers mois, y compris l'injection subite de sommes d'argent considérables pour le financement des soins de santé, ont finalement confirmé ce qu'une vaste majorité des médecins savaient déjà et dénonçaient depuis plusieurs années : la planification des services de santé dans ce grand pays errait dangereusement. La réalité nous a enfin rattrapés. Hier, il était question de sur-financement, aujourd'hui on corrige le sous-financement. Hier, on parlait d'une surabondance de médecins et d'infirmières, aujourd'hui, on se préci-pite à pallier les pénuries. L'accessibilité raisonnable aux services médicaux se transforme en délais inacceptables à vrai dire, il est grand temps de soigner les soins de santé. Dans ce contexte difficile, la profession médicale est mise au défi de proposer ses solutions. Si elle le fait bien, elle sera entendue et ses solutions seront mises en application.

Deux articles dans ce numéro du Journal canadien de la médecine rurale s'engagent dans cette direction. On y discute du recours aux habiletés spécialisés des médecins de famille dans le contexte rural. Un article décrit la situation, un autre prescrit des mesures.

L'article de Iglesias et Strachan ([page 227](#)) met l'accent sur la façon dont ces médecins de famille qui mettent en pratique des habiletés spécialisés contribuent à l'amélioration des services médicaux en milieu rural. D'entrée de jeu, les auteurs reconnaissent qu'aucun modèle unique, simple et tout usage ne peut assurer la dispensation de ces services partout au Canada. Au contraire, ils signalent sagement combien l'accès en temps opportun à ces services varie d'une région à l'autre de notre pays. Ils nous rappellent que les médecins de famille désireux d'acquérir l'une ou l'autre de ces habiletés doivent généralement s'en remettre à une formation ad hoc et ne peuvent aucunement compter sur des normes nationales.

Certains aspects méthodologiques du travail d'Iglesias et Strachan prêtent à discussion; par exemple, pour compléter l'analyse, il faudrait fournir plus d'information sur les services médicaux dispensés dans les grandes villes à des citoyens issus d'un milieu rural. Mais, convenons avec les auteurs de cet article que l'accès aux services médicaux appropriés en région rurale a été amélioré

grâce à l'engagement et à l'exercice des médecins de famille possédant des habiletés spécialisés. Il est maintenant tout à fait raisonnable d'explorer comment appliquer ce concept de façon plus étendue et encore mieux organisée. Il y a peut être de meilleurs moyens d'arriver à cette même fin. Mais nous savons au moins que celle-ci fonctionne! Et, quand on a recours à cette solution, appuyons-la toujours avec les ressources nécessaires.

Le second article par le Collège des médecins de famille du Canada, la Société de la médecine rurale du Canada et la Société des obstétriciens et gynécologues du Canada ([page 209](#)) formule des recommandations spécifiques. Ce document préparé avec beaucoup de soin revoit l'expérience du passé, les enjeux et les réalités. C'est un exemple frappant de ce que peut accomplir un groupe de médecins tenaces en coopération avec des organisations médicales. Cet exemple pourrait en inspirer d'autres.

On y met en lumière la césarienne. Ceux qui ont contribué à ce travail, médecins de famille et médecins spécia-listes, auraient pu se laisser distraire par des conflits d'intérêt. Au contraire, ils ont saisi cette occasion pour mieux définir et promouvoir les normes de soins appropriés en zone rurale. La profession médicale devrait être plus disposée que jamais à s'engager hors des sentiers battus puisque, grâce aux méthodes modernes de gestion de l'information, les besoins de la population peuvent être plus adéquatement définis, et le résultat et l'impact global de nos interventions plus rigoureusement monitorées. La nécessité d'un suivi adéquat s'applique non seulement au traitement de nos patients mais aussi aux procédés que nous utilisons.

La formation des médecins de famille en obstétrique-gynécologie, y compris la césarienne, est une mesure menant à l'intégration des services de santé. C'est aussi un rappel qu'il existe d'autres possibilités pour l'intégration inter-professionnelle des services dans le but de mieux répondre aux besoins de la population.

Tout en exerçant sa prudence habituelle, la profession médicale devrait envisager les possibilités d'intégration des services comme des sentiers à explorer et non comme des pièges. N'est-il pas vrai que des services intégrés efficaces ne peuvent se développer que sous la direction de gens de terrain sachant guérir et soulager les êtres humains, plutôt que sous la tutelle de bureaucrates ou de technocrates sachant mieux composer avec des systèmes et des chiffres. La fourniture de ressources suffisante et leur maillage fonctionnel sont aussi des conditions essentielles.

D'autres mesures que celles-ci seront nécessaires pour assurer l'accès optimal aux soins médicaux optimaux. La formation de médecins de famille exerçant en milieu rural, pour leur permettre d'acquérir certaines habiletés spécialisés, ne règlera pas les importantes pénuries de médecins qui sévissent au Canada aujourd'hui, mais cela aidera sans doute à pallier ces difficultés. Cette méthode, aujourd'hui établie, est stimulante et nous aidera à mieux nous adapter au contexte perturbé des soins de santé.

Le Collège royal des médecins et chirurgiens du Canada (CRMCC) a accepté de travailler de

concert avec le Collège des médecins de famille du Canada, l'organisme responsable de l'agrément des programmes de formation des médecins de famille désireux d'acquérir des habiletés spécialisés pour améliorer l'exercice dans le contexte rural. Le CRMCC saisit cette occasion pour aider à mieux définir les besoins de la population et mieux y répondre, et à améliorer les normes de la médecine spécialisée et faciliter les changements requis.

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Access to rural health care services "at home"

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Access to health care services in rural communities has always been a challenge, but physicians motivated by a desire to serve the far-flung people of Canada and meet their health care needs make a major commitment. They do what needs to be done, developing new skills when they see they are needed, and often help raise the funds to support their communities' hospital health care network.

Recently one such hospital, of 28 beds and serving a community of 7000, was part of a hospital accreditation process -- a 3-year cycle, which for the past 20 years has always been beneficial.

This year the accreditation team recommended that the hospital convert its emphasis from acute care to long-term care. Apart from the fact that the team was outside the bounds of its mandate in making such a recommendation, the rural Community Health Council took strong exception to the thinking behind the recommendation. The hospital serves a mixed native and non-native community in a high acuity area on a major highway. Local people know that once the emphasis of the facility is changed, the net effect will be the loss of access to services. Emergency, surgical, anesthetic, and obstetrical skills and services will gradually erode.

This tale illustrates but one of the challenges rural facilities and physicians face. We can't fight these major battles in isolation. We need to be in contact with one another, debating, informing, researching and supporting, if rural health care is to maintain its integrity. The Society of Rural Physicians of Canada (SRPC) has achieved a great deal in a short time by bringing together (thank goodness for email and determination) physicians from across the country. Good things have happened.

This issue of the journal contains articles that focus on supporting and restoring some of the services that should be a part of rural health care (see articles beginning on pages [209](#) and [227](#)). They mark a collaboration of rural physicians and others wanting to support rural health care that is both remarkable and timely.

The output of this work -- papers on cesarean-section access, and obstetrical services for small communities, research on advanced skills in anesthesia and surgery, and lately, sponsored by the College Family Physicians of Canada (CFPC), a document offering a vision and recommendations for postgraduate medical training for rural practice, is necessary groundwork.

We have a lot more work to do together. Obstetrical services are declining in some provinces as is access to anesthetic and surgical services, despite indications that these services can be provided safely by rural doctors. The attitude that "if rural people want these services they'll have to come to the city to get them" is simply not acceptable but can only be changed if we work together and pool our commitment and energy.

Such collaboration will, in the immediate future, involve work in identifying appropriate core services from a rural viewpoint (including those mentioned already, plus psychiatry, palliative care, geriatrics, addictions, and emergency medicine), confirming and strengthening the programs for training already in place, creating and consolidating new programs and seeking avenues for the development and maintenance of advanced skills that will support rural communities into the future.

Those of us who work in rural communities recognize that the hard work of early pioneer physicians and health care workers is threatened by "reforms" that put barriers in the way and remove the incentives to provide the skills needed to serve rural Canada.

The CFPC has welcomed the opportunity to work with the SRPC and the Royal College of Physicians and Surgeons of Canada to further develop the groundwork and the vision to advance rural medical care on behalf of patients and their communities.

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Accès aux services de soins de santé ruraux «à domicile»

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L'accès aux services de santé en milieu rural a toujours posé un défi, mais les médecins soucieux de desservir les personnes des régions éloignées du Canada et de répondre à leurs besoins en soins de santé prennent un engagement de taille. Ils et elles ne reculent devant aucune tâche, n'hésitent pas à acquérir les nouvelles compétences nécessaires et aident souvent à réunir des fonds pour appuyer le réseau de soins de santé de leur hôpital communautaire.

Un de ces hôpitaux, comptant 28 lits et desservant une communauté de 7000 personnes, s'est soumis récemment au mécanisme d'agrément -- exercice triennal qui s'est toujours révélé bénéfique depuis 20 ans.

Cette année, l'équipe d'agrément a recommandé à l'hôpital de changer de vocation et de se réorienter des soins actifs vers les soins de longue durée. Sans compter que l'équipe a outrepassé son mandat en formulant une telle recommandation, le Conseil de santé communautaire rural s'est vivement opposé à la réflexion à l'origine d'une telle recommandation. L'hôpital dessert une communauté autochtone et non autochtone mixte dans une région de forte acuité située sur une grande route principale. La population locale sait que si l'on modifie la vocation de l'établissement, cette décision entraînera une perte d'accès aux services. Les services d'urgence, de chirurgie, d'anesthésie et d'obstétrique et les compétences en la matière disparaîtront graduellement.

Cet exemple illustre un des nombreux défis que doivent relever les établissements et les médecins ruraux. Nous ne pouvons livrer ces batailles majeures dans l'isolement. Nous devons être en contact les uns avec les autres, lancer des débats, informer, effectuer des recherches et nous entraider si nous voulons que les soins de santé en milieu rural conservent leur intégrité. La Société de la médecine rurale du Canada (SMRC) a beaucoup fait en peu de temps en réunissant les médecins (grâce au courrier électronique et beaucoup de détermination) d'un bout à l'autre du pays. Les résultats ont été positifs.

Ce numéro du journal contient des articles qui portent avant tout sur le soutien et le rétablissement de certains des services qui devraient faire partie des soins de santé ruraux (voir les articles qui commencent aux pages 209 et 227). Ils témoignent d'une collaboration, à la fois remarquable et opportune, entre les médecins ruraux et d'autres intervenants désireux d'appuyer les soins de santé en milieu rural.

Le fruit de ce travail -- communications sur l'accès aux césariennes et aux services d'obstétrique dans les petites communautés, recherche sur les techniques avancées d'anesthésie et de chirurgie et depuis peu, grâce au parrainage du Collège des médecins de famille du Canada (CMFC), un document qui présente une vision et des recommandations sur la formation médicale postdoctorale en vue de la pratique en milieu rural. Il s'agit là d'un travail de base indispensable.

Nous avons encore beaucoup à faire ensemble. Les services d'obstétrique sont à la baisse dans certaines provinces, tout comme l'accès aux services d'anesthésie et de chirurgie, même si l'on indique que les médecins ruraux peuvent les dispenser en toute sécurité. Il est tout simplement inacceptable d'entendre dire que «si la population rurale veut ces services, elle devra aller en ville». Le seul moyen de changer cette attitude, c'est de collaborer et de mettre en commun notre engagement et notre énergie.

Notre collaboration consistera notamment, dans l'avenir immédiat, à définir les services essentiels appropriés du point de vue rural (y compris ceux qu'on a déjà mentionnés, sans oublier les services de psychiatrie, de soins palliatifs, de gériatrie, de traitement des toxicomanies et de médecine d'urgence), à confirmer et à renforcer les programmes de formation déjà en place, à créer et à consolider de nouveaux programmes et à chercher des moyens de créer et de maintenir des compétences spécialisées avancées qui appuieront les communautés rurales.

Ceux d'entre nous qui travaillent en milieu rural reconnaissent que le dur travail des premiers médecins et travailleurs de la santé qui ont fait œuvre de pionnier est menacé par des «réformes» qui créent des obstacles et éliminent les incitations à fournir les compétences spécialisées nécessaires pour servir la population rurale du Canada.

Le CMFC est heureux de pouvoir collaborer avec la SMRC et le Collège royal des médecins et chirurgiens du Canada pour élaborer les bases et la vision qui feront progresser les soins médicaux ruraux pour le compte des patients et de leur communauté.

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President's message: pulling together for rural health

Patricia Vann, MD

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New affiliate members of the SRPC are the Canadian Association of Interns and Residents, the Atikokan General Hospital and the Bruce Grey Regional Health Council. Welcome!

The regional committees of the SRPC are becoming more active locally, as witnessed by the CME events and meetings planned this fall by the Quebec, Ontario and British Columbia committees.

In May the Board of Directors of the College of Family Physicians of Canada (CFPC) accepted a report on the recommendations of the Working Group on Postgraduate Education for Rural Family Physicians. The report was prepared by a committee comprising members of the CFPC and SRPC. It shows how joint ventures can be undertaken successfully to promote the needs of rural Canada. The Royal College of Physicians and Surgeons of Canada, acknowledging the SRPC drive to review the delivery of special care in rural Canada, has agreed to work with the CFPC on implementing the advanced skills portion of this report.

The SRPC has been approached by several medical schools, asking for input into developing rural elective opportunities for students and for input into the amount of rural health-related topics in their curriculum. In response, a proposal was put forward by the SRPC and the National Northern and Rural Communities' Caucus of the Federation of Canadian Municipalities to develop a community elective package that could be used on a national basis. At many universities, rural student advocacy groups have developed, with SRPC input, rural health orientation packages for incoming students to encourage them to think about a career in rural Canada.

The National Rural Liberal Caucus has been busy this summer surveying rural Canadians on their health care concerns. The Caucus has accepted the challenge of promoting a National Rural Health Strategy for all of Canada that will improve access to care. This concept was initially promoted by the SRPC to the Rural Caucus and Health Canada and now is accepted and

supported by other medical organizations. Our members have been attending the local forums to discuss health care concerns with their MPs. The report of the findings of these "dialogues" that are being conducted across the country will be presented to the minister of health and ex-director of health later this fall. We know that issues related to access to care in rural areas cross all provincial and territorial boundaries and are a national problem. An adequately funded National Rural Health Strategy could go a long way to improving the care we will be able to provide in rural Canada.

Watch for more discussions on these and other topics in upcoming issues of this journal and on RuralMed. Get involved. Things will change for the better if we all pull together!

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Message de la présidente : conjuguer nos efforts pour la santé rurale

Patricia Vann, MD

CJRM 1999;4(4):205.

L'Association canadienne des internes et des résidents, l'Hôpital général d'Atikokan et le Conseil de santé de la région de Bruce-Grey sont les nouveaux membres affiliés de la SMRC. Nous leur souhaitons la bienvenue!

Les comités régionaux de la SMRC deviennent plus actifs sur la scène locale, comme en témoignent les activités d'EMC et les réunions prévues cet automne par les comités du Québec, de l'Ontario et de la Colombie-Britannique.

En mai, le conseil d'administration du Collège des médecins de famille du Canada (CMFC) a accepté un rapport sur les recommandations du Groupe de travail sur la formation postdoctorale pour les médecins de famille ruraux. Le rapport a été produit par un comité constitué de membres du CFMC et de la SMRC. Il montre comment lancer des coentreprises couronnées de succès afin de promouvoir les besoins des milieux ruraux du Canada. Reconnaisant la campagne menée par la SMRC pour que l'on revoie la prestation des soins spéciaux en milieu rural au Canada, le Collège royal des médecins et chirurgiens du Canada a convenu de collaborer avec le CMFC pour mettre en œuvre le volet du rapport qui porte sur les compétences spécialisées avancées.

