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rurale**



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VOLUME 9, No. 4, FALL 2004

VOLUME 9, N° 4, AUTOMNE 2004

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Beyond Kirby and Romanow

Sustainable Rural Maternity Care



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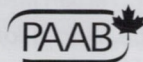
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Montréal, Que. — Apr. 28–30, 2005

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Society of Rural Physicians of Canada Type 2 Diabetic Flow Chart 2004

DIAGNOSTIC CRITERIA FOR DIABETES

A confirmation test must be done on another day unless severe hyperglycemia

Type 1 and Type 2 DM
 Random ≥ 11.1 mmol/L
 OR
 Fasting ≥ 7.0 mmol/L
 OR
 75gm 2h ≥ 11.1 mmol/L

Gestational DM screening (24-28/32)
 non-fasting 1hr 50 gm: ≥ 10.3 is diagnostic;
 7.8-10.3 do confirmatory fasting 75 gm 2hr:
 two out of three: fasting ≥ 5.3 or 1 hour ≥ 10.6
 or 2 hour ≥ 8.9

A1C - AVERAGE GLUCOSE

| Glycosylated Hemoglobin | Average blood glucose in last 3mo. |
|-------------------------|------------------------------------|
| 0.06 | 6 |
| 0.065 | 7 |
| 0.07 | 8 |
| 0.075 | 9 |
| 0.08 | 10 |
| 0.085 | 11 |
| 0.09 | 12 |
| 0.095 | 13 |
| 0.1 | 14 |
| 0.105 | 15 |
| 0.110 | 16 |
| 0.115 | 17 |
| 0.120 | 18 |
| 0.125 | 19 |
| 0.130 | 20 |
| 0.135 | 21 |
| 0.140 | 22 |

SCREENING SENSORY FOOT EXAM

Choice of Method

- 1) 10 gram monofilament $\times 4$
- 2) Pin prick $\times 4$
- 3) ON+ OFF 128 Hz $\times 2$

Score 2 out of 4 or less = neuropathy
 Colour foot on top of flow chart
 solid colour to indicate high risk



Once neuropathy established, discontinue this testing and do regular foot exams on this high risk patient to screen for ulcers and infections.



LIPID VALUES Targets based on 10 year risk of CVD event

Target Values

| LDL-C (mmol/L) | TC/HDL Ratio | TG (mmol/L) |
|-------------------|-----------------|----------------|
|-------------------|-----------------|----------------|

Very high risk
 10 year risk $> 10\%$ on history
 of CVD or Diabetes Mellitus

| | | |
|---------|-------|---------|
| < 2.5 | < 4 | < 2.0 |
|---------|-------|---------|

For complete risk assessment, see CMAJ 2000; 162 (10): 1441-7

MANAGEMENT APPROACH

- Step 1. Diet and exercise
- Step 2. Oral agent: Metformin if obese; or Glyburide; or ... glitazone
- Step 3. Combine two or three oral agents
- Step 4. Add NPH Insulin, QHS, 10-20 units
- Step 5. BID-QID Insulin alone, or with metformin / ... glitazone

* GLYCEMIC CONTROL

CDA recommends A1c < 0.07 ; UKPDS notes \uparrow hypoglycemia (up to 18%) with such tight control. Consider A1C level of 0.07-0.08 in the frail elderly, or if using meds causing hypoglycemia (insulin, glyburide).

The chart is designed for a 3 year period, but can be used flexibly for any time frame. Not every clinic appointment need be recorded, nor all of the patient's medications. Once peripheral neuropathy is documented, please fill in the top foot in solid colour, so it acts as a reminder that this patient is at high risk for peripheral complications.

Updated from: Kelly L, Roedde S, Harris S, Kapas IH, Bozek N, Baechler M, Williams L, Kakei J, Seligal Y, Hyde B. Society of Rural Physicians of Canada Evidence-based Practical Management of Type 2 Diabetes. CJRM 2001; 8 (7) insert

Available at www.srpc.ca



Palliative Care: the final challenge

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Treatment across the life cycle is a hallmark of rural medicine. Although much attention is paid to the earliest stages of this cycle (obstetrical and newborn services for rural women), the other end of the cycle is equally important. Many of the same issues are at play when thinking about palliative care in rural communities: the desire to allow people to die as close to home as possible, and at home if possible; the importance of paying attention, not only to the patient but to their families and friends; the goal of not adding to the burden of illness (which may be significant) the indignity of transport away from home and family and from all that is familiar.

The leading causes of death — coronary heart disease, cancer and stroke — are well known to rural health care providers, with cancer in particular being the major diagnosis in patients requiring palliative care.

Such care has been developed as a specialty in many urban areas, but in many rural environments the resources are lacking to provide the same level of care. This should not be so, particularly since the need for expensive technology is less in a palliative care setting although the need for human resources correspondingly increases.

Currently, approximately 3.7 million Canadians are over the age of 65. By 2021 there will be 6.9 million Canadians in this age group. In 1991 Canadians older than 65 had a life expectancy of 18 years, 9 of which were expected to be disability free, with the remaining years including 3 years each of slight, moderate and severe disability.¹ These

projections may underestimate the actual situation in many rural regions that have a more elderly population than the average Canadian region.

The characteristics of palliative care are widely accepted and include an interdisciplinary and holistic approach that is focussed on quality of life and includes the involvement and support of the family. Care should be based on individual values and patient's wishes, and it should reflect best practices and integrate the community through the use of volunteers. In this issue of the Journal we publish personal reflections of two practitioners, who argue for the integration of palliative care into the "Jack of All Trades" armamentarium of rural physicians, and provide a host of practical tips.² This article is a good place to start (see page 253).

Unfortunately, in many communities palliative care is provided on an ad-hoc basis. The resources, both human and infrastructural, must compete with all the other imperatives on the rural health wagon. Nevertheless, more can and should be done. With strategic investment the opportunity exists to provide palliative care that is every bit as well organized, compassionate and appropriate, as any, anywhere. Rural communities will be strengthened, and those in need of these services will be the winners.

REFERENCES

1. Fisher R, Ross MM, MacLean MJ, editors. *A guide to end-of-life care for seniors*. Ottawa (ON): Population Health Directorate, Health Canada; 2000, p. 8.
2. Kelly L, O'Driscoll T. The occasional palliative care patient: lessons we have learned. *Can J Rural Med* 2004;9(4):253-6.



Les soins palliatifs : le défi ultime

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Le suivi des soins tout au long de la vie d'une personne est caractéristique de la médecine rurale. Or, si on accorde beaucoup d'attention en milieu rural aux premières années de la vie (services d'obstétrique et soins aux nouveau-nés), la fin du cycle est tout aussi importante. De nombreux enjeux sont les mêmes lorsqu'il est question des soins palliatifs dans les communautés rurales : nous voulons permettre aux gens de mourir le plus près possible de leur résidence, et à la maison si possible. Il est important d'être attentif, non seulement aux patients, mais aussi à la famille et aux amis pour éviter d'ajouter au fardeau de la maladie, qui peut être très lourd, l'indignité du déplacement loin de la résidence, de la famille et de tous les repères familiaux.

Les premières causes de mortalité — maladie coronarienne, cancer et accident vasculaire cérébral — sont bien connues des prestataires de soins de santé en milieu rural, et le cancer en particulier est le principal diagnostic chez les patients qui ont besoin de soins palliatifs.

Ces soins se sont transformés en spécialité dans de nombreuses régions urbaines, mais souvent, en milieu rural, les ressources ne suffisent pas à la prestation de soins de même niveau. Il devrait pourtant en être autrement, puisque les soins palliatifs exigent moins de technologies onéreuses, quoique le besoin en ressources humaines soit parallèlement plus grand.

Environ 3,7 millions de Canadiens ont actuellement plus de 65 ans. Il y aura 6,9 millions de Canadiens dans ce groupe d'âge en 2021. Les Canadiens de plus de 65 ans avaient une espérance de vie de 18 ans en 1991, dont 9 années sans incapacité, les autres étant réparties en trois tranches de trois ans marquées respectivement d'incapacités légères, moyennes et graves¹. Ces prévi-

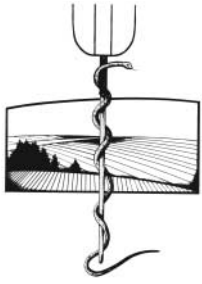
sions peuvent toutefois sous-estimer la situation réelle dans de nombreuses régions rurales, qui ont une population âgée plus nombreuse que la moyenne canadienne.

