

Fall 2001 / automne 2001

*CJRM* 2001; 6(4)

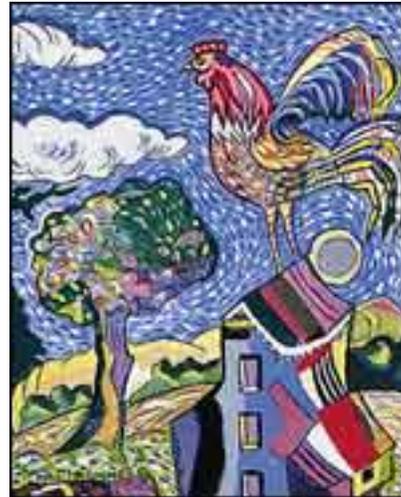
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**Cover: "Rooster on the Roof"**

Marcio Melo, Quyon, Que.  
Acrylic on masonite, 177 cm x 34 cm.

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**Features • Articles**

**Editorials • Éditoriaux**

- 241 [Crisis in rural anesthesia](#)  
*Robert F. Seal, MD*
- 245 [Crise de l'anesthésie en milieu rural](#)  
*Robert F. Seal, MD*
- 249 [President's message: Between here and there](#)  
*Peter Hutten-Czapski, MD*
- 251 [Message du président : Par monts et par vaux](#)  
*Peter Hutten-Czapski, MD*

**Original Articles • Articles originaux**

- 255 [Discussion paper on rural obstetrical analgesia and anesthesia](#)  
*Margaret Tromp, MD; Stuart Iglesias, MD*

263 [A survey of recently trained general practitioner anesthetists in Ontario. Part I: Does residency training adequately prepare them for practice?](#)

*Rob Sansom, MD; George Doig, MD; Kelly Morris, BSc*

271 [A survey of recently trained general practitioner anesthetists in Ontario. Part II: Does continuing medical education adequately meet their needs?](#)

*Rob Sansom, MD; George Doig, MD; Kelly Morris, BSc*

### **The Practitioner • Le praticien**

278 [The occasional laryngeal mask airway](#)

*T.C. O'Neill, MB*

### **Podium: Doctors Speak Out • La parole aux médecins**

282 [A primer on rural medical politics. 2: Federal/provincial jurisdictions](#)

*Keith MacLellan, MD*

## **Off Call • Détente**

### **Tales from Rural Practice • Les belles histoires de la pratique rurale**

285 [A week in the life of a GP anesthetist](#)

*T.C. O'Neill, MB*

## **Departments • Chroniques**

### **Letters • Correspondance**

289 Poor man's epidural

[M.J. Douglas, MD](#); response: [N. Leslie, MD](#)

292 Colles' fractures

[C.G. Moisey, MD](#); response: [G. Brock, MD](#)

### **Out Behind the Barn • Dans le feu de l'action**

293 [Anesthesia on the Web](#)

*Barrie McCombs, MD*

### **Literature • Litterature scientifique**

295 [Rural anesthesia](#)

### **[Author Information](#)**

**[RuralMed: the SRPC listserv](#)**

**[Service \(and advertising information\)](#)**

**Nov. 16–18, 2001  
Kananaskis, Alberta**

**Invitational Conference  
Maintenance of Competence Program  
for GPs in Rural Canada**

Plan to attend! An **Invitational Conference to Determine and Sustain a Maintenance of Competence Program for General Practitioner Anesthesiology in Rural Canada**. Kananaskis, Alta., Nov. 16–18, 2001. Hosted by the departments of Family Medicine and Anesthesiology at the universities of Calgary and Alberta, the SRPC, the College of Family Physicians of Canada and the Canadian Anesthesiologists' Society. Working groups will consider 6 issues:

- the essentials of a national curriculum;
- programs for maintenance of competence;
- accreditation and certification of programs, portability of privileges;
- the potential for simulation technology in the CME of GP anesthetists;
  - Physician Resource Plan for GP anesthetists; and
  - infrastructure options to support GP anesthetists.

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## Crisis in rural anesthesia

Robert F. Seal, MD, FRCPC

CJRM 2001;6(4):241-3

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There is a crisis in rural anesthesia! Those who practise anesthesia in a rural or remote setting are already aware of this on a personal level. The discussion that follows will attempt to come to terms with the magnitude of this problem and will touch upon some of the interrelated factors that are both part of the problem and part of the solution.

## Kananaskis Summit

This coming November, issues that are crucial to the sustainability of rural anesthesia in Canada will be addressed at a multidisciplinary summit in Kananaskis, Alberta. The rural anesthesia physician resource crisis is one measure of the severity and urgency of the problem. Data that will be presented in November suggest that the number of general practitioners providing anesthetic care has dropped by a staggering 22% between 1995 and 2000! This is a worsening of a trend that was previously identified in 1996 by the Canadian Anesthesiologists' Society (CAS).<sup>1</sup> The CAS physician resource survey showed a 32.6% decline in the number of family physicians providing anesthetic care had occurred in the previous decade. Rourke's survey of 35 small hospitals in Ontario in 1988 and again in 1995 also identified this trend.<sup>2</sup> During that interval there was a 24% decrement in the number of family practitioners providing anesthetic services.

## Anesthesia: a short practice life

Unfortunately, the physician resource crisis is worse than is indicated merely by the numbers. Rural anesthesia is plagued by a short practice life. A follow-up study in graduates of a family practice anesthesia-training program revealed the average anesthesia practice life span to be approximately 5 years.<sup>3</sup> At the conclusion of the follow-up period in 1996, 57.6% of the original trainees were not practising any anesthesia. Only 31.4% continued to provide family practice anesthesia, and 11% had completed specialty training in anesthesia.

## The greying of medicine

The rural anesthesia resource crisis is also worse than it appears at first glance due to the ageing of Canada's physician population. With some variation from province to province and between different fields of medical practice, between 25% and 35% of practising physicians are currently over the age of 55. It can be expected that most of them will retire within the next 10 years. This is a situation that is compounded by a lack of inflow of new physicians.

### New recruits are down

Most of the PGY3 training programs in anesthesia for family physicians are under subscribed. In addition, each year training positions specifically designated for re-entry or for advanced skills development for practising physicians go unfilled. Approximately one-third of individuals providing rural anesthesia received their anesthetic training outside of Canada.<sup>4</sup> Unless this domestic trend can be reversed, our reliance on physicians with foreign training will increase. However, the recruitment of foreign-trained physicians can be a complex process. There must be an established and appropriately funded evaluation mechanism to ensure that these physicians have anesthesia training and skills that satisfy Canadian standards.

### Training FPs

Canada and its provinces need to support anesthesia training of greater numbers of family physicians in order to compensate for the current shortfall as well as the rapidly approaching wave of retirements. Commitment to training positions in isolation will not solve the problem, if these positions continue to go unfilled. As well, one has to question the cost of training and the costs (including loss of income) incurred by the trainees if these individuals are destined for such a short practice life.

### Recruitment and retention

Therefore, rural anesthesia physician resource planning cannot be discussed in isolation. It is necessary to examine the factors that influence recruitment and retention. Lifestyle issues pertaining to home and family life, and recreation need to be addressed. Attention must be given to the demands of practice in a rural or remote location. Examples include length of working day, frequency of call, remuneration, and available practice relief to permit travel for vacation or meetings. The professional isolation goes beyond the difficulty of accessing continuing medical education (CME) locally or through travel, as there is also often a lack of interaction with anesthesia colleagues. Although of great benefit to their communities and colleagues, the acquisition of advanced skills in anesthesia, obstetrics or surgery can result in even more onerous on-call demands at the expense of a healthy personal and family lifestyle. Rourke's study indicated that many small hospitals in Ontario now had only 1 or 2 family physicians practising anesthesia in 1995 compared with 2 or 3 in 1988.<sup>2</sup>

What size or type of community must continue to support a rural anesthetic practice? There will continue to be a need for family physicians with training in anesthesia to provide anesthesia care and resuscitation

skills in nonurban and isolated communities. This need cannot be considered in isolation from the factors that determine the ability of a community to attract and retain physicians with surgical and obstetrical skills. Recent data (Canadian Medical Protective Association Database, Dr. John Gray: personal communication, 2001) suggest that the number of general practitioners who practise obstetrics has dropped by 29% in the past 5 years! Conversely, a rural surgical or obstetrical program is not going to survive without anesthesia coverage. Planning future human resource requirements for rural anesthesia also requires an analysis of the anticipated size and age composition of the rural population.

### Joint Position Paper on anesthesia training

Collaborative efforts of the Society of Rural Physicians of Canada (SRPC), the College of Family Physicians of Canada (CFPC), and the CAS have resulted in the publication of the Joint Position Paper on Training for Rural Family Physicians in Anesthesia (see insert with this issue of CJRM). Recommendations contained within this paper are directed at the issues that have been described above.

There must be an adequate number of appropriately funded anesthesia training positions for family physicians intending to practise in a rural or remote setting. As outlined in the enclosed Joint Position Paper on anesthesia training, this training should follow a curriculum tailored to optimally prepare physicians for this practice setting. There should be commonality of training program accreditation, core curriculum, and the evaluation of trainees in order to ensure graduate quality as well as to facilitate practice portability.

Ensuring sufficient physician resources in rural and remote communities can solve some of the practice and lifestyle issues. Permanent links must be established between the anesthesia training programs and the physicians practising in rural and remote settings. This includes potential CME opportunities such as outreach teaching, video-conference rounds, locum-tenens relief, and regularly scheduled CME events directed at the needs of the rural practitioner. These relationships can also meet needs such as access to consultation, quality assurance, peer review, as well as advice or assistance pertaining to anesthesia machines, monitors, and pharmaceuticals. In certain locales such opportunities already exist. However, it must be recognized that most of this will require new initiatives supplemental to existing services. Implementation will be challenging due to the current environment of physician overwork and poor morale. Therefore, realization of these initiatives will require funding both for the providers and the participants.

### Participation of the CAS

The CAS will participate in this process through collaboration with the Association of Canadian University Departments of Anesthesia (ACUDA) and the individual departments represented by ACUDA. The CAS offers formal CME not only through its annual national meeting, but also through regional and provincial meetings. The latter meetings, which have grown considerably in size and scope, are more accessible to the rural practitioner. Many of the provincial and regional meetings already include content directed at the rural practitioner and seek involvement by rural physicians in planning

their CME content. Nationally, in order to plan the content of the annual general meeting, there is a standing position for a rural family physician on the CAS Scientific Affairs Committee. In order to improve communication between organizations and to enable participation on other relevant committees, the CAS is prepared to support the formation of a Section of Rural Anesthesia within its organization. It is hoped that these links combined with accessible and appropriate CME can decrease professional isolation as well as provide the knowledge, skills and interest that will result in a longer and more satisfying anesthesia practice life for rural physicians.

Those familiar with the 1988 Report of the CMA Invitational Meetings on the Training of General Practitioners/Family Physicians to Provide Anesthesia Services (Webber Report) know that these recommendations are not new. Further collaboration amongst the SRPC, the CFPC, and the CAS will be essential to the creation and maintenance of the mechanisms necessary to enact these recommendations. This next step will require the commitment and involvement of the provincial and federal governments as well as the faculties of medicine and their respective departments of anesthesia, family medicine, and continuing medical education.

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President, Canadian Anesthesiologists' Society, and Associate Clinical Professor and Vice-Chair, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alta.

Correspondence to: Dr. Robert F. Seal, Department of Anesthesiology and Pain Medicine, University of Alberta, 3B2.32 WMC, 8440 – 112 St., Edmonton AB T6G 2B7; [rseal@gpu.srv.ualberta.ca](mailto:rseal@gpu.srv.ualberta.ca)

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[Table des matières automne 2001](#)

Crise de l'anesthésie en milieu rural

Robert F. Seal, MD, FRCPC

CJRM 2001;6(4):245-7

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L'anesthésie en milieu rural est en état de crise! Ceux qui pratiquent l'anesthésie en milieu rural et éloigné s'en sont déjà rendu compte personnellement. L'exposé qui suit vise à circonscrire l'ampleur du problème et traitera de certains des facteurs interreliés qui font partie aussi bien du problème que de la solution.

Sommet de Kananaskis

En novembre prochain, les questions qui sont essentielles à la viabilité de l'anesthésie en milieu rural au Canada seront abordées lors d'un sommet pluridisciplinaire à Kananaskis (Alberta). La crise des effectifs médicaux qui a éclaté dans le domaine de l'anesthésie en milieu rural est une indication de la gravité et de l'urgence du problème. Les données qui seront présentées en novembre indiquent qu'entre 1995 et 2000, le nombre d'omnipraticiens dispensant des soins en anesthésie a accusé une baisse renversante de 22 %! Cette dégringolade est le fruit de l'aggravation d'une tendance que la Société canadienne des anesthésiologistes (SCA) avait déjà cernée en 1996<sup>1</sup>. L'enquête sur les effectifs médicaux de la SCA a démontré qu'au cours de la décennie précédente, le nombre de médecins de famille assurant la prestation de soins en anesthésie avait chuté de 32,6 %. L'enquête de Rourke menée en 1988 et de nouveau en 1995 auprès de 35 hôpitaux de taille modeste de l'Ontario avait également relevé cette tendance<sup>2</sup>. Pendant cette période, le nombre de médecins de famille fournis-sant des services d'anesthésie a chuté de 24 %.

L'anesthésie : une pratique de courte durée

Malheureusement, la crise des effectifs médicaux est plus grave que ne l'indiquent les seuls chiffres. La courte durée de la pratique ronge l'anesthésie en milieu rural. Une étude de suivi réalisée auprès des diplômés d'un programme de formation en anesthésiologie de médecine familiale a révélé que la durée de vie moyenne de la pratique de l'anesthésie s'établit approximativement à 5 ans<sup>3</sup>. Au terme de la période de suivi en 1996, 56,6 % des premiers stagiaires ne pratiquaient pas l'anesthésie. Seulement 31,4 % avaient continué à dispenser des services d'anesthésie en médecine familiale, et 11 % avaient complété une formation spécialisée en anesthésie.

## La médecine grisonne

La crise des ressources humaines de l'anesthésie en milieu rural est également plus grave qu'elle ne paraît à première vue, à cause du vieillissement de la population des médecins au Canada. Suivant certaines variations entre les provinces et les différents domaines de la médecine, à l'heure actuelle, entre 25 et 35 % des médecins actifs sont âgés de plus de 55 ans. On peut s'attendre à ce que la plupart d'entre eux prennent leur retraite d'ici 10 ans. L'afflux insuffisant de nouveaux médecins complique cette situation.

### Moins de nouvelles recrues

L'effectif de la plupart des programmes de formation postdoctorale de niveau 3 en anesthésie pour les médecins de famille n'est pas suffisant. En outre, à chaque année, des postes de formation conçus précisément pour la réintégration ou pour le perfectionnement des compétences spécialisées des médecins actifs ne sont pas comblés. Autour du tiers des intervenants qui dispensent des services d'anesthésie en milieu rural ont reçu leur formation à l'extérieur du Canada<sup>4</sup>. À moins qu'il ne soit possible de renverser cette tendance nationale, nous serons de plus en plus dépendants envers les médecins formés à l'étranger. Le processus de recrutement de médecins diplômés à l'étranger peut toutefois s'avérer complexe. Il faudra un mécanisme d'évaluation établi et accompagné des fonds voulus pour vérifier que ces médecins ont une formation et des compétences spécialisées en anesthésie qui satisfont aux normes canadiennes.

### Formation des médecins de famille

Le Canada et ses provinces doivent soutenir la formation en anesthésie d'un plus grand nombre de médecins de famille afin de compenser l'écart défavorable qu'on constate actuellement de même que la vague de retraite qui s'approche rapidement. Le seul engagement envers les postes de formation ne permettra pas de résoudre le problème si ces postes demeurent vacants. De même, il faudrait remettre en question le coût de la formation et les frais engagés par les stagiaires (y compris la perte de revenu) s'ils ne doivent pratiquer que pendant si peu de temps.