Plusieurs facultés de médecine ont demandé à la SMRC de contribuer à l'élaboration de possibilités de stages en milieu rural pour les étudiants et de contribuer au volume des sujets liés à la santé rurale dans leur programme d'études. Pour répondre à cette demande, le Caucus national des collectivités en régions nordiques ou éloignées de la Fédération canadienne des municipalités a présenté une proposition afin de mettre au point un ensemble de stages communautaires au choix qui serviraient à l'échelon national. À de nombreuses universités, des groupes de promotion des étudiants ruraux ont mis au point, avec la collaboration de la SMRC, des trousse d'initiation à la santé en milieu rural au Canada à l'intention des nouveaux étudiants afin de les encourager à envisager d'y faire carrière.

Le caucus rural du Parti libéral national a été occupé cet été à sonder les Canadiens en milieu

rural au sujet de leurs problèmes en matière de soins de santé. Le caucus a relevé le défi de promouvoir, pour l'ensemble du Canada, une stratégie nationale sur la santé rurale qui améliorera l'accès aux soins. D'autres organisations médicales acceptent et appuient maintenant ce concept présenté à l'origine par la SMRC au caucus rural et à Santé Canada. Nos membres ont participé aux tribunes locales de discussion avec leur député fédéral pour discuter des préoccupations liées aux soins de santé. Le rapport sur les résultats de ces «dialogues» organisés d'un bout à l'autre du pays sera présenté au ministre de la Santé et au directeur exécutif de la santé plus tard au cours de l'automne. Nous savons que les enjeux liés à l'accès aux soins en milieu rural ne connaissent pas de frontières provinciales et territoriales et constituent un problème national. Une stratégie nationale sur la santé rurale disposant d'un financement suffisant pourrait faire beaucoup pour améliorer les soins que nous pourrions fournir en milieu rural au Canada.

Suivez d'autres discussions qui porteront sur ces questions dans les prochains numéros du journal et sur RuralMed. Impliquez-vous. La situation changera pour le mieux si nous tirons tous dans la même direction!

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Joint position paper on training for rural family practitioners in advanced maternity skills and cesarean section

Stuart Iglesias, MD; Peter Hutten-Czapski, MD

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All women in Canada deserve timely access to advanced maternity care. In urban Canada this is usually a given. For the approximately one third of Canadian women who spend their pregnancies in rural Canada, access can be a major challenge.

That which constitutes rural has been variously defined. In this paper we use the following definition:

A practical definition in current Canadian application defines "rural remote" as communities ranging 80 to 400 km from a major regional hospital and "rural isolated" as communities more than 400 km away or about 4 hours transport time in good weather. In some of the agricultural zones of Canada, the population is widely dispersed and served by hospitals that are rural in nature but within 80 km of small urban centres. These small hospitals function relatively independently to provide

safe and adequate maternity care. Facilities that meet these characteristics can be defined as "rural close."¹

Rural Canada can be operationally defined as areas where general practitioners provide most or all medical services, including maternity care. As a direct result of a relative lack of specialists in these communities, rural family physicians have to provide a broader scope of practice than their urban counterparts. This paper describes training programs in advanced maternity care to provide delivery of these services in rural settings.

Most rural communities are too small and remote to sustain specialist obstetrical and anesthetic services for operative birth. There are only 38 obstetricians who practise in all of rural Canada.² Most rural maternity care is done by the 1384 family physicians who provide intrapartum services.² In rural hospitals, advanced maternity skills, including forceps, manual removal of the placenta, repair of lower genital tract lacerations and cesarean sections, may have to be performed by family practitioners. Their commitment and tenacity have sustained maternity programs in rural Canada. These family physicians have obtained varied training from several sources. Many are international medical graduates, some with foreign specialty training. Many rural hospitals have depended on these doctors, but it is increasingly difficult to find replacements as they age, and immigration patterns have reduced their entry into Canada. Others are Canadian-trained physicians who acquired their skills through a variety of training programs -- some formally, as in the third year of a family practice residency; some informally, through special arrangements between a supportive physician, a teaching program and a community with specific needs. Individual training has been arranged in recent years at the universities of Ottawa, Toronto, Manitoba, Saskatchewan, Alberta, Calgary and British Columbia.

In 1991, there were 576 hospitals that provided maternity care in Canada. The number is smaller now. When 40% of the 576 hospitals perform fewer than 20 cesarean sections each year,³ it is unrealistic to expect these services to be provided by specialist obstetricians. Physicians without specialty certification perform about 7% of all cesarean sections. Cesarean section in the hands of appropriately trained family practitioners has allowed rural Canada to continue to provide maternity care services -- there is no practical alternative.

Canada has one of the best regionalized health systems in the world that transports those who are sickest to centres that have the resources to manage their illness. This is reflected in maternal mortality (6/100 000) and perinatal mortality (6-8/1000) -- figures that are among the best in the world.⁴ Any changes to such a system must, therefore, be carefully planned and monitored.

There is a need to sustain and restore availability of advanced maternity care in rural Canada. Rourke⁵ has found that in rural Ontario there is considerable attrition in the availability of rural maternity units, family physicians attending births and cesarean sections. Canadians need to know that without well-trained practitioners these skills will not be available to women who need them. For this to happen, there needs to be an integrated response to sustain the rural medical, nursing,

administrative and physical environments where women give birth. Support of the rural health infrastructure is a complex undertaking. It involves such issues as maintaining a complement of trained nurses, adequate equipment, emergency transport, anesthetic support, funding and organization -- none of which is addressed here.

It must be emphasized that the capability to provide operative birth locally does not imply that all patients requiring operative birth can or should give birth locally. The relevant model is the larger perinatal system where a proportion of the pregnant population is identified as high risk and transferred for birth to the closest centre competent in the level of care required. The same principles of risk management and regionalization apply to patient selection for local operative birth as apply to the perinatal system as a whole.

Not every community has the will, resources, and the anesthetic and nursing support required to sustain a local cesarean section option. Cesarean sections require a health care team approach with a high intensity of commitment and resources. Some rural communities will practise maternity care at a lower level of intensity and will transfer many women for birth elsewhere. It is clear that this can be done safely, provided the patient selection process is effective and backed up by an organized audit and feedback program.¹

This paper is limited to a discussion of labour, operative delivery and other advanced maternity skills for rural physicians. Advanced maternity skills training could also include such areas as basic obstetrical ultrasound, obstetrical analgesia, as well as advanced neonatal assessment and stabilization. The program can also be integrated into a rural family practice surgery training curriculum. Companion training papers in family practice anesthesia and family practice surgery are being developed to complement and support this document.

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Review of the literature

Literature searches were performed on MEDLINE to 1987 on training general practitioners/family physicians for forceps, vacuum extractions and cesarean sections. Additional literature was gathered, as described earlier,¹ on rural maternity care. Very few papers were found that listed rural operative birth outcome measures.⁶⁻⁹

The reviewed papers have a general problem of controlling for potential confounders in comparing population outcomes. Nevertheless, these papers are encouraging in their reports of acceptable perinatal and maternal outcomes of populations served by appropriately trained non-specialist physicians.

The study by Deutchman and associates⁶ documented outcomes over 10 to 15 years by family

practitioners in two 35-bed rural hospitals (631 cesarean sections). The cesarean section rate was 16%. Outcomes were compared with standards found in the medical literature for maternal mortality, Apgar scores, maternal transfusion, urinary tract infection, endometritis, peritonitis, wound infection, reoperation, and injuries to bladder, urethra or bowel.¹⁰ In this limited sample, "By national standards, family physicians performed cesarean sections that produced infant and maternal outcomes of high quality...."⁶

Kriebel and Pitts documented low levels of intervention, complications, infant mortality and good Apgar scores from 8 years of data (1026 births) at a 3-doctor, 25-bed hospital in Forks, Wash.⁷ All doctors had been trained in cesarean-section birth. Intrapartum transfers were 3% and infant transfers were 0.8%. The cesarean-section rate was 8.9%. Forceps rate was 1.8% and vacuum extraction, 3.1%.

Cameron recently documented outcomes from the hospital in Atherton, Queensland, from 1981 to 1990.⁸ Atherton lacked specialist obstetricians, but 5 physicians had advanced training in operative births and held diplomas in obstetrics. The patient population is mostly public with 10% aboriginal births. From 2883 births attended by 17 non-specialist physicians over 9 years, the section rate was 13% (Queensland average 18.4%). The success rate of vaginal birth after cesarean (VBAC) section trials was 58%. Gross perinatal mortality was 5.2/1000. When outcomes of antenatal referrals (1.6%) and intrapartum and postpartum transfers (3.8%) were factored in, the perinatal mortality (9.6/1000) compared favourably with the rates for the state of Queensland as a whole (13.5/1000).

In northern Ontario, Black and Fyfe⁹ carried out a population-based study of 24 524 births. They found that women from the 11 communities with only non-specialist cesarean section availability had acceptable rates of perinatal mortality. Instrumental vaginal birth rate was 7.7%. The cesarean section rate was 14.2%.

It can be anticipated that the collaborative process among the Society of Rural Physicians of Canada (SRPC), the Society of Obstetricians and Gynaecologists of Canada (SOGC) and the College of Family Physicians of Canada (CFPC) will encourage the establishment of perinatal population-based databases, which are needed to audit and conduct research into rural maternity care. The Canadian Perinatal Surveillance System (CPSS) is also beginning to address similar issues.

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Potential benefits to rural women and their infants

As maternity services or rural hospitals close, women are being denied the choice of giving birth in their home community hospitals. In the "Joint position paper on rural maternity care,"¹ we

reviewed and confirmed the evidence that women in rural communities achieve better outcomes when supported by local intrapartum care programs, regardless of whether there is on-site access to operative birth.^{9,11-13} Clearly, a limited rural maternity care program is superior to none. Are there additional benefits for women in rural maternity care settings, which enjoy local access to advanced maternity care?

A central component to rural living is the sense of belonging to a community. While rural women can usually travel out of the community to give birth, many will not want this. It is clear that the simple presence of such local operative birth options as forceps deliveries, vacuum extractions and cesarean sections will reduce markedly the need for ante- and intrapartum transfers. Without access to local operative birth and with careful risk management, approximately 80% of rural maternity patients can anticipate a birth in their community hospital. Because of emergent intrapartum risk and transfer, the proportion who give birth in these hospitals falls to 60%.⁹ With local access to operative delivery, more than 90% of maternity patients can give birth in their community.⁷⁻⁹

Some women cannot be transferred because complications of childbirth are often unpredictable. Natural disasters (e.g., abruptio placentae, cord prolapse, fetal hypoxemia) will occur in rural maternity practice. Local access to operative birth will equip these rural programs to deal with these rare but inevitable problems.

Independent of outcomes and standards, inaccessibility to advanced maternity care puts in question the survival of rural maternity programs. While many (125) rural communities continue to provide intrapartum care without cesarean section capability, they do so under considerable stress. In a study of outcomes of rural units in Washington state, Nesbitt and colleagues¹² found that communities that could and did handle most of their maternity care had little attrition of physicians attending births (less than 3%/yr). The most vulnerable communities were those where less than a third of births were occurring locally. These communities had lost those doctors attending births at a rate of 27% per year.

Canadian data from Rourke⁵ and Hutten-Czapski¹⁴ show a rapid decline in availability of rural maternity services. Without the special anesthetic and surgical skills to intervene, health care professionals struggle with a crisis of confidence in their ability to manage the broad range of maternity complications they might encounter. Regardless of good outcomes, rural Canada faces continuation of the erosion of choice for women, as these programs close for reasons of occupational stress, crisis of confidence, perceived medicolegal risk, retirement of senior staff with advanced skills, and even hospital budgetary considerations.

Training for advanced skills will not solve occupational stress, medicolegal risk or budgetary considerations but it will improve confidence in rural maternity care providers so that they can continue to offer these services without local obstetrical specialist availability. It will also improve the ability of the community to attract a solo obstetrician by lessening the burden of on-

call coverage.

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Scope of practice

Concern has been expressed about providing short training programs in surgical and technical skills, with the assumption that these procedures can only be performed safely by those with the broader base of training achieved in an extended residency program (i.e., the specialty program is indivisible).¹⁵ The evolution of the delivery of medical care in rural settings would refute this concern. Appropriately trained rural doctors give anesthetics,¹⁶ manage trauma,^{17,18} give thrombolytics for myocardial infarction,^{19,20} treat pneumonia²¹ and perform cesarean sections.^{6,9,10} It is recognized that, in those clinical situations requiring technical/surgical skills in the rural setting, many cases are transferred out for specialist consultation or management, but many are handled locally. Available data are limited but show that these cases can be handled well in rural settings.^{6,9,10,16-21}

Many rural family physicians are well trained in the knowledge base of maternity and neonatal care and the indications for operative birth. What is required for some is training in the specific procedures of operative vaginal birth and cesarean section, which can be performed with good outcomes by well-trained nonspecialist family physicians. This can only be achieved through properly designed and accredited training programs made available to those family physicians who wish to practise in a rural setting and provide these services. The knowledge taught in any such program should be of the same quality as currently exists within training programs in family medicine and obstetrics and gynecology. Family physicians trained through these accredited programs should be granted privileges to practise their expanded roles. This position is supported by the American Academy of Family Physicians (AAFP) and the American College of Obstetricians and Gynecologists (ACOG) who have stated: "Privileges should be granted on the basis of education, experience, and documented competence, not solely on the basis of board certification, fellowship in ACOG, membership in other organizations, or the physician's rank or tenure."²²

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Training

There is little information that describes the training of a rural generalist to acquire advanced maternity skills. Clearly, these graduates need to meet high training standards that ensure outcomes comparable to the results from the same procedures in the same low-risk population receiving specialist care in urban Canada. In addition, these training programs should meet

national standards, ensuring the portability of these skills throughout rural Canada. This will require rigorous in-training evaluation and exit examinations of the graduates. Successful accreditation of the programs will require documentation that certification of Advanced Maternity Skills has been verified appropriately.

The continuation of high-quality rural medical care depends on our ability to design workable training programs for general practitioners who will then be able to function in emergency departments and medical wards, as well as in the maternity unit and surgical suite. Some of these skills are complementary. Unfortunately, there is no evidence-based information detailing the length of time that it takes for a general practitioner to acquire these skills, either individually or in various combinations. We believe that, in the absence of good evidence, the bar in each of the training programs not be set so high that the goals of the rural practitioner become unattainable.

With this background, guidelines for the length of training are presented as ranges. The final amount of training will vary with the pre-existing capabilities of trainees, their capacity to learn, the intensity of the training experience, the complementary skills to be acquired, and the anticipated role these physicians will serve in their communities. Any training program must be sufficiently flexible in duration and curriculum to accommodate the breadth of ability of the trainees and needs of rural Canada, as well as being sufficiently rigorous to ensure safe and competent graduates.

We believe that most trainees will achieve competence in the following periods of time.

1. Newly graduated family medicine resident: 6 to 12 months in a third year of training.
2. Re-entry family physicians: 6 to 12 months.
3. Re-entry family physicians who wish to refresh or consolidate existing advanced skills: 1 to 3 months.
4. International medical graduates with 1 or more years of training in obstetrics and gynecology: 1 to 3 months. (This initial 1 to 3-month appraisal may lead to a recommendation for further training.)