Les caractéristiques des soins palliatifs sont largement acceptés et comprennent une approche holistique et interdisciplinaire axée sur la qualité de vie, y compris l'engagement et le soutien de la famille. Les soins devraient reposer sur les valeurs individuelles et la volonté du patient, ils devraient refléter les pratiques exemplaires et intégrer la communauté par l'intermédiaire du recours aux bénévoles. Nous publions dans ce numéro du Journal les réflexions de deux praticiens qui interviennent en faveur de l'intégration des soins palliatifs dans l'«outillage à tout faire» des médecins en milieu rural, et qui offrent une foule de conseils pratiques². Cet article constitue un bon début (voir en page 253).

Dans de nombreuses communautés, malheureusement, les soins palliatifs sont dispensés au cas par cas. Les ressources humaines et les infrastructures font concurrence aux autres impératifs dans le train de la santé rurale. Nous pouvons néanmoins en faire davantage et il le faudrait. À l'aide de l'investissement stratégique, nous avons l'occasion d'offrir des soins palliatifs tout aussi bien organisés, humanitaires et appropriés que n'importe quels autres, n'importe où. Les communautés rurales seront renforcées et les personnes qui ont besoin de ces services en seront avantagées.

RÉFÉRENCES

1. Fisher R, Ross MM, MacLean MJ, rédacteurs. *Un guide des soins en fin de vie aux aînés*. Ottawa : Direction de la santé de la population, Santé Canada, 2000, p. 8.
2. Kelly L, O'Driscoll T. The occasional palliative care patient: lessons we have learned. *Can J Rural Med* 2004;9(4):253-6.



President's message: First-winter woes

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The seasons are changing, and a new group of rural doctors are facing their first winter in practice. With this in mind, I offer tips from some SRPC members for a healthy season in the Great White North.

I seldom considered transportation prior to moving to rural BC. However, the choice of vehicle is important. Many of us provide on-call from home, which results in the inevitable after-midnight trip to the hospital. I found out they plow the roads infrequently at

**GET A 4-WHEEL DRIVE
IF POSSIBLE. IF NOT,
GET A FRONT-WHEEL DRIVE
WITH GOOD SNOW TIRES.**

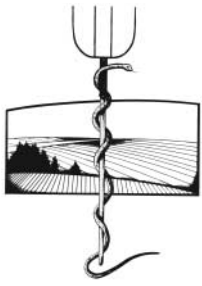
night. Unless you are on a major highway they may not plow your road for days. Get a 4-wheel drive if possible. If not, get a front-wheel drive with good snow tires. I spent too much time on call either stuck in my driveway, worrying about getting stuck in my driveway, or not going home because I knew I would get stuck in the driveway. And if you don't know what a block heater is, find out. You'll need one.

Another practical consideration is where you live, what type of house, how it is heated, and where your water supply comes from. Rural acreage is tremendously appealing, but can add to transportation challenges. Likewise, log houses are very popular. But nobody tells you about how difficult they are to

insulate. The logs shrink, and wind whistling through the cracks can make a rural winter extremely unpleasant. If you choose wood heat, you either have to participate in the annual woodcutting ritual or buy the stuff. You also must stoke the fire at odd hours. As for water, one of my colleagues misses a considerable amount of work each winter when he is out in his yard with a blowtorch thawing out his frozen pipes. A good reliable well with properly buried pipes is an absolute necessity.

A more serious challenge has to do with living in a small town for the winter. It is harder to go away because the roads are bad. The days are short, and the nights are long. No matter where you go, you see your patients everywhere. It is a challenge to establish proper boundaries between your personal and professional life. If you cannot define your own space the job will consume you. Something that helps a great deal in these situations is the support of your more experienced colleagues. In addition to the local medical community I have found the larger community of rural docs in the SRPC to be tremendously helpful. The contacts at meetings and CME events, the practical articles and personal stories shared in the *CJRM*, and the advice on RuralMed have all been useful.

We are in the midst of a membership drive. To be effective and continue to provide support to rural doctors on a variety of levels, we need your help. If you're not a member, consider joining. If you're already a member I hope you find the collegiality many of us experience through the SRPC to be a valuable addition to your medical life.



Message de la présidente : Les aléas du premier hiver

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Les saisons passent et un nouveau groupe de médecins pratiquant en milieu rural fera l'expérience de son premier hiver. J'offre donc des conseils à ces membres de la Société de la médecine rurale du Canada pour qu'ils vivent une saison en santé dans le Grand Nord.

J'ai rarement considéré le mode de transport avant de déménager en milieu rural en C.-B., mais le choix du véhicule est important. Nous répondons souvent aux appels à partir de notre domicile, et nous devons inévitablement aller à l'hôpital tard la nuit. J'ai constaté que les routes ne sont pas déneigées régulièrement en soirée. Sauf sur l'autoroute, les chemins peuvent être enneigés pendant des jours. Obtenez un véhicule à quatre roues motrices si possible; sinon, ayez au moins un véhicule à traction avant chaussé de bons pneus à neige. J'ai passé trop de temps sur appel soit immobilisé dans l'entrée, soit m'inquiétant de rester pris dans l'entrée ou d'être incapable de revenir à la maison, sachant que je risquais de ne pouvoir sortir d'une autre entrée. Si vous ne savez pas ce qu'est un chauffe-bloc, informez-vous, vous en aurez besoin.

Autre considération pratique : l'endroit où vous habitez, le genre de résidence, le chauffage et l'approvisionnement en eau potable. La superficie en acres en milieu rural est extrêmement intéressante, mais elle peut ajouter aux défis du transport. Les maisons en bois rond sont aussi très populaires, mais personne ne vous dit à quel point elles sont difficiles à isoler. Le bois rond rétrécit, le vent siffle dans les fissures et l'hiver en milieu rural peut être extrêmement désagréable. Si vous choi-

sissez le chauffage au bois, vous devrez l'acheter ou participer à la corvée annuelle de coupe du bois. Il faut aussi tisonner la braise à des heures indues. Quant à l'eau, un de mes collègues manque un nombre considérable d'heures de travail chaque hiver parce qu'il doit aller dans la cour dégeler les conduites avec un chalumeau. Un bon puits fiable et des conduites bien enfouies sont absolument nécessaires.

La vie dans une petite ville en hiver est un plus grand défi. Il est difficile de sortir parce que les chemins sont en mauvais état. Les jours sont courts et les nuits sont longues. Peu importe où vous allez, vous rencontrez vos patients partout. Il est difficile d'établir les limites entre la vie personnelle et la vie professionnelle. Si vous n'avez pas de vie privée, le travail vous consumera. Il est parfois très utile dans ces situations d'avoir le soutien de collègues plus chevronnés. Outre la communauté médicale locale, j'ai constaté que la communauté plus large des médecins en milieu rural de la SMRC est extrêmement utile. Les rencontres aux réunions et pendant les activités d'EMC, les articles pratiques, les anecdotes personnelles échangées dans le *JCMR* et les conseils téléchargés à *MedRurale* ont tous été utiles.

Nous sommes actuellement en pleine campagne de recrutement. Nous avons besoin de votre aide pour être efficaces et continuer d'aider les médecins en milieu rural à divers échelons. Si vous n'êtes pas membre, pensez à le devenir. Si vous l'êtes, j'espère que vous considérez que la collégialité dont nombre d'entre nous faisons l'expérience par l'intermédiaire de la SMRC est un ajout précieux à votre vie médicale.

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Du 28 au 30 avril 2005 – Montréal, QC – April 28-30, 2005

Jeudi, 28 avril : Ces communautés rurales qui nous tiennent à cœur

- Discussion en groupe
- Séances en petits groupes
- Ateliers de recherche
 - Séance sur la politique et AGA de la SMRC et plus encore
- Soins spécialisés
- Sujets brûlants en santé rurale
- Ateliers de recherche

Thursday, April 28: Caring About Rural Communities

- Panel Discussion
- Small Group Sessions
- Research Workshops
- Policy Sessions and SRPC AGM and more
- Specialty Care
- Hot Topics in Rural Health
- Research Workshops

Friday, April 29 : Rural Care – It's Critical

- Trauma Workshops
- Industrial Health Issues
- Fast Echo
- Infectious Diseases
- Rural EMT Emergencies
- Diabetes Management
- Psychiatric Emergencies
- Advanced Eye Exam
- Many RCC[®] Workshops
- Orthopaedics and much more

Ven. 29 avril : Soins en milieu rural – C'est critique

- Ateliers de travail sur les traumatismes
- Enjeux en médecine du travail
- Écho rapide
- Maladies infectieuses
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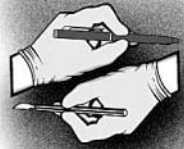
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Comparison of rural and urban users and non-users of home care in Canada

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Introduction: Geography is considered a determinant of health because people living in rural and remote areas, compared with those in urban areas, have poorer health status and more difficulty accessing health care.

Purpose: To examine the characteristics associated with the use of publicly funded home care services among rural and urban Canadians 18 years of age and over.