### Recrutement et maintien des effectifs

Par conséquent, il ne convient pas de se pencher seulement sur la planification des effectifs médicaux pour les services d'anesthésie en milieu rural. Il faut examiner les facteurs qui ont une incidence sur le recrutement et le maintien des effectifs. Les questions de style de vie se rapportant à la vie à domicile et en famille et aux besoins de loisirs doivent être abordées. Il faut prêter attention aux exigences de la pratique en milieu rural et éloigné, par exemple, la durée de la journée de travail, la fréquence des périodes de garde, la rémunération, et la disponibilité des services de relève qui permettent aux médecins de voyager pendant leurs vacances ou de participer à des réunions à l'extérieur. L'isolation professionnelle va plus loin que les difficultés que pose la participation, localement ou à l'extérieur, à un programme d'éducation médicale continue (EMC), puisqu'il y a très souvent trop peu d'échanges avec les collègues en anesthésie. Malgré les grands avantages qu'elle suppose pour la communauté et les collègues des

médecins en milieu rural, l'acquisition de compétences poussées en anesthésie, en obstétrique ou en chirurgie peut aboutir à des exigences de garde encore plus lourdes au détriment d'un style de vie personnel et familial équilibré. L'étude de Rourke a indiqué que bon nombre des hôpitaux de taille modeste de l'Ontario comptaient seulement un ou deux médecins de famille pratiquant l'anesthésie en 1995, par rapport à deux ou trois en 1988<sup>2</sup>.

Quels sont le type et la taille des communautés qui doivent continuer à appuyer l'anesthésie en milieu rural? Dans les milieux non urbains et isolés, il y aura encore un besoin de soins en anesthésie et de techniques de réanimation appliqués par des médecins de famille ayant reçu une formation en anesthésie. Impossible d'examiner ce besoin sans compter les facteurs qui déterminent la capacité d'une communauté à attirer et à maintenir en poste des médecins ayant des compétences spécialisées en chirurgie et en obstétrique. Des données récentes (Association canadienne de protection médicale, Dr John Gray : communication personnelle, 2001) indiquent que le nombre d'omnipraticiens qui pratiquent l'obstétrique est tombé de 29 % ces cinq dernières années! En retour, un programme de chirurgie ou d'obstétrique en milieu rural ne survivra pas sans anesthésiologie. La planification des futurs besoins de ressources humaines pour l'anesthésie en milieu rural devra aussi reposer sur une analyse des estimations de la taille et de la composition selon l'âge de la population rurale.

### Énoncé de principe conjoint sur la formation en anesthésiologie

Les efforts de collaboration de la Société de la médecine rurale du Canada (SMRC), du Collège des médecins de famille du Canada (CMFC) et de la SCA ont abouti à la publication de l'Énoncé de principe conjoint sur la formation en anesthésiologie pour les médecins de famille du milieu rural (voir encart dans le présent numéro du JCMR). Les recommandations formulées dans l'exposé portent sur les enjeux décrits ci-dessus.

Il doit y avoir suffisamment de postes de formation en anesthésie, appuyés du financement voulu, pour les médecins de famille qui ont l'intention de pratiquer en milieu rural ou éloigné. Comme l'indique l'exposé de principe conjoint sur la formation en anesthésiologie, ci-annexé, la formation dispensée devrait reposer sur un programme d'études visant précisément à préparer le mieux possible les médecins à ce contexte de pratique. Il faudrait pratiquer une uniformisation quant à l'agrément des programmes de formation, aux programmes d'études de base et à l'évaluation des stagiaires afin d'assurer la qualité des diplômés et de faciliter la transférabilité de la pratique.

L'assurance de la suffisance des effectifs médicaux en milieu rural et éloigné peut résoudre certains des problèmes liés à la pratique et au style de vie. Il faut établir des liens permanents entre les programmes de formation en anesthésiologie et les médecins qui pratiquent en contexte rural et éloigné. Ces liens supposent des occasions d'EMC comme l'enseignement itinérant, des séances de vidéoconférence, les services de remplacement, et des activités régulières d'EMC articulées autour des besoins des praticiens en milieu rural. Ces liens permettraient également de répondre à des besoins comme l'accès aux consultations, l'assurance qualité, l'examen critique par les pairs de même que des conseils et de l'aide concernant les appareils, les moniteurs et les produits pharmaceutiques d'anesthésie. De pareilles

occasions se présentent déjà dans certaines localités. Il importe toutefois de reconnaître qu'il faudra, dans la plupart des cas, mettre en place de nouvelles initiatives pour compléter les services existants. La mise en œuvre sera ardue dans le contexte actuel de surmenage et de moral à la baisse chez les médecins. La réalisation de ces initiatives nécessitera par conséquent un financement aussi bien pour les prestataires que pour les participants.

## Participation de la SCA

La SCA contribuera au processus en collaboration avec l'Association canadienne universitaire des départements d'anesthésie (ACUDA) et avec des départements que l'ACUDA représente. La SCA offre de l'EMC structurée non seulement dans le cadre de son assemblée nationale annuelle, mais également lors de réunions régionales et provinciales. Ces réunions, qui ont pris beaucoup d'ampleur, tant sur le plan de la taille que de la portée, sont plus facilement accessibles aux médecins en milieu rural. Bon nombre des réunions provinciales et régionales portent déjà sur des questions consacrées aux médecins du milieu rural, et ceux-ci sont invités à y participer pour élaborer le contenu des programmes d'EMC. À l'échelon national, le Comité des affaires scientifiques de la SCA compte un poste permanent à l'intention d'un médecin de famille du milieu rural, pour les besoins de l'élaboration du contenu de son assemblée générale annuelle. Dans le dessein d'améliorer la communication entre les organisations et de favoriser la participation à d'autres comités pertinents, la SCA est prête à soutenir la formation d'une division de l'anesthésiologie en milieu rural au sein de son organisation. On espère que ces liens, conjugués aux programmes d'EMC accessibles et appropriés, permettront de contrer l'isolation professionnelle tout en présentant des connaissances, des compétences spécialisées et des intérêts qui conduiront les médecins du milieu rural à une pratique en anesthésie plus longue et satisfaisante.

Ceux qui connaissent le rapport de 1988 sur les réunions invitation de l'AMC portant sur la formation dispensée aux omnipraticiens et aux médecins de famille pour la prestation de services d'anesthésie (rapport Webber) savent que ces recommandations ne sont pas nouvelles. Il est crucial pour la création et le maintien des mécanismes nécessaires à l'adoption de ces recommandations que la SMRC, le CMFC et la SCA collaborent de nouveau. Cette prochaine étape devra reposer sur l'engagement et la participation des gouvernements provinciaux et fédéral de même que des facultés de médecine et de leurs départements respectifs d'anesthésie, de médecine familiale et d'éducation médicale continue.

Intérêts concurrents : Aucun déclaré.

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Président, Société canadienne des anesthésiologistes, et professeur clinique agrégé et vice-président, Département d'anesthésiologie et d'analgésie, Université de l'Alberta, Edmonton (Alberta)

Correspondance : D<sup>r</sup> Robert F. Seal, Department of Anesthesiology and Pain Medicine, University of Alberta, 3B2.32 WMC, 8440 – 112 St., Edmonton AB T6G 2B7; [rseal@gpu.srv.ualberta.ca](mailto:rseal@gpu.srv.ualberta.ca)

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President's message: Between here and there

Peter Hutten-Czapski, MD  
Haileybury, Ont.

CJRM 2001;6(4)249

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The Society of Rural Physicians of Canada, in its short 9-year history, has developed an expertise in writing position and policy papers. If we haven't become good at it we have at least been prolific — witness our corporate bibliography. A particularly fine jewel in our cap is the Joint Position Paper on Training for Rural Family Physicians in Anesthesia, published as an insert in this issue of the Journal.

While we have every right to be proud of our agenda and the papers that elaborate it, moving it forward is always our frustration. We often forget that moving a good idea into production takes time. New graduates shrug their shoulders at "call is compensable." Something so "obvious" must always have been so. However, 6 years ago it was the war cry behind the rural revolution that swept the country.

Another truth that is becoming "obvious" is that there is no better provider of anesthesia for rural Canada than the GP anesthetist (GPA) with either 6 or, more recently, 12 months' training. Acute care services in rural hospitals are made sustainable by the 3-legged stool of obstetrics, anesthesia and surgery. If your community loses any of these services, the other 2 services are at risk, and the community's ability to look after its own diminishes. It is only one step further to turning the hospital into a home for the aged, as has been done in many a rural community. Sustaining the skills needed to prevent this is an important task.

With this publication we now have our second paper that explicitly recognizes the continuing value for rural areas of the broadly skilled generalist. In effect, we have an attestation to the sharing of advanced skill sets between specialists and rural generalists for the provision of advanced maternity skills and cesarean section,<sup>1</sup> and now for anesthetics.

Like previous truths, getting rural doctors, family medicine, and a specialty society together to sign off on a joint rural position paper is a story in itself. Walking in the corridors between the back rooms, I cannot help but notice that the system is not naturally rural-friendly. Many people have difficulty with the concept of a powerful and dynamic rural advocacy group.

Naming names is not something that a sitting president of the SRPC will do, but Keith MacLellan as past president is at greater liberty. He gets very close in his continuing exposé of Canadian medical politics (see [page 282](#)).<sup>2</sup> Strange things happen in the shadows to move us forward.

Moving this particular Joint Position Paper forward is the story of another SRPC accomplishment — the [Invitational Conference](#) to Determine and Sustain a Maintenance of Competence Program for GP Anesthesiology in Rural Canada, to be held in Kananaskis, Alta., this November. GPAs from the field, specialist colleagues, and the family medicine and anesthesia training programs will meet to work on putting life and real world application to the words in this issue. Wish them and the Society good will and open minds, so that we can continue to serve rural Canadians to the best of our abilities.

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Correspondence to: [phc@srpc.ca](mailto:phc@srpc.ca)

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[Table des matières automne 2001](#)

Message du président : Par monts et par vaux

Peter Hutten-Czapski, MD  
Haileybury (Ont.)

CJRM 2001;6(4):251

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En neuf ans à peine, la Société de la médecine rurale du Canada a acquis des compétences dans la rédaction d'exposés de principe et de documents stratégiques. En fait, si nous ne sommes pas devenus compétents en la matière, nous avons été pour le moins prolifiques, comme en témoigne notre bibliographie générale. Le Principe conjoint sur la formation en anesthésiologie pour les médecins de famille du milieu rural, publié sous forme d'encart joint au présent numéro du Journal, est un joyau particulièrement fin de notre collection.

Même si nous avons parfaitement le droit d'être fiers de notre programme et des documents qui le constituent, les démarches visant à le faire progresser sont toujours sources de frustration. Nous oublions souvent qu'il faut du temps pour mener une bonne idée jusqu'à sa réalisation. Les nouveaux diplômés répondent d'un haussement d'épaules à l'affirmation selon laquelle «le service de garde mérite rémunération». Quelque chose d'aussi «évident» doit l'être depuis toujours. Pourtant, il y a six ans, les cris de guerre de la révolution rurale balayaient le pays.

Au Canada, il n'y a pas meilleur prestataire de services d'anesthésie en milieu rural que l'omnipraticien anesthésiste (OPA) ayant suivi une formation de six mois, ou plus récemment, de 12 mois, et c'est en voie de devenir une autre vérité «évidente». Dans les hôpitaux ruraux, la viabilité des services de soins actifs repose sur le trépied que composent l'obstétrique, l'anesthésie et la chirurgie. Si votre communauté perd l'un de ces services, les deux autres sont compromis, et la capacité de la communauté de s'occuper des siens est réduite. On en est alors qu'à un pas de faire de l'hôpital un foyer pour personnes âgées, à l'instar de nombreuses communautés rurales. Il importe de maintenir les compétences spécialisées nécessaires pour éviter cette situation.

Cette publication est le deuxième document qui reconnaît explicitement la valeur continue en milieu rural des généralistes ayant de vastes compétences spécialisées dont nous disposons. En fait, il s'agit d'une attestation quant au partage des compétences spécialisées poussées entre les spécialistes et les généralistes du milieu rural pour la prestation de perfectionnement avancé en maternité et césarienne<sup>1</sup> et maintenant en anesthésie.

À la manière des vérités décrites précédemment, le rassemblement de médecins du milieu rural, de représentants de la médecine familiale et d'une société de spécialité pour la signature d'un exposé de principe conjoint sur la médecine rurale compose, en soi, toute une histoire. Parcourant les couloirs entre les antichambres, je ne peux faire autrement que de constater que le système n'est pas naturellement favorable aux milieux ruraux. Le concept d'un groupe puissant et dynamique d'intervention en faveur de la médecine rurale pose des problèmes à un bon nombre.

Le président en poste de la SMRC ne doit pas dévoiler de noms, mais Keith MacLellan, en sa qualité de président sortant, jouit de plus de liberté, et il s'en approche drôlement dans le cadre de sa dénonciation continue des politiques médicales canadiennes (voir [page 282](#))<sup>2</sup>. Il se déroule dans l'ombre des choses étranges pour nous faire progresser.

À l'appui de l'exposé de principe conjoint dont il est question ci-dessus, figure une autre réalisation de la SMRC : la [conférence invitation](#) en vue de déterminer et de maintenir un programme de compétences spécialisées pour les omnipraticiens anesthésistes des milieux ruraux au Canada, qui se déroulera à Kananaskis (Alberta) en novembre prochain. Des OPA de la base, leurs collègues spécialistes et des représentants des programmes de formation en médecine familiale et en anesthésiologie se réuniront pour donner de la vitalité et des applications dans le monde réel aux discours qui entourent cette question. Souhaitez que la Société et ses intervenants feront preuve de bonne volonté et d'ouverture d'esprit, afin que nous puissions continuer de servir les intérêts des Canadiens du milieu rural au meilleur de nos compétences.

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Correspondance : [phc@srpc.ca](mailto:phc@srpc.ca)

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Discussion paper on rural obstetrical analgesia and anesthesia

Margaret Tromp, MD, CCFP  
Stuart Iglesias, MD

CJRM 2001;6(4):255-9

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
- [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)

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This paper was prepared by the Anesthesia Committee of the Society of Rural Physicians of Canada. It aims to promote discussion about issues that arise in the provision of obstetrical analgesia and anesthesia services in rural hospitals. It proposes the following recommendations: 1) obstetrical regional analgesia may be provided in a facility that does not provide cesarean section; 2) a physician who does obstetrics may provide regional analgesia to his or her own patient; 3) an appropriately trained physician who does not have skills to initiate an epidural may provide "top-ups" to an already established epidural; and 4) an appropriately trained physician who does not have general anesthesia skills may provide intrathecal opioids for labour analgesia.

Le présent document a été rédigé par le Comité d'anesthésie de la Société de la médecine rurale du Canada. Il vise à encourager la discussion au sujet des questions que soulève la prestation de services d'analgésie et d'anesthésie en obstétrique dans les hôpitaux ruraux. Les recommandations suivantes sont présentées : 1) une analgésie régionale obstétrique pourrait être offerte dans un établissement où on ne pratique pas de césarienne; 2) un médecin pratiquant l'obstétrique pourrait administrer l'analgésie régionale à ses propres patientes; 3) un médecin ayant reçu la formation appropriée, sans toutefois posséder les compétences spécialisées nécessaires pour amorcer une péridurale, pourrait administrer des bolus périduraux dans un cathéter déjà installé; 4) un médecin ayant reçu la formation appropriée, sans toutefois avoir des compétences spécialisées en anesthésie générale, pourrait administrer des opioïdes intrathécaux comme analgésie au cours du travail.

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
-

The majority of rural women, if given the choice, would choose to deliver in their community hospitals, supported by family and friends. They prefer a non-interventionist approach to the management of their labour and delivery. Ideally, they want to be able to control any discomfort, using nonpharmacologic means (Alberta Medical Association. Final Report of the Ad Hoc Committee on Epidural Analgesia in Labour and Delivery: unpublished data, 1996). Rural maternity units are generally capable and experienced in supporting women who make these choices. In 1998, the Joint Working Group of the Society of Rural Physicians of Canada (SRPC), the College of Family Physicians of Canada (CFPC) Committee on Maternity Care, and the Society of Obstetricians and Gynaecologists of Canada (SOGC) published their Joint Position Paper on Rural Maternity Care.<sup>1</sup> It strongly supports the delivery of maternity care in rural Canada.

Women want to maintain a sense of control throughout their labour and delivery, to have a realistic idea of how much pain they may experience and to know the options available to control this pain. For some women the pain associated with labour and delivery becomes intolerable. It causes them to lose their sense of control and significantly detracts from the birthing experience. These women want to have a reliable method of analgesia available to them, should they need it. They want to maintain the right to change their minds about management options should their experience be different from what they anticipated. Since epidural analgesia is the most consistent and reliable method of analgesia for labour and delivery, it should always remain an option.