The volume of procedures required to achieve competence is poorly understood. For advanced maternity skills, one example comes from the Saskatchewan program, which "suggests" 20 cesarean sections performed by the family practitioner with involvement in another 30.²³ This figure was derived from review of the literature and evaluations of first-year obstetrics and gynecology residents. The American ACOG-AAFP Core Curriculum specifies 10 or more cesarean sections in a 3-month training block.²² The Royal Australian College of Obstetricians and Gynaecologists (RACOG)-Rural Doctors Association of Australia (RDAA)-Royal Australian College of General Practitioners (RACGP) curriculum suggests 6 months of training and a minimum of 23 cesarean sections as primary surgeon.²⁴ An American study noted that the training volumes for family doctors who currently perform cesarean sections ranged from 25 to 100, with the average of 46 completed in

Physicians wishing to undergo training should realize that there is no set number but that acquiring advanced maternity skills requires considerable commitment. Competence can only be based on measured proficiency in the procedure and not numbers of procedures or months of training. For a few physicians, mastery will come relatively quickly but others might not be ready for independent practice, even after the suggested number.

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Maintenance of competence

There is little in the literature about the necessary volume of advanced maternity procedures. Ontario general practitioner/family physicians who perform cesarean sections do an average of 15 annually.²⁵ Research evidence shows that family practitioners who have acquired competence in cesarean section can maintain their skills with relatively few (5 to 22) cases.⁶ This fits with research that suggests that it is the quality of the training and not the numbers performed annually that preserves the skill base:

There is little to suggest that the psychomotor skills that are important in the practice of procedural medicine will be lost if they are not practised regularly. The extent to which the skill was practised during the initial learning phase is likely to be of greater importance. The more thorough the initial learning and the more overlearning (repetition past the point of having learned the skill) that occurs, the more resistant to forgetting the skill appears to be.²⁶

The SOGC guideline for general competence in low-risk maternity care does not specify an absolute number of births to maintain competence. Rather, it encourages a lifetime commitment to audit, review and continuing professional development. Advanced maternity skills will require a greater commitment and broader training.

If one is to succeed with formal programs to train maternity care providers with advanced skills, one must anticipate and provide for the continuing education, organizational needs and professional support of the graduates. Each of these programs has a large potential contribution to make in the continuing support and development of rural family physicians with advanced maternity skills:

- University and hospital departments of obstetrics and gynecology might, on an informal or formal basis, open their clinical practices to rural family practitioners who want a brief opportunity to refresh their advanced skills.
- The curriculum ([see Appendix](#)) proposes that graduates continue to record their clinical experience in a log book and that this be reviewed every 3 to 5 years. This review should

be educational and helpful. Departments that have trained these physicians would, thus, continue to play a role in meeting ongoing educational requirements.

Individual training programs should be encouraged to select that which seems most appropriate to local geographic needs. However, we recommend that the accreditation of these programs should require some formal maintenance of competence and be subject to periodic evaluation.

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Summary

- Advanced maternity skills, including operative birth, can be incorporated into the scope of family practice.
- Well-trained family practitioners who perform cesarean sections can produce satisfactory outcomes.
- Communities with local access to advanced maternity skills can sustain local maternity services.
- The disciplines of family medicine and obstetrics and gynecology need to design and deliver formal, accessible training programs for advanced maternity skills. This will involve the cooperation and coordination of academic departments to organize the programs, the CFPC to accredit them, and the provincial licensing authorities and health ministries to provide funding.
- The training and privileges for these advanced maternity skills are advocated for rural physicians, hospitals and communities only and should not be considered transferable to settings where there is an adequate number of specialist obstetricians.

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Recommendations

1. Existing hospitals with cesarean section capability should work to sustain this service.
2. Where adequate human and physical resources are present, every woman who can anticipate a safe birth in a rural community should be supported by physicians with local access to advanced maternity skills, including cesarean section.
3. The principles of risk management, regionalization, disclosure, informed consent and patient choice in the "Joint position paper on rural maternity care"¹ apply without qualification to rural maternity care providers who successfully acquire advanced maternity skills.
4. Advanced maternity skills, including those in operative birth, are included in the scope of appropriately trained rural family physicians.

5. Training in advanced maternity skills is the joint responsibility of the university departments of family medicine and obstetrics and gynecology.
6. Departments of family medicine need to play the lead role in negotiating these training programs with their obstetrical colleagues, universities, provincial licensing authorities and funding authorities.
7. These training programs should be accredited by the CFPC.
8. Family physicians who obtain advanced training in maternity care should have a long-term commitment to audit, review and continuing professional development.
9. Accreditation of training programs should require that support and continuing professional development of the graduates be in place and evaluated on a regular basis.
10. Training should be accessible to third-year family medicine residents and to re-entry physicians. In principle, subject to availability of mentors and teaching opportunities, these skills could be acquired in a teaching centre, regional hospital, rural hospital or a combination of sites.
11. Training programs in advanced maternity skills for rural family physicians should have a formal realistic mechanism for their evaluation and certification that includes the observation of inhospital work of physicians who received their training outside Canada.
12. Applicants for training should be evaluated for previous learning, existing skills and their access to community resources and support. The proposed duration and scope of training should be sufficiently flexible to meet the needs of individual trainees and communities.
13. Certification or membership in the CFPC should not be a factor in the selection process.
14. All efforts should be made to train an adequate number of Canadian physicians in advanced maternity skills and in making working conditions sustainable for them. If a suitably trained Canadian is not available, care should be taken not to exclude the entry of international medical graduates with advanced training.
15. Physicians who successfully acquire certification in advanced maternity skills require assurance that these will be recognized by provincial licensing bodies and rural hospital boards.
16. Funding authorities need to provide an appropriate level of financial support to the applicants, the preceptors, and the departments of family medicine and obstetrics and gynecology.
17. A continuous audit and quality improvement program is a necessary adjunct to training in advanced maternity skills.
18. The Curriculum for Advanced Skills in Maternity Care for Family Physicians (Appendix) is recommended as one example of an appropriate, generic and inclusive training program.

This document has been prepared by the College of Family Physicians of Canada, the Society of Rural Physicians of Canada and the Society of Obstetricians and Gynaecologists of Canada.

This article has been peer reviewed.

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Appendix: proposed curriculum for advanced skills in maternity care for family physicians

The following is a suggested curriculum and evaluation outline to teach physicians advanced maternity care skills including those in operative birth.

Selection of candidates

- Rural generalists who require operative birth capabilities and who are supported by their institution/community.
- Existing rural doctors who wish for certification of their existing skills in operative birth.
- Family practice residents as an add-on to a 2-year basic family practice residency for physicians who intend to practise in a rural setting.

Course

The teaching of procedural medicine should take place within the larger cognitive context of the indications, options and complications of these procedures. In addition, successful completion of the curriculum will require the candidates to demonstrate their familiarity with the principles of

risk management, regionalization, the CFPC training standards for maternity care, and the relevant guidelines endorsed by the CFPC, SOGC and SRPC.

Knowledge Component

Induction of labour

Management of dystocia

Fetal assessment in labour

Indications for cesarean section

Alternatives to cesarean section, including forceps and vacuum

Complications of cesarean section

Risk management

Audit and quality assurance

Conditions that increase risks of operative complications that might warrant transfer for specialist opinion or management including:

- pre-term cesarean section
- grand multiparity
- placenta previa
- placenta accreta;
- repeat cesarean section with extensive adhesions
- extension of uterine incision into uterine arteries, cervix or vagina
- wound infection or hematoma
- morbidly obese patients
- fetal abnormalities
- maternal coagulopathy
- multiple gestation
- injury to bowel or bladder
- uterine atony
- uterine infection
- coagulopathy or thromboembolic disease.

Core procedures

Cesarean sections (assisted) 15

Cesarean sections (completely done) 25

Low (nonrotational) forceps 10

Vacuum extraction 10

Repair of third- and fourth-degree tear *

Manual removal of retained placenta *

Manual rotation *

Repair of bladder *

Treatment of obstetrical emergencies *

Treatment of neonatal emergencies *

Obstetrical emergencies covered include shoulder dystocia, unexpected breech or emergency twin birth, sepsis, hemorrhage, eclampsia, prolapsed cord, etc.

Neonatal emergencies include neonatal resuscitation, management of meconium, neonatal transfer, etc.

* Indicates knowledge of principles and as much experience as possible.

Logbook

An integral part of the ongoing and exit examination is based on logbooks of procedures. For operative birth, the following information will be kept as appropriate:

- Case number (as on the hospital chart)
- Procedure (e.g., lower uterine segment cesarean section)
- Level of responsibility (e.g., primary surgeon)
- Indication (e.g., fetal distress)
- Complications (if any)
- Apgar scores, cord gases and fetal outcome.

Evaluation

All candidates will be evaluated by standardized criteria and will undergo a continuous formative evaluation by their supervisor during training. When training is complete and the required volume and competence levels have been achieved, the supervisor will recommend the candidate for an exit evaluation. Each candidate will be tested for competence in operative birth by an examiner other than the supervisor. The exit evaluation is in 3 parts.

- Oral Examination: each candidate will submit a logbook. The examiner will pick a number of charts for the candidate to bring to the examination and review these charts as a basis for discussion.
- Written Examination: written questions will evaluate cesarean section skills and others for which the candidate is being tested.
- Practical Examination: the candidate will be observed performing operative birth.

Maintenance of competence

As an adjunct to a program to maintain their competence in advanced obstetrical skills, all trainees are required to continue to record their clinical experience in a logbook. A formal review of this experience should be conducted every 3 to 5 years by the departments that trained them or a recognized training program.



Déclaration de principe conjointe sur la formation des omnipraticiens ruraux pour les soins maternels avancés et les césariennes

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Contenu

- [Revue de la littérature médicale](#)
- [Avantages attendus pour les mères et leurs nouveau-nés en milieu rural](#)
- [Étendue de la pratique](#)
- [Formation](#)
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- [Annexe : programme de formation en soins maternels avancés à l'intention des médecins de famille](#)

Toutes les canadiennes méritent d'avoir un accès rapide à des soins avancés de maternité. Au Canada, on considère généralement cela comme acquis dans les milieux urbains. Mais, l'accès peut représenter un véritable défi pour les quelque 30 % de femmes dont la grossesse se déroule en milieu rural.

Il existe diverses définitions de ce qui constitue un milieu rural. Dans ce document, nous utiliserons la définition suivante :

En pratique, au Canada, on définit actuellement les «régions rurales éloignées» comme étant à une distance de 80 à 400 km d'un hôpital régional important et les «régions rurales isolées», comme étant à plus de 400 km, c'est-à-dire à environ quatre heures de transport par beau temps. Dans certaines régions agricoles du

Canada, la population est fort dispersée et desservie par des hôpitaux de nature rurale bien que situés à moins de 80 km de petits centres urbains. Ces petits centres hospitaliers visent à fournir des soins maternels adéquats et sécuritaires d'une façon relativement autonome. De tels établissements peuvent être appelés «ruraux rapprochés1.»

Sur le plan opérationnel, on peut dire que le Canada rural se définit comme les régions où les médecins de famille assurent la majorité ou la totalité des services médicaux, y compris la soins de la maternité. Le manque relatif de spécialistes dans ces communautés oblige les médecins de famille ruraux à fournir un plus large éventail de services que leurs collègues des villes. Le présent document décrit des programmes de formation pour les soins maternels avancés visant à assurer la présence de ces services en milieu rural.

La plupart des communautés rurales sont trop petites et trop isolées pour assurer la présence d'un obstétricien et d'un anesthésiste lorsque l'accouchement requiert une intervention. Seulement 38 obstétriciens pratiquent actuellement en milieu rural au Canada2. La majeure partie des services de protection de la maternité sont fournis par les quelque 1384 médecins de familles qui assurent les soins intra-partum2. Dans les hôpitaux ruraux, il se peut que les soins maternels avancés, tels que l'application des forceps, le retrait manuel du placenta, la réparation des lacérations du tractus génital et les césariennes, doivent être pratiqués par les médecins de famille. Ce sont leur dévouement et leur ténacité qui ont assuré la continuité des programmes de maternité du Canada rural. La formation des ces médecins de famille est variée et de sources multiples. Beaucoup d'entre eux sont des diplômés en médecine venus de l'étranger. Certains ont même reçu une formation de spécialistes dans d'autres pays. Beaucoup d'hôpitaux des régions rurales, habitués à compter sur les services de ces médecins, trouvent de plus en plus difficile de les remplacer quand ils prennent la retraite. De plus, moins de nouveaux médecins immigreront au Canada. Les autres médecins sont formés au Canada, grâce à un certain nombre de programmes, certains structurés, tels que la troisième année de résidence en pratique familiale, d'autres non structurés, tels que les arrangements particuliers entre des médecins intéressés, un programme d'enseignement et une communauté éprouvant des besoins précis. Depuis quelques années, les universités d'Ottawa, de Toronto, du Manitoba, de la Saskatchewan, de l'Alberta, de Calgary et de Colombie-Britannique offrent des programmes de formation individualisés.

En 1991, au Canada, 576 hôpitaux offraient des services de soins de la maternité. Il y en a moins maintenant. On peut difficilement s'attendre à ce que des obstétriciens soient présents pour pratiquer des césariennes quand on sait que, dans 40 % de ces 576 hôpitaux, il y avait moins de 20 césariennes par année3. Environ 7 % de toutes les césariennes sont pratiquées par des médecins sans certificat de spécialité. C'est grâce aux césariennes pratiquées par des médecins de famille dûment formés que le Canada rural peut continuer d'offrir des services de soins de la maternité. Du point de vue pratique, il n'y a pas d'autres choix.

Le Canada dispose de l'un des meilleurs systèmes régionaux de soins de santé au monde grâce

auquel les malades graves sont transportés à des centres équipés des ressources nécessaires pour traiter leur maladie. Voilà pourquoi nos taux de mortalité maternelle (6/100 000) et périnatale (6-8/1000) sont parmi les plus bas au monde⁴. Pour cette raison, on ne doit faire des changements à un tel système qu'avec une grande prudence et en assurant une surveillance attentive.

Il faut maintenir ou rétablir la présence de soins maternels avancés au sein du Canada rural. Rourke⁵ a constaté une réduction considérable du nombre de places en maternité, de médecins de famille présents lors des accouchements et de césariennes en milieu rural ontarien. Les Canadiens doivent savoir que, sans la présence de praticiens bien formés, ces ressources ne seront pas disponibles quand les femmes en auront besoin. Pour éviter ce problème, il faut une action concertée pour maintenir des services médicaux, infirmiers, administratifs et des installations là où les femmes accouchent. Assurer l'existence d'une infrastructure rurale de la santé s'avère une entreprise complexe comprenant la présence d'un contingent adéquat d'infirmières qualifiées, un équipement adéquat, des transports d'urgence, des services d'anesthésie, un financement et une organisation. Nous ne traitons pas de ces aspects ici.

Il faut bien comprendre que la capacité d'offrir des services opératoires d'accouchement localement ne veut pas dire que toutes les patientes devant subir une intervention au moment de l'accouchement doivent accoucher localement. Le modèle qui convient comprend un système périnatal élargi dans lequel certaines femmes enceintes considérées à haut risque sont transportées au centre le plus proche disposant des services jugés nécessaires avant le moment de l'accouchement. Les mêmes principes de gestion de risque et de régionalisation s'appliquent au choix des patientes pour les naissances avec intervention que pour l'ensemble du système périnatal.

La volonté, les ressources et le support anes-thésique et infirmier nécessaires ne sont pas toujours présents, au niveau local, pour la pratique d'une césarienne qui exige un travail d'équipe, un engagement intense et des ressources abondantes. Certains établissements ruraux pratiquent des soins d'accouchement moins intenses et transfèrent plusieurs patientes à un autre centre. Il est évident que cela peut se faire en toute sécurité pourvu que le processus de sélection des patientes soit efficace et qu'il soit renforcé par un système de vérification et de rétroaction¹.