Methods: The Andersen and Newman Behavioural Model of Health Services Use guided the selection of variables, analyses and interpretation of the findings. Descriptive, correlation and multiple logistic regression analyses were completed on 2 cross-sectional cycles of Statistics Canada's National Population Health Surveys.

Results and Conclusion: This research revealed that rural residents are increasingly less likely to receive personal care assistance, and rural home care users appear to have more resources (e.g., higher levels of education, sense of coherence) that likely influence their ability to access and receive home care services, than their urban counterparts. Rural residents without these resources may be less likely to receive home care services.

Introduction : On considère la géographie comme un déterminant de la santé parce que les populations des régions rurales et éloignées sont en moins bonne santé et ont plus de difficulté à avoir accès aux soins de santé que celles des régions urbaines.

Objet : Étudier les caractéristiques associées à l'utilisation de services de soins à domicile financés par l'État chez les Canadiens urbains et ruraux de 18 ans et plus.

Méthodes : Le modèle comportemental Andersen et Newman d'utilisation des services de santé a guidé la sélection des variables, les analyses et l'interprétation des résultats. On a procédé à des analyses de régression logistiques multiples, de corrélation et descriptives portant sur deux cycles transversaux des enquêtes nationales sur la santé de la population de Statistique Canada.

Résultats et conclusion : Cette recherche a révélé que les habitants des régions rurales, par rapport à ceux des régions urbaines, sont de moins en moins susceptibles de recevoir de l'aide sous forme de soins personnels et que les utilisateurs de foyers de soins en milieu rural semblent avoir plus de ressources personnelles que leurs homologues urbains (p. ex., plus d'instruction, plus grand sentiment de cohérence), ce qui influence probablement leur capacité à recevoir des services de soins à domicile et à y avoir accès. Les habitants des régions rurales qui n'ont pas ces ressources risquent d'être moins susceptibles de bénéficier des services de soins à domicile.

INTRODUCTION

It is estimated that 21.7% (6 665 926) of Canadians live in rural and remote areas.¹ Geography is considered a determinant of health because people living in rural and remote areas have poorer health status and more difficulty accessing health care.² Indeed, the

health of a community appears to be inversely related to the remoteness of its location.² Compared to urban older adults, rural older adults have a lower life expectancy by one year, greater proportions of old-old seniors (over the age of 85 years), lower income, less education, higher levels of impairment in some basic activities of daily living,

lack of formal services such as hospitals, home care, physicians and other health care providers, and greater distances to travel to access health services.³⁻¹⁰

There is a shift in health care philosophy favouring community-based care over institutionalized care. Health care restructuring from 1992 to 1999 resulted in a 4% decrease in per capita spending on Canadian hospitals and an approximate 30% decrease in acute care beds per capita.¹¹ The proportion of the population over the age of 65 will grow from the current 13% to 21% by the year 2026,¹² with the greatest growth occurring in old-old seniors.¹³ Currently, 93% of Canadians over the age of 65 live in their own homes, and 65% of old-old seniors live within their communities.¹⁴ Given continued advances in treatments, medications and technology, continuing trends for early discharge from hospital, along with the aging of the population and the growing number of old-old seniors, the demand for home care services will increase.²

Previous research has demonstrated the importance of home care in supporting older adults to remain in their homes, especially old-old seniors.¹⁵⁻¹⁹ Forbes and colleagues¹⁵ demonstrated a strong negative association between health status and use of home care for older Canadians, suggesting that those in poorer health relied on home care to be able to remain in their homes. There is strong evidence that home care enhances clients' quality of life and is a cost-effective alternative to recovery in hospital¹⁹ and to residential long-term care.¹⁷ Hollander and Tessaro¹⁸ compared individuals in British Columbia who received housekeeping home support services with those who had their services cut. Clients who no longer received this service cost the health system significantly more and had higher mortality rates.¹⁰ Unfortunately, due to increased pressure on Canadian home care programs to service the post-acute clients, many programs have reduced or eliminated the support services. Frail and disabled elderly without family, friends or financial resources do without.¹⁸ Little is known about how the restructuring of the health care system had an impact on the use of home care services among Canadians and whether there are differences between rural and urban users.

The purpose of the present study was to examine the demographic, economic, psychosocial and physical correlates of publicly funded home care use by rural and urban Canadians 18 years of age and over. The research questions were as follows.

- What are the similarities and differences between Canadian rural and urban users and non-users of publicly funded home care?
- Do the characteristics most strongly predictive of home care use vary as a function of rural and urban status?
- Among rural and urban residents, did the use of home care services, or characteristics associated with home care use, change between 1996/97 and 1998/99?

METHODS

Conceptual framework

Over the past 25 years the Andersen and Newman^{20,21} Behavioural Model of Health Services Use has been used almost exclusively to conceptually organize health services utilization research. Health services utilization is conceptualized as factors predisposing individuals to make use of services (e.g., age, gender, marital status); factors enabling or limiting individuals' abilities to access services (e.g., knowledge of the service, income, social relationships, area of residence); and need factors (e.g., acute and chronic illness, functional disability, perceived health). This model was used as a framework for the current study to provide a structure for the organization of the variables and analyses.

Design

This study examined the predictive value of the predisposing, enabling and need variables in relation to use of home care for rural and urban Canadians. Currently, home care data provided by home care programs are not collected at a national level. Statistics Canada's National Population Health Surveys (NPHSs)^{22,23} provided an opportunity to examine home care use from a national perspective. The NPHSs collect information related to the health of the Canadian population. The questionnaires included components on health status, use of health services, risk factors, and demographic and socioeconomic characteristics. The NPHSs collect information from a core panel of individuals at 2-year intervals for up to 20 years.²⁴ The research described in this paper focuses on deriving estimates from 2 cycles of cross-sectional data collected in 1996/97 and 1998/99. Data from the 1998/99 cycle are used to answer the first 2 research questions, and data from both cycles are used to answer the third question.

Sample

The target population of the NPHS included household residents in all provinces excluding populations on Indian Reserves, Canadian Forces Bases, and some remote areas in Quebec and Ontario. A multi-stage stratified sample design developed for the Labour Force Survey was used and has been described elsewhere.²⁵ Essentially it weights respondents to obtain population estimates for all of Canada. Most of the information was collected from a single household member. For the longitudinal follow-up, the single household member was re-surveyed and the same basic health-related information was collected from all members of the household in which he or she was currently living. The sample sizes for the cross-sectional components were 13 070* in 1996/97 and 14 148 in 1998/99. The selected person-response rates were 98.7% in 1996/97 and 98.5% in 1998/99.^{22,25}

Indicators

There are many ways to define "rural."^{26,27} The definition used in this study is known as the "census rural" and is defined as the population living outside places of 1000 people or more, or a population living outside places with densities of 400 or more people per square kilometre based on the previous census.²⁶ To be considered as continuous, the built-up area must not have a discontinuity exceeding 2 km.²⁵ In response to the question related to living in a rural or urban area, Statistics Canada's Public Use Microdata File did not include respondents living in Vancouver, Montréal or Toronto, thus the non-applicable responses were very high. To address this problem, all participants' responses to the rural and urban question were obtained through remote access to the survey master file at Statistics Canada.

Our dependent variable was use of home care. Respondents were read the following definition: "Home care services are health care or homemaker services received at home, with the cost being entirely or partially covered by government (e.g., nursing care, help with bathing, help around the home, physiotherapy, counselling and meal delivery)."

*The sample size in 1996/97 was originally 81 804 due to the buy-ins from Ontario, Manitoba and Alberta. The core sample ($n = 13\ 070$) that excluded the buy-ins was obtained through remote access to the survey master file at Statistics Canada.

Respondents were then asked: "Have you received any home care services in the past 12 months? What type of services have you received: nursing care (e.g., dressing changes, VON)? housework (e.g., cleaning, laundry)?" Analyses of the specific types of services were not conducted because the sample sizes were often less than 30 and the results cannot be released.²⁵

We examined 13 independent variables, based on the Andersen and Newman^{20,21} Behavioural Model of Health Services Use. The predisposing variables included age (<65 and ≥ 65); gender; and living arrangement (alone or with at least one other person). The enabling variables included education (less than secondary education or secondary); income adequacy based on household size (lowest, lower-middle, middle, upper-middle or highest); sense of coherence (13 items of a scale developed by Antonovsky²⁸ measured the extent to which respondents perceive events as comprehensible, manageable and meaningful); and social support index. Internal consistency testing of the Sense of Coherence Scale in the NPHS was reported to be 0.83.²⁹

In 1998/99, social support was measured by the Tangible Social Support Medical Outcomes Study (MOS) subscale (e.g., availability of someone to help if confined to bed, to take to the doctor, to prepare meals, and to help with daily chores when sick) and the Emotional or Informational Support MOS subscale (e.g., someone to count on to listen to you, to give advice, to give you information, to confide in, and who understands your problems). In the current study, internal consistency testing of the Tangible Social Support and Emotional or Informational Support subscales produced Cronbach's alphas of 0.87 and 0.95 respectively.