As rural women become more aware of analgesia options for labour, they are requesting access to such options, and many are receiving them. Physicians who provide these services are requesting guidance from their peers on the appropriate provision of these services.

The CAS updated its "Guidelines for obstetrical regional analgesia" in 1999.<sup>2</sup> The CAS also publishes annual updates to its "Guidelines to the practice of anesthesia."<sup>3</sup> These guidelines do not specifically address issues that arise in rural communities, where most anesthetics are provided by non-FRCPC anesthetists. Family physicians (FPs) may have skills in both obstetrics and regional analgesia and anesthesia. However, in rural areas, physician manpower is often limited; therefore, there is a need for FPs to be multi-skilled in order to support each other in providing services to their patients and communities. Finally, not all communities have cesarean section capability. This discussion paper was prepared by the Anesthesia Committee of the SRPC to promote discussion about these issues, including the training issues.

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
-

## Distinction between obstetrical analgesia and anesthesia

### Analgesia

It is important to distinguish between obstetrical analgesia and anesthesia. Obstetrical analgesia includes a range of techniques for which the primary aim is to decrease the discomfort and pain associated with labour and vaginal delivery. Ideally, motor power and sensation, particularly perineal sensation, should remain intact so that the mother will feel the descent of the fetal head, get the urge to push and then be able to push effectively in the second stage. Regional techniques to provide analgesia include intrathecal opiates, epidural analgesia (including patient-controlled epidural analgesia [PCEA]), and combined spinal epidural analgesia. Once stabilized, a patient receiving epidural analgesia without large bolus injections may be monitored by an appropriately trained nurse.

### Anesthesia

Anesthesia is used for operative delivery and aims to block pain, sensation and motor fibres. A dense motor block is intended, to make the delivery technically easier.<sup>4</sup> Regional techniques to provide anesthesia include epidural anesthesia and spinal anesthesia. Anesthetic techniques use much higher concentrations of local anesthetics than do analgesic techniques and, because of the dense block obtained, require the continuous presence of an anesthetist to monitor the patient.

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### Contents

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
- 

### Epidural analgesia and operative delivery

There is no evidence that epidural analgesia increases the risk of cesarean section. Most importantly, a Medline search found no evidence that epidural analgesia increases the risks for urgent cesarean section. The literature suggests there is an association between epidural analgesia and cesarean delivery for dystocia or failure to progress. However, there is controversy as to whether this represents a causal relationship.<sup>5</sup> A recent meta-analysis concluded that it does not.<sup>6</sup> Women who have dystotic labour usually have more painful labour and are more likely to request epidural analgesia. Conversely, women who have rapid coordinated labour are less likely to request epidural analgesia.

Most of the literature<sup>7</sup> suggests that operative vaginal delivery (vacuum or forceps) is increased in women who receive epidural analgesia. However, much of this literature accumulated when higher-dose epidurals were used and when the second stage of labour was limited to 2 hours. It is suggested that using low-dose or "walking" epidurals<sup>8</sup> and allowing the second stage to progress slowly will decrease the rate of

operative vaginal delivery.<sup>9</sup>

Until these questions can be answered more definitively, it is the responsibility of the physician to provide the woman with information about epidural analgesia so that she can make an informed choice.

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
- 

### Hospitals without cesarean section capability

Many rural hospitals that offer maternity care do not have cesarean section capability. These hospitals must have protocols for patient transfer to another institution should the need arise.<sup>10</sup> A woman's request for epidural analgesia may be a sign that labour is not progressing well and that she is at increased risk for cesarean delivery for dystocia. However, many women with normal labours request epidural analgesia; most studies suggest that if epidural analgesia is available, about 50% of women will request it.<sup>11</sup> Therefore, a woman's suitability for delivery in a hospital without operative delivery must be judged by obstetrical factors and not solely by her choice of analgesic technique.

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
- 

### Defining the role of the attending physician

Some rural physicians have both obstetric and anesthetic skills. CAS guidelines state that during initiation of obstetrical regional analgesia, the physician should be immediately available until analgesia is established and the patient's vital signs are stable. In contrast, when continuous infusion or PCEA are used it must be possible to contact the anesthetist for advice and direction, but the continuous presence of the anesthetist is not required.<sup>2</sup> If a physician initiates an epidural but then obstetrical skills are required prior to the patient stabilizing, a second physician should be called in. The two physicians may decide between them who is most appropriate to provide the obstetrical intervention and who should continue providing the analgesia. The second physician should be available as per the SOGC "Attendance at labour and delivery" policy statement,<sup>10</sup> which states that for a community or rural hospital, a physician must be available for the labour and delivery room within approximately 30 minutes and must be prepared to respond promptly to requests from hospital staff. In contrast, once the patient is stabilized it is appropriate for the initiating physician to manage the patient's labour and delivery, as well as provide advice and

direction for the epidural.

## Removal of the placenta

There has been discussion about the appropriate attendance of the physician for manual removal of the placenta and operative vaginal delivery. For manual removal of the placenta, the appropriate attendance by the physician can be determined by whether analgesia or anesthesia is being provided. If a woman is receiving epidural analgesia and a decision is made to use the epidural catheter to provide anesthesia by injection of high-dose boluses of local anesthetics, one physician must provide the anesthetic and monitor the patient. A separate physician should do the removal of the placenta.

In contrast, if the manual removal is done without topping-up the epidural, it is appropriate for the same physician to do the obstetrical procedure. In this scenario the appropriate attendance is not determined by the procedure performed but by whether analgesia or anesthesia is being provided. An analogous situation is the reduction of a dislocated shoulder, which could be done in the emergency department (ED), where the procedural physician provides appropriate systemic analgesia and reduces the shoulder. Or, it could be done in the operating room, where the procedural physician needs an anesthetist to provide the required level of unconsciousness.

## Operative delivery

The decision tree with respect to operative delivery is somewhat different. First, if anesthesia is required in the form of a high-dose bolus, then a second physician is clearly needed. The reasoning is identical to that used for the manual removal of the placenta. Second, depending on the indications for the operative delivery and the degree of difficulty anticipated, it is often the case that a second physician will be required for anticipated neonatal resuscitation.

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### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
- 

## Training and the management of complications

The SRPC supports the concept that physicians acquire skills appropriate for their practice and community. For physicians to perform a procedure, they must know how to safely manage any complications of the procedure. Management options may include seeking the assistance of other physicians in the community or in the regional referral centre or, on occasion, referring the patient to the regional centre. The physician must be able to stabilize any acute complications that occur as a result of the procedure. In some communities it may be appropriate for a physician who does not have general anesthesia skills to acquire some obstetrical analgesia skills, as discussed below.

## "Top-ups"

In many obstetrical units, nurses do "top-ups" as a "transfer of function." In the section "Maintenance of regional labour analgesia" of the CAS guidelines,<sup>2</sup> item 3 states:

Bolus dose of local anesthetics through the epidural catheter, or through a catheter or needle presumed to be in the epidural space, can cause immediate, life threatening complications [emphasis ours]. For this reason, when a bolus dose of local anesthetic is injected through the epidural catheter (except PCEA), an anesthesiologist must be available to intervene appropriately should any complications occur. The intent of the phrase "available to intervene appropriately" is that individual Departments of Anesthesiology should establish their own policies regarding the availability of an anesthesiologist to manage any complications of regional analgesia. Each Department should consider the possible risk of bolus injection of local anesthetics and the methods of dealing with emergency situations in developing these policies.

In some rural hospitals, it may be more appropriate to train other physicians to provide the "top-ups," within the guidelines above and within the accepted protocols for transfer-of-function responsibilities.

## Intrathecal opiates

With appropriate training, an FP who does not have general anesthesia skills can safely administer intrathecal opiates. The FP must have certain technical skills and the ability to monitor, recognize and treat complications of the technique.<sup>12</sup>

The primary technical skill required is the ability to perform a lumbar puncture. Many FPs, especially those who work in rural EDs, are able to perform lumbar punctures. Intrathecal opiates have the same side effects and complications as parenteral narcotics: nausea, sedation and respiratory depression. They frequently cause pruritis and urinary retention. Hypotension may occasionally occur.

## Respiratory depression

The most worrisome of these complications is respiratory depression. The patient who has received intrathecal opiates must be monitored for respiratory depression. This must include careful monitoring of the respiratory rate. Oxygen, naloxone and a method of temporarily providing positive pressure ventilation must be available immediately should respiratory depression occur.

Clinically important respiratory depression appears to be quite rare. In a review of the literature, Tarshis<sup>13</sup> found 13 case reports of respiratory arrest or high sensory block in women who received intrathecal opiates for labour analgesia. In the majority of these reports, sufentanil was used. Some women were ventilated briefly but responded quickly to intravenous naloxone.<sup>14,15</sup> Two women required more prolonged resuscitation, but were not given naloxone.<sup>16,17</sup> There are 2 studies that have shown that

intrathecal narcotics have a respiratory depressant effect by demonstrating an increase in end tidal carbon dioxide (ETCO<sub>2</sub>). Herman and colleagues<sup>18</sup> demonstrated an increase in ETCO<sub>2</sub> after intrathecal fentanyl; however, there was no change in oxygen saturation or respiratory rate and no adverse clinical outcomes. Norris and coworkers<sup>19</sup> demonstrated an increase in ETCO<sub>2</sub> after intrathecal sufentanil; this was associated with a drop in oxygen saturation but no adverse clinical outcomes.

Although there have been reports of respiratory arrest with intrathecal morphine, these occurred in non-labouring patients and with higher doses of morphine than are commonly used today in the obstetric patient.<sup>20</sup>

### Other side effects

Leslie<sup>12</sup> and Stephens and Ford<sup>21</sup> have reviewed the other adverse effects of intrathecal opiates, as well as their appropriate treatment. Leslie<sup>12</sup> states:

Hypotension has been reported anecdotally and has generally been seen with larger doses or when combined with other anesthetic drugs. It has been rare with pure narcotic techniques where the dosing has been limited. It is more likely when the patient is already dehydrated. Hypotension should be managed by placing the patient in the left lateral supine position and by administering an intravenous fluid bolus. Intravenous ephedrine may also be used as a peripheral vasoconstrictor (p. 228).

Pruritis occurs in 40% to 70% of obstetrical patients and is generally well tolerated. Women who find it uncomfortable can be treated with antihistamines (e.g., diphenhydramine) or, in more severe cases, the opioid agonist/antagonist nalbuphine.

Nausea also appears to be quite common, but because it is common in all labouring women, it is difficult to know how much can be attributed to the intrathecal narcotic. It can be treated with antiemetics such as promethazine or metoclopramide, or, in more severe cases, nalbuphine intrapartum or narcotic antagonists (naloxone or naltrexone) postpartum.

Urinary retention occurs in up to 20% of women and may necessitate catheterization.

FPs have safely administered intrathecal narcotics to labouring patients. Edwards and colleagues describe a nonrandomized study where labouring women were offered the choice of intravenous butorphanol, intrathecal morphine 0.5 mg or no analgesia. Forty-nine women received intrathecal morphine. There were no cases of decreased respiratory rate, hypotension or bradycardia.<sup>22</sup>

---

### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
- [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)

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## Recommendations

1. Obstetrical regional analgesia may be provided in a facility that does not provide cesarean section. The decision to transfer a patient to a centre where cesarean section is available should be based on obstetrical factors.
2. A physician who does obstetrics may provide regional analgesia to his or her own patient. It is not appropriate for a physician to provide regional anesthesia and obstetrical services simultaneously.
3. An appropriately trained physician who does not have skills to initiate an epidural may provide "top-ups" to an already established epidural. The anesthetist must be available to intervene appropriately, as determined by the participating department of anesthesia.
4. An appropriately trained physician who does not have general anesthesia skills may provide intrathecal opioids for labour analgesia.

Competing interests: None declared.

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Margaret Tromp, MD, CCFP — Picton Doctors Group, Picton, Ont., and Associate Professor, Department of Family Medicine, Queen's University, Kingston, Ont.

Stuart Iglesias, MD — Hinton, Alta.

This article has been peer reviewed.

Correspondence to: Dr. Margaret Tromp, Picton Doctors Group, Box 1560, 389 Main St. E, Picton ON K0K 2T0

---

### **Contents**

- [Abstract](#) • [Introduction](#) • [Distinction between obstetrical analgesia and anesthesia](#) • [Epidural analgesia](#)
  - [Hospitals without cesarean section capability](#) • [Defining the role of the attending physician](#) • [Training and the management of complications](#) • [Recommendations](#) • [References](#)
- 

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A survey of recently trained general practitioner anesthetists in Ontario. Part I: Does residency training adequately prepare them for practice?

Rob Sansom, MD

George Doig, MD, FRCPC

Kelly Morris, BSc

CJRM 2001;6(4):263-8

---

### **Contents**

- [Abstract](#)
  - [Introduction](#)
  - [Methods](#)
  - [Results](#)
  - [Discussion](#)
  - [References](#)
- 

A decreasing availability of anesthetic services has been identified in rural communities. The Society of Rural Physicians of Canada recommends the use of general practitioner anesthetists (GPAs) to address this shortage. GPAs must be trained to deliver adequate care. This survey evaluated the degree to which Ontario residency programs prepare GPAs for various aspects of practice and examined the use of continuing medical education resources by GPAs. In this article, Part I of a report on the survey, the adequacy of Ontario residency programs for GPAs is addressed. All family physicians (n = 41) who had undergone advanced skills training anesthesia in Ontario between 1995 and 2000 were polled. Thirty-one of 41 GPAs responded. Eighty-seven percent were still practising as GPAs, 85% of whom remained in Ontario. GPAs generally felt very to extremely well prepared for their anesthesia duties. Areas where residency training could have been augmented included: pediatrics, neonatal medicine, intensive care, chronic pain, regional blocks, trauma management and administrative functions as they relate to GPAs. Eighty-four percent of respondents wanted a certification exam implemented. Educational coordinators of PGY3 advanced skills in anesthesia programs should be encouraged to consider these findings in the refinement of their curricula. The importance of developing a national society that will represent the needs of GPAs was recognized.

Une baisse de la disponibilité des services d'anesthésie a été relevée dans les communautés rurales. La Société de la médecine rurale du Canada recommande de faire appel aux omnipraticiens anesthésistes (OPA) pour lutter contre la pénurie. Les OPA doivent recevoir une formation appropriée pour dispenser des soins adéquats. Cette enquête a évalué la mesure dans laquelle les programmes de résidence en Ontario préparent les OPA aux divers aspects de la pratique, et a examiné l'usage que font les OPA des ressources d'éducation médicale continue. Le présent article, première partie du rapport sur l'enquête, porte sur la suffisance des programmes de résidence de l'Ontario pour les OPA. Tous les médecins de famille (n = 41) qui avaient suivi une formation spécialisée poussée en anesthésie entre 1995 et 2000

ont été sondés. Trente et un des 41 OPA ont répondu. La proportion des OPA toujours actifs s'est établie à 87 %, dont 85 % n'avaient pas quitté l'Ontario. En règle générale, les OPA estimaient qu'ils avaient été très bien à extrêmement bien préparés pour leurs fonctions en anesthésie. Les domaines de la formation en résidence qui pourraient être renforcés comprenaient la pédiatrie, la médecine néonatale, les soins intensifs, la douleur chronique, les blocs nerveux régionaux, la prise en charge des traumatismes et les fonctions administratives relevant des OPA. Parmi les répondants, 84 % souhaitaient qu'un examen de certification soit mis en application. Il faudrait encourager les coordonnateurs en éducation des programmes de formation postdoctorale poussée de niveau 3 en anesthésie à tenir compte de ces constatations lorsqu'ils raffineront leurs programmes d'études. On a reconnu l'importance de la mise sur pied d'une société nationale qui représenterait les besoins des OPA.