Le présent document ne porte que sur les questions liées au travail, aux accouchements nécessitant une intervention et aux autres compétences avancées en soins maternels ayant un rapport avec les fonctions des médecins ruraux. La formation en soins maternels avancés peut aussi comprendre l'échographie obstétricale élémentaire, l'analgésie obstétricale, l'évaluation néonatale et la stabilisation avancées. On peut aussi intégrer ce programme à la formation chirurgicale pour la pratique familiale en milieu rural. On prépare aussi actuellement des documents sur l'anesthésie et sur la chirurgie en pratique familiale destinés à accompagner, à compléter et à renforcer le présent document.

[\[Contenu\]](#)

On a fait une recherche sur MEDLINE pour trouver les publications, depuis 1987, sur la formation des omnipraticiens/médecins de famille pour le recours aux forceps, à la ventouse obstétricale et à la césarienne. D'autres publications sur les soins maternels en milieu rural ont aussi été recueillies, tel que décrit ci-dessus¹. Très peu d'articles évaluent les résultats d'accouchements avec intervention en milieu rural⁶⁻⁹.

Les articles passés en revue présentaient un problème général quant à la possibilité de contrôler les facteurs confusionnels possibles pour la comparaison des résultats de diverses populations. Pourtant, ils présentent des rapports encourageants sur les résultats périnataux et maternels acceptables obtenus auprès de populations desservies par les médecins non spécialistes adéquatement formés.

L'étude de Deutchman et collègues⁶ examine les résultats obtenus par des médecins de famille dans deux hôpitaux ruraux de 35 lits (631 césariennes), sur une période de 10 à 15 ans. Le taux de césariennes était de 16 % On a comparé les résultats aux normes établies dans la littérature médicale sur la mortalité maternelle, l'indice d'Apgar, les transfusions maternelles, les infections des voies urinaires, l'endométrite, la péritonite, les infections de lésions, la réopération et les atteintes à la vessie, à l'urètre ou à l'intestin¹⁰. Dans cet échantillon limité, «à en juger par les normes nationales, les médecins de famille ont pratiqué des césariennes qui ont produit des résultats de haute qualité pour les nouveau-nés et pour les mères....⁶»

Kriebel et Pitts ont démontré que, dans un hôpital de 25 lits, desservi par trois médecins, à Forks, dans l'État de Washington, il y avait eu peu d'interventions et de complications, un faible taux de mortalité infantile et un bon indice d'Apgar, à partir de données obtenues sur une période de huit ans (1026 naissances)⁷. Chaque médecin avait reçu une formation pour les accouchements par césarienne. Les taux de transferts intra-partum et infantiles étaient de 3 % et de 0,8 %, respectivement. Le taux de césariennes était de 8,9 %. Le taux d'utilisation des forceps était de 1,8 %, et celui de la ventouse obstétricale, de 3,1 %.

Récemment, Cameron a compilé les résultats, de 1981 à 19908, à l'hôpital d'Atherton, dans le Queensland, où il n'y avait pas d'obstétricien spécialisé. Pourtant, cinq médecins avaient reçu une formation avancée pour pratiquer des césariennes. Un taux de 1,3 % a été obtenu à partir des 2883 naissances supervisées par 17 médecins non spécialisés, sur une période de neuf ans (au Queensland, la moyenne est de 18,4 %). Le taux de succès des accouchements vaginaux après césarienne (AVAC) était de 58 % et le taux brut de mortalité périnatale, de 5,2/1000. Le taux de mortalité périnatale (9,6/1000) se comparait favorablement à ceux de l'ensemble de l'État du Queensland (13,5/1000) compte tenu de facteurs tels que les résultats des recommandations anténatales (1,6 %) et des transferts intra-partum et post-partum.

Dans le nord de l'Ontario, Black et Fyfe⁹ ont mené une étude de population basée sur 24 524 naissances. Ils ont conclu que les femmes de 11 localités où les césariennes n'avaient été pratiquées que par des non-spécialistes avaient connu des taux acceptables de mortalité périnatale. Les taux de naissances vaginales assistées par des instruments étaient de 7,7 % et celui des césariennes, de 14,2 %.

On peut s'attendre à ce que le processus de collaboration entre la Société de la médecine rurale du Canada (SMRC), la Société des obstétriciens et gynécologues du Canada (SOGC) et le Collège des médecins de famille du Canada (CMFC) saura encourager la création des bases de données périnatales démographiques dont on a besoin pour vérifier et mener la recherche sur la protection de la maternité en milieu rural. Le Système canadien de surveillance périnatale (SCSP) commence aussi à s'intéresser à ce genre de question.

[\[Contenu\]](#)

Avantages attendus pour les mères et leurs nouveau-nés en milieu rural

Au fur et à mesure qu'on réduit les services de maternité et qu'on ferme des centres hospitaliers en milieu rural, les femmes se voient privées de la possibilité d'accoucher dans un hôpital de leur localité. Dans la Déclaration de principe conjointe sur les soins maternels en milieu rural¹, nous avons passé en revue et confirmé les preuves qui démontrent que les femmes connaissent de meilleurs résultats dans les localités rurales lorsqu'elles reçoivent le soutien de programmes locaux de soins intra-partum, indépendamment de la présence de services opératoires d'accouchement^{9,11-13}. Il est évident qu'il vaut mieux offrir des services limités de soins maternels que de n'en offrir aucun. Les femmes qui ont accès localement à des soins avancés de protection de la maternité en milieu rural jouissent-elles d'avantages supplémentaires?

Le sentiment d'appartenir à une communauté constitue l'un des éléments inhérents à la vie rurale. Même si ces femmes ont généralement la possibilité de se rendre ailleurs pour accoucher, plusieurs d'entre elles ne le souhaitent pas. Il est évident que la simple présence locale de ressources d'intervention, telles que les forceps, la ventouse obstétricale ou la césarienne, peut réduire considérablement les besoins de transferts ante- et intra-partum. En l'absence de ressources d'intervention locales et avec une gestion attentive du risque, environ 80 % des patientes peuvent s'attendre à accoucher dans un hôpital de leur localité. Les risques et les transferts intra-partum réduisent cette proportion à 60 %⁹. Lorsque des services opératoires d'accouchement sont disponibles localement, plus de 90 % de ces femmes peuvent accoucher au sein de leur communauté⁷⁻⁹.

Certaines femmes ne peuvent pas être transférées parce que les complications lors d'un accouchement sont souvent imprévisibles. Des désastres naturels (p. ex. le décollement placentaire, le prolapsus du cordon, l'hypoxémie fœtale) peuvent se produire en milieu rural. La

possibilité de recourir localement aux techniques d'intervention rend les services ruraux capables de faire face à ces situations rares mais inévitables.

Indépendamment des résultats et des normes, l'absence de soins maternels avancés menace la survie des programmes de maternité en milieu rural. Certes, plusieurs localités rurales (125) continuent d'offrir des soins intra-partum sans possibilité de césarienne. Cependant, cela leur impose des pressions considérables. Dans une étude sur les résultats obtenus par des centres ruraux dans l'État de Washington, Nesbitt et collègues¹² ont conclu que les localités qui avaient été capables de conserver la majorité de leurs services de maternité connaissaient une perte très peu importante de leurs médecins qui pratiquaient des accouchements (moins de 3 % par an). Les communautés les plus vulnérables étaient celles où moins du tiers des naissances avaient lieu localement. Ces localités perdaient leurs médecins pratiquant des accouchements à un rythme de 27 % par année.

Rourke⁵ et Hutten-Czapski¹⁴ ont présenté des données montrant un déclin rapide des services de soins maternels en milieu rural au Canada. Dépourvus des connaissances précises en anesthésie et chirurgie qui leur permettraient d'intervenir, les prestataires de soins de santé font face à un problème de confiance quant à leur capacité de répondre aux défis présentés par une variété considérable de complications de grossesse pouvant se produire. Quelque favorables que soient les résultats actuels, il n'en reste pas moins que le Canada connaît une érosion continue des services offerts aux femmes. Les programmes ferment l'un après l'autre pour des raisons allant du stress professionnel aux crises de confiance, à la perception de risques médico-juridiques, à la retraite du personnel ayant une compétence avancée, et même aux priorités budgétaires des hôpitaux.

La formation en soins avancés n'éliminera pas le stress professionnel, les risques médico-juridiques ou les problèmes budgétaires, mais elle améliorera le niveau de confiance des prestataires de soins maternels en milieu rural. Ils pourront ainsi continuer à offrir leurs services sans exiger la présence sur place de spécialistes en obstétrique. Cela permettra aussi aux localités rurales d'attirer des obstétriciens en allégeant leur fardeau de disponibilité.

[\[Contenu\]](#)

Étendue de la pratique

Certains croient qu'il n'est pas souhaitable d'offrir une formation réduite en techniques chirurgicales parce qu'ils croient qu'elles ne peuvent être pratiquées d'une façon sécuritaire que par ceux qui ont été formés d'une manière approfondie grâce à un programme complet de résidence (c.-à-d. que le programme de spécialisation est indivisible)¹⁵. L'évolution des soins de santé en milieu rural suffit à contredire cet argument. Après une formation adéquate, les médecins ruraux donnent des anesthésiques¹⁶, traitent les traumatismes^{17,18}, font des thrombolyses pour

infarctus du myocarde^{19,20}, traitent la pneumonie²¹ et pratiquent des césariennes^{6,9,10}. On reconnaît que, lorsque la situation clinique en milieu rural requiert le recours à des techniques chirurgicales, beaucoup de cas sont transférés pour une consultation ou un traitement par un spécialiste. Cependant, plusieurs sont pris en main localement. Bien que limités, les résultats connus révèlent que ces cas sont bien traités en milieu rural^{6,9,10,16-21}.

Beaucoup de médecins de famille sont bien formés en matière de connaissances fondamentales sur la maternité et les soins néonataux ainsi que sur les indications pour les accouchements nécessitant une intervention. Certains ont besoin d'une formation sur les techniques exactes de naissance vaginale avec intervention et sur les césariennes pouvant être pratiquées avec succès par des médecins de famille non spécialistes bien formés. On peut atteindre ces objectifs en mettant sur pied des programmes de formation professionnelle bien conçus et agréés pour les médecins de famille qui souhaitent pratiquer en milieu rural et offrir ces services. Les connaissances transmises dans ces programmes devraient avoir la même qualité que les programmes de formation actuels en médecine familiale et en obstétrique et gynécologie. Les médecins de famille formés par ces programmes agréés devraient avoir le droit de pratiquer conformément à leurs nouvelles qualifications professionnelles. Cette position est corroborée par l'American Academy of Family Physicians (AAFP) et l'American College of Obstetricians and Gynecologists (ACOG) qui ont déclaré : «Les privilèges doivent être accordés selon leur éducation, leur expérience et leur compétence attestée et non pas exclusivement sur la base d'un certificat, de leur association à l'ACOG, de leur adhésion à d'autres organisations ou de leur rang et de leur titularisation comme médecins.²²»

[\[Contenu\]](#)

Formation

Il existe très peu de descriptions de la formation professionnelle visant l'acquisition de compétence en soins maternels avancés par les généralistes pratiquant en milieu rural. Il est évident que ces diplômés doivent répondre aux mêmes normes élevées de formation qui assurent des résultats comparables à ceux des mêmes procédés dans la même population à faible risque qui reçoit les services d'un spécialiste en milieu urbain au Canada. De plus, ces programmes de formation doivent répondre à des normes nationales permettant d'utiliser ces compétences en milieu rural, partout au Canada. Cela exige des évaluations rigoureuses en cours de formation et des examens de sortie pour les diplômés. Pour que ces programmes soient agréés, il faudra soumettre une documentation établissant que la certification de compétence en soins maternels avancés a été évaluée d'une manière adéquate.

L'existence de soins médicaux de haute qualité en milieu rural dépend de notre capacité de concevoir un programme de formation réaliste pour que les omnipraticiens soient en mesure de fonctionner aussi bien à l'urgence et aux autres services médicaux que dans les services de

maternité et de chirurgie. Certaines habiletés sont complémentaires. Malheureusement, il n'existe pas d'information objective permettant de préciser le temps nécessaire pour qu'un omnipraticien acquière ces différentes habiletés, séparément ou en combinaison. Nous croyons que, en l'absence de données objectives, il faut éviter d'établir, dans chaque programme de formation, des normes de passage si élevées que les objectifs des praticiens ruraux soient inaccessibles.

Dans cette perspective, les lignes directrices concernant la durée des programmes de formation ne présentent qu'un intervalle de temps. La durée précise de la formation dépendra des capacités déjà existantes des individus en formation, de leur facilité d'apprentissage, de l'intensité du programme, des habiletés complémentaires à acquérir et du rôle que ces médecins seront appelés à jouer dans leur milieu. Chaque programme de formation doit être suffisamment flexible en terme de durée et de contenu pour tenir compte de l'étendue des habiletés préexistantes des sujets et des besoins des milieux ruraux, tout en étant suffisamment rigoureux pour s'assurer que ses diplômés sont compétents.

Nous croyons que la plupart des sujets pourront acquérir la compétence voulue dans les délais suivants :

1. Résidents en médecine familiale récemment diplômés : de 6 à 12 mois durant la troisième année de formation.
2. Médecins de famille pratiquants : de 6 à 12 mois.
3. Médecins de famille pratiquants qui souhaitent rafraîchir ou consolider leur compétence avancée existante : de 1 à 3 mois.
4. Diplômés en médecine d'origine étrangère ayant reçu une année ou plus de formation en obstétrique et gynécologie : de 1 à 3 mois. (Il se peut que cette estimation de 1 à 3 mois mène à la recommandation d'une formation supplémentaire.)

Le nombre d'interventions nécessaires pour acquérir la compétence souhaitée est mal défini. Dans le cas des habiletés liées aux soins maternels avancés, le programme de la Saskatchewan fournit un exemple lorsqu'il «suggère» que le médecin de famille doit pratiquer 20 césariennes et participer à 30 autres²³. On en est arrivé à ce chiffre à partir d'un examen des publications et des évaluations des résidents de première année en obstétrique et gynécologie. Aux États-Unis, le programme de base de l'ACOG-AAFP précise 10 césariennes ou plus au cours d'un programme de formation de trois mois²². Le programme des Royal Australian College of Obstetricians and Gynaecologists (RACOG)-Rural Doctors Association of Australia (RDAA)-Royal Australian College of General Practitioners (RACGP) suggère six mois de formation et un minimum de 23 césariennes pratiquées en tant que chirurgien principal²⁴. Une étude américaine a établi que les médecins de famille qui pratiquent actuellement des césariennes en avaient fait de 25 à 100 durant leur formation. La moyenne, pendant la formation, était de 466.

Les médecins qui s'intéressent à recevoir une formation doivent comprendre qu'il n'y a pas de chiffre fixe, mais que l'acquisition d'une compétence avancée en matière de soins maternels exige

un engagement considérable. La compétence ne peut se mesurer qu'en fonction de la capacité à bien pratiquer l'intervention, et non pas en nombre d'interventions ou de mois de formation. Pour quelques médecins, la maîtrise viendra rapidement alors que, pour d'autres, le nombre suggéré peut ne pas suffire à les préparer pour pratiquer d'une façon indépendante.

[\[Contenu\]](#)

Maintien de la compétence

La littérature médicale nous renseigne très peu sur la question de quantité en matière d'interventions avancées de grossesse. Les médecins de familles et les omnipraticiens de l'Ontario qui pratiquent des césariennes en font, en moyenne, 15 par année²⁵. Des conclusions de recherche confirment que les médecins de famille habilités à pratiquer des césariennes peuvent maintenir leur compétence en faisant relativement peu (de 5 à 22)⁶. Ceci corrobore la recherche qui indique que c'est la qualité de la formation plutôt que le nombre pratiqué annuellement, qui permet de maintenir la capacité de base :

Il y a peu de preuves que les capacités psychomotrices qui importent pour la pratique de la médecine d'intervention se perdent avec le manque de pratique régulière. L'intensité de la pratique de cette habileté durant la période de formation risque d'avoir la plus grande importance. Plus l'apprentissage initial est approfondi et plus il y a surapprentissage (c.à.d. la répétition de l'intervention qui dépasse le point d'apprentissage nécessaire), moins on risque de perdre cette habileté²⁶.