The need variables included restriction of activities (because of a long-term [>6 mo] physical or mental condition or a health problem respondents were limited in the kind or amount of activity they could do at home, school, work and other); need for help with normal everyday housework or with personal care such as washing, dressing or eating; presence and type of chronic conditions (e.g., arthritis/rheumatism, chronic bronchitis, cancer, cataracts, diabetes, heart disease, effects of stroke, urinary incontinence) that have lasted or were expected to last 6 months or more and have been diagnosed by a health professional; perceived health (self-report measure of general health: excellent-good or fair-poor); and overnight hospitalizations in the past 12 months.

Data analyses

The planned data analyses entailed a multi-stage process consisting of data description, bivariate, and multivariate analyses using SPSS 11.0 for Windows. Tabulations of the predisposing, enabling and need variables were used to describe rural and urban recipients and non-users of home care. Descriptive statistics included frequencies, percents, ranges, means and standard deviations of the population estimates. Differences between the cohorts were tested using the chi-squared analysis of contingency tables, Mann-Whitney *U* test, or one-way analysis of variance.^{30,31}

Pearson product-moment correlations were used to determine the strength and association between the independent and dependent variables. Potential confounders were also revealed by these analyses so that appropriate control could be exercised in subsequent analyses. Variables that were marginally significant (i.e., <0.25)³² and theoretically appropriate were retained for inclusion in multivariate analyses.

For each NPHS cycle, multiple logistic regression analyses were performed to examine the associations of the independent variables with home care use for rural and urban respondents. Based on the Andersen and Newman model,^{20,21} independent variables were entered into the regression in 3 blocks: 1) predisposing factors; 2) enabling factors; and 3) need factors. Only the final models are presented in our Results for each question. To account for design effects, odds ratios (ORs) were considered statistically significant if the values of the lower and upper bounds of their 95% confidence intervals were not in the range 0.945 to 1.055. Because all Canadians did not have an equal probability of participating, sampling weights were calculated for each respondent. Sample weighting permits generalizability to the Canadian population. An average sampling weight was used in the multivariate analyses.²⁵ Given that the research conducted analyses on Statistics Canada data that were released following certain procedures that guarantee the anonymity of the respondents, ethical issues were not a concern.

RESULTS

Canadians living in rural and urban areas differed in several important attributes. In rural areas (using 1998/99 data) there were greater proportions of males ($\chi^2 = 12.95, p = 0.000$); people living with others ($\chi^2 = 42.83, p = 0.000$); and people with lower levels of income ($\chi^2 = 45.51, p = 0.000$), lower levels

of education ($\chi^2 = 74.74, p = 0.000$), greater tangible social support $F(1, 17511) = 36.71, p = 0.000$, greater emotional and informational support $F(1, 17409) = 26.05, p = 0.000$ and higher sense of coherence ($\chi^2 = 22.29, p = 0.000$). There were no differences between rural and urban residents in terms of age, perceived health, overnight hospitalizations, activity restriction, needing help with housework or needing help with personal care.

Question 1:

What are the similarities and differences between Canadian rural and urban users and non-users of publicly funded home care?

Predisposing variables

The percentage of rural and urban home care users and non-users in relation to each independent variable can be found in Table 1. The results are reported as estimates of the Canadian population aged 18 or older. Nearly twice as many women as men received home care services in rural and urban areas (rural: $\chi^2 = 13.68, p = 0.000$). Use of home care sharply increased with age in both the rural and urban populations (rural: $\chi^2 = 280.34, p = 0.000$). Both urban and rural home care recipients were more likely than non-users to be living alone (rural: $\chi^2 = 82.68, p = 0.000$).

Enabling variables

Home care users in both rural and urban areas tended to fall within the lowest and lower-middle income brackets, and the majority of non-users reported higher levels of income (rural: $\chi^2 = 66.10, p = 0.000$). In urban areas, home care users were significantly more likely than non-users to report lower education levels ($\chi^2 = 54.08, p = 0.000$). However this was not the case in rural areas: the rural population showed no significant educational differences between users and non-users.

In both rural and urban areas, home care users were more likely than non-users to report lower emotional and informational support ($\chi^2 = 5.72, p = 0.02$). However, only in rural areas did home care users report lower tangible support than non-users ($\chi^2 = 6.64, p = 0.01$). While urban home care users were more likely than non-users to report lower levels of sense of coherence (1998/99: $\chi^2 = 19.04, p = 0.000$), no statistically significant differences in sense of coherence emerged between rural users and non-users.

Need variables

Both rural and urban users were more likely than non-users to report their health as "poor" (rural: $\chi^2 = 213.77, p = 0.000$). As one might expect, persons receiving home care services in both geographic

areas were hospitalized overnight in the past 12 months more frequently than were non-users (rural: $\chi^2 = 136.60, p = 0.000$). As well, urban home care users were more likely than rural users to have been hospitalized overnight ($\chi^2 = 4.03, p = 0.045$).

Compared to non-users, both rural and urban

Table 1. Characteristics of users and non-users of home care, by rural/urban status in 1998/99

| Independent variable | Rural | | Urban | |
|-------------------------------|--------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------------------|
| | Home care users, % <i>n</i> * = 104 703 | Non-users, % <i>n</i> * = 4 048 142 | Home care users, % <i>n</i> * = 508 165 | Non-users, % <i>n</i> * = 17 897 657 |
| Predisposing variables | | | | |
| Gender | | | | |
| Male | 1.8 | 98.2 | 2.0 | 98.0 |
| Female | 3.3 | 96.7 | 3.5 | 96.5 |
| Age | | | | |
| <65 | 1.0 | 99.0 | 1.1 | 98.9 |
| ≥65 | 11.1 | 88.9 | 12.0 | 88.0 |
| Living arrangement | | | | |
| With others | 1.8 | 98.2 | 2.1 | 97.9 |
| Alone | 7.8 | 92.2 | 6.2 | 93.8 |
| Enabling variables | | | | |
| Income | | | | |
| High | 0.9 | 99.1 | 1.4 | 98.6 |
| Low | 4.4 | 95.6 | 5.1 | 94.9 |
| Education | | | | |
| High | 3.1 | 96.9 | 1.5 | 98.5 |
| Low | 2.3 | 97.7 | 3.5 | 96.5 |
| Social support | | | | |
| High | 1.8 | 98.2 | 2.2 | 97.8 |
| Low | 2.9 | 97.1 | 2.5 | 97.5 |
| Sense of coherence | | | | |
| High | 2.1 | 97.9 | 2.1 | 97.9 |
| Low | 3.3 | 96.7 | 4.3 | 95.7 |
| Needs variables | | | | |
| Perceived health | | | | |
| Good | 1.5 | 98.5 | 1.5 | 98.5 |
| Poor | 11.8 | 88.2 | 14.3 | 85.7 |
| Overnight hospitalization | | | | |
| No | 1.8 | 98.2 | 1.6 | 98.4 |
| Yes | 10.9 | 89.1 | 16.9 | 83.1 |
| Activity restriction | | | | |
| No | 1.0 | 99.0 | 0.8 | 99.2 |
| Yes | 8.7 | 91.3 | 11.4 | 88.6 |
| Chronic condition | | | | |
| No | 0.6 | 99.4 | 0.7 | 99.3 |
| Yes | 3.8 | 96.2 | 4.1 | 95.9 |
| Needs help with housework | | | | |
| No | 1.2 | 98.8 | 1.3 | 98.7 |
| Yes | 28.6 | 71.4 | 30.4 | 69.6 |
| Needs help with personal care | | | | |
| No | 2.0 | 98.0 | 1.9 | 98.1 |
| Yes | 37.3 | 62.7 | 53.5 | 46.5 |

**n* = population estimates of home care users and non-users.

users were much more likely to be restricted in their daily activities (rural: $\chi^2 = 206.75$, $p = 0.000$) and to report a long-term condition (rural: $\chi^2 = 53.04$, $p = 0.000$). The most commonly reported chronic conditions for home care users were arthritis or rheumatism, high blood pressure, back problems, heart disease, cataracts and diabetes.

Rural and urban users were more likely than non-users to report that they needed help with housework (rural: $\chi^2 = 760.78$, $p = 0.000$). Similarly, home care users were more likely than non-users to report a need for personal care assistance, especially those in urban areas. It is important to note that 3.5%–3.8% of rural and urban non-users reported needing assistance with housework. There were very few urban or rural non-users who reported needing personal care assistance (0.8%–1.0%).

Question 2:
Do the characteristics most strongly predictive of home care use vary as a function of rural and urban status?