---

## Contents

- [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)
- 

### Introduction

General practitioner anesthetists (GPAs) are a valuable resource for remote and rural communities that would otherwise be left with inadequate anesthetic, obstetrical and surgical services. It has been estimated that GPAs administer 25% of general anesthetics in Ontario.<sup>1</sup> Throughout Canada, 6.6% of anesthetic care is delivered in rural hospitals and GPAs are responsible for delivering 60.6% of those services.<sup>2</sup> Rourke notes that 6% of Ontario births occur at small hospitals and that there is a diminishing availability of epidural and cesarean section capabilities due to a decline in available anesthetists.<sup>3</sup> Not only are rural communities currently underserved by anesthetists holding Royal College of Physicians and Surgeons of Canada (RCPSC) certification, but the availability of these certified anesthetists in rural Canada continues to decline.<sup>4,5</sup> Canadian residency positions in anesthesia have decreased by at least 15% since 1986 despite an increased demand for their services.<sup>6</sup>

A Canadian Journal of Rural Medicine News summary<sup>7</sup> of a 1999 Conference on Advanced Skills in Rural Canada hosted by the Society of Rural Physicians of Canada (SRPC) and the College of Family Physicians of Canada reported support for the idea that family practitioners with advanced skills training in anesthesia (GPAs) are a solution to the escalating shortage of RCPSC anesthetists in underserved areas. However, the News article also stated<sup>7</sup> that "generalists should ... perform an advanced skill equally as well as a specialist." At present, Canada does not have a certification exam or a regulatory body to evaluate the competency of GPAs before they begin practising anesthesia. The last published practice audit of Ontario GPAs was conducted 27 years ago and it revealed considerable shortcomings in Ontario GPAs with regard to their anesthesia skills and knowledge.<sup>8</sup> The results of that audit are outdated and no longer reflect the proficiency of present-day GPAs. To ensure that quality health care is being delivered we must periodically re-examine the activities and capabilities of Ontario GPAs.

Advanced skills residency programs potentially can train rural GPs to deliver certain anesthesia services with the same level of competence that is expected of RCPSC-trained specialists. The primary goal of

this survey, therefore, was to examine the adequacy of Ontario residency training programs for GPAs. Specific strengths and weaknesses of Ontario advanced skills training programs were explored with the aim of facilitating the delivery of improved anesthesia care to rural populations.

Secondary areas of investigation in this survey included demographic information on GPAs, the perceived need for a certification exam, reasons why GPAs quit practising anesthesia, reasons why GPAs decided to undergo RCPSC training in anesthesia, and the degree to which PGY3 training in anesthesia helped GPs to prepare for non-anesthesia related aspects of their practices. The survey also identified the activities and needs of GPAs for continuing medical education (see Part II, [page 271](#)).<sup>9</sup>

---

### **Contents**

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

## Methods

A list of all physicians who had completed their 3rd-year of postgraduate (PGY3) training in advanced anesthesia skills from 1995 to 2000 was requested from the following Ontario universities: University of Western Ontario in London, University of Toronto, McMaster University in Hamilton, Health Sciences North at Lakehead University in Thunder Bay, University of Ottawa, and Queen's University in Kingston. Addresses for the identified physicians initially were obtained using the software database, MDSelect: Canadian Medical Directory on CD-ROM,<sup>10</sup> telephone directories and personal communications. A second mail-out was conducted after attempting telephone contact with all nonresponders. All returned surveys were confidential and coded for mail tracking only.

The survey was 7 pages in length and consisted of 25 questions. Questions regarding demographics and practice activities consisted of fill-in-the-blank and check-the-box formats. Certain questions employed Numeric Rating Scales (NRS) ranging from 1 to 5 with the corresponding anchoring descriptors "not," "mild," "moderate," "very" and "extremely." The factors listed under these NRS questions were validated based on pre-existing studies of this nature<sup>8,11,12</sup> and on an unpublished survey by Dr. Neil Donen (Dr. Neil Donen, Director, Continuing Medical Education, Capital Health Region, Victoria: personal communication, 1999). Questions were validated by a research group in the Family Medicine North: NWO (Northwestern Ontario) Family Medicine Residency Program. Statistical analysis was performed using the SPSS/PC+ computer software package. The analysis of variance (ANOVA) technique was used to analyze the relationship between the university where PGY3 training took place and the degree of preparation for practice.

---

### **Contents**

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

## Results

The universities provided names of 41 physicians who had undergone additional skills training in anesthesia. Current addresses could not be found for 7 physicians. There were 3 whose addresses were confirmed over the telephone but who did not respond to the survey: at least 2 of these were still practising as GPAs in Canada. Thirty-one of the 41 physicians responded to the survey.

Demographic data on the 31 respondents is listed in [Table 1](#). As in all tables and figures, where n equals less than the total subpopulation analyzed, respondents have neglected to answer the specific question. Of those who continued to practise as GPAs in Canada, 85% remained in Ontario. Only 1 respondent had undergone RCPSC training and indicated that "increased skill level" and "increased knowledge level" were extremely important advantages of doing so.

The relative importance of various factors influencing 3 respondents to quit practising anesthesia is depicted in [Figure 1](#). As in all the figures, the vertical lines represent one standard deviation from the mean. Each physician in this group ranked "location" (of practice) as an extremely important factor in his or her decision to not practise anesthesia.

Demographic information for respondents still performing anesthesia as a GPA in Canada is shown in [Table 2](#). The mean number of anesthesiologists and operating rooms at each centre was 4 and 3, respectively. On average, respondents were on call 2 nights per week.

[Figure 2](#) depicts the distribution of the 27 GPAs practising in Canada by the size of their community. The majority (44%) serviced populations in the category of 20 000 to 50 000 people.

[Figure 3](#) indicates how the GPAs divided their hours at work. The mean number of hours per week spent on anesthesia, emergency and family medicine were 13–16, 13–16 and 5–8, respectively.

[Table 3](#) reflects the opinions of all respondents to the institution of a certification exam following the PGY3 year and to the ideal length of a PGY3 training program. Twelve months was the optimal duration of such a program according to 90% of respondents. Eighty-four percent indicated there should be a certification exam for GPAs. Twenty-two percent commented that a certification exam would lend credibility, recognition or validity to GPAs, and 10% believed an exam would demonstrate competency. Thirteen percent thought exam questions should be of a practical nature and applicable to GPAs, and 6% believe the exam should be standardized across the country. Sixty-five percent did not comment.

[Figure 4](#) and [Figure 5](#) indicate the degree to which all respondents felt prepared for various aspects of general practice and for specific aspects of anesthesia practice. The additional year of anesthesia training left GPAs feeling "very" well prepared to "extremely" well prepared for practising both anesthesia and emergency medicine. Respondents' mean rankings for degree of preparedness for general surgical, gynecological surgical and orthopedic cases were also between "very" and "extremely" well prepared.

The mean response for ability to perform administrative duties related to anesthesia was "not" well prepared.

[Figure 6](#) depicts the percentage of the 31 respondents who commented on an increased need for PGY3 training in specific areas of anesthesia. Twenty-six percent believed further training in pediatric anesthesia would be beneficial, and 23% indicated that residency programs should include more training related to intensive care and/or ventilator management. Only one respondent stated that the PGY3 program required "no extra" changes.

While 90% of respondents thought that residency training should remain at 12 months, the most common requests for further training related to pediatrics and neonatal medicine (39%), intensive care unit (ICU) and ventilation (23%), regional blocks (16%), chronic pain (13%), administration duties (13%), obstetrics (13%), trauma (10%) and central line placement (6%). Reflecting these comments, GPAs felt no more than "moderately" prepared for administration, neonatal ICU, chronic pain and regional blocks.

The opinions of all respondents who gave a general comment (61%) were tabulated. Sixteen percent indicated that an association of GPAs should be formed and they cited the following reasons: a need to clarify the role of GPAs, to suggest guidelines on what cases to undertake, to provide continuing medical education and practice audits and to bring recognition to GPAs.

There were no statistically significant differences between subgroups when stratified according to either the university where training took place or the size of the practice population.

---

### **Contents**

- [Abstract](#)
  - [Introduction](#)
  - [Methods](#)
  - [Results](#)
  - [Discussion](#)
  - [References](#)
- 

## Discussion

The results of the study suggest that PGY3 training programs in anesthesia are effective in supplying small Ontario communities with competent anesthesia care. Generally, respondents perceived themselves as "very" well to "extremely" well prepared for their anesthesia duties. Eighty-three percent of the respondents were still practising as GPAs, 85% of whom remained in Ontario. Only 11% of the practising GPAs worked in communities with populations larger than 50 000. The attrition rate of GPAs trained in Ontario compares favourably with that of Manitoba-trained GPAs, 44% of whom had quit practising anesthesia after 5 years.<sup>13</sup>

The training also provided GPs with additional skills that left them feeling "very" well to "extremely" well prepared for working in an emergency department, thereby further improving delivery of care to their communities. Most GPAs divided their time between anesthesia and emergency medicine, with a mean of only 5–9 h/wk spent on family medicine. It should be considered whether additional skills

training drains primary care resources in small communities and whether some such communities could actually support fully trained specialists in anesthesia and emergency medicine.

Those who quit practising anesthesia did so primarily due to preferences of practice location rather than concern over their abilities.

The population size of this study was kept small in order to sample only recent graduates of the Ontario residency programs (thereby reflecting current curricula). We should be cautious about drawing conclusions from a small data pool. In particular, the study lacks the statistical power to detect any effect of either practice size or location of residency training on issues such as practice activities and degree of preparedness for practice.

Of note, we did not hear from 10 of the 41 recent graduates. Two of these were confirmed to be practising anesthesia in Canada as GPs. The status of the other 8 remains unknown. Those who had a negative experience with anesthesia as a GP may have been more reluctant to disclose their opinions. On the other hand, those who had concerns regarding GPAs and their training might have had the most incentive to complete the survey.

GPA's identified general, gynecological, orthopedic and obstetrical surgeries as areas in which they felt "very" to "extremely" well prepared. Whether PGY3 training in these strong domains should be sacrificed for increased training in the weaker domains is not clear from this study. It would seem, however, that pediatric and neonatal training should be increased, perhaps at the expense of the more straightforward anesthetic cases in gynecology. Further exposure to ICUs and high-risk cases might provide experience with ventilation and central lines. Since over 10% of respondents indicated a need for more regional blocks and obstetrical anesthesia training, instruction in orthopedic and obstetrical anesthesia should probably not be decreased. The educational coordinators of Ontario PGY3 advanced skills in anesthesia training programs are encouraged to consider these findings in the refinement of their curricula.

Eighty-four percent of respondents felt there should be a certification exam following the completion of additional skills training. Such a majority in favour of instituting a certification exam should not be ignored. GPA's would feel more secure with some validation of their roles in the health care system and an assurance that their skills meet an acceptable standard of care.

When asked to produce general comments 16% of all respondents (26% of those who left a comment) wanted the formation of an association to represent GPA's. This study identifies some priorities that should be considered for such an association:

- to validate, define and regulate the roles of GPA's in the health care system;
- to review curriculum development for additional skills training;
- to set a standardized, practical and relevant certification exam for residents completing their advanced skills training; and

- to assist GPAs in administrating their hospital anesthesia departments effectively.

We hope that the results of this study will encourage the SRPC, the RCPSC and the Canadian Anesthesiologists' Society to continue their combined efforts toward the establishment of a representative body for Canadian general practitioner anesthetists.

Competing interests: None declared.

Ethics and Funding: Ethics approval for this project was granted by the Lakehead University Research Ethics Board, Thunder Bay, Ont. Funding was provided by Associated Medical Services, Inc. through the AMS/Wilson Resident Fellowship Education Program.

Acknowledgements: Drs. John Jamieson and Susan Dent, and Family Medicine North: NWO Family Medicine Residency Program.

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Rob Sansom, MD — GP anesthesia resident, Health Sciences North, Thunder Bay, Ont.

George Doig, MD, FRCPC — Anesthetist, Thunder Bay Regional Hospital, Thunder Bay, Ont.

Kelly Morris, BSc — Coordinator, Research and Evaluation Services, Research Office, Health Sciences North, Thunder Bay, Ont.

This article has been peer reviewed.

Correspondence to: Dr. Rob Sansom, Health Sciences North, 955 Oliver Rd., Thunder Bay ON P7B 5E1

---

### Contents

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

### References

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A survey of recently trained general practitioner anesthetists in Ontario. Part II: Does continuing medical education adequately meet their needs?

Rob Sansom, MD

George Doig, MD, FRCPC

Kelly Morris, BSc

CJRM 2001;6(4):271-4

---

### **Contents**

- [Abstract](#)
  - [Introduction](#)
  - [Methods](#)
  - [Results](#)
  - [Discussion](#)
  - [References](#)
- 

There is an increasing demand for GPAs in rural Ontario communities. It has been estimated that GPAs administer 25% of the anesthesia care in Ontario. Currently there are no regulatory bodies to ensure that GPAs maintain adequate anesthesia skills. This is the second in a 2-part series on the results of a survey of general practitioner anesthetists (GPAs) who graduated from advanced skills training in anesthesia programs in Ontario between 1995 and 2000. The survey was conducted to evaluate the degree to which Ontario residency programs prepare GPAs for various aspects of practice, and to identify the activities and needs of GPAs for continuing medical education (CME). This article deals with the CME aspect of the survey. GPAs mostly employed journals, textbooks and Internet searches to maintain their skills and knowledge. The greatest barriers to CME participation were the availability of relevant CME resources and the difficulty in taking time away from professional and personal responsibilities. If these barriers to CME could be minimized, GPAs would mostly increase their use of conferences and small group discussions. We encourage the development of a national or provincial society to improve the quality and accessibility of CME resources, with an emphasis on the organization of conferences, journal articles, workshops and visiting anesthesia specialists.

Dans les communautés rurales de l'Ontario, il y a une demande croissante de services d'anesthésie dispensés par des omnipraticiens. Selon des estimations, en Ontario, les omnipraticiens anesthésistes (OPA) administreraient 25 % des soins en anesthésie. À l'heure actuelle, aucun organisme de réglementation ne veille à ce que les OPA maintiennent les compétences spécialisées nécessaires en anesthésie. Le présent document est le deuxième d'une série en deux parties sur les résultats d'une enquête menée auprès des OPA diplômés d'un programme de formation spécialisée poussée en anesthésie de l'Ontario entre 1995 et 2000. L'enquête a été réalisée pour déterminer dans quelle mesure les programmes de résidence en Ontario préparent les OPA aux divers aspects de la pratique, et pour établir quels sont les besoins et les activités des OPA au chapitre de l'éducation médicale continue

(EMC). Le présent article traite du volet de l'enquête portant sur l'EMC. Les OPA ont surtout recours aux journaux, aux manuels et aux recherches sur Internet pour maintenir leurs compétences et connaissances spécialisées. La disponibilité des ressources pertinentes d'EMC et la difficulté à s'absenter des responsabilités professionnelles et personnelles étaient les obstacles les plus difficiles à surmonter pour participer aux programmes d'EMC. S'il était possible de réduire ces obstacles au minimum, les OPA, pour la plupart, se serviraient davantage des conférences et des discussions en groupe restreint. Nous encourageons la mise sur pied d'une société nationale ou provinciale qui viserait à améliorer la qualité et l'accessibilité des ressources d'EMC en privilégiant l'organisation de conférences, les articles de journaux, les ateliers et les spécialistes visiteurs du domaine de l'anesthésie.

---

### Contents

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

## Introduction

This is the second of a 2-part series on the activities and education of general practitioner anesthetists (GPAs) who completed their advanced skills training in Ontario between 1995 and 2000. This article examines the use of continuing medical education (CME) resources by GPAs.

As discussed in Part I (see [page 263](#)), GPAs are considered a valuable asset in providing rural communities with anesthetic, obstetrical and surgical services. It is estimated that GPAs administer 25% of anesthetic care in Ontario.<sup>2</sup> In 1995/96, 6.3% of fee-for-service anesthesia care took place in rural Canada; 498 GPAs submitted billing codes and were collectively responsible for 60.6% (151,168 cases) of this anesthesia care.<sup>3</sup> The demand for GPAs will likely continue to increase given the diminishing availability of rural anesthetists holding Royal College of Physicians and Surgeons of Canada (RCPSC) certification<sup>4-6</sup> A News article<sup>7</sup> in the Canadian Journal of Rural Medicine, reporting on a 1999 conference, stated that GPAs must deliver care as competently as an RCPSC-certified anesthetist. Others have also emphasized this point.<sup>8</sup> Rural populations should neither be denied anesthesia care, nor should they receive substandard anesthesia treatment. Isolated, nonacademic practices, however, potentially deprive GPAs of the opportunity to maintain their existing skills or to keep abreast of further developments in anesthetic care.

The SRPC Anesthesia Committee (Dr. Stuart Iglesias, committee member: personal communication, 2001) and others<sup>8</sup> have previously considered CME in anesthesia to be less accessible and not as relevant to GPAs in comparison with their RCPSC-certified colleagues. In the past, there have not been any organizations or regulatory bodies dedicated to the nation-wide delivery of adequate CME for GPAs. The SRPC, the College of Family Physicians of Canada (CFPC) and the Canadian Anesthesiologists' Society (CAS), however, have recently shown interest in supplying this unique practice group with appropriate and available CME resources (Dr. Hal Irvine, Chair, SRPC Anesthesia Committee: personal communication, 2001).