Les lignes directrices de la SOGC en matière de compétence générale pour les soins maternels à faible risque ne spécifient pas un nombre absolu de naissance pour maintenir la compétence. Elles encouragent plutôt un engagement à vie à l'évaluation et au perfectionnement professionnel continu. La compétence à pratiquer des soins maternels avancés exige un plus grand engagement et une formation plus large.

Pour connaître le succès, les programmes structurés de formation avancée, destinés aux prestataires de soins maternels, doivent prévoir une formation continue des diplômés ainsi qu'une infrastructure au niveau de l'organisation et du support professionnel. Chacun de ces programmes peut contribuer grandement à fournir aux médecins de famille en milieu rural le support et le perfectionnement dont ils ont besoin en matière de soins maternels :

- Les départements d'obstétrique et gynécologie des universités et hôpitaux peuvent permettre l'accès à leurs services cliniques, d'une façon structurée ou non, aux médecins de famille des milieux ruraux qui souhaitent rafraîchir leur compétence en techniques avancées.
- Le programme de formation ([voir l'Annexe](#)) propose aux diplômés de continuer d'inscrire

leur expérience clinique dans un carnet de route devant être évalué chaque trois ou cinq ans. Cette évaluation devrait être faite dans le but d'aider et d'améliorer les médecins. Ainsi, les départements qui auront formé ces médecins continueront de jouer un rôle permettant de poursuivre les exigences de formation.

On doit encourager chaque programme de formation à choisir les éléments de formation qui semblent les plus adaptés à son contexte géographique. Nous recommandons cependant que l'accréditation de ces programmes exige une structure quelconque visant à assurer le maintien de la compétence et une évaluation périodique.

[\[Contenu\]](#)

Sommaire

- La compétence en soins maternels avancés, y compris les naissances avec intervention, peut être incorporée à la pratique familiale.
- Les médecins de famille bien formés qui pratiquent des césariennes peuvent obtenir des résultats satisfaisants.
- Les localités dotées d'un accès local à des médecins capables de fournir des soins maternels avancés sont en mesure de conserver leurs services de maternité locaux.
- Les disciplines de médecine familiale et d'obstétrique et gynécologie doivent mettre sur pied des programmes de formation en soins maternels avancés, structurés et accessibles. Cela nécessitera la coopération et la coordination des départements universitaires qui organiseront ces programmes, du CMFC qui les agréera, et des organismes de réglementation provinciaux et des ministères de la santé qui les financeront.
- La formation en soins maternels avancés et les privilèges qui s'y rattachent ne sont préconisés que pour les médecins de famille, les hôpitaux et les localités des milieux ruraux. Ils ne doivent pas s'appliquer aux milieux où les obstétriciens spécialistes sont en nombre suffisant.

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Recommandations

1. Les hôpitaux dotés de services de césariennes doivent s'efforcer de maintenir ces services.
2. Lorsque des ressources humaines et physiques adéquates le permettent, les médecins devraient encourager toutes les femmes qui souhaitent accoucher en milieu rural, à le faire lorsque l'accès local à des soins maternels avancés et aux césariennes permet d'espérer des conditions sécuritaires.
3. Les principes de gestion de risque, de régionalisation, de transparence, de choix éclairé et

de liberté de choix, énoncés dans la Déclaration de principe conjointe sur les soins maternels en milieu rural¹, s'appliquent sans réserves aux prestataires de soins maternels en milieu rural qui réussissent à acquérir la compétence nécessaire en soins maternels avancés.

4. La compétence en soins maternels avancés, y compris les naissances avec intervention, font partie du champ de compétence des médecins de famille ayant reçu une formation adéquate.
5. La responsabilité de la formation en soins maternels avancés est partagée par les départements universitaires de médecine familiale et d'obstétrique et gynécologie.
6. Les départements de médecine familiale doivent prendre l'initiative de négocier ces programmes de formation avec leurs collègues obstétriciens, avec les universités et avec les organismes de réglementation et de financement provinciaux.
7. Ces programmes de formation doivent être agréés par le CMFC.
8. Les médecins de familles qui reçoivent une formation en soins maternels avancés doivent accepter d'être soumis à des vérifications, à des évaluations et à une formation professionnelle continue.
9. L'accréditation des programmes de formation doit exiger la mise en place de services de soutien et de perfectionnement professionnel continu pour les diplômés ainsi qu'un système d'évaluation à intervalles réguliers.
10. La formation doit être offerte aux résidents de médecine familiale de troisième année et aux médecins en réinsertion. En principe, selon la présence de mentors et de services enseignants, ces habiletés sont acquises dans un centre d'enseignement, dans un centre hospitalier régional ou rural ou dans une combinaison de ceux-ci.
11. Les programmes de formation en soins maternels avancés pour les médecins de famille doivent disposer de mécanismes réalistes d'évaluation et de délivrance des diplômes. Les médecins qui ont reçu leur formation à l'étranger doivent travailler dans un hôpital sous observation.
12. Les candidats aux programmes de formation doivent être évalués de manière à déterminer leur formation antérieure, leurs habiletés présentes et leur accès aux ressources locales. La durée et l'envergure de la formation doivent être suffisamment flexibles pour répondre aux besoins individuels des stagiaires et de leur milieu.
13. Le fait d'être agréé ou membre de la CMFC ne doit pas être un facteur de sélection.
14. Il faut déployer tous les efforts nécessaires pour assurer un nombre de médecins canadiens compétents en soins maternels avancés et pour leur permettre de travailler dans des conditions viables. En l'absence d'un médecin canadien adéquatement formé, on ne doit pas exclure la possibilité d'inviter des diplômés en médecine étrangers, formés en soins avancés.
15. Les médecins qui obtiennent leurs qualifications en soins maternels avancés doivent être reconnus par les organismes de réglementation provinciaux et par les conseils d'administration des hôpitaux ruraux.
16. Les organismes de financement doivent fournir un niveau adéquat de financement aux candidats, aux précepteurs et aux départements de médecine familiale et d'obstétrique et gynécologie.

17. Un programme de vérification continue et d'amélioration de la qualité est un appoint nécessaire à tout programme de formation en soins maternels avancés.
18. Le Programme de formation en soins maternels avancés à l'intention des médecins de famille, présenté en annexe, offre un exemple d'un programme de formation adéquat, générique et complet.

La présente déclaration de principe a été élaborée par le Collège des médecins de famille du Canada, la Société de la médecine rurale du Canada et la Société des obstétriciens et gynécologues du Canada.

Cet article a fait l'objet d'un examen critique par les pairs.

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Annexe : programme de formation en soins maternels avancés à l'intention des médecins de famille

Le programme suivant offre un modèle de formation et d'évaluation pour former les médecins en soins maternels avancés, y compris les accouchements avec intervention.

Sélection des candidats

- Les omnipraticiens, oeuvrant en milieu rural, qui ont besoin d'une compétence en accouchements assistés et qui sont parrainés par leur institution ou leur localité.
- Les médecins déjà installés en milieu rural qui souhaitent faire reconnaître leur compétence déjà acquise en accouchements assistés.
- Les résidents en pratique familiale disposés à ajouter une année de résidence à leur programme de deux ans de façon à pouvoir oeuvrer en milieu rural.

Cours

L'enseignement de la médecine d'intervention doit se faire dans un contexte cognitif plus large, comprenant les indications, les choix et les complications associés à ces interventions. De plus, avant de terminer leur programme de formation avec succès, les candidats devront être en mesure de prouver leur connaissance des principes de gestion de risque et de régionalisation, ainsi que des normes de formation pour les soins maternels du CMFC et des lignes directrices applicables provenant du CMFC, de la SOGC et de la SMRC.

Connaissances à acquérir

Déclenchement du travail

Gestion de la dystocie

Évaluation fœtale durant le travail

Indications pour une césarienne

Les solutions de rechange à la césarienne, y compris les forceps et la ventouse obstétricale

Complications associées à la césarienne

Gestion de risque

Vérification et contrôle de la qualité

Conditions qui accroissent les risques de complications associées à l'intervention et qui justifient le transfert en vue d'obtenir l'opinion d'un spécialiste ou un traitement.

Celles-ci incluent :

- césariennes avant terme
- grande multiparité
- placenta previa
- placenta accreta
- césariennes multiples accompagnées de cicatrisations importantes
- prolongement de l'incision utérine dans les artères utérines, le col ou le vagin
- infection de lésions ou hématome
- patientes atteintes d'une obésité morbide
- anomalies fœtales
- coagulopathie maternelle

- gestation multiple
- atteinte à l'intestin ou à la vessie atonie utérine
- infection utérine
- coagulopathie ou maladie thromboembolique.

Interventions de base

Césariennes (assistées)	15
Césariennes (complètes)	25
Forceps à la partie basse (sans rotation)	10
Ventouse obstétricale	10
Réparation de déchirures du 3e et du 4e degré	*
Élimination manuelle du placenta retenu	*
Rotation manuelle	*
Réparation de la vessie	*
Traitement d'urgences obstétricales	*
Traitement d'urgences néonatales	*

Les urgences obstétricales comprennent la dystocie de l'épaule, les présentations du siège inattendues ou les naissances gémellaires d'urgence, la septicémie, les hémorragies, l'éclampsie, le prolapsus du cordon, etc.

Les urgences néonatales comprennent la réanimation néonatale, la gestion du méconium, les transferts néonataux, etc.

*Signifie une connaissance des principes, accompagnée de la plus grande expérience possible.

Carnet de route

Une partie indispensable de l'évaluation continue et de sortie se base sur le carnet de route où sont inscrites les interventions. Pour les accouchements assistés par intervention, les renseignements suivants doivent être fournis si cela s'applique :

- Numéro du cas (tel qu'inscrit au dossier hospitalier)
- Intervention (p. ex. césarienne dans le bas utérus)
- Niveau de responsabilité (p. ex. chirurgien principal)
- Indication (p. ex. souffrance fœtale)
- Complications (s'il y a lieu)
- Indices d'Apgar, gaz du cordon et pronostic fœtal.

Évaluation

Tous les candidats seront évalués au moyen de critères normalisés et seront soumis à une

évaluation continue faite par leur superviseur pendant la durée de la formation. Une fois la formation terminée, le nombre requis d'interventions et les niveaux de compétence atteints, le superviseur recommandera que le candidat subisse un examen de sortie. Chaque candidat sera évalué pour sa compétence en matière d'accouchements avec intervention par un examinateur autre que son superviseur. L'examen de sortie comprendra trois parties :

- Examen oral : chaque candidat soumettra un carnet de route. L'examineur choisira un certain nombre de tableaux que le candidat devra apporter à l'examen et il s'en servira pour mener la discussion.
- Examen écrit : des questions écrites vérifieront les connaissances du candidat sur les césariennes et les autres interventions qui font l'objet de l'examen.
- Examen pratique : on observera le candidat pendant la conduite d'un accouchement avec intervention.

Maintien de la compétence

Comme appoint au programme destiné à maintenir leur compétence en soins obstétricaux avancés, tous les stagiaires devront continuer d'inscrire leur expérience clinique dans un carnet de route. Une évaluation officielle de cette expérience devra être menée chaque trois à cinq ans par les départements qui les ont formés ou par un programme de formation reconnu.

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Advanced skills by Canada's rural physicians

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[[résumé](#)]

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Abstract

The National Physician Database at the Canadian Institute for Health Information provided both services and demographic information for those physicians providing fee-for-service care in rural Canada in 1995/96. Anesthetic services were provided by 498 GP anesthetists and 123 FRCS anesthetists. Together they provided 6.3% of all anesthetic services in Canada. Of these services, 60.6% were provided by GP anesthetists, of whom 315 (63.3%) were Canadian trained. Appendectomies were provided by 121 GP surgeons and 151 general surgeons. Together they performed 2605 procedures representing 9.5% of all appendectomies in Canada. Of these, 669 (25.7%) were performed by GP surgeons, of whom 47 (38.8%) were Canadian trained. Cesarean sections in rural Canada were provided by 200 GP obstetricians and 131 specialists (100 general surgeons, 31 obstetricians). Together they performed 4292 procedures representing 6.9% of all cesarean sections in Canada. Of these, 1838 (42.8%) were performed by GP obstetricians, of whom 108 (54.0%) were trained in Canada.

Résumé

La base de données nationale sur les médecins de l'Institut canadien d'information sur la santé a fourni de l'information sur les services et les caractéristiques démographiques des médecins dispensant des soins rémunérés à l'acte en milieu rural au Canada en 1995-1996. Des services d'anesthésie ont été fournis par 498 OP anesthésistes et 123 anesthésistes FRCS. Ensemble, ils ont dispensé 6,3 % du total des services d'anesthésie au Canada. De ce total, 60,6 % ont été fournis par des OP anesthésistes, dont 315 (63,3 %) ont reçu leur formation au Canada. Des appendicectomies ont été pratiquées par 121 OP chirurgiens et 151 chirurgiens généraux. Ensemble, ils ont pratiqué 2605 interventions représentant 9,5 % du total des appendicectomies réalisées au Canada. De ce total, 669 (25,7 %) ont été réalisées par des OP chirurgiens, dont 47 (38,8 %) ont reçu leur formation au Canada. Des césariennes pratiquées en région rurale au Canada ont été réalisées par 200 OP obstétriciens et 131 spécialistes FRCS (100 chirurgiens généraux, 31 obstétriciens). Ensemble, ils ont réalisé 4292 interventions représentant 6,9 % du total des césariennes pratiquées au Canada. Sur ce total, 1838 (42,8 %) ont été réalisées par des OP obstétriciens, dont 108 (54 %) ont reçu leur formation au Canada.

Historically, advanced skills in rural Canada have been provided by two types of physicians. Sometimes, it has been the generalist specialist, the true general surgeon, training in multiple surgical fields that include abdominal, orthopedic, trauma, urologic and plastic surgery. Other times it has been the generalist family physician (FP) who, although trained and practising as an FP, has acquired advanced skills in anesthesia, surgery and operative obstetrics. The goal of this study is to document, using physicians' billing data, the role played by Canada's rural FPs in the delivery of these advanced skills.

Methods

The National Physician Database (NPDB) at the Canadian Institute for Health Information (CIHI) provided the data source. NPDB contains information not only on services and billings but also on some demographic characteristics of these physicians, including gender, age and place of graduation. This database is used widely by governments, professional associations, consulting firms, pharmaceutical companies and the media for medical resource planning and

utilization analysis.

How to define a rural physician has always been problematic. We have used a definition of rural developed elsewhere in work by the Society of Rural Physicians of Canada (see article on page 209):

Rural Canada can be operationally defined as areas where general practitioners provide most or all medical services, including maternity care. As a direct result of a relative lack of specialists in these communities, rural FPs have to provide a broader scope of practice than their urban counterparts.

A listing of postal codes for each physician on the NPDB by census metropolitan area (CMA), census agglomerate (CA) and other areas (OA) outside of CMA or CA was prepared. In the past, a selection for "rural" simply selected the "other rural" (a "0" as the second letter in the postal code). However, this excludes many small towns, often with a small hospital. Sometimes these areas function either exclusively or almost exclusively without specialist services and meet our functional definition of rural. Consequently, a manual review of postal codes in the OA-urban and CA-rural added many postal codes, and physicians, that we considered rural. This manual review was conducted by representatives of the Society of Rural Physicians of Canada in each province, assisted by a listing of acute care hospitals, the Canadian Medical Association directory, which identified specialist physicians, and the reviewer's knowledge of the area and the hospital.