Predisposing variables

The multivariate analyses incorporated an average weight of the population estimates — thus the sample sizes are much smaller. The results are in Table 2. In the multivariate analyses, similar predisposing variables were associated with use of home

care in rural and urban areas. Individuals over the age of 65 were over 4 times as likely as those under 65 to receive home care services. Women were 1.5 to 2.5 times as likely as men to receive home care, and those living alone, nearly 2 to 3 times as likely as those living with others to receive home care, especially those in rural areas.

Enabling variables

Different enabling variables predicted use of home care in rural and urban areas. In rural areas, those with a higher level of education were over 4 times more likely than those with a lower education to receive home care, and those with a higher sense of coherence were nearly 4 times as likely as those with a lower sense of coherence to receive home care. In both areas, those with lower levels of income were 1.6 to 2.5 times as likely as higher income residents to receive home care services (Table 2).

Need variables

The need variables associated with use of home care tended to be similar in rural and urban areas. In urban areas, those who were restricted in their activities of daily living were over 3 times as likely as those without a restriction to receive home care. The need for help with normal housework and personal care had strong associations with use of home

| Independent variable | Rural, n = 2944 | | | Urban, n = 9679 | | |
|-------------------------------|-----------------|------------|---------|-----------------|------------|---------|
| | Odds ratio | 95% CI | p value | Odds ratio | 95% CI | p value |
| Predisposing variables | | | | | | |
| Older adult | 4.29 | 2.44–7.55 | < 0.001 | 4.08 | 2.94–5.65 | < 0.001 |
| Woman | 2.54 | 1.42–4.53 | < 0.01 | 1.46 | 1.06–2.02 | < 0.05 |
| Lives alone | 3.26 | 1.81–5.88 | < 0.001 | 1.78 | 1.25–2.52 | < 0.01 |
| Enabling variables | | | | | | |
| Higher education | 4.57 | 2.59–8.06 | < 0.001 | – | – | – |
| Lower income | 2.48 | 1.34–4.60 | < 0.01 | 1.56 | 1.10–2.20 | < 0.05 |
| Lower social support | – | – | – | – | – | – |
| Higher sense of coherence | 3.65 | 1.16–11.49 | < 0.05 | – | – | – |
| Needs variables | | | | | | |
| Restricted activities | – | – | – | 3.12 | 2.15–4.53 | < 0.001 |
| Chronic condition | – | – | – | – | – | – |
| Needs housework assistance | 5.60 | 2.73–11.50 | < 0.001 | 2.49 | 1.69–3.65 | < 0.001 |
| Needs personal care | 4.39 | 1.78–10.78 | < 0.01 | 6.24 | 3.82–10.20 | < 0.001 |
| Hospitalizations | 3.11 | 1.74–5.57 | < 0.001 | 5.06 | 3.70–6.91 | < 0.001 |
| Poor perceived health | 2.03 | 1.05–3.92 | < 0.05 | 1.68 | 1.18–2.39 | < 0.01 |

n = sample size of home care users
CI = confidence interval

care. Compared to individuals who did not require these services, rural residents needing housework services were almost 6 times as likely to receive home care, and urban residents were 2.5 times as likely to receive home care. Those in urban areas who needed personal care assistance were over 6 times as likely, and those in rural areas over 4 times as likely to receive home care as those not needing assistance. Overnight hospitalization was an important predictor, especially in urban areas: those who experienced an acute care episode (compared to those who did not) were nearly 3 to over 5 times as likely to receive home care, and those with poor perceived health (compared to those with good perceived health) were nearly twice as likely to receive home care (Table 2).

Question 3:

Among rural and urban residents has the use of home care services, or characteristics associated with home care use, changed between 1996/97 and 1998/99?

Although there was only a 2-year span between the 2 cycles of data, some possible trends were apparent. Only a small proportion of Canadians received publicly funded home care in the years studied (2.5% in rural areas in both cycles, and 2.3% and 2.8% in urban areas in 1996/97 and 1998/99 respectively). Few respondents claimed they needed care but did not receive it. The percentages increased slightly from 1996/97 to 1998/99. In 1996/97, 4.2% of rural respondents and 4.6% of urban respondents did not receive needed care, and in 1998/99 this percent had risen to 6.4% and 6.7%, respectively. Urban users (14.6%) were more likely to report that needed care was not received compared to 2.9% of rural users in 1996/97. In 1998/99 the rates were 5.7% and 11.3%, respectively.

An examination of the individual services (e.g., nursing, housework, personal care) offered by home care programs revealed interesting trends. The percentage of home care users who received nursing services was comparable in rural and urban areas and remained fairly stable over time (e.g., rural 39.6% in 1996/97 to 40.9% in 1998/99). However, trends in relation to receiving housework services appear to differ between rural and urban users and also differed over time. In 1998/99, a greater proportion of rural users (50.9%) than urban users (39.9%) received housework services, although this difference was not statistically significant ($\chi^2 = 3.34$, $p = 0.07$). In urban areas, the proportion of users

who received housework services decreased from 46.5% in 1996/97 to 39.9% in 1998/99, but the proportion did not decrease in rural areas (47.4% in 1996/97 to 50.9% in 1998/99). In 1998/99, urban users (39.7%) were much more likely than rural users (11.5%) to receive personal care assistance ($\chi^2 = 6.72$, $p = 0.01$). As well, there were apparent differences over time: the proportion of home care users who received personal care assistance decreased in rural areas (24.1% in 1996/97 to 11.5% in 1998/99) but increased in urban areas (23.8% in 1996/97 to 39.7% in 1998/99).

The logistic regression analyses revealed that, over time, the need for housework assistance appears to be becoming less important in predicting home care use (in 1996/97 ORs = 3.1–6.4, in 1998/99 ORs = 2.5–5.6), most likely due to rationing of housework services. In contrast, the need for personal care assistance appears to be increasing in importance over time, as is the strength of association between need for personal care and receiving home care (in 1996/97 ORs = 3.1–3.4, in 1997/98 ORs = 4.4–6.2). That is, those who needed help with personal care were 3 to over 6 times more likely to receive home care.

DISCUSSION

The results of the present study broaden our understanding of the similarities and differences between rural and urban Canadians. Rural residents have lower levels of income and education, thus placing them at a disadvantage in comparison to their urban counterparts. These findings are consistent with the work of Rupnik and colleagues.⁸ There is widespread evidence that those who are economically better off tend to live longer and healthier lives.

On the other hand, compared to urban residents, rural residents were more likely to be living with others and to report greater tangible, emotional and information support. These attributes have demonstrated a positive affect on health status.^{33,34} In addition, having an informal support network that provides emotional and/or tangible support will result in less use of home care.³⁵ Although there appears to be greater informal support networks within rural communities, research also reveals that, over time, these informal networks cannot sustain high levels of care.³⁶ As the burden of care becomes too physically or emotionally demanding or too technically complex, the informal networks may then assume the role of advocate and mobilize the formal support system such as home care.³⁷

Surprisingly, the results demonstrated no rural/urban differences in activity restrictions or rates of hospitalization. These findings are contrary to other research that has found rural residents to have greater restrictions in basic activities of daily living and greater hospital use.^{9,38} A measure of the average length of stay in hospital may be a better indicator of hospital use than rate of overnight hospitalization because rural residents may access hospital services as frequently as urban residents but remain in hospital longer because of the greater travel distances to access needed health care.

Consistent with previous research,¹⁶ the bivariate and multivariate analyses revealed that both rural and urban home care users were more likely than non-users to be women, older adults and living alone. Rural and urban home care recipients were also more likely than non-users to report lower levels of income, lower emotional and informational support, greater overnight hospitalizations, greater restrictions in activity, at least one chronic condition, and that they needed help with housework and personal care assistance.

There were some important differences between rural and urban home care users. Urban users were more likely than urban non-users to have lower levels of education and sense of coherence. These differences were not observed between rural users and non-users. These findings may imply that, compared with urban residents, rural residents must be more resourceful (e.g., higher education, greater sense of coherence) and have actual lower levels of support (i.e., tangible support) in order to secure home care services. Higher levels of education and sense of coherence will contribute to one's ability to achieve and maintain a healthy lifestyle, and to access and/or to navigate the health care system. The strongest predictors of home care use among urban residents were (in descending order): need of personal care assistance, hospitalizations, older age, and restricted activities. The strongest predictors of home care use in rural areas were somewhat different: need of help with housework, higher education, older age, need of help with personal care, higher sense of coherence, living alone, and hospitalizations.

In the present study, similar proportions of rural and urban respondents reported receiving home care. Previous research has found that those living in urban areas are more likely to receive home care.^{38,39} The current findings may reflect the fact that the NPHS excluded populations on Indian Reserves and some remote areas in Quebec and Ontario, thus preventing the examination of those who are per-

haps most at risk for not having access to home care services. Although challenging, including these most vulnerable populations in research studies is essential in order to capture a more accurate understanding of their health and service needs.