This article will identify the current use, desired use and barriers preventing participation in CME activities among Ontario-trained GPAs who continue to practise in Canada. The goal of the article is to provide encouragement and direction to those groups seeking to improve the delivery and quality of CME to GPAs in Ontario and across Canada.

---

### **Contents**

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

## Methods

The survey population, questionnaire format and study design were as described in Part I.<sup>1</sup> Out of 41 physicians who had completed a 3rd postgraduate year (PGY3) of additional skills training in anesthesia in Ontario, 31 responded to the survey. Of these, only the 27 physicians who continued to practise as GPAs in Canada were included in the analyses of CME use and barriers. Data concerning general comments were gathered from all 31 respondents.

The survey contained 2 multiple-part questions relating to CME. As described below, the questions pertaining to CME barriers and desired use of CME resources employed Numeric Rating Scales (NRS) ranging from 1 to 5, with these corresponding, anchoring descriptors: "not," "mild," "moderate," "very" and "extremely." The questions were validated by a research group in the Family Medicine North: NWO (Northwestern Ontario) Family Medicine Residency Program.

With respect to the maintenance of their anesthesia abilities, the participants were questioned about their use and desired use of the following CME resources: conferences, journal articles or textbooks, small group discussions, audiovisual tapes, shadowing other anesthetists, formal courses, Internet searches, chat lines or teleconferences, dinner presentations, computerized learning tools, and "other" ([Fig. 1](#)). They indicated whether they used these resources 0, 1–2, 3–4 or 5+ times per year.

Study participants were also questioned as to what extent (on an NRS of 1–5) the following factors acted as barriers to participation in CME for GPAs: cost of CME fees, cost of travel, loss of generated income, loss of personal time, lack of practice coverage, lack of CME availability, lack of personal interest, and CME directed at RCPSC-trained anesthetists instead of GPAs ([Fig. 2](#)). They used the 5-point NRS to indicate their desired use of these resources (assuming all resources could be made readily accessible) ([Fig. 3](#)).

Statistical analysis was performed using the SPSS/PC+ computer software package. The ANOVA (analysis of variance) technique was used to investigate the influence of practice population size on current and desired use of CME activities.

---

---

## Contents

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

### Results

Figure 1 indicates the current use of various CME resources. The most frequently employed CME resource was "journals or textbooks," the mean use of which was between 3–4 and 5+ times per year. The second most frequently used resource was "Internet searches," the mean use of which fell between these same ranges. All other resources were associated with a mean use of less than 1–2 times per year.

Based on mean responses, most factors were considered "mildly" to "moderately" barriers to CME participation (Fig. 2). Only "lack of interest" (in CME) rated between "not" a barrier and "mildly" a barrier. There were no additional barriers suggested under the category "other."

Figure 3 depicts the desired use of the various CME resources provided all barriers to participation could be removed. The mean response for desired increase in the use of conferences was between "moderately" and "very." All other resources ranked between "mildly" and "moderately," except for audiovisual tapes and chat lines or teleconferences, which had mean responses between "not" and "mildly."

In all figures, wherever n equals less than the total subpopulation analyzed, respondents have neglected to answer the specific question.

Analyzing current and desired use of CME according to size of practice community did not produce any statistically significant differences.

The opinions of all survey respondents who left a general comment (61% of 31) were tabulated. Sixteen percent of the 31 respondents wanted the formation of an association of GPAs. They cited reasons such as a need to clarify the role of GPAs, to help decide what cases to undertake, to set national standards, to bring recognition to GPAs, and to provide CME and practice audits. A separate 16% reiterated their desire for increased CME availability. Some felt that CME should be targeted toward GPAs and that CME participation would increase confidence among GPAs. Six percent indicated that anesthesia skills were easily forgotten if not maintained in practice. One respondent commented on the potential benefit of having RCPSC-trained anesthetists and GPAs working in the same centres.

---

## Contents

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

---

### Discussion

The survey results confirm that recent graduates of additional skills programs in anesthesia are using many CME resources to maintain their anesthesia skills. CME resources are relatively accessible to GPAs.

One can infer that although GPAs are mostly using journals, textbooks and Internet searches for CME, they would prefer to increase their participation in conferences and small group workshops. The factors potentially preventing GPAs from increasing their use of these CME resources are no more than moderate barriers. Even those physicians in practice communities smaller than 10 000 did not perceive these factors to be more than moderate barriers (no statistical differences relative to their colleagues in larger communities). Nevertheless, the results imply that GPAs want some changes in the delivery of their CME training and that several factors are at least mild barriers to the implementation of these changes. These barriers related mostly to the availability of relevant CME and difficulty in taking time away from professional and personal responsibilities.

We acknowledge that, by nature of the small study size, our conclusions are based on data trends rather than statistically significant observations. Out of the 41 physicians comprising the study population, 10 did not respond. At least 3 of these nonresponders received the survey but chose not to return it. The survey may be biased toward a more positive outlook assuming that the nonresponders were reticent to admit a lack of participation in CME. However, since the questionnaires were confidential and coded for mail tracking only, the introduction of this type of bias is rendered less likely.

Another source of potential bias is that the study polled only the recent graduates (1995–2000) of PGY3 programs. Those GPAs who received tertiary care training prior to 1995, and those who never received it, would most likely express a greater desire for CME access.

When asked for general comments, 16% of all respondents (26% of those who left a comment) expressed a need for the formation of an association to represent GPAs.<sup>1</sup>

With the above results in mind, we propose the following suggestions to improve the quality and accessibility of CME to GPAs.

1. A national or provincial association should be formed to represent GPAs. This group could organize conferences and workshops that meet the particular educational needs of GPAs, thereby delivering more relevant CME material to them. We wish to encourage the SRPC, CFPC and CAS to work together toward the formation of a representative body for GPAs.
2. The aforementioned body might distribute journal articles and textbooks that address the specific educational needs of GPAs, since these are the most commonly employed CME formats at present. The development of computerized learning tools, such as simulated anesthesia cases, could also be a worthwhile contribution.
3. GPAs should receive adequate financial compensation for taking time away from their practices to engage in CME activities such as conferences, workshops, visits to tertiary centres or peer discussion groups.

4. GPAs should be supplied with adequate funding to arrange for locum anesthetists to cover their practices so that they are available to participate in CME events.
5. RCPSC-certified anesthetists should be adequately funded to periodically visit the centres where GPAs practise. This would allow specialists to observe GPAs in their own practice setting and to provide practical, hands-on instruction. These visiting specialists could share their skills and knowledge by leading workshops, small group discussions and presentations.

Competing interests: None declared.

Ethics and Funding: Ethics approval for this project was granted by the Lakehead University Research Ethics Board, Thunder Bay, Ont. Funding was provided by Associated Medical Services, Inc. through the AMS/Wilson Resident Fellowship Education Program.

Acknowledgements: Drs. John Jamieson and Susan Dent, and Family Medicine North: NWO Family Medicine Residency Program.

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Rob Sansom, MD — GP anesthesia resident, Health Sciences North, Thunder Bay, Ont.

George Doig, MD, FRCPC — Anesthetist, Thunder Bay Regional Hospital, Thunder Bay, Ont.

Kelly Morris, BSc — Coordinator, Research and Evaluation Services, Research Office, Health Sciences North, Thunder Bay, Ont.

This article has been peer reviewed.

Correspondence to: Dr. Rob Sansom, Health Sciences North, 955 Oliver Rd., Thunder Bay ON P7B 5E1

---

### **Contents**

• [Abstract](#) • [Introduction](#) • [Methods](#) • [Results](#) • [Discussion](#) • [References](#)

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The occasional laryngeal mask airway

Thomas C. O'Neill, MB, BCh, BAO, DTM&H (Liverpool), CCFP

CJRM 2001;6(4):278-9

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## Introduction

The laryngeal mask airway (LMA) has gone from being an interesting curiosity to being a standard piece of equipment in the operating room. If it follows the example set by other equipment such as pulse oximetry, CO<sub>2</sub> capnographs, it will become a commonly used piece of equipment for the "difficult airway" in the emergency department.

Intubation in the emergency department may sometimes be difficult. If after 2 attempts it has been unsuccessful, the LMA can be used. It is fast to insert and the probability of success is high. Sedation may be required in the alert patient, but it can be inserted without sedation in the obtunded patient, or in an emergency situation.

## Equipment

- Laryngeal mask airway
- Lubricant
- 20-cc syringe
- Propofol 10 mg/mL in a 20-cc syringe



Fig. 1

### Step 1

Chose the right size. Size 4 is appropriate for normal and large adults. The LMA is completely deflated (Fig. 1).



Fig. 2

### Step 2

Pre-oxygenate the patient (Fig. 2).



Fig. 3

### Step 3

Completely deflate the LMA and lubricate on the posterior side only (Fig. 3).



Fig. 4

### Step 4

If the patient requires sedation and you are familiar with this medication, give propofol at a dose of 2.5 mg/kg (Fig. 4).



Fig. 5

### Step 5

With the left hand, extend the neck and flex the

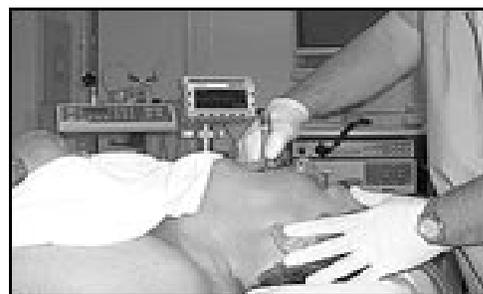


Fig. 6

### Step 6

Now grasp the tube with the left hand, withdraw

chin ("sniffing" position). With the airway side of the mask oriented forward, hold the LMA like a pen, and advance it against the hard palate to the limit of your index finger (Fig. 5).

the index finger, and press gently downward with the right hand to seat the cuff in the pharynx (Fig. 6).

## Step 7

Inflate the cuff with 30 cc of air.



Fig. 7

## Step 8

Connect to an ambubag and oxygen (Fig. 7).

## Contraindications

The LMA should not be used in nonfasting patients unless the airway cannot be safely secured by other means. Other contraindications include morbid obesity, hiatus hernia, pregnancy > 14 weeks, massive trauma, acute abdomen and thoracic injury.

In the rare instance where this technique is not successful, revert to basic bag and mask ventilation.

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Thomas C. O'Neill, MB, BCh, BAO, DTM&H (Liverpool), CCFP — Associate Lecturer in Family Medicine, McGill University, Montreal, Que. Correspondence to: Dr. Thomas C. O'Neill, PO Box 610, 320 Main St., Shawville QC J0X 2Y0

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A primer on rural medical politics. 2: Federal/provincial jurisdictions

Keith MacLellan, MD  
Shawville, Que.

CJRM 2001;6(4):282-4

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In the first installment I described how the rural generalist, often functioning as a specialist with an advanced skill set, has been the traditional but unofficial mainstay of all rural health care in Canada.<sup>1</sup> Yet any effort to support generalists who function beyond the provision of primary care threatens some basic tenets of our health care system.

To use only one example of the many possible, if rural women are to deliver in or close to their own communities they need to have access to specialized care provided by generalists. The 1999 Joint Position Paper on Training for Rural Family Practitioners in Advanced Maternity Skills and Cesarean Section,<sup>2</sup> prepared by the Society of Rural Physicians of Canada, the Society of Obstetricians and Gynaecologists of Canada and the College of Family Physicians of Canada, was an effort to support, at the community level, the generalist functioning at a specialized obstetrical level. If such a local service is better than attempting to transfer all maternity care to regional centres, and the evidence shows that it is, then how do we implement the recommendations of the aforementioned paper?

Health care services in Canada are a provincial responsibility. Health Canada has spent the last 30 years trying to conform to the seminal White Paper, which gave the Federal government the task of keeping Canadians healthy — population health, determinants of health, product safety and so on. If Canadians persist in falling (or throwing themselves) off the cliff of life, it makes sense for a government to build a fence at the top of the cliff. The provinces' purview is at the bottom of the cliff — services — and they receive large amounts of federal money to do this. The provinces are usually shirty about these transfer payments requiring any kind of direction from Health Canada.

Unfortunately, the options open to provincial governments to address rural health care problems are limited. Barer and Stoddart made this point eloquently in 1999.<sup>3</sup> How can a provincial health ministry shore up the ability of women to have their babies in or close to their own community? Specialists will not work in small communities. Incentive and disincentive programs only partially work, and only if there is a complement of physicians trained to do the task. International medical graduates with special

skills could be indentured, as has been done for decades, but that route is being choked off. A province could support training programs for "homegrown" special skills, but without a national credentialing process, without a formal maintenance of competence program, without a national "home" for these brave graduates, how long will they last? GP anesthesiologists in Canada now have only a 5-year career duration. Will GP obstetricians last any longer?

Regionalization and telemedicine are what the provinces have pinned their hopes on. But regionalization immediately negates the notion of women being able to deliver close to home, and video-conferencing has yet to be able to deliver a baby. Furthermore, wherever regionalization and video-conferencing facilities have replaced the local generalist, the inability of the local hospital to do anything beyond simple triage and public health leads to a demoralization of the public and the inability of the local health system to deal with even the usual conditions that afflict all populations. There is no evidence that regionalization and telemedicine will result in improved health for the local community — in fact there are already some indicators of negative outcomes.

The provinces pin their hopes on these unproven and probably deleterious strategies because their limited options cannot include broadly skilled and specialized generalists fully supported on a national level. Many provinces have set up some form of rural health bureaucracy. These have tenuous, jealously guarded budgets, concentrating mostly on incentive plans. Tellingly, the individual provincial programs rarely communicate with each other, often having only the vaguest idea of what is going on in other jurisdictions.

There are some tentative but admirable efforts by these rural health bureaucracies to address training issues. This requires the buy-in and support of the universities and medical schools. But nowhere else is the commitment to the separation of primary and secondary care — between family physicians and specialists — more entrenched than in Canada's medical schools. The principles of the 1999 Joint Position Paper to train family physicians in advanced maternity care skills received a cold reception in these hallowed halls. The jury is still out on how successful these provincial health bureaucracies will be in their efforts to persuade the medical schools to seriously address the training issues of the rural generalist.

One finds a distinct chill in the air around provincial organizations when mentioning federal involvement in rural health care. Are there any federal bodies open to argument?

All federal, provincial and territorial ministers of health meet once a year in what is called the "F/P/T" meeting, which is preceded by a meeting of the deputy ministers. Decisions at this level rarely get past the political quagmires of jurisdictional and money disputes. There is no hope for a discussion of GP obstetricians at the F/P/T level. On the other hand, this is where broad agreement for a Federal/Provincial National Rural Health Strategy could be found, piloting new avenues for cooperation between the provinces and the federal government — if the F/P/T ministers got the right advice.

This F/P/T annual meeting has spawned several joint federal and provincial committees to advise the

ministers. One is called ACHHR — Advisory Committee on Health Human Resources — a purely bureaucratic structure (made up of federal and provincial health ministry officials) that suggests policies influencing physician/nursing type, numbers and distribution. The ACHHR commissioned the huge and ponderous Barer–Stoddart Report,<sup>4</sup> which looked at the entire Canadian health system. This report was infamously cherry-picked by the F/P/T ministers so that only one of its recommendations — a 10% cut in admissions to medical faculties — was disastrously (but unanimously!) enacted. This report should not be confused with the much shorter but specifically rural 1999 report later commissioned by the ACHHR.<sup>3</sup> Perhaps because of its bleak but realistic tone, particularly in outlining the need for a pan-Canadian solution to rural health care problems, the 1999 report has been ignored. The failure of the ACHHR to influence the F/P/T ministers in any cooperative way has led to widespread doubts about its effectiveness. Indeed, even with the rural areas having the most pressing health and human resource problems for decades, the ACHHR has had no measurable impact on rural health care policies to date. It needs leadership and a political desire for cooperation.

Canadian rural health care problems, instead of being tagged on to the ACHHR agenda and then ignored, would be better served bureaucratically by advice to the F/P/T ministers of health coming from a specific Federal/Provincial Advisory Committee on Rural Health, that, like the ACHHR, would be made up of health ministry officials. Such a committee, because of the focused nature of its agenda and because of the urgent, national need for solutions, could stand a better chance of having its advice heeded. It could be convinced of the need to gear our system up to produce and support GP obstetricians and implement the 1999 Joint Position Paper.