In summary, the sample group consisted of physicians in the following: CA-rural, excluding physicians with significant access to specialist services; OA-urban, excluding physicians with significant access to specialist services; OA-rural, all physicians.

How does this compare with historical definitions of rural? In our 1995/96 data run we identified 4866 rural physicians using the methodology described. Using CMA categories of rural without scrutinizing postal codes, we found that the numbers of physicians providing fee-for-service in OA-rural was only 3415. There were an additional 1990 (OA-urban) and 302 (CA-rural) that we could potentially have included when we reviewed these postal codes looking for areas where FPs provided all, or almost all, of the essential services. Of this potential additional physician supply (2292), we added only 1451 (63.3%) to OA-rural (3415) to have a sample size of 4866 rural physicians in 1995/96.

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Results

In 1995/96, anesthetic services in rural Canada were provided by 498 general practitioner (GP)

anesthetists and 123 specialty anesthetists. Together, they provided 249 364 services, representing 6.3% of all anesthetic services in Canada. Of these, 151 168 (60.6%) were provided by 498 GP anesthetists, mostly in Ontario, the West and British Columbia ([Table 1](#)). Of these 498 GP anesthetists, 315 (63.3%) were Canadian trained. The West is more heavily dependent on the recruitment of international medical graduates (IMGs) for anesthetic services -- 46.9% ([Table 2](#)).

Using the same definition of rural Canada, appendectomies were performed by 121 GP surgeons and 151 specialty surgeons. Together they performed 2605 procedures, representing 9.5% of all these procedures in Canada. Of the 2605 procedures, 669 (25.7%) were performed by GP surgeons, mostly in the West and in British Columbia ([Table 3](#)). Where were these GP surgeons trained? Of the 121 who performed appendectomies, 47 (38.8%) received their training in Canada ([Table 4](#)).

Cesarean sections in rural Canada were provided by 200 GP obstetricians and 131 specialists (only 31 of whom were obstetricians/gynecologists). Together, they performed 4292 procedures representing 6.9% of all cesarean sections in Canada. Of these 4292 procedures, 1838 (42.8%) were provided by GP obstetricians, mostly in Ontario, the West and British Columbia ([Table 5](#)). Of the 200 GP obstetricians, 108 (54.0%) were Canadian trained. Only Ontario and Quebec did not rely to a great extent on IMGs trained in cesarean section ([Table 6](#)).

Intrapartum maternity care was provided by 1704 FPs and 31 specialty obstetricians. Together, they attended 28 755 deliveries representing 9.5% of all deliveries in Canada. Of these deliveries, 25 602 (89.0%) were attended by FPs. Overall, 35.0% of Canada's rural FPs provided intrapartum maternity care ([Table 7](#)). The cesarean section rate in rural Canada was 20.4%.

In [Table 8](#), we show the surgical manpower in rural Canada. In 1995/96, there were 223 FPs performing surgical procedures in the peritoneal cavity, 117 (52.5%) of whom were Canadian trained. A significant portion, trained in advanced obstetrics, did only cesarean sections (81 [36.3%]). Of the remainder, who were trained in surgical programs, 21 (13.6%) did only appendectomies and 66 (29.6%) did both cesarean sections and appendectomies. Surprisingly, a large portion, (55 [24.7%]) did both anesthesia and one or both of cesarean section and appendectomy. In total, 121 (54.3%) of the 223 FPs trained to perform intra-abdominal surgery had acquired at least 2 of the 3 principal advanced skill sets.

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Discussion

Clearly, advanced skills in rural Canada are delivered by different systems in each of Canada's

regions. In the East, rural FPs share the provision of advanced skills (anesthesia, surgery and obstetrics), with a significant number of specialty physicians. In Quebec, as in the East, both FPs and specialists share the anesthesia services. However, although there is a small role for rural FPs performing cesarean sections in Quebec (15 GPs versus 45 specialists), there are virtually no GP surgeons performing ap-pendectomies (1 versus 50 specialists). In Ontario, GP anesthesia begins to be the predominant provider of these services (127 versus 23 specialists). But Ontario does have a good supply of rural generalist specialist surgeons providing appendectomy (43 versus 10 FPs) and cesarean section (33 versus 20 FPs). How does this mix of rural generalist FPs and specialist general surgeons work in the field? Partly, it doesn't. If we had the ability to distinguish northern from southern Ontario, we suspect that the rural FPs with advanced skills would predominate in the north where the geography approximates that of the West and British Columbia. In southern Ontario, the predominant provider of advanced surgical skills is likely the generalist surgeon. However, it is possible that in some communities there is a working arrangement whereby rural GP surgeons collaborate with and support the presence of a single generalist surgeon.

In the West and in British Columbia, a large proportion of anesthesia, appendectomies and cesarean sections is performed by rural FPs. Why should Ontario and regions east of Ontario find it easier

to locate specialty services in rural Canada? In

our view, geographic factors predominate. In some areas, the geography is smaller and the population density greater, allowing specialist surgeons and anesthetists to draw from large surrounding populations. In Ontario, there are a significant number of towns in the 15 000- to 25 000-population range, encouraging one or more specialist surgeons to establish practice. In the West and in British Columbia, outside the very large regional centres, most of the communities fall into the 5000 to 15000-population range, usually too small for a successful specialty practice.

We were surprised to find that there is a strong presence of Canadian-trained rural FPs in the delivery of advanced surgical and obstetric skills. Whereas Canada has long enjoyed established and successful training programs for GP anesthesia, rural physicians have not enjoyed the same access to training in surgical or obstetrical departments. To our knowledge, there are only 2 recognized programs, each relatively new and each training only 2 rural physicians per year in advanced surgery and obstetrics. However, 117 of 223 rural FPs with advanced surgical and obstetrical skills were Canadian trained. Presumably, there is, or has been, an ad hoc, opportunistic, nonaccredited, needs-driven "underground" postgraduate training system, preparing a select group of rural FPs for advanced procedural work in rural Canada.

How do our findings compare with those of others who have studied the provision of advanced skills by rural FPs? Our count of 498 GP anesthetists is almost identical to that obtained by a 1996 survey (Canadian Anesthetists' Society. Unpublished data). The Janus Project of the College of Family Physicians of Canada (unpublished data) estimated, again by survey, approximately 604 GP anesthetists (rural and small town). It is likely that some of these GP

anesthetists who self-identified themselves as "small town" would not meet our criteria for inclusion in our rural sample. The same Janus Project estimated 193 GP surgeons, similar to our estimate of 223.

Chiasson and Roy¹ surveyed small hospitals in Alberta, British Columbia and the Yukon and Northwest Territories in 1992. They found 105 GP surgeons, 35 of whom were fully trained specialists (IMGs) practising as rural FPs. Of the remaining 70 GP surgeons, 46% were Canadian trained. These numbers are similar to our own. The same authors found 95 GP anesthetists of whom 63% were Canadian trained. Our findings with respect to origin of training are almost identical.

Limitations of our study

The NPDB provides information only on the fee-for-service activities of rural physicians. It does not include either of the Territories. Consequently, some of the rural delivery systems of advanced skills are excluded from this study. In particular, the Yukon, Northwest and Nunavut territories are excluded. So are the medical services organized through Canada's voluntary organizations, such as the United Church, usually in the most isolated of parts of Canada. The Canadian Medical Association found that 18% of rural physicians report that 90% or more of their earnings come from a source other than fee-for-service.² A second limitation is our definition of rural. One of the criteria for inclusion into our sample was the decision by rural physicians familiar with the community that most or all of the essential services provided within the community hospital (if there was one) were provided by rural FPs. Some small specialist presence was allowed. How much? The end points were soft and not verified by others for accuracy or for cross-regional consistency. It would be useful to attempt to make end points both verifiable and consistent.

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Conclusions

Canada's rural FPs play an important role in the delivery of advanced skills in anesthesia, general surgery and operative delivery. Although present to some extent everywhere in Canada, this role is hugely important in the West, in British Columbia and possibly in northern Ontario. The billing data confirm the widely held belief that the continued provision of these skills relies on the recruitment of IMGs. The Canadian training programs in GP anesthesia provide 66.4% of rural Canada's GP anesthetists. Surprisingly, there seems to exist within the institutions of Canadian medical education, an underground heretofore-unrecognized system to complement the recruitment of IMGs with Canadians trained in advanced surgical and obstetrical skills. These informal programs produced 52.5% of rural FPs performing intraperitoneal procedures such as appendectomy and cesarean section.

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This article has been peer reviewed.

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The occasional Bier block (intravenous regional anesthesia)

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A Bier block is a simple anesthetic technique for surgery of the arms and legs and for fracture reduction. It avoids the need for a general anesthetic or heavy sedation and is specially useful in patients who have a full stomach. It can be done safely even if done infrequently as long as the proper steps are followed.

Under an occluding tourniquet, local anesthetic is injected into a vein distal to the site of the surgery or fracture. The local anesthetic will diffuse from the vein into the tissue surrounding the peripheral nerves and will produce surgical anesthesia in about 10 minutes. The following is the technique that I use.

- Step 1. Insert an intravenous (IV) catheter in the unaffected arm to provide for emergency IV access. Apply a blood pressure cuff, saturation monitor and cardiac monitor (Fig. 1).



Fig. 1

- Step 2. Insert a 22-gauge IV catheter into the affected extremity, as distally as possible, and cap it with a heparin. Flush with saline.
- Step 3. Apply a few layers of cast padding and then apply a pneumatic tourniquet proximally on the limb, but do not inflate it. Check distal pulses.
- Step 4. Elevate the arm and exsanguinate it with an elastic (Esmarch) bandage. Inflate the

tourniquet to 300 mm Hg or 2.5 times the systolic blood pressure. Recheck pulses to ensure that they are absent (Fig. 2).



Fig. 2

- Step 5. Inject local anesthetic over a period of 90 seconds. More rapid injection may cause IV pressure to exceed cuff pressure. The limb will discolour and develop a mottled appearance, and the patient may complain of burning sensation or "pins and needles." Surgical anesthesia is usually achieved about 10 minutes later, but test for anesthesia before beginning any procedure. Keep the tourniquet inflated for the duration of the surgical procedure since the duration of anesthesia is minimal after tourniquet release (Fig. 3).



Fig. 3

- Step 6 (after the procedure). After injecting the anesthetic, keep the tourniquet on for a minimum of 20 minutes. Once 40 minutes has passed all the local anesthetic is fixed in the tissue and the tourniquet can be released. However, between 20 and 40 minutes a significant amount of local anesthetic is still unbound. Therefore, I release the cuff in graduated steps. Deflate the cuff for 10 seconds and then reinflate for 1 minute. Repeat this two more times. If the patient complains of numbness of the tongue, lightheadness, visual disturbance or a roaring sound in the ears (all signs of local anesthetic toxicity), inflate the tourniquet until the symptoms resolve and then repeat these steps again.

Pneumatic tourniquets are available as either single or double cuffs. A tourniquet can become uncomfortable after about 30 minutes. The advantage of the double cuff is to avoid this tourniquet pain. Test both cuffs before starting (Fig. 4). Then inflate the proximal cuff to allow the anesthetic to infiltrate under the distal cuff. If there is tourniquet pain, inflate the distal cuff and then release the proximal cuff. (It is important to follow these steps as you need one cuff inflated at all times to prevent the release of local anesthetic into the systemic circulation.) A single cuff can be used as well. It is wider than the individual cuffs of the double tourniquet, therefore it reduces the risk of the anesthetic agent leaking. It should be used only for short procedures because of tourniquet pain.

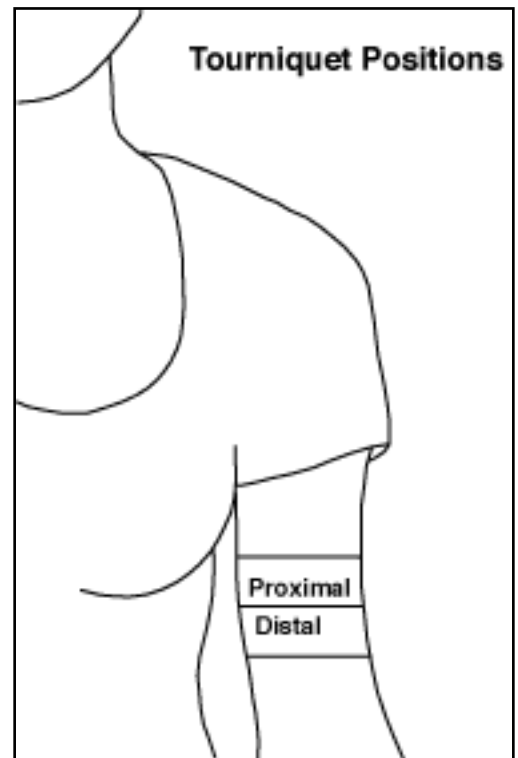


Fig. 4

If you are unfortunate enough to have a cuff failure or leakage of a large amount of lidocaine into the systemic circulation, it is important to know what to do to treat the toxic side effects. Treatment of seizures can usually be accomplished with oxygen, and Valium or Versed. Succinylcholine may be needed if the patient requires intubation. For more severe toxic reactions leading to cardiovascular collapse, epinephrine should be used for hypotension, atropine for a decreased heart rate and defibrillation for ventricular arrhythmias. If the arrhythmia recurs then the use of bretylium as an antiarrhythmic agent should be considered.

The only type of local anesthetic agent that I use is preservative-free lidocaine. I favour use the 2% (20 mg/mL) solution that is used for epidural anesthetics (Fig. 5), but any preservative-free solution of lidocaine is appropriate. The toxic effects of lidocaine range from numbness of the tongue, lightheadedness, auditory disturbance and muscle twitching at lower doses to convulsions, coma, respiratory arrest and cardiovascular collapse at progressively higher blood concentrations. The cardiovascular collapse can be difficult to reverse, but it is possible with lidocaine. Another common local anesthetic, Marcaine (bupivacaine), is much more cardiotoxic and should not be used for IV regional anesthesia.



Fig. 5

When I mix up my lidocaine solution, I aim for a total dose of 3 to 4 mg/kg. This is diluted to a total volume of 30 to 50 mL for an upper extremity and 80 to 100 mL for a lower extremity. I believe a better block is obtained by maintaining a minimum concentration of 0.5% for arms. However, due to the large volume necessary for legs, concentrations may be as low as 0.25%. No vasoconstrictors should be used. For my 2% lidocaine solution in a patient weighing 80 kg this solution would be mixed as follows: total dose ($80 \text{ kg} \times 3 \text{ mg/kg}$) = 240 mg or 12 mL of the 2% (20 mg/mL) solution. Dilute to 40 mL with normal saline intravenous solution (i.e., approximate concentration 0.6%).

If the Bier block is being done on the lower extremity, dilute to 100 mL to give an approximate concentration of 0.24%.

Most of you will be using this technique for distal fractures of the extremities. I apply the same technique, including exsanguination of the arm, with an elastic bandage. This can be somewhat uncomfortable over the fracture site and often I will give a little intravenous narcotic and wrap less tightly over the fracture site. Exsanguination is an important part of this technique so that the local anesthetic solution is not diluted further, making it less effective. In patients with hairy arms, I will often put a pillow case over the arm before exsanguinating as the elastic bandage can be quite uncomfortable when it pulls on hair.

Using a careful step-by-step technique, a Bier block can be an effective and safe method of providing limb anesthesia in the Emergency Department.

This article has been peer reviewed.