Home care users in rural areas are more likely than those in urban areas to receive housework services and less likely to receive personal care assistance. These findings are difficult to explain. Perhaps rural home care programs have lagged behind their urban counterparts in reducing or eliminating the housework services due to the more pressing demands to service post-acute clients. The lower proportion of personal care services may reflect the stoic and independent nature of rural residents and greater availability of informal support networks in rural areas. The trend of decreasing personal care services offered through home care for rural areas is a concern and requires further research.

Although most rural and urban residents (93%–95%) were satisfied with health care services received, 11%–15% of urban dwelling residents who received home care reported that needed care was not received. On the other hand, few (3%–6%) rural users reported this to be the case. Perhaps, this is once again a reflection of the personalities of the rural residents, as their needs were similar to their urban counterparts.

CONCLUSION

This research reveals that rural residents are increasingly less likely to receive personal care assistance, and rural home care users appear to have more resources (e.g., higher levels of education, sense of coherence) that likely influence their ability to access and receive home care services than their urban counterparts. Rural residents without these resources may be less likely to receive home care services. Health care practitioners in rural communities are in an ideal position to ensure that rural residents who need home care services are encouraged to accept the services that will assist them to remain living in their own homes and communities.

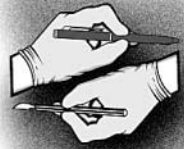
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ORIGINAL ARTICLE ARTICLE ORIGINAL

Adding women's voices to the call for sustainable rural maternity care

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The shortage of maternity care providers in Canada has been documented largely from the perspective of physicians. Women in rural communities, however, have much to contribute to this discussion. Exploratory research in 3 rural communities in south central Ontario eliciting the perspectives of 36 birthing women has affirmed the need for integrated models of maternity care. Rural women seek care that is local and “relational,” characterized by time spent with care providers, continuity and personalized care. They also seek care that is based on fully informed choice. Collaborative models of care, including rural physicians, nurses and midwives, have the potential to create the sustainability and collegiality required to achieve these qualities.

On a abordé la pénurie de prestataires de soins en maternité au Canada principalement de la perspective des médecins. Les femmes des communautés rurales ont cependant beaucoup à contribuer à cette discussion. Une recherche exploratoire dans trois communautés rurales du centre-sud de l'Ontario, de la perspective de 36 femmes ayant donné naissance, a affirmé le besoin de modèles intégrés de soins en maternité. Les femmes des milieux ruraux veulent des soins accessibles localement et «relationnels», caractérisés par le temps passé en présence des prestataires, la continuité des soins et leur personnalisation. Elles veulent aussi des soins fondés sur un choix entièrement éclairé. Des modèles de soins en collaboration, réunissant médecins, infirmières et sages-femmes des milieux ruraux, offrent la possibilité de créer la viabilité et la collégialité nécessaires pour obtenir ces qualités.

INTRODUCTION

The shortage of maternity care providers in Canada, particularly in rural and remote areas, has been well documented, mainly from the perspective of physicians.¹⁻⁶ Yet childbearing women themselves bear many of the costs associated with the lack of health care service, and their voices have gone largely unheard within the relevant Canadian literature and in policy-making circles. Their experiences may be instructive to physicians and other health care workers committed to improving the delivery of rural maternity care.

In this paper, I discuss preliminary research designed to fill that gap. This research documented and compared women's maternity care expectations and experiences in 3 rural Ontario communities to explore the relative

importance of various components of maternity care from women's perspectives, and to examine mediating factors influencing how rural women experience maternity care.⁷

METHODS

From April to November 2000, 36 new mothers in 3 rural study sites in south-western and central Ontario (Havelock Southampton and Goderich) underwent semi-structured narrative interviews. The case study sites were selected primarily to reflect diversity in size, economic resources and the availability of family physician-led obstetric care, as well as some consistency in the availability of midwifery care. In Havelock, the smallest site (population 1318), local family physician services were not available at all; in Southampton (pop.

3075), family physicians no longer delivered babies, and in the largest site, Goderich (pop. 7604), local family physicians were responsible for the majority of deliveries.

Women were initially contacted through local physicians, midwives, nurses, hospitals and community development workers, and subsequently by word of mouth. In all cases, participants were women who had at least one child younger than 18 months, and who lived in the case study sites regardless of where they actually gave birth. Additional interviews with 36 health care workers helped to supply the contexts for the women's accounts. Priority was given to the birthing women's perspectives on rural maternity care.

Interviews were taped and transcribed verbatim, then manually coded for common themes in the women's experiences. Coded portions were entered into Citation (a bibliographic software package), organized by site, person and key word. Transcripts were returned to participants for verification, and follow-up focus groups were held in each site as an additional validity check for preliminary findings. External sources, including academic literature and

health statistics, were then introduced to provide further context to participants' reports.

RESULTS

Of the 36 new mothers interviewed 16 were from Goderich, 8 from Havelock and 12 from Southampton. Table 1 summarizes the participants' characteristics with respect to age, number of children, duration of residence in the study site, household income and education and indicates the numbers of health care-related workers in the study sites. Table 2 summarizes the provision of maternity care in the 3 study sites, by location and care provider.

Rural women and many of the health care workers identified 3 features of maternity care that were of particular importance to them. Women wanted care that was local, relational, and characterized by informed choice.

Local care

There is clear support among maternity care professionals for the provision of maternity care for

| Mothers / Staff | Study site | | |
|------------------------------------------------------------------------------------------------|---------------|---------------|---------------|
| | Goderich | Havelock | Southampton |
| Mothers | | | |
| No. interviewed at each site | 16 | 8 | 12 |
| Age, mean (and range), yr | 30 (26–36) | 30 (21–41) | 30 (20–37) |
| Children, no./mother | 1.75 | 2.8 | 1.9 |
| Residence at site, yr | 21 | 14 | 11 |
| Household income, \$* | | | |
| < 30 000 | 0 | 4 | 0 |
| 30 000–44 999 | 7 | 3 | 2 |
| 45 000–59 999 | 3 | 1 | 4 |
| > 60 000 | 6 | 0 | 0 |
| University degree | 7 | 0 | 7 |
| Health care-related staff | | | |
| Family physicians | | | |
| Local | 3 | 1 | 4 |
| Out of town | 0 | 1 | 0 |
| Midwives | 1 | 3 | 3 |
| Doulas† | 2 | 0 | 0 |
| Specialists | 0 | 0 | 1 |
| Planners and administrators | 2 | 1 | 2 |
| Nurses and lactation consultants | 1 | 0 | 3 |
| Municipal politicians | 0 | 1 | 0 |
| Community workers | 2 | 3 | 2 |
| *Not all participants provided income figures. †Includes a former senior midwifery student. | | | |

healthy women in their home communities.^{1,5,8-11} The importance of local care was strongly echoed by the rural women in this study. Health care workers were also supportive of local care in principle but were more likely to emphasize its difficulties rather than the need for it. Women spoke at length of the emotional, social and financial costs of having to travel elsewhere for care. The most common concerns had to do with increased stress, employment disruptions and difficulties arranging child care.

Perhaps surprisingly, anxiety was particularly acute for those who did not know if they would have to leave their home communities or not. In Goderich, where family physicians were still delivering babies locally, surgeons and anesthetists were inconsistently available at the time of the study. As a result, women were unsure of the location of their delivery right up until the final stages of labour. Three women reported intentionally scheduling an induction or cesarean section in advance, during

business hours when local specialist availability was guaranteed. As one said, "I didn't want to take the chance of not having a surgeon available and getting shipped out." This uncertainty was more problematic for women than knowing they would need to give birth elsewhere and planning accordingly.