The NCCPMT (National Coordinating Committee on Post-graduate Medical Training) is composed of several provincial and federal bureaucrats joined by some medical academics and deans of post-graduate training. It is meant to sort out such things as the ratio of specialists to generalists, the need for certain subspecialists and matching those needs to the capacity of the universities to train them. When the committee has looked at rural health care, it generally worries about producing more rural specialists, such as community general surgeons or internists. This is worthy of consideration, but the concept of the broadly skilled generalist is foreign (and perhaps threatening) to the NCCPMT. It certainly does not see one of its jobs as implementing the 1999 Joint Position Paper. Furthermore, it appears the NCCPMT has lost any hope that it had of influencing either government policy or our training system. Unless it sorts out its governance and authority, the NCCPMT is impotent, with its functions being eyed by the Canadian Medical Forum. (This topic will be covered later.) Again, in the spirit of rural health issues being hampered when they are attached to "larger" issues, a specific rural post-graduate training committee would have a better chance of success, to the good of our entire training system.

And then there is the Office of Rural Health — Health Canada, which has had a hard row to hoe but has made strides in having the concept of rural health accepted within a bureaucratically hostile environment. That's our next story.

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A week in the life of a GP anesthetist

Thomas C. O'Neill, MB, BCh, BAO, DTM&H (Liverpool), CCFP

CJRM 2001;6(4):285-8

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I work in a 64-bed hospital: 43 active and 21 chronic. It's about 1 hour from the local referral centre. Approximately 1400 patients are admitted per year, with 19 000 ED visits, 6000 visits to the specialty clinic and 140 deliveries. It has a catchment area of 20 000 people, and 1200 procedures per year are performed that require anesthesia support. I've been working in this institution for the past 22 years as a GP anesthetist; 11 of these on my own with partial replacement. I wrote this article realizing it may enlighten colleagues both in the country and in the city as to what life is like for rural GP anesthetists.

Sunday night

18:00 – Started ED call. Usual stuff. Saw approximately 24 people between 18:00 and midnight.

01:00 – Went to sleep after seeing the last patient. No calls during the night!

Monday morning

06:00 – Get up, shower, catch up on some paperwork.

08:00 – First colonoscopy, usual meds. Fentanyl 100 µg IV + Versed 1 mg IV and Propofol via infusion pump at 100 µg/kg/min. Works very well. Patient probably has Ca of the bowel — has had multiple biopsies. In between cases I see my in-patients: a young woman dying with Ca of breast, abdominal ascites and a gangrenous toe with associated stomatitis secondary to chemotherapy. She's having it tough. Refuses a PICC line. Strong element of denial but I feel her "castle is crumbling." She also just heard that a beloved family member died yesterday evening.

My other patient has multiple soft tissue injuries from a fall at home. She has the largest hematoma in her back I've ever seen. It's fluctuant. Her daughter works, and the patient is reluctant to go to her own home. Difficulty mobilizing out of bed. Luckily enough, the pressure on hospital beds is less than it's been for the last month. I'll keep her in for a few more days. Slipped down to the ED and saw my patient with

myelodysplastic syndrome after he received 3 units of blood. Doing OK. No beds in the hospital so I'll keep him in Observation overnight. Hbg >100. Home this morning.

09:30 – Use the same recipe on the 2nd colonoscopy. Similar result. Works like a treat. Our general surgeon, who is doing the scope, is discussing how he's going to whip me on the golf course. We'll see.

Our FRCS anesthetist is retiring this April. Of the anesthetists replacing me while I'm at the SRPC conference, one has cancelled at the last minute and the other has changed his on-call availability. Bad situation! I've 2000 people I'm following in my practice and it will be impossible to provide the anesthesia support if no replacement comes. I'm not sure that administration realizes the impact of cancelling in a week 25 cases of people booked for surgery. I'm sure I couldn't go back to doing call one-in-one. Trouble down the road!

11:05 – Discharged a kid held overnight with abdominal pain. Query appendix. Better. Viral according to coworker. WBC is down.

11:30 – Dropped into my office in town. Left some paperwork for billing, test results, etc. Drove to my other office in Beachburg, Ont., about 30 minutes away. I do 2 home visits prior to starting my office:

- a. leaking abdominal aortic aneurysm, non-surgical candidate, doing better;
- b. patient dying of Lou Gehrigs.

Monday afternoon

12:35 – Arrive at office. See 12 people. Grab 50 minutes of shut-eye. See another 5 patients.

17:00 – Finish. 1/2 hour to home. Do I really want to go to that "introduction to computers" at the high school? We'll see. Not on call for anesthesia this evening.

Tuesday morning

08:00 – OR starts. 2 IV blocks for carpal tunnel syndrome. Versed 1.5mg + Fentanyl 50 µg and 40 cc of 0.5% Xylocaine. Hernia repair: Versed 1.5 mg IV + Fentanyl 100 µg + Propofol 150 mg IV. Followed by Atracurium 40 mg IV. Intubate using a "Heine" laryngoscope. Amputation: patient with gangrene of the 1st metatarsal. Fentanyl 100 µg + Versed 2 mg. Propofol 150 mg IV. Following 3 minutes intubate using a #3 laryngeal mask airway. In between cases I visit the young woman dying of Ca of breast with mets to liver. Discuss resuscitation requests. She breaks down, saying she doesn't want to die and she worries about her children. Refuses all home care services. Other patient with multiple soft tissue injuries. Will D/C home tomorrow.

12:30 – Grab a sandwich. Another patient with a bowel obstruction. Office starts at 13:00. Fortunately the FRCS anesthetist says he'll do the case as he has just finished the 5th cataract with only one to go.

Tuesday afternoon

13:05 – Start office. See about 5 patients per hour (32 in total).

21:20 – Finish office. Not on call for anesthesia this evening. Over supper I talk with my wife Jane about the retirement of my anesthetist colleague in 2 months. "You've told them often enough about it." No matter what I say, it obviously only takes a crisis before the full impact is realized. It will be impossible to look after a 2000-patient practice, provide anesthesia support for 1200 patients, run a pre-anesthetic clinic, do shifts in the ED, be available for epidurals, resuscitation in the ED, run ventilated patients in the ICU, if there isn't even one-in-two. Not that I mind providing call. "Give me a scotch!!!" I look at the table and see instead a sparkling glass of cold, fresh, spring water. Oh well, it's only Tuesday night!

Wednesday morning

06:45 – Start the morning with a squash game. It's the usual Wednesday special. I still really enjoy it. Snowing today.

08:00 – Arrive at hospital. Discuss a PICC line with the Ca patient, pain control, up-coming chemotherapy and her ascites. Discharge my other patient home. I discover that the agenda for the upcoming Department of General Medicine meeting with the appropriate papers has not been sent out. It's got to be the 4th secretary in 1 year. If it's frustrating for me as the Chief of Department of General Medicine, it must drive our Director of Professional Services crazy. When this happened last year I got a "blast across the bows." I've been the Chief of Department for 10 years. My last term started 2 years ago. This is definitely my last time.

09:30 – Head off to the office in Beachburg.

10:00 – Arrive. I share this practice with a colleague. Catchment area of 7000 with the equivalent of 1.5 doctors. It's a well set-up, excellent clinic! See 15 people and do a home visit.

Wednesday afternoon

14:00 – Get home and take it easy. On call tonight for anesthesia.

18:20 – One of my colleagues phones to let me know about the patient in ICU. Severe diabetic. Attempted wean today is unsuccessful. Develops pulmonary edema. Probably we'll leave her on the ventilator 2 more days.

Thursday morning

08:00 – Start. First patient doesn't show. Visit patient with Ca of breast with mets. Seems more at ease with herself. Is discussing death and dying with the nurse at the day-care/oncology unit.

08:45 – Start the second case, a carpal tunnel. Usual technique with a Biere block and 40 cc of preservative-free Xylocaine. Good block. Next case is a Ca of breast with guide wire; Fentanyl 100 µg, Versed 2 mg and Propofol 120 mg IV. Three minutes after, I introduce a #3 laryngeal mask airway. Good seal. Start her on Isoflurane 2% and drop it to 1.5. Starts breathing spontaneously 10 minutes into the case. Also doing an axillary node dissection case. Goes well. Start the third case; carpal tunnel. This is to be carpal tunnel week. Call to the recovery room. Previous case is having pain. Rx morphine 2 mg IV q 5 minutes p.r.n. up to 3 doses. Carpal tunnel with usual technique. Patient works in the hospital. Will pay extra attention because, as we all know, if something is going to go wrong, it will be a doctor, a doctor's family member, or someone working in the place.

Review the ICU case on a ventilator. Known insulin-dependent diabetic smoker, who is septic. Attempted weaning yesterday. Unsuccessful, as expected. Fighting ventilator. On SIMV Versed/Fentanyl and "the rock" (rocuronium). For sure she has multiple organ problems with a) sepsis, b) diabetic keto-acidosis, c) myocardial infarct, d) chronic lung disease, e) smoker, f) gangrenous left leg. I'm only involved in the ventilator aspect of her case. I'm going to increase sedation and introduce, for the first time, "sedation protocol" for patients in the ICU on ventilators and discontinue "the rock." Too much possibility of awareness.

Thursday afternoon

12:25 – Squash. Great game but for swallowing a fluff ball on the court. Gross!! Cough for 5 minutes. Must have sucked it right down to the carina. Life is a continuum of experiences.

13:45 – Get 15 minutes of paper work done prior to starting the office at 14:00. See 3 people for complete medicals and 11 other patients. Atrial fibrillation, complete exam. Anemia, complete exam. Chest pain, complete exam. Otitis, ordinary exam × 2. Contraception, ordinary exam. Syncope, ordinary exam. 6-year-old check-up, complete exam. Condyloma, ordinary exam and supportive psychotherapy × 30 mins. Sinusitis, complete exam. Abdominal pain, complete exam.

A colleague was good enough to cover in the ED so I don't have to start at 18:00. That's a break.

Thursday evening

17:30 – Finish at the office. Eat a quick supper and have a power nap for 1 hour.

19:50 – Oops ... I never oversleep. Still got to ED in time.

20:00 – One of the quietest shifts in the last year. Three Sundays ago we had 5 people in the hospital in respiratory failure with 2 on mechanical ventilation. I see approximately 12 people between 20:00 and

midnight: 1 laceration, 3 viral URTIs, 1 sore back. 1 otitis, a dehydrated 10-month-old, 1 strep.

01:00 – Went to bed.

Friday morning

02:30 – Called re diabetic worried about her sugars. Hasn't seen her doctor in 2 months. Glucose 18. Recently stopped smoking. Eating +++. Gained weight. Will wait until 07:00 for bloodwork. Back to bed.

04:30 – Up for ICU patient on ventilator. On Propofol up to 40 cc/hr. Looks like my ICU protocol is not working so well. Clearly, she won't be weaned today, as she's febrile. Temp 38.7. Plan switch to Versed.

05:30 – Best time I find to get some work done. Wrote up an ad for an anesthetist.

08:00 – Meeting with the Director General of the hospital, the DSP, the general surgeon, a.k.a. colleague, friend, and golf partner, the head nurse of the OR and anesthetist colleague who is retiring in 2 months. "Crisis" — the Federation of Specialists of Quebec has a program for retired anesthetists to fill in for other anesthetists. Short notice of not being able to cover as promised. Potential of cancelling 20 patients in a week if no dependable replacement. That's what we are discussing today. We cannot depend on this system when our second anesthetist leaves.

Canada graduates about 56 anesthetists/year; Quebec approximately 20 of these. A recent medical publication has advertisements from 26 hospitals for anesthetists in Quebec alone. The university hospitals don't even advertise but sweep up nearly all the new graduates. Impending problems! Looks like we may have the chance of a foreign graduate working here under a restricted permit.

Also possibility of a GP anesthetist. God, the medical establishment can be such a disillusioning lot! I read an editorial of the Canadian Anaesthesiologists' Society about staffing requirements for Ontario. They deliberately excluded GP anesthetists but everyone knows that FRCS anesthetists will never come to rural hospitals to do one-in-one call. Yet they offer no solutions. If GP anesthetists don't do it, it will be the demise of hospital-based rural medicare since no GP anesthetist means: 1) no functioning OR, 2) no back-up to ICU, 3) no help with resuscitation, epidurals etc. How can an organization, with a straight face, propose solutions for future staffing in Ontario while disenfranchising large rural areas of Ontario of access to anesthesia services? As one of my colleagues says, we really are orphans. However, without rural GP anesthetists rural health care will be seriously compromised.

9:10 – Meeting finishes. Finish rounds. Head off to the office.

10:15 – At the office: dictation and paper work × 45 minutes.

11:00 – I manage to go home. It's Friday and it's winter and our surgeon drops by at 1 o'clock. Hey, we're

heading to the city to hit some golf balls. We take our pagers and head down the road. It's one of those computerized indoor driving ranges where it's as if you're playing on a course. We hit a lot of balls, we have a lot of fun and we manage to get home by 6 o'clock that evening. I am on call for the weekend for anesthesia. Fortunately enough, it's a quiet weekend and I am uncalled.

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Monday morning comes, and the cycle begins again.

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Thomas C. O'Neill, MB, BCh, BAO, DTM&H (Liverpool), CCFP — Associate Lecturer in Family Medicine, McGill University, Montreal, Que.

Correspondence to: Dr. Thomas C. O'Neill, PO Box 610, 320 Main St., Shawville QC J0X 2Y0

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Poor man's epidural

CJRM 2001;6(4):289-90

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See response from: [N. Leslie](#)

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To the editor:

I am a strong supporter of the role that family physicians play in the provision of anesthesia in rural communities. However, I must take issue with the position taken in two articles<sup>1,2</sup> and an accompanying editorial,<sup>3</sup> in CJRM's special issue, "Focus on Obstetrics," published in the Fall of 2000. The message these articles convey is that anyone can provide intrathecal narcotic analgesia during labour, as long as they know how to do a lumbar puncture and how to draw up drugs. While empathizing with women who do not have access to epidural analgesia, I have major concerns about spinal opioids being used in the periphery by those not trained to provide anesthesia care. In fact, the references<sup>4,5</sup> cited in one of Dr. Neil Leslie's articles<sup>1</sup> support the position that family physicians need to have appropriate training<sup>4</sup> or have the anesthesia department actively involved in the program.<sup>5,6</sup> Other authors suggest a process of certification.<sup>7</sup>

Leslie talks about the technique being simpler, having a more rapid onset and requiring less maintenance and monitoring than an epidural. A sceptic might rightly ask, "Why is it not being done everywhere by anesthesiologists?" The truth is that while it appears simpler, experience has shown that it requires the same amount of maintenance and monitoring as a routine epidural and may in fact need more. Many centres are using this technique for only very special situations.

Leslie states that medication-related risks are the major risks. That is true, and Leslie has outlined some of them. However, the risk of maternal respiratory depression is significant, and that aspect requires more, not less, monitoring because it could result in a fatal outcome.<sup>8</sup> In particular, this risk is significantly greater when systemic opioids have been previously administered. One-on-one nursing is a requirement, and if this can not be provided the technique should not be done anywhere. The impression from one of the articles<sup>1</sup> is that the technique can be repeated (p. 228), although it mentions it would be less effective. It should not be repeated because the risk of serious side effects is increased.

The other major risk, which is not mentioned, is the risk of a medication error. If the wrong drug is inadvertently administered in the intrathecal space or if the wrong amount is given it can have serious

consequences: neurotoxicity or a marked increase in side effects. Leslie suggests this technique be used in centres where there is not sufficient volume to support someone with anesthesia training. This means the technique would be used infrequently and therefore would be subject to more errors.

Infection is mentioned as a "potentially serious complication in the subdural space" (p. 228). As far as I am aware there are no reports of infection in the subdural space. The subdural space is not the subarachnoid space but a potential space between the dura and the arachnoid. Meningitis has been reported with the combined spinal epidural technique and is not a minor complication. In fact, many centres have stopped using the intrathecal route for labour analgesia because of concerns about breaking the dural barrier.

Leslie mentions that fetal heart rate (FHR) decelerations may occur but he does not address the issue as to what would happen if the FHR did not recover. Who will provide anesthesia in this now emergency situation? A study by Gambling and colleagues<sup>9</sup> found that within 1 hour of administering intrathecal sufentanil, profound fetal bradycardia requiring emergency cesarean section occurred in 8 of 400 parturients. So it does happen!