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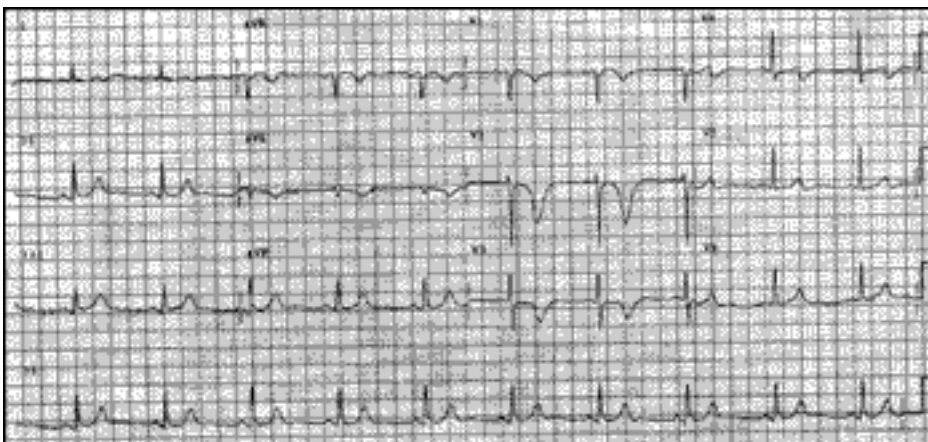
Country cardiograms case 14

Hugh Hindle, MB BS, CCFP

CJRM 1999;4(4):236

The RNs have just voted to go on strike; every stable patient in the hospital has to be sent home. As chief of staff, it is your job to make the call about who can be discharged. You are reviewing the following case:

Mrs. Burnett (not her real name) is a 63-year-old woman who was admitted 4 days earlier with a 30-minute history of typical ischemic chest pain. The pain settled with the administration of oxygen in the Emergency Department and did not recur as she began to move about. Her initial ECG showed poor R-wave progression but no features of acute ischemia. She has managed to climb a flight of stairs without the recurrence of any symptoms. Serial creatine kinase estimations were normal. Her physician has treated her with Aspirin, beta-blockers and heparin intravenously. You can tell that her ECG has become progressively more abnormal during her admission. The current ECG is shown below.



Is it safe to send Mrs. Burnett home?

See [page 242](#) for the discussion and answer.

Hinton Medical Clinic, 102 Allen Cove, Hinton AB T7V 2A6

This article has been peer reviewed.

"Country cardiograms" is a regular feature of the Canadian Journal of Rural Medicine. In each issue we will present an electrocardiogram and discuss the case in a rural context. Please submit cases to Ms Suzanne Kingsmill, Canadian Journal of Rural Medicine, Box 1086, Shawville QC JOX 2Y0.

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Reports

Hal Irvine, MD, FCFP

CJRM 1999;4(4):239-40.

3rd WONCA world rural health conference in Kuching, Sarawak, Malaysia

Malaysia is known for its network of rural health centres, and this made Kuching in Sarawak state, Malaysia the ideal venue for the 3rd WONCA World Rural Health Conference. Following the first World Conference on Rural Health in Shanghai in 1996 and the second in Durban in 1997, the theme of the conference in Kuching, which was held July 1 to 7, 1999, was achieving health for all rural people.

The conference was attended by 280 delegates from 24 countries and the World Health Organization. Many of the delegates were from Southeast Asia, but there were representatives from Canada, Australia, South Africa, the United States and Europe. The conference provided the milieu for people from widely different nations to meet and share ideas and solutions to the problems facing rural health and health care delivery.

There were sessions on education for rural practice. Canadians and Australians talked about efforts to encourage medical graduates to settle in rural areas, including a new rurally based and oriented medical school in Queensland. In China, there is a tremendous effort to upgrade the training of the "barefoot doctors" to equal that of a standard medical education.

Other sessions focussed on community involvement in rural health issues and integrated approaches to health care to sustain healthy villages. Malaysia has done an extensive health-needs assessment of its population and has made the commitment that all Malaysians should live within 5 km of a health facility. A visit to a rural health facility near Kuching demonstrated what they are accomplishing: its small staff of nurses, midwives and medical assistants (no doctors) provides primary health care services to a population of about 9000 in 9 villages. The emphasis is on maternal and child health, primarily antenatal care and immunization. The facility is also a birth centre, where low-risk pregnant women not only deliver but also can come and live before their due date to ensure safe and attended delivery. Minor ailments are treated at the centre, and

they have the capability to diagnose and treat malaria and collect sputum for tuberculosis. They also have programs for "Pap" smears and for instructing women in breast self-examination. Volunteers in each village are supported in their efforts to teach basic sanitation techniques, and home visits help ensure compliance in their community and public health programs.

The use of information technology as a tool for rural health care was the topic of several presentations, and the new WONCA Policy on Using Information Technology to Improve Rural Health Care was introduced. Simple solutions to problems such as teleradiography were introduced: in a pilot project in Malaysia, radiographic images were digitized by photographing them with a digital camera. The resulting images were in files small enough to be transmitted easily by email.

There were also sessions on traditional and complementary medicine, and clinical workshops on trauma and critical care, obstetrical and ophthalmic emergencies, sleep disorders, ECG interpretation and advances in the fight against malaria.

The conference wasn't all work. Sarawak is home to almost 2 million people, an ethnic mix of Malays, Chinese and native groups, and there is plenty to do and see. Much of the state remains a tropical paradise with 10 national parks providing protection to orangutans, proboscis monkeys and wild orchids. There are also world-class beach resorts and golf courses. The capital, Kuching, retains the old-world charm of its romantic past. The focal point of the city is the Sarawak River with a graceful European-style esplanade along the waterfront. The narrow, bustling streets near the river are crammed with ornate temples, markets, historic buildings and traditional Chinese shop houses selling everything from local handicrafts to digital cell phones.

A highlight at the conference was the Informal Borneo Night. The ballroom of the Kuching Hilton was transformed into a tropical jungle, and to gain entry we were each wrapped in a sarong and had our faces painted by native performers. A large variety of fabulous traditional dishes was served for dinner, followed by a performance of native dances and songs. Then the real entertainment started with each country's representatives coming to the stage to sing their own songs. The Canadians did their country proud with rousing renditions of Something to Sing About and I's the "Bye." The crowd was blown away, however, by a Chinese doctor who really could sing, and her associate who performed Tai Chi to her song. A hard act to follow -- I think we'll have to schedule some rehearsal time before the next conference.

After the main conference in Kuching, extension meetings were held in the resort areas of Damai Lagoon and Mount Santubong, where further discussions took place on the topics of creating the healthy village, community-based approach to telehealth, and a model rural Health centre. The Kuching conference marked another important step in the journey of achieving health for rural people. The challenges of delivering appropriate health care to our rural populations are shared around the world, and by meeting with others who are working on solutions to these challenges, we gain new perspectives and insights. Plan to attend the next world conference on rural health,

"Progress Through Partnerships," to be held in Calgary, Aug. 16 to 19, 2000.

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Answers to cryptic crossword #13

Lee Teperman

CJRM 1999;4(4):235.

The clues to Cryptic Crossword # 13 can be found in the [Summer issue](#).



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Cryptic crossword # 14

Lee Teperman

CJRM 1999;4(4):264

Presented in part by an unrestricted educational grant from:



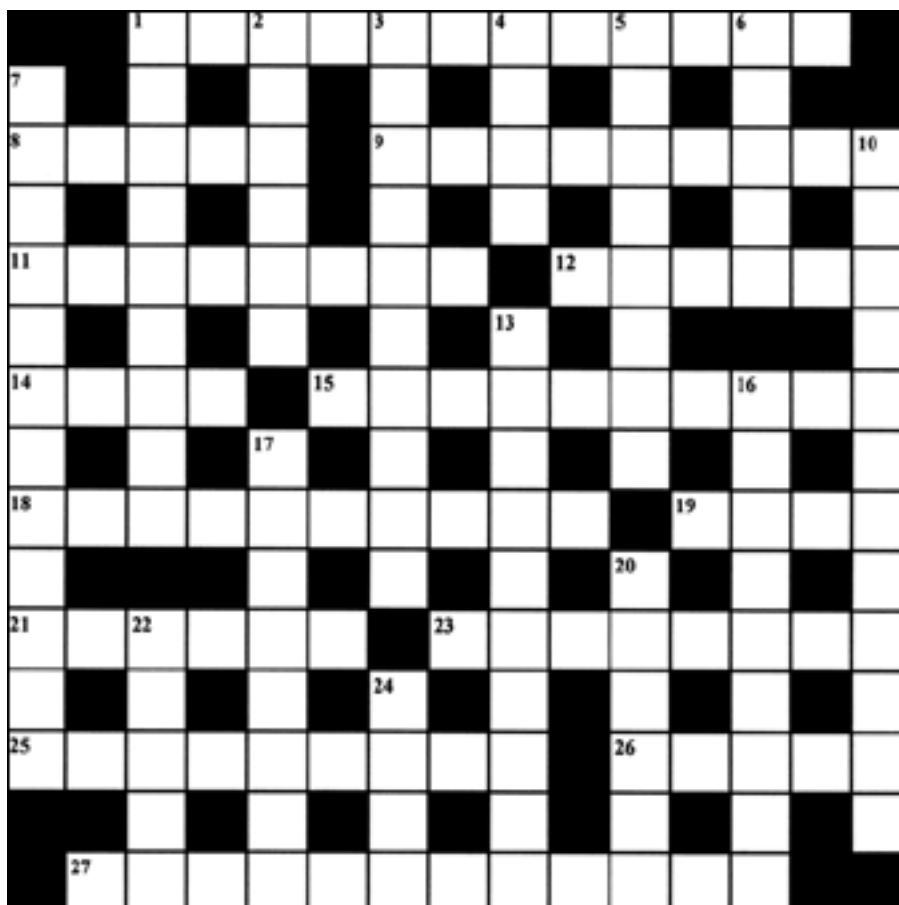
PARKE-DAVIS



For instructions on how to tackle a cryptic crossword, please see the first issue of CJRM ([1996;1:34-5](#)) or correspond with Lee Teperman, RR 5, Shawville QC J0X 2Y0; 819 647-3971 (tel and fax); bullhits@infonet.ca

The first physician to correctly answer Cryptic Crossword # 13 will receive a prize, compliments of Parke-Davis. To qualify, please fax, mail or email your completed crossword along with your name, address and telephone number to The Editor, CJRM, Box 1086, Shawville QC J0X 2Y0; fax 819 647-2845, cjrm@fox.nstn.ca

Readers can find the answers to Cryptic Crossword # 14 in the next issue of the journal. For the answers to [Crossword # 13](#) (Summer 1999 issue) see [page 235](#).



Across

1. Terribly kind as credit is exhausted (4,3,5)
8. Gold to the French and odd Brit (5)
9. Time-controlled recreation vehicle (9)
11. Bent a number of commandments to keep first commandment, say it ain't so (8)
12. Available for duty and make a good guess (2,4)
14. Ointment could make us die before operation (4)
15. Cautionary tale for man if alarm goes off (6,4)
18. Hope acting strangely enough to cause disease (10)

Down

1. Good person managed disease that's wasted on drugs (6,3)
2. Groomed for business with post-graduate education (6)
3. Very old solution related to relatively new class of drugs (10)
4. Drink and drive before noon (4)
5. Any lines can be drawn beyond reason (8)
6. A function to the north Ontario town (5)
7. Position given to an apt view (7,5)
10. Health technology will "give em heck," inventor says (12)

- | | |
|---|--|
| 19. In the morning papers (4) | 13. Frivolous point to men with absolute power (10) |
| 21. City with a capital district (6) | 16. High-ranking bureaucrat is wrong about nothing, same as the in-patient (9) |
| 23. Prime minister or fool in charge of messy condition (8) | 17. Very Catholic Queen attended by emergency room wizard (8) |
| 25. Ability to stand at greater height and what we look like from there, they say (9) | 20. Fruit pop carrying a benefit (6) |
| 26. Position inside an outsider (5) | 22. Eternal damnation I cross with this coil (5) |
| 27. Former president with type of flu gets non-stop 9 (7,5) | 24. A territory's colonists (4) |

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Letters / Correspondance

CJRM 1999;4(4):241-2.

Factor VIII inhibitor

We read with great interest the case report "Blood somewhere, blood nowhere, blood everywhere: Factor VIII inhibitor in a man in congestive heart failure" by Hutten-Czapski ([Can J Rural Med 1999;4\[2\]:83-5](#)). We would like to congratulate him on his wise and compassionate management of a very challenging medical emergency. Truly, acquired Factor VIII inhibitor is a rare condition occurring in 0.2 to 1 person per million annually. It can be life threatening owing to the difficulty in controlling the bleeding diathesis. Although death rates have been reported as high as 30%, the success rate is markedly improved if these patients are treated in specialized centres using the most recent available products.

We would like to introduce ourselves to your readers and emphasize a few points regarding the management of this patient. We are both members of the Association of Hemophilia Clinic Directors of Canada, a group of pediatric and adult hematologists with a special interest in bleeding disorders.

When evaluating a hospitalized patient with an elevated aPTT (activated partial thromboplastin time), the differential diagnosis should include the following: heparin contamination of the plasma sample, or the presence of a lupus anticoagulator or a coagulation factor deficiency (Factors XII, XI, IX and VIII). The latter may be due to either a congenital or an acquired defect or to the development of an acquired inhibitor. A heparin neutralization test, available in many hematology laboratories, can confirm or disprove the presence of heparin in the patient's plasma.

Mixing studies of equal volumes of patient and control plasma (not serum or normal saline) will further elucidate the cause of an elevated aPTT. Correction of aPTT to within 3 seconds of control would support a diagnosis of coagulation factor deficiency (or multiple defects as in a consumptive coagulopathy). The lack of correction, as in Hutten-Czapski's patient, suggests the presence of an inhibitor with the presence of a lupus anticoagulant being the next condition encountered most commonly. Factor VIII inhibitor would be a distant second diagnosis. Clinically, a useful indication is that patients with lupus anticoagulation rarely bleed, but patients

with fast Factor VIII inhibitor have a variable (usually severe) bleeding diathesis.

This patient had a second cause of hemostatic dysfunction due to long-term warfarin intake and would have required correction of the INR by the administration of vitamin K₁ to further lessen the risk of bleeding.

We believe that patients with a bleeding diathesis and rare coagulopathies (excluding palliative settings and patient refusal) should be managed in centres of expertise, where resources, experienced personnel and hemostasis laboratories are available. This would improve the outcome for this type of severely ill patient. It would be preferable to transfer this patient to the care of a facility that has an expert hematologist or to the nearest comprehensive hemophilia centre. These centres have access to specialized products such as re-combinant Factor VIIa (Niasase), activated prothrombin complex concentrates (Feiba), porcine Factor VIII (Hyate), recombinant Factor VII products (Kogenate, Recombinate) and plasmapheresis or immunoadsorption.

A useful source of information on the management of these patients is located at our Web site: <http://ahcdc.medical.org/index/html>, where the most recent "Suggestions for the management of patients with Factor VIII inhibitors" draft is available. This will be constantly updated by the Association of Hemophilia Directors of Canada and our Web-master welcomes comments to the site.

Congratulations again on your excellent management of a challenging patient.

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St. John's, Nfld.
Member
Society of Rural Physicians of Canada

Morel Rubinger, MD, FRCPC
Director
Hemophilia Program
Winnipeg, Man.

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2. Rubinger M, Houston DS, Schwetz N, Woloschuk DM, Israels SJ, Johnston JB. Continuous infusion of porcine Factor VIII in the management of patients with Factor VIII inhibitors. Am J Hematol 1997;56:112-8.

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Dr. Peter Hutten-Czapski responds

Drs. Scully and Rubinger make an important observation that this case is exceptional and, implicitly, say that most rural physicians who might encounter such a "zebra" should herd it to a subspecialized treatment centre. I certainly agree. On the other hand, it is just this type of exceptional case that draws the rural physician, textbook in hand (and, for that matter, to an Internet abstract search), way beyond the skills set in which s/he may feel comfortable. This happens again and again to any given country doctor, when the lack of local resources forces one to go and do "that which must be done."