Relational care

The second aspect of maternity care of importance to rural women is what I refer to as "relational care," — care characterized by time spent with the patient, continuity and personalization. Assessing quality of care is complex; Haddad and associates¹² suggest distinguishing between the quality of interpersonal processes, technical processes and outcomes. The birth outcomes were positive in all cases in this study, and the level of technical intervention, despite varying widely, did not figure prominently in these women's stories. Instead, par-

Table 2. Provision of maternity care for the study participants by study site, care provider and location

| Type of care | Study site | | | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| | Goderich, n = 16 | | Havelock,† n = 8 | | Southampton,‡ n = 12 | |
| | Provider* and distance in min | No. | Providert and distance in min | No. | Provider‡ and distance in min | No. |
| Regular primary care | Local FP | 16 | Local FP FP < 40 FP 40–60 FP > 60 None | 0 3 3 1 1 | Local FP FP 40–60 | 11 1 |
| Prenatal care | Own local FP Different local FP Midwife Obstetrician | 7 8 1 0 | Own local FP Different local FP Midwife Obstetrician 40–60 Obstetrician > 60 | 0 0 4 3 1 | Own local FP Different local FP FP < 40 FP 40–60 Midwife Obstetrician 40–60 | 0 0 3 3 5 1 |
| Intrapartum care | Own local FP Local FP on call Local FP but unclear who Own FP < 40 Midwife < 40 Unknown physician 40–60 Unknown physician > 60 | 3 5 2 1 1 2 2 | Own local FP Different local FP Midwife at home Midwife 40–60 Obstetrician 40–60 Obstetrician > 60 | 0 0 1 3 3 3 | Own local FP Different local FP FP < 40 FP 40–60 Midwife at home Midwife 40–60 Midwife > 60 Obstetrician 40–60 Emergency,§ local | 0 0 3 2 1 1 1 1 1 |

*Physicians < 40 min were located in Clinton, Ont. Those 40–50 min away were in Stratford, Ont., and those > 60 min away were in London, Ont.
†Physicians < 40 min were located in Norwood and Hastings, Ont., those between 40–50 min away were in Peterborough, Ont., and those > 60 min away were in Trenton and Belleville, Ont.
‡Physicians in both Southampton and Port Elgin, Ont., were considered local; physicians < 40 min were in Walkerton or Chesley, Ont., those 40–60 min away were in Owen Sound, Ont., and those > 60 min away were in Markdale, Ont.
§The emergency delivery occurred in Southampton.

ticipants strongly emphasized interpersonal processes in their assessments of care quality, far more than did the health care workers. Overall satisfaction was expressed in terms of the relationships established with their care providers. They emphasized the importance of “feeling comfortable,” receiving “personal care,” “not being rushed,” being “listened to” and feeling “totally supported.” A midwifery client said, “You become like family . . . it was just so personal, and that was the best part.”

Three characteristics of relational care emerged from the data: time, continuity and personalization. Women appreciated a care provider who took time to talk to them and to answer their questions without feeling rushed. As one mother said of her doctor, “She was really good because she took time . . . she really wanted to know how things were going with me.” Participants were particularly affirming of midwives’ willingness to ensure that appointments were not rushed. Women also reported wanting timely care, meaning the ability to get appointments when needed, as well as someone who showed respect for their time by keeping the office running roughly on schedule.

The women acknowledged that it takes time to develop a relationship, and they therefore considered continuity of care over time to be another important dimension of relational care. This desire for continuity did not apply only to their current pregnancy; many rural women spoke highly of being in the care of the same physician who had delivered their previous babies, or in some cases had cared for them all of their lives. This was particularly true in Goderich, where local obstetric care has been consistently available for many years. Although it was often more difficult to receive personalized, continuous care from a practitioner who was not local, those qualities had more to do with the practitioner’s approach to care than with the location. With the exception of a few individual physicians, midwives were reported to be best suited to providing personal, non-rushed care.

Women felt more comfortable within an established relationship because they felt that care could be individualized. One woman explained that in a rural area, “When you call the hospital or doctor, you know the people who are answering the phone, so you get a more personal touch.” According to another, “[Doctors] don’t care for you . . . as they would Joe Blow down the hall. They know you as a person; they know your family. Nine times out of ten they know one of your parents, if not both, so there’s that personal connection.”

Some of the women also acknowledged a darker side to being well known by one’s physician. They expressed concern about doctors making assumptions and being less thorough because of their history with that patient. As one woman suggested to physicians, “Maybe it is better seeing someone that you are not as familiar with; you are more thorough because you have to check them from top to bottom instead of taking for granted that you know what is wrong.”

Personalized care is often more likely in rural areas because of overlapping social networks in small communities. As one mother explained, “[Doctors] are not going to treat you awful in the hospital, because nine times out of ten they’re going to see you on the street.” When physicians practise in a small town, they are likely to be embedded in the community in ways that extend beyond their professional boundaries. As another mother explained, “When you live in a small community, your physicians take on a different role because they have to live here too. So their kids are involved in the same things your kids are involved in, and you see them in other settings other than the office.”

Seeing someone in multiple contexts can accelerate the building of trust. It appears from this exploratory data that having a positive relationship with a care provider leads to a more positive perception of care quality, independent of the technical quality of that care. Women in Goderich, where their own family doctors attended their deliveries, were far more likely to report being satisfied because of the relationship, even when the details of their stories revealed a less than satisfactory experience even by their own standards. To cite 2 examples: one woman reported being “furious” with her doctor, yet chose to stay in his care because “it was important to go with someone I was familiar with.” Another mother spoke of her care as “extremely negative” because her doctor failed to provide her with timely information, yet she chose to have him deliver her next baby because he was “a nice man in town.” A similar pattern did not appear in the accounts of the women in Southampton and Havlock where local physicians did not provide maternity care, suggesting that relationships may be compensating for care that might, in other contexts, be deemed problematic.

Everybody knowing everybody can also mean that there is more at stake in rural communities in “rocking the boat,” since doing so can endanger one’s entire social network.^{13,14} As one woman who was unhappy with her doctor explained, “I have to live in this community, so I don’t want to be known

as that kind of trouble-making, witchy person. . . . Here, there's almost an unspoken word that you can't doctor hop. It's not even considered. You don't. I wouldn't want to get that name." Rural women whose deliveries were attended by local physicians may therefore have been less likely to express dissatisfaction than women who had to travel elsewhere for care.

Informed choice

The third aspect of maternity care that rural women deemed important was informed choice. Informed choice requires at least 3 elements: a range of options, knowing what they are, and being able to act on them. The narrow range of maternity care options for rural women in Canada has been well documented.^{1,6,9,15-24} Clearly, informed choice is not possible when no choices exist.

Yet for the women in this study, even when maternity services were available, informed choice was compromised owing to a lack of awareness of the few options actually available. Most women reported relying on their family doctor to make them aware of the maternity care choices available to them. As one woman said, "My doctor told me what to do. It didn't occur to me to ask any differently." According to another, "Midwives were never even talked about at all. I wish they had been." For those women with no family doctor, or a physician who did not inform them of the full range of maternity care options, informed choice could not be fully exercised.

DISCUSSION

Collaborative models of maternity care have the potential to offer rural women the qualities of care they are seeking. In order to make local care a certainty, such models should incorporate not only family physicians, nurses and midwives, but also the specialists and emergency personnel who provide the back-up needed for the other practitioners to attend local births with greater confidence.

The emphasis on relationships in care quality reflects the assertion of Berg and associates²⁵ that "a necessary condition for practicing good care is to establish a good relationship," and the 3 aspects of relational care reflect qualities of desirable care highlighted throughout the maternity care literature.²⁶⁻³¹ Tinkler and Quinney,³² for example, have argued that the nature of the provider-client relationship is "integral and crucial," since a lack of continuity, information and support are central to

maternal dissatisfaction. These findings also parallel those of Green and colleagues,³³ wherein emotional wellbeing after birth was not significantly correlated with the level of obstetrical intervention but rather with the extent to which women felt they had a say in what interventions were used.

It could be argued that this apparent valuing of relationship over quality of technical care reflects the tendency for women to express satisfaction regardless of the care actually provided, particularly in the context of a positive birth outcome.^{31,34} It also supports the notion that women "bolster" their childbirth choices, playing up the advantages and minimizing the negatives of a selected course of action.³⁵ Yet the tension between relationship and care quality did not emerge in the sites where women had to look elsewhere for care, suggesting that the interpersonal dynamics in small communities played a role in shaping women's assessments and choices. Relationships are especially important in small rural communities, which rely on face-to-face interactions and are often characterized by social stability and long-term residence. McKie³⁶ has suggested that the community-based values of rural life revolve around personal identities, as "custodians of the emotional heart of small communities."

Because of the increasing scarcity of rural maternity care providers in Canada, the likelihood of establishing a stable relationship with a care provider over time is diminishing. When caregivers are not part of the local fabric, relationships cannot develop as easily. Continuity of care is undermined when professional turnover is high. To the extent that collaborative models of maternity care would allow for more consistent, sustainable service, they could go a long way toward facilitating the kinds of relationships that rural women consider important, not only between clients and caregivers but also among maternity care professionals. Moreover, collaborative models of care could be intentionally structured in ways that allow health professionals to spend more time with women, much as the current midwifery model allows.

Improved interprofessional collegiality could also lead to improved information-sharing and reduce barriers to referrals. Having access to timely and complete information is especially important in the changing contexts of rural health care, where women frequently have to take the initiative to piece together their own maternity care plan. Improved collegiality is not the only solution — rural women need more and better access points to information, and they need the social and economic freedom to

act on the information they receive — but it would be a helpful start.

It is obviously important to recognize the limitations of a study based on the stories of a small non-random number of mothers in just 3 rural sites. As people with access to midwifery services, living in communities relatively close to major urban centres, their experiences may not mirror those in more remote parts of the country. Yet the validity and resonance of these exploratory findings are starting to be confirmed in larger scale research among rural women in Canada,³⁷ affirming the need for rural health care providers and planners to find creative ways to offer services that are local, relational and based on informed choice. Doing so is clearly difficult, but hearing the voices of rural women can help health professionals stay focused in their commitment to sustaining rural care.