Lastly, Leslie suggests that if one can do a lumbar tap, one can do this procedure. It is not that simple. It is extremely difficult to be certain at which level a lumbar puncture is being performed, particularly in the pregnant patient. When aiming for the L3-4 interspace it has been shown that one is usually 1–3 segments higher.<sup>10</sup> This has potentially serious implications because conus damage can occur and has been reported with spinal anesthesia.<sup>11</sup> Although the risk of this complication may be small, the risk is justified when doing a diagnostic lumbar puncture for a condition such as meningitis. If conus damage occurs when the procedure is being done for analgesia during labour it would be difficult to justify it in court, particularly if the procedure had been done by someone untrained in anesthesia.

For these reasons, I would suggest that this technique is not one to be undertaken by someone untrained in anesthesia.

**M. Joanne Douglas, MD, FRCPC**

Head, Department of Anesthesia

BC Women's Hospital

Vancouver, BC

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11. Reynolds F. Damage to the conus medullaris following spinal anaesthesia. *Anaesthesia* 2001;56:235-47.



Poor man's epidural

CJRM 2001;6(4):290-92

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In response to: [M.J. Douglas](#)

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Dr. Douglas's interest and letter are appreciated. She raises some interesting points for discussion. Her concerns address both the use of the technique and who should provide it. I will attempt to address the points in that order.

Concerns raised about the technique were those of respiratory depression, possible drug errors, infection, nerve or spinal cord damage, and fetal bradycardia. As stated in the first of my two articles,<sup>1</sup> anecdotal reports of respiratory depression in the literature generally occurred when a much higher dose of narcotics had been used, often in conjunction with anesthetic medications such as bupivacaine. Most of the respiratory depression reported in the literature occurred with higher doses of morphine (from 1 mg to 5 mg), and several studies limiting the dose of morphine to 0.25 mg have had large series without respiratory depression occurring.<sup>2-6</sup> Regardless, respiratory depression is a potential complication of narcotics given by any route. The use of both intramuscular and intravenous (IV) narcotics, including patient-controlled IV narcotics, is well established for use by non-anesthetists in L and D wards. Ward staff is vigilant in their surveillance and experienced in their management of respiratory depression and other potential complications of intrapartum narcotics by any route.

My article<sup>1</sup> limited its recommendation to the use of fentanyl or morphine because there are studies establishing dose-response curves and efficacy.<sup>7</sup>

In one of the articles<sup>8</sup> cited by Douglas the first patient had received 50 mg of meperidine, which would be a significant dose by any route, and the resultant respiratory depression was perhaps more likely than if a smaller dose had been employed. My search of the literature did not turn up any established dose-response curves for intrathecal meperidine so I have not recommended its use.

The second case<sup>8</sup> Douglas refers to illustrates a point I am grateful she brought forth — that the risk of respiratory depression is more significant if the patient received other narcotic doses prior to the intrathecal narcotic (ITN). This is an important caution that, although mentioned, could have been much more explicitly made in my article. My own preference is not to use ITN where narcotics have been administered previously, by whatever route.

Douglas expresses concern that I suggest the technique can be repeated.<sup>1</sup> However, my exact wording (p. 228) is this: "This technique is generally limited to a single use per labour." Again, some studies have done repeated dosing but have found it to be generally much less effective and, in view of the increased risk of respiratory depression, not warranted. Hopefully this will clarify the point.

Douglas is very correct in her concern about using the wrong medication in the intrathecal space, which may result in serious toxicity or increased side effects. The point that only medications prepared for use in this indication should be used bears emphasizing again.

I am not sure I agree with Douglas that in a facility doing a low volume of this procedure more drug errors would take place. I don't believe that there is any literature to support her view. One could argue that a person doing fewer procedures might take more care in selection to ensure that the wrong medication is not administered.

Infection is a potentially serious but rare complication in the subarachnoid space. I thank Dr. Douglas for pointing out the incorrect use of the words "subdural space" in the original article (p. 228).

The incidence of infection in the single use of a small-gauge spinal needle to enter the intrathecal space is very low. Taking care to ensure aseptic technique during the administration of ITN is mandatory. I am aware that the use of combined spinal epidural analgesia has a higher incidence of infection, but that technique uses an indwelling catheter in the epidural space following dural puncture and is a significantly different technique.

The concern of possible damage to the spinal cord in administering the ITN bears some consideration. This complication has been anecdotally reported, and two of Douglas's references<sup>9,10</sup> suggest that determining the lumbar space used for puncture is not as reliable as we have been taught. If the incidence of permanent neurological injury is significant then it will not be acceptable. If the incidence is very low a woman may elect to use this technique and accept the risk. Unfortunately, Douglas has not given an incidence for this complication, and my review of the literature for this technique in labour did not reveal reports of neural damage as a complication. My current impression is that the risk is very low, but I would appreciate further clarification of the actual incidence.

Fetal heart rate (FHR) decelerations do occur and cesarean sections do happen. The issue of what to do should evidence of FHR decelerations occur is a difficult one for small facilities, which may not have access to cesarean section backup. This is true whether or not they consider using ITN for labour analgesia.

Does the use of ITN increase the incidence of significant FHR deceleration over other effective labour analgesic options such as epidural techniques or IV narcotics? Is the relationship causal or coincidental?

Douglas cited a study by Gambling and colleagues,<sup>11</sup> who found that 8/400 women who were

administered intrathecal sufentanil had profound fetal bradycardia within 1 hour and went on to cesarean section. A review article by Norris<sup>12</sup> notes that the reported incidence of FHR changes is similar regardless of the type of analgesia used: intrathecal, epidural or intravenous. The studies Norris reviewed, with the exception of the Gambling and colleagues' study, have not reported a significant increase in the need for cesarean section in the patients administered ITN for fetal bradycardia. Why Gambling and colleagues had a significantly different number of FHR abnormalities leading to cesarean section following ITN sufentanil is not clear from the study, therefore, further vigilance is prudent.

The question of who should administer the ITN and what would constitute adequate training bears discussion. Douglas asserts that the skill set to do this technique exists only among anesthesiologists. However, references in my article<sup>1</sup> were very supportive of non-anesthetic-trained physicians safely and effectively using this technique. In some of the studies family physicians were supported by their specialist colleagues in acquiring the experience to provide this technique. However, none of these articles suggested that family physicians required extensive anesthetic training to provide this limited technique.

The skill sets required are not outside the skill sets possessed by many rural physicians. The ability to perform a lumbar puncture is not exclusive to anesthesiology. Narcotic effects are well known and have an effective antidote. The use of this technique, like any other medical intervention, requires being well versed in the procedure and in its strengths and weaknesses.

**Neil Leslie, MD**  
Revelstoke BC

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  10. Reynolds F. Damage to the conus medullaris following spinal anaesthesia. *Anaesthesia* 2001;56:235-47.
  11. Gambling DR, Sharma SK, Ramin SM, Lucas MJ, Leveno KJ, Wiley J, et al. A randomized study of combined spinal-epidural analgesia versus intravenous meperidine during labor: impact on cesarean delivery rate. *Anesthesiology* 1998;89:1336-44.
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Colles' fractures

CJRM 2001;6(4):292

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See response from: [G. Brock](#)

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To the editor:

I am writing in response to the article<sup>1</sup> "The occasional short-arm cast." It was well written, but I would like to point out a deficiency. Colles' fractures are difficult, and what was missing in the article is the suggestion that a follow up x-ray be made to make sure there is no angulation.

**C.G. Moisey, MD, FRCPC**

Diseases of children

Smithers, BC

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1. Brock G, Griffith C. The occasional short-arm cast. [Can J Rural Med 2000;5\(3\):146-8.](#)

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Colles' fractures

CJRM 2001;6(4):292

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In response to: [C.G. Moisey](#)

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We thank Dr. Moisey for his reminder that follow-up x-rays are indicated in Colle's fractures, certainly the most common arm fracture seen in practice. The article however, was intended only as a technical article on the process of applying a short-arm cast. Space limitations precluded it being an article on the management of Colles' fractures.

Moisey's remarks are welcome. To paraphrase: "proper application of a cast is not the end of treatment of a fracture. It is not even the beginning of the end. It is, however, the end of the beginning."

**Gordon Brock, MD, CCFPC**  
Temiscaming, Que.

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[Fall 2001 Table of Contents](#)

Anesthesia on the Web

Barrie McCombs, MD, CCFP, CCFP(EM)

CJRM 2001;6(4):293-4

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"I got my education, out behind the barn, I ain't a-fooling, no sir-ee. Passed each examination, out behind the barn, but it almost made a wreck out of me" — Little Jimmy Dickens, c. 1950

This column fits with the "Anesthesia" theme of this issue. It includes useful Web sites for rural physicians practising anesthesia.

Searching for "anesthesia"

To search Web sites, use the multiple terms "anaesthesia," "anesthesia," "anaesthesiology," "anesthesiology," "anaesthetist" and "anesthetist." On the lighter side, if you search for "passing gas," you'll find over 5000 sites, including some questionable jokes.

Textbooks and journals

There are a number of Internet-based textbooks and journals. Since my own anesthesia experience is limited, I've listed the sponsors of each site to help you decide how to evaluate the information.

Virtual Anaesthesia Textbook

<http://virtual-anaesthesia-textbook.com>

Links to other anesthesia-related Web sites. Sponsor: Datex-Ohmeda.

Global Textbook of Anesthesiology

<http://gasnet.med.yale.edu/gta/>

Textbook. sponsor: GasNet.

Update in Anaesthesia

[www.nda.ox.ac.uk/wfsa/html/pages/up\\_issu.htm](http://www.nda.ox.ac.uk/wfsa/html/pages/up_issu.htm)

Journal: full-text. Sponsor: World Federation of Societies of Anaesthesiologists.

Anesthesiology

[www.anesthesiology.org](http://www.anesthesiology.org)

Journal: abstracts. Full-text for subscribers only. Sponsor: American Society of Anesthesiologists.

Current Opinion in Anesthesiology

[www.co-anesthesiology.com](http://www.co-anesthesiology.com)

Journal: table of contents. Sponsor: Lippincott.

Anesthesia & Analgesia

[www.anesthesia-analgesia.org](http://www.anesthesia-analgesia.org)

Journal: abstracts. Full text for subscribers. Sponsor: International Anesthesia Research Society.

Anaesthesia

[www.blackwell-science.com/products/journals/anae.htm](http://www.blackwell-science.com/products/journals/anae.htm)

Journal: table of contents. Sponsor: Association of Anaesthetists of Great Britain & Ireland.

Oyston Associates – Anaesthesia

[www.oyston.com/anaes/](http://www.oyston.com/anaes/)

Articles for patients and physicians. Links. Sponsor: Dr. John Oyston.

Canadian Web sites

Canadian Anesthesiologists' Society

[www.cas.ca](http://www.cas.ca)

Society activities. Patient information. Links to anesthesia sites.

Canadian Anesthesia List

[www.anesthesia.org/professional/can\\_anes.html](http://www.anesthesia.org/professional/can_anes.html)

Links to Canadian resources.

North American Chronic Pain Association of Canada

[www.chronicpaincanada.org/](http://www.chronicpaincanada.org/)

Information about chronic pain.

International Web sites

GasNet

[www.gasnet.org/](http://www.gasnet.org/)

Variety of resources. "Tips & Tricks" section for registered users. Sponsor: not determined.

Hardin MD — Anesthesia Resources

[www.lib.uiowa.edu/hardin/md/anesth.html](http://www.lib.uiowa.edu/hardin/md/anesth.html)

Sponsor: University of Iowa.

Medical Matrix

[www.medmatrix.org](http://www.medmatrix.org)

An index of anesthesia sites.

American Society of Anesthesiologists

[www.asahq.org](http://www.asahq.org)

Society activities. Patient information. Links.

Royal College of Anaesthetists

[www.rcoa.ac.uk/](http://www.rcoa.ac.uk/)

Society activities. Links. Index of related software.

Anesthesia Resources

[www.invivo.net/bg/index2.html](http://www.invivo.net/bg/index2.html)

Extensive links, including clinical resources. Sponsor: Dr. Bruno Grenier (France).

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Barrie McCombs, MD, CCFP, CCFP(EM) — Director, University of Calgary Medical Information Service, Calgary, Alta.

Correspondence to: Dr. Barrie McCombs, Director, University of Calgary Medical Information Service, 3330 Hospital Dr. NW, Calgary AB T2N 3Z0; [bmccombs@ucalgary.ca](mailto:bmccombs@ucalgary.ca); [www.ruralnet.ab.ca/medinfo/](http://www.ruralnet.ab.ca/medinfo/)

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Rural anesthesia

CJRM 2001;6(4):295

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Rural literature, from 1966 to the present, was searched for articles related to the provision of anesthesia services in rural hospitals. Search results were remarkable by the relative absence of papers. A search of "rural health" over these nearly 40 years returned over 14 000 articles; a mere 40 concern rural anesthesia, with no indexed articles in 2001, and the majority published in the late 80s and early 90s. The issue is clearly one that needs to be revisited.

Meeting the challenge: providing anesthesia services in rural hospitals. Barry AW. CMAJ 1995;153(10):1455-6.

This article states the essential issue, which in Canada remains the essential issue: "Although the volume and intensity of surgery done in rural hospitals are not sufficient to support a fully trained staff anesthetist, it is not practicable for all surgical, anesthesia and obstetric services to be provided by specialists in referral centres." In the same issue, data are presented from rural BC, Alberta, Yukon and Northwest Territories concerning the services provided by GP anesthetists.

Role of the general practitioner in the delivery of surgical and anesthesia services in rural western Canada. Chiasson PM, Roy PD. CMAJ 1995;153(10):1447-52.

The authors surveyed 148 rural hospitals and analysed data from 101 hospitals with less than 51 beds and serving populations of less than 15 000. They found that 55% of these hospitals provided surgical services and that, of these, 80% employed GP anesthetists and 64% relied solely upon them.

Rural health care and the nurse anesthetist. Gunn IP. CRNA 2000;11(2):77-86.

More recent is the documentation of the anesthesia service provision trends south of our border. There, "...certified registered nurse anesthetists have been and continue to be the principal anesthesia providers in rural hospitals in the US," and "...from available reports, their communities are satisfied with their services." And: "Despite the significant rise in the number of anesthesiologists in the past 10–15 years, there is no evidence that they are attracted to practice in these [rural] areas."

A five-year prospective analysis of the efficacy, safety and morbidity of epidural anaesthesia performed by a general practitioner anaesthetist in an isolated rural hospital. Watts RW. *Anaesth Intensive Care* 1992;20(3):348-53.

Obstetrical epidural anaesthesia in a rural Canadian hospital. Webb RJ, Kantor GS. *Can J Anaesth* 1992;39(4):390-3.

Obstetrical epidural anaesthesia in a Canadian outpost hospital. Orser B. *Can J Anaesth* 1988;35(5):503-6.

The issue of standards and safety has not been addressed in recent years, and certainly not in a comprehensive manner. The data that exist date from a decade ago. These 3 references are of interest since they document in 3 different rural settings (Saskatchewan, Ontario, and Port Lincoln, Australia) the safety and efficacy of the same procedure, namely obstetrical epidural anaesthesia.

These studies surveyed periods over 5-, 4- and 10-year spans, and 324, 42 and 116 procedures respectively. A number of data variables relating to complications were common among all studies, namely epidural taps (0%, 1.8% and 3.4% respectively), and hypotension (24%, 12% and 8.6%). Watts and Webb reported a failure rate of 2% and 4%, and no authors reported any significant neonatal morbidity or mortality.

Clearly the practice of anesthesia in rural areas needs better documentation, not only with regard to its safety and efficacy, but also with respect to its role in supporting other services such as trauma care, critical care and transport.

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## Author information

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- Original articles: research studies, case reports and literature reviews of rural medicine
- Commentary: editorials, regional reviews and opinion pieces
- Clinical articles: practical articles relevant to rural practice. Illustrations and photos are welcomed and encouraged
- Off Call articles: a grab-bag of material of general interest to rural doctors, such as travel, musings on rural living, essays
- Cover: artwork with a rural theme

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Submit 3 hard copies of the manuscript and a copy on computer disk to Editor, Canadian Journal of Rural Medicine, Box 1086, Shawville QC J0X 2Y0; 819 647-2972, fax 819 647-2845, [cjrm@fox.nstn.ca](mailto:cjrm@fox.nstn.ca). Include a covering letter indicating that the piece has not been published or submitted for publication elsewhere. Hard copies of the manuscript should be double-spaced, with a separate title page, an abstract of no more than 200 words, followed by the text, full references and tables (each table on a separate page).