"That which must be done" may mean that one needs to perform a rapid sequence induction for intubation of a head-injured patient or reduce an inverted uterus in a patient who has just delivered. These moments of sheer terror, with the knowledge that failure would kill the patient, will live vividly in my memory for the rest of my years. Similar moments live in the memories of all experienced rural doctors across the country.

Is this because we are cavalier? No, and this is important: it is done in the context of our knowledge of the inadequacy of local resources, health care teams and settings. Knowing our own limits and not being comfortable outside them is an important tool for all practitioners.

Knowing one's limits, and repeatedly running into them, explains why rural physicians have an appetite for discussing burr holes with the neurosurgeon and rapid sequence induction with the anesthetist. It's not that we want to become neurosurgeons or anesthetists; it's just that we might need to perform the skill, under duress, in the near future. The willingness to take the plunge into the struggle of self-doubt, when faced with urgent need, is a necessary attitude for all rural doctors.

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Literature / Littérature scientifique

CJRM 1999;4(4):244.

This issue's column focuses on rural obstetrics, both in Canada and internationally.

Provision of intrapartum care by GP/FPs in Canada: an update. Levitt C, Kaczorowski J. CMAJ 1999;160(6):815-6.

In this article Drs. Levitt and Kaczorowski, from McMaster University, report on the trends of involvement of GP/FPs with obstetrical care in Canada. The data are derived from fee-for-service billing data from the National Physician Database housed by CIHI and suggest that between 1984 and 1994 the proportion of total vaginal deliveries billed by GP/FPs declined from 54.8% to 45.0%. This represented an absolute decline of 22000 deliveries over the 11-year period. The authors state that "This decline probably reflects the decreased involvement of GP/FPs in the provision of intrapartum care in Canada." They also noted that this trend has particular significance in rural areas. "This shortage of human resources for obstetric care is already being felt in many rural areas of the US and Canada, where women must travel great distances and be separated from their families when they give birth."

Trends in small hospital obstetrics services in Ontario. Rourke JT. Can Fam Physician 1998;44(10):2117-24.

This article, focussing on rural hospitals in Ontario over a roughly comparable period (1988 to 1995), repeated a survey done in 1988 to compare the change in obstetric services provided in small Ontario hospitals over the 12-year span. Thirty-five hospitals were surveyed, and the author reported that this group of hospitals had "significantly fewer births, fewer family physicians attending births, and fewer GP anaesthetists in 1995 than in 1988." He also noted that "11 other hospitals that had provided active obstetric care in 1988 (defined as more than 25 births yearly),

no longer did so in 1995."

Obstetrics anyone? How family medicine residents' interests changed. Ruderman J. Can Fam Physician 1999;45(3):638-40, 643-7.

This study covers a 5-year period from 1991 to 1996 during which the attitudes of 4 consecutive family medicine resident cohorts were tracked with respect to their "attitudes and plans about practising obstetrics when they graduated." Two hundred and fifteen residents completed both entry and exit questionnaires. Results showed that although women had a greater interest in obstetrics both at entry and at exit, both men and women demonstrated a decrease in their interest by the time they graduated, (58% at entry and 49% at exit for women, and 31% at entry and 22% at exit for men). The study identified perceived lifestyle factors and compensation as "very important negative factors." The authors also concluded that the "intent to practise obstetrics after graduation was most closely linked to being a woman, intending to practise in a rural area, and having an interest in obstetrics prior to residency."

Outcomes in rural obstetrics, Atherton Hospital 1981-1990. Cameron B. Aust J Rural Health 1998;6(1):46-51.

Although lifestyle and compensation are significant barriers in the choice of taking up rural obstetrics, risk and liability also remain a concern in the minds of planners and practitioners alike. In this article, the author reports on audit data collected in far north Queensland in Australia over a 10-year period from 1981 to 1990. Over this period, "there were 2883 deliveries with an overall perinatal mortality of 5.2/1000." Even when the results were corrected for deaths occurring within the population, transferred because of complications such as prematurity or neonatal problems, the rates compared favourably with the overall rates for Queensland and the Far North Statistical Division which were 13.5/1000 and 16.9/1000 respectively.

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Out Behind the Barn / Dans le feu de l'action

Barrie McCombs, MD, CCFP, CCFP(EM)

CJRM 1999;4(4):245-6.

I got my education, out behind the barn, I ain't a-fooling, no-o-o sir-ee-ee/Passed each examination, out behind the barn, but it almost made a wreck out of me. -- As sung by Little Jimmy Dickens, circa 1950

"Out behind the barn" is a common rural metaphor for learning about life by first-hand experience. It is an apt title for a new column in the Journal, which will focus on how rural physicians can make the best use of medical information and computer technology in their practice. For the past 8 years, I've been involved in helping rural Albertan physicians keep up with the rapid changes in medical information. I hope this column will do the same for rural physicians in other provinces. This first column is a broad overview of some of the topics that will be covered in more detail in future issues of the Journal. It is based on questions that have been asked at our Medical Information Service (MIS)1 "Effective use of medical information" courses at the University of Calgary.

- What can I do if my patients are more computer literate than I am?

Many patients now use the Internet to find medical information. They have more time and motivation to look up information about their individual health problems. They can conduct their own searches of MEDLINE and can and do access online medical textbooks or other databases. It is common for them to bring the information that they find to their physicians. Because much of the medical information on the Internet is contradictory or even biased, physicians can play a role in interpreting this information and assessing its relevance to an individual patient. The process can take time but also helps you keep up-to-date.

- I have absolutely no computer experience. How can I get started?

Modern computers are very easy to use. It is difficult to make a serious mistake without the computer giving you a warning. Many of the participants in our MIS "Computer literacy for busy physicians" courses are retired physicians who now have the time to learn about new technologies. Local adult education programs usually teach courses on basic computer skills and the use of the most popular word-processing or database programs. In smaller communities, the school system might also have some useful resources. If necessary, hire a teenage whiz kid to teach you. Anecdotal reports from my computer literacy students suggest that your own children will rarely have the time or the patience to teach you properly.

- What computer would you recommend for a first-time purchase?

I have always used IBM-compatible computers, but the new iMac computers from Apple are very user-friendly. Be sure to buy from a vendor who provides good after-sale service and support. That is far more important than saving a few bucks at a discount dealer -- particularly dealers who sell many other wares besides computers. The most cost-effective machines are ones that are one or two steps below "state-of-the-art." They will meet your needs for at least the next 3 years, which is really all you can expect in the rapidly changing computer world.

Laptop computers have advantages for physicians who require medical information at multiple locations (home, hospital and office). They are always available and you don't have to share them with your staff or your kids. The small "hand-held" computers will fit into a jacket pocket, while their tiny cousins, the "palmtops" will fit into a shirt pocket. Both types are a useful way to carry medical information right to a patient's bedside. They are all capable of synchronizing information with your main computer at home or at the office. Some of the latest ones can record voice messages as well as digital data.

- Are CD-ROM-based medical textbooks as useful as the paper-based ones?

Textbooks on CD-ROM are compact, portable and much better indexed than their paper counterparts. The two that I recommend most to rural physicians are Harrison's Principles of Internal Medicine and Tintinalli's Emergency Medicine. Several Alberta hospitals have installed these books as part of a computer "information station" in their emergency department. Another popular program in the emergency setting is the excellent ACLS simulator from SimBioSys.

- Can I do MEDLINE searches on the Internet?

Yes. I recommend the free PubMed2 site, which is sponsored by the US National Library of Medicine. It is fast and easy to use -- even for a novice. The Canadian Medical

Association provides the OSLER3 Web site for its members. It is very powerful but requires some time and effort to use effectively. If you don't yet have a computer, consider having your Internet-literate patients do PubMed searches for you.

- Can I find the full text of medical journal articles on the Internet?

Many medical journals (including the Canadian Journal of Rural Medicine⁴) provide access to selected articles on their own Web site. Some will also send you their table of contents by email as soon as each issue is published. This trend was started by the British Medical Journal,⁵ which is one of the few major journals to provide full text of all their articles online.

- Can I use the Internet to find useful medical information for my patients or myself?

There are too many excellent medical sites to mention in one article. On our MIS Web site,¹ we provide links to some of the best ones available. We rate the sites as to their usefulness and make a special effort to identify Canadian sites. Another good index is Medical Matrix,⁶ where all the links have been peer reviewed by family physicians.

- What program do you recommend for searching the Internet?

There are many different search engine Web sites available. There are also some "meta-search engines" that will send the same search query to several major search engines simultaneously. My personal favourite is AltaVista,⁷ which has a basic mode for simple searches and an advanced mode that gives you more control over the search results. AltaVista also has a Canadian version⁸ that searches only Web sites based in Canada.

- Can journal readers make suggestions for topics to be addressed in future "Out Behind the Barn" columns?

Most certainly! This column is intended to meet the information needs of rural physicians. Suggestions will help keep me in touch with those needs. My email address is bmccombs@ucalgary.ca, or you can write to me care of the Canadian Journal of Rural Medicine.

Correspondence to: Dr. Barrie McCombs, Director, Medical Information Service, University of Calgary, 3330 Hospital Dr. NW, Calgary AB T2N 3Z9; fax 403 270-7285, bmccombs@ucalgary.ca, www.ruralnet.ab.ca/medinfo/

Web sites

1. MIS: <http://www.ruralnet.ab.ca/medinfo/>
2. PubMed: <http://www.ncbi.nlm.nih.gov/PubMed/>
3. OSLER: <http://www.cma.ca/osler/>
4. CJRM: <http://www.cma.ca/cjrm/>
5. BMJ: <http://www.bmj.com>
6. Medical Matrix: <http://www.medmatrix.org>
7. AltaVista: <http://www.altavista.com>
8. AltaVista Canada: <http://www.altavista.ca>

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Correction

CJRM 1999;4(4):246.

In the Summer 1999 issue of the Journal there is an error in the Country Cardiograms article: page 155, right-hand column, line 14-15 should read: "...but not finding these phenomena is not of diagnostic significance..." (the second "not" was omitted).

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Advanced skills by Canada's rural physicians

Table 1. Anesthetic services provided by rural general practitioner (GP) and specialty (Spec) anesthesiologists by region, 1995/96

Region	No. of GPs (and Specs)	Average no. of GP (and Spec) cases	Total services provided by GPs, %
East	18 (12)	641 (818)	53.9
Quebec	14 (50)	398 (532)	17.3
Ontario	127 (23)	824 (1828)	71.3
West	286 (24)	118 (427)	76.1
British Columbia	53 (14)	103 (663)	36.6
Canada	498 (123)	323 (797)	60.6

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Advanced skills by Canada's rural physicians

Table 2. GPs anesthetists by nationality of training by region, 1995/96

Region	No. of GP anesthetists	No. (and %) Canadian trained	No. (and %) of international medical graduates (IMGs)
East	18	10 55.6	8 44.4
Quebec	14	13 92.9	1 7.1
Ontario	127	105 82.7	22 17.3
West	286	152 53.1	134 46.9
British Columbia	53	35 66.0	18 34.0
Canada	498	315 63.3	183 36.7
Of rural Canada's 498 GP anesthetists, 58 also perform either cesarean section or appendectomy, or both (27 Canadian trained, 31 IMGs).			

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Advanced skills by Canada's rural physicians

Table 3. Appendectomy services provided by rural GPs and Specs by region, 1995/96

Region	No. of GPs (and Specs)	Average no. of GP (and Spec) cases	Total services provided by GPs, %
East	11 (21)	10 (9)	36.1
Quebec	1 (50)	1 (11)	0
Ontario	10 (43)	4 (15)	6.1
West	79 (31)	5 (15)	46.9
British Columbia	20 (6)	5 (11)	61.8
Canada	121 (151)	6 (13)	25.7

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Advanced skills by Canada's rural physicians

Table 4. GP appendectomy by nationality of training by region, 1995/96

Region	No. of GP surgeons	No. (and %) Canadian trained	No. (and %) of IMGs
East	11	4 (36.4)	7 (63.6)
Quebec	1	1 (100.0)	0
Ontario	10	6 (60.0)	4 (40.0)
West	79	26 (32.9)	53 (67.1)
British Columbia	20	10 (50.0)	10 (50.0)
Canada	121	47 (38.8)	74 (61.2)

[\[Back to text\]](#)

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Advanced skills by Canada's rural physicians

Table 5. Cesarean section services provided by rural GPs and Specs by region, 1995/96				
Region	No. of GPs (and Specs)		Average no. of GP (and Spec) cases	Total services provided by GPs, %
East	14	(14)	15 (26)	36.6
Quebec	15	(45)	9 (14)	17.8
Ontario	21	(33)	19 (16)	43.0
West	110	(32)	7 (26)	49.6
British Columbia	40	(7)	7 (15)	71.9
Canada	200	(131)	9 (19)	42.8

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Table 6. GP obstetricians doing cesarean section by nationality of training by region, 1995/96

Region	No. of GP obstetricians	No. (and %) Canadian trained		No. (and %) of IMGs
East	14	7	(50.0)	7 (50.0)
Quebec	15	15	(100.0)	0
Ontario	21	15	(71.4)	6 (28.6)
West	110	50	(45.5)	60 (54.5)
British Columbia	40	21	(52.5)	19 (47.5)
Canada	200	108	(54.0)	92 (46.0)

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Table 7. GPs providing maternity care in rural Canada, 1995/96				
Region	No. of GPs (and deliveries) providing care		GPs providing obstetrical care, %	Average no. of deliveries
East	164	(2 449)	26.1	15
Quebec	178	(5 331)	15.1	30
Ontario	417	(5 831)	32.4	14
West	654	(9 503)	54.1	15
British Columbia	291	(2 488)	52.1	9
Canada	1704	(25 602)*	35.0	15
*Represents 89.0% of all deliveries (excluding cesarean sections) in rural Canada.				

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Table 8. Surgical skills of rural (and Canadian trained) GPs, by region, 1995/96

Region	Appendectomy only	Cesarean section only	Appendectomy and cesarean section	Anesthesia and cesarean section/appendectomy
East	6 (4)	9 (6)	5 (0)	0
Quebec	0	12 (12)	1 (1)	0
Ontario	4 (2)	13 (10)	4 (1)	4 (4)
West	10 (2)	32 (20)	38 (14)	47 (19)
British Columbia	1 (1)	15 (9)	18 (8)	7 (4)
Canada	21 (9)	81 (57)	66 (24)	55 (27)

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Country cardiograms case 14: Wellens' sign

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The electrocardiogram shows deep symmetrical T-wave inversion in leads V2 to V5 but no pathological Q waves. In 1988, de Zwaan and colleagues¹ described a group of patients with this type of ECG abnormality, sometimes known as Wellens' sign, after one of the authors. Either at presentation or over the following few days, the ECG shows an isoelectric or minimally elevated takeoff of the ST segment in leads V3 and V2, followed by a concave or straight ST segment and a symmetrically inverted T wave. Sometimes these changes also involve V4 to V6. de Zwaan and colleagues found that these patients were at high risk of progression to myocardial infarction or death. At angiography there is almost invariably a tight stenosis of the proximal left anterior descending (LAD) coronary artery.

Even though Mrs Burnett remained well, it would be appropriate to discuss the case with a cardiologist with a view to urgent angiography. If she has to be sent home, I would consider maintaining her on low-molecular-weight heparin until angiography is done, even though there are no data to support that decision.

In real life Mrs. Burnett had a tight proximal LAD stenosis. She did well after stent insertion.

Reference

1. de Zwaan C, Bar F, Janssen A, Cheriex E, Dassen W, Brugada P, et al. Angiographic and clinical characteristics of patients with unstable angina showing an ECG pattern indicating critical narrowing of the proximal LAD coronary artery. *Am Heart J* 1989;117(3):657-65.

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