CONCLUSIONS

These rural women's experiences confirm the well-documented need for consistent, sustainable, local rural maternity care. They affirm the importance of care providers intentionally investing in relationship building, with their patients as well as with other health care professionals. As physicians, midwives, nurses and other health care professionals grapple with the pressures and complexities of providing high quality maternity care in rural contexts, perhaps hearing from the intended beneficiaries of their efforts will affirm that those efforts are not in vain.

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Rural and remote community health care in Canada: beyond the Kirby Panel Report, the Romanow Report and the federal budget of 2003

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Dr. John Wootton, former Executive Director of the Office of Rural Health and now a special advisor on rural health in the Population Health and Public Health Branch of Health Canada, has said that "If there is a two-tiered medicine in Canada, it's not rich and poor, it's urban versus rural."¹ This dramatic statement emphasizes the extent of the current health care gap between urban and rural areas of Canada, a problem that was addressed in the Kirby Panel Report² and the more recently released Romanow Commission Report.³

In this paper I discuss how these 2 bodies approached the problem and, how the federal government budget of 2003⁴ dealt with the issue and the need to go beyond the current situation in order to address the rural and remote health care issues.

THE KIRBY PANEL REPORT

The portion of the Kirby Panel Report² devoted to a discussion of rural health (volume 2, chapter 10) starts by pointing out some stark statistics about the dimensions of the rural health problem. It notes that about 95% of Canada's territory is rural and about 30% of Canada's population (approximately 9 million people) lives in rural and remote areas.

Defining characteristics of rural

The Kirby Panel Report points to the following as the defining characteristics

of rural Canada, paraphrased from the report:

- Rural Canada includes not only rural and remote communities but also small towns outside major urban areas.
- Rural populations are declining as young people leave, looking for better opportunities and seniors leave looking for better long-term care facilities.
- Rural populations near urban centres or in recreational areas are increasing.
- Across Canada, more than half of the Aboriginal peoples live in rural and remote areas.
- Ontario and British Columbia have the lowest percentage of rural residents, and almost 50% of the population in Atlantic Canada lives in rural areas.
- Seniors, children and youth under the age of 20 years are over-represented in rural areas.
- Rural areas have populations that suffer higher unemployment levels and lower educational levels than populations in the rest of the country.
- Rural people living in the Prairie provinces have lower unemployment than people living in rural Atlantic Canada.¹

In terms of the health status of the rural population, the Report notes that compared with urban areas, life expectancy in rural areas is shorter, and infant death rates are higher. Overall, the health of rural residents is worse

than their urban counterparts.

The health and health care needs of the rural population are also different, given the environment, demographics, occupations and ethnic composition.

Access issues

The most serious problem for residents of rural and remote areas is access to health care. The report rightly quotes the *Canada Health Act* (CHA) provision that reasonable access to insured health services be provided to all Canadians under uniform terms and conditions. The Report points out, however, that in the real world, CHA notwithstanding, rural and remote area residents can have access only to a small range of service providers, and if they have to seek more specialized care they must travel long distances and incur additional expenses, which are not fully reimbursed. During some parts of the year, travel may be impossible due to weather conditions, leading to poor health outcomes.

Recently, there has been widespread closure of rural hospitals in some provinces, such as Saskatchewan, with serious consequences to the local residents. A telling observation found in the Report is that the 1993 closure of 53 rural hospitals in Saskatchewan was followed by an increase in the perinatal death rate in affected areas. Even if one may not directly have caused the other, the Report notes that this finding "is concerning."¹

Recruitment and retention

Related to the access problem is the issue of recruitment and retention of health care personnel. The Report notes that the lack of access to physicians is a particularly severe problem, one that has been persistent and is expected to continue. Strategies involving financial incentives have not worked, since the determinants of physician location include many personal factors such as lifestyle, access to schools for children, and opportunities for spousal employment among others. Of course, as the Report notes, these problems are not unique to Canada. The United States, Australia and New Zealand also report similar difficulties.

Telehealth

What can be done in view of the severe shortage of personnel and forbidding geographical barriers

faced by the rural and remote communities in gaining access to health services? The Report mentions telehealth as a possible solution. The upside of this technology is to act as a supplement to "the skills and abilities of existing rural health care workers to deal with problems that would otherwise require patients to travel out of the community to access needed care."¹ The risk, however, is that this technology could lead to a situation that "needed care can be accessed only from outside sources."¹

Government response

The federal government responded by creating an Office of Rural Health within Health Canada. The Report also mentions the allocation of \$50 million over 3 years, starting in 1999, to support pilot projects under the Innovations in Rural and Remote Community Initiative. In July 2001, the federal government established a Ministerial Advisory Committee on Rural Health "to provide advice to the federal Minister of Health on how the federal government can improve the health of rural communities and individuals."¹

Witnesses who appeared before the committee emphasized the need for a "federal presence in areas such as funding, immigration, planning, evaluation, information-sharing and co-ordination, technology, facilitating consensus, promoting innovative solutions to rural health issues, and an expansion of the mandate of Health Canada's Office of Rural Health."¹ The Report concludes the discussion on rural health by expressing the hope that the Ministerial Advisory Committee on Rural Health "will lead to concrete policies and programs that will effectively contribute to enhancing the health of rural Canadians."¹

The final report of the Kirby Panel, released in October 2002,² contains its recommendations for action. Despite noting the serious problem facing rural Canadians in the area of health care, there are only 2 recommendations of specific concern to the health care of rural and remote communities.

Relevant recommendations

The Report (chapter 11) calls for the establishment of The National Coordinating Committee for Health Human Resources. Part of its mandate is to recommend "strategies for increasing the supply of health care professionals from under-represented groups, such as Canada's Aboriginal peoples, and in

under-serviced regions, particularly the rural and remote areas of the country.² This recommendation suggests that health care training institutions should make an attempt to recruit students from the under-represented groups. Presumably, the graduating students from these groups will go back to where they came from and serve their communities. There is evidence suggesting rural students have a better chance of going back to the rural areas to practise medicine upon graduation than their urban counterparts.⁵ However, this is a long-term solution and will not provide immediate relief to the health care human resource shortage in rural and remote communities.

Since most Aboriginal peoples live in rural and remote communities, these recommendations (dealt with in chapter 12 of the Report) are important.² The Report recommends that the federal government “provide additional funding to CIHR [Canadian Institutes for Health Research] in order to increase participation of Canadian health researchers, including Aboriginal peoples themselves, in research that will improve the health of Aboriginal Canadians.”² The Report also recommends that the federal government “provide additional resources to expand its research capacity and to strengthen the research translation capacity in the field of Aboriginal health.”²

These are valuable recommendations. However, no dollar figures are attached to them, so they are more exhortations than policy recommendations that can be implemented and monitored.

THE ROMANOW COMMISSION REPORT

Like the Kirby Panel Report, the Romanow Commission Report⁵ devotes a whole chapter (chapter 7) to health care issues in rural and remote communities. It begins by recommending the establishment of a new rural and remote access fund “to support new approaches for delivering health care services and improve the health of people in rural and remote communities.”⁵ It also recommends using part of the fund to address the demand for health care providers in these communities and to expand telehealth to improve access.

Geography determines health

The Report then makes its case for the change, noting the vastness of the Canadian landscape and the large number of people living in rural and remote communities. These factors make it difficult to

“ensure that all our citizens have access to health care services regardless of where they live.”⁵ The Report echoes the views of rural physicians that “geography is a determinant of health.”⁵

Rural–urban disparities

The Report also recognizes the disparities in health status between urban and rural Canadians and identifies access to health care in rural and remote communities as a problem due to the distances and the struggle to recruit and retain health care personnel.

The Romanow Report delves deeper into the characteristics of the rural and remote communities and makes the point that rural and remote communities are “not a single, homogeneous population.”⁵ They are diverse just as are urban areas. As a result, health needs, and the way in which health care needs to be delivered, vary widely. The Report recognizes that there is no “one size fits all” solution. It also recognizes that issues specific to rural and remote areas overlap with Aboriginal health care issues.

Location versus health

Another troubling observation made in the Report is that the “health of the community also appears to be inversely related to the remoteness of its location.”⁵ That is, there is a gradient in terms of health status, depending on how far away a community is from an urban metropolitan area. The farther away the community, the worse is the health status of the population. Despite the efforts to improve access in the 1990s in the wake of centralization and consolidation, the Report notes there is an “inverse care law” in effect.⁵ That is, while the health status of this population is lower and access to primary care is worse, the rural communities are not as well served as their urban counterparts.

Human resources

Like the Kirby Panel Report, the most serious problem identified in the Romanow Commission Report is the shortage