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## RuralMed

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To participate in RuralMed you must be able to send and receive email. Subscription is by request to the listowner. Simply send a message to [admin@srpc.ca](mailto:admin@srpc.ca).

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**Table 1. Demographic information on all graduates of Ontario PGY3 programs from 1995 to 2000 who returned surveys**

Variable	Mean (years)	%	<i>n</i>
Present age	34 (5.2)	–	31
Male	–	77	30
Female	–	33	30
Years since CCFP completed	4 (4.0)	–	29
Years since PGY3 completed	2 (2.0)	–	31
12-month PGY3 training	–	97	30
Practising anesthesia in Canada	–	90	31
Practising anesthesia in Ontario	–	77	31
Practising RCPSC anesthesia	–	3	31
Not practising anesthesia	–	10	31

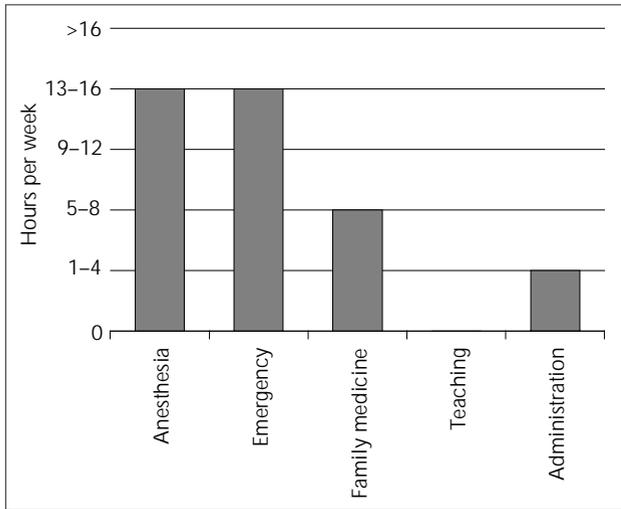


Fig. 3. Mean hours per week devoted to various aspects of practice among study respondents who are still practising as a GPA in Canada ( $n=27$ ).

Variable	%	<i>n</i>
Desired length of PGY training		29
6 months	3	
12 months	90	
18 months	3	
24 months	3	
Desire certification exam		31
Yes	84	
No	0	
Unsure	16	

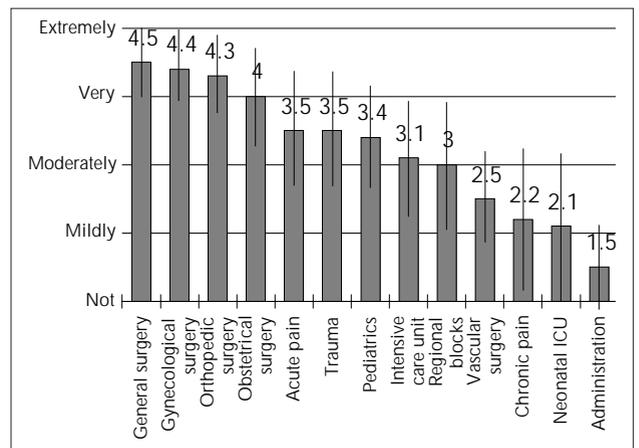


Fig. 5. Degree of preparedness for specific areas of anesthesia practice among all study respondents ( $n=31$ ).

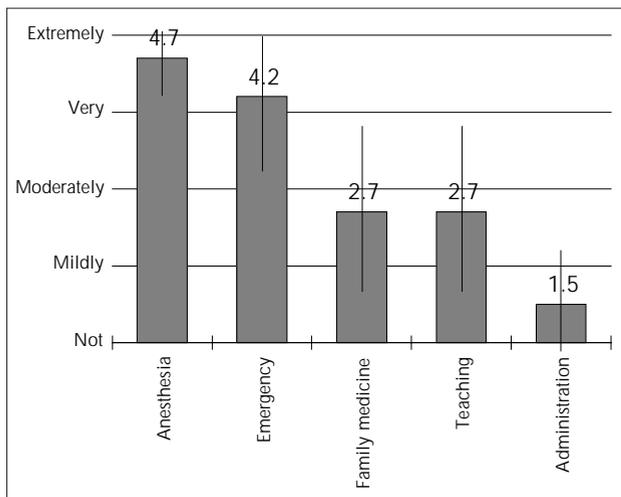


Fig. 4. Degree of preparedness for various aspects of practice among all study respondents ( $n=30$ ).

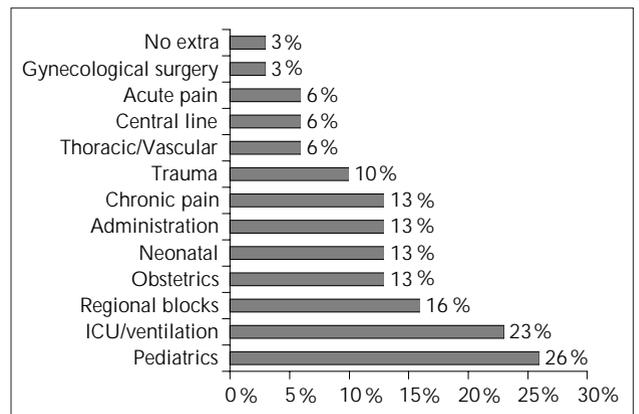


Fig. 6. Percentage of respondents commenting (without being prompted) on an increased need for PGY3 training in specific areas, among all study respondents ( $n=31$ ).

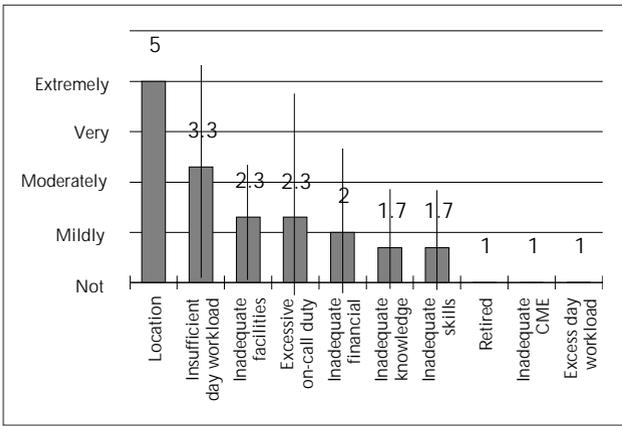


Fig. 1. The importance of various factors in the decision not to practise anesthesia ( $n=3$ ) among study respondents.

**Table 2. Demographic information on survey respondents who are still practising anesthesia in Canada as a GPA**

Variable	Mean	Range	<i>n</i>
No. of operating rooms at centre	3 (1.3)	1-5	26
No. of anesthetists at centre	4 (1.4)	1-6	27
No. of nights on call per week	2 (1.7)	0-7	26

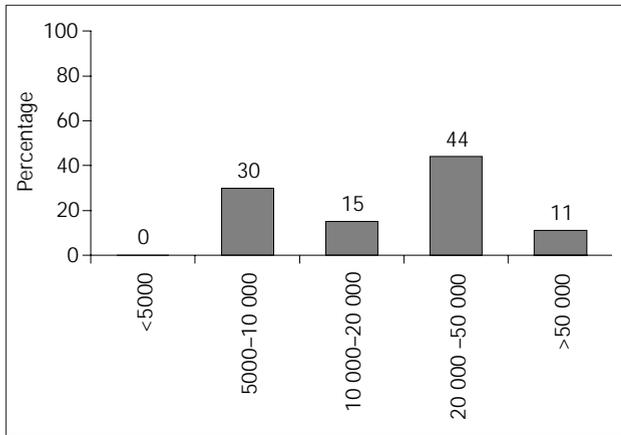


Fig. 2. Percentage distribution by size of serviced population among all study respondents who are still practising as a GPA in Canada ( $n = 27$ ).

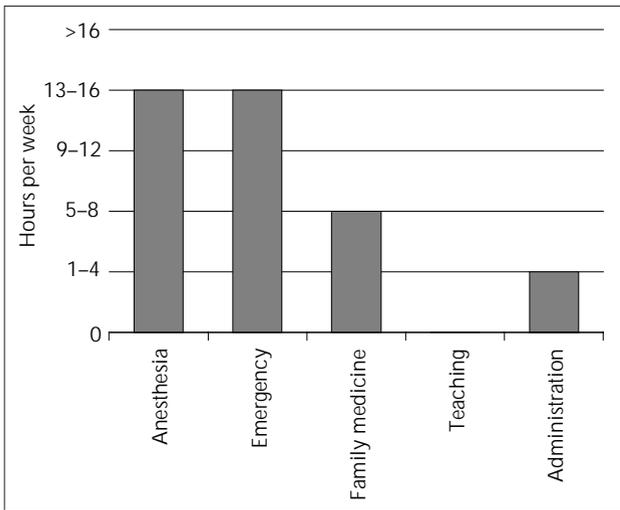


Fig. 3. Mean hours per week devoted to various aspects of practice among study respondents who are still practising as a GPA in Canada ( $n=27$ ).

Table 3. Desired length of PGY3 training and perceived need for a certification exam following completion of PGY3 training among survey respondents		
Variable	%	<i>n</i>
Desired length of PGY training		29
6 months	3	
12 months	90	
18 months	3	
24 months	3	
Desire certification exam		31
Yes	84	
No	0	
Unsure	16	

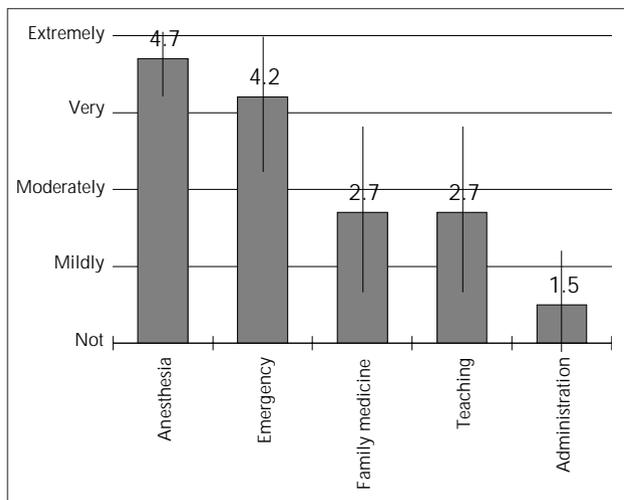


Fig. 4. Degree of preparedness for various aspects of practice among all study respondents ( $n = 30$ ).

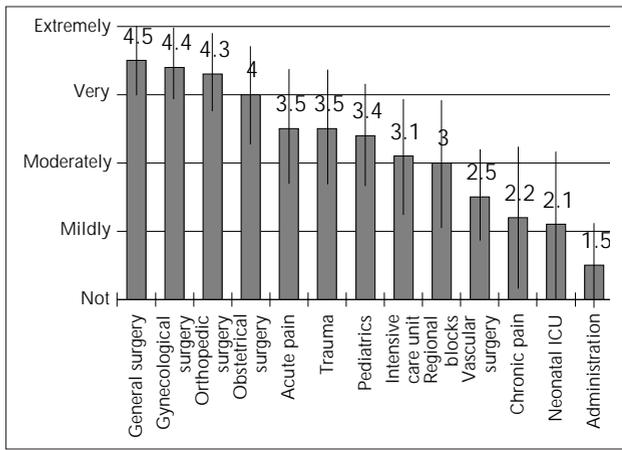


Fig. 5. Degree of preparedness for specific areas of anesthesia practice among all study respondents ( $n = 31$ ).

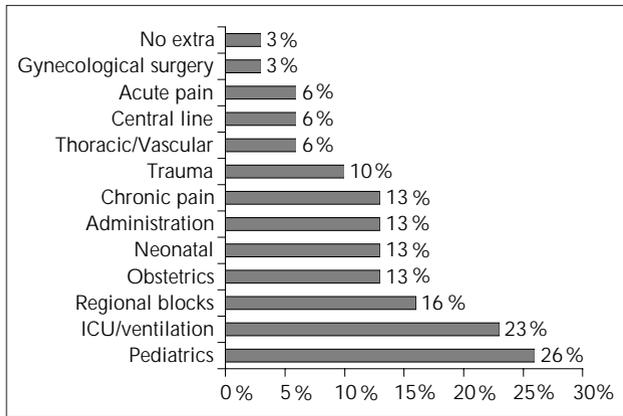


Fig. 6. Percentage of respondents commenting (without being prompted) on an increased need for PGY3 training in specific areas, among all study respondents ( $n = 31$ ).

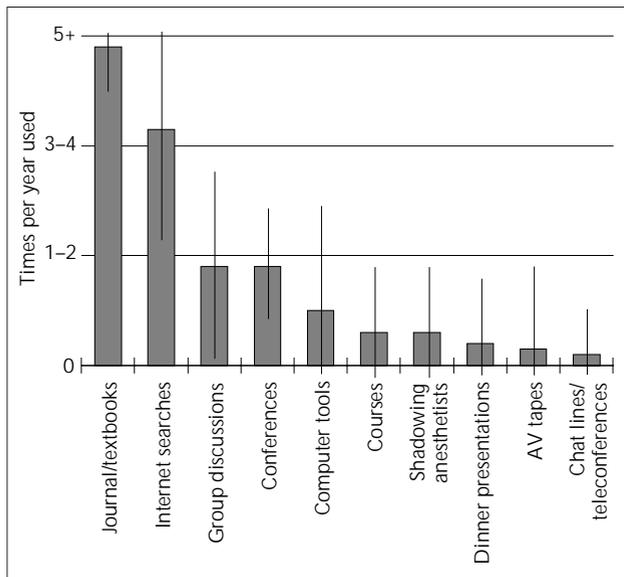


Fig. 1. Mean number of times per year that CME resources are currently used among study respondents who still practise in Canada ( $n = 25$ ).

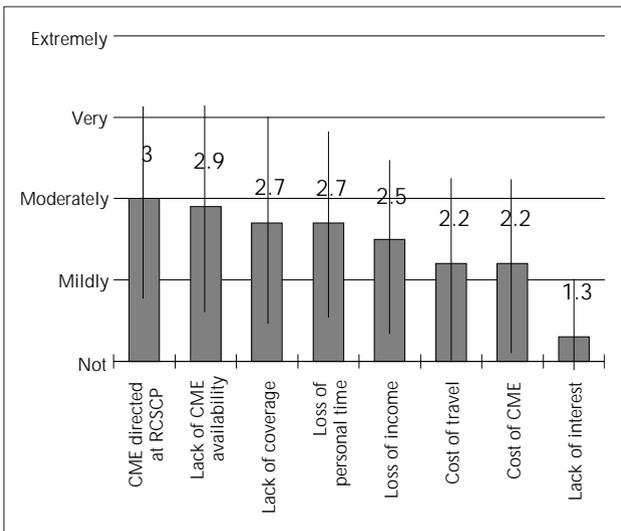


Fig. 2. Mean extent to which various factors act as a barrier to CME use among study respondents who still practise in Canada ( $n = 26$ ).

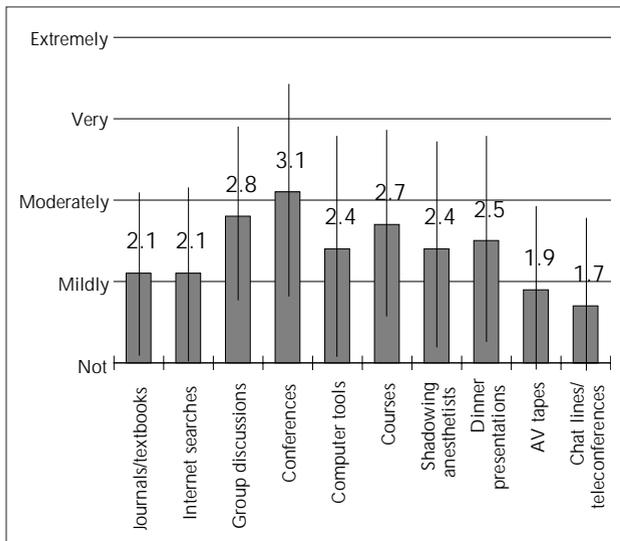


Fig. 3. Mean desired increase in use of CME resources, provided barriers to use could be removed, among study respondents who still practise in Canada ( $n = 25$ ).

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ISSN 1488-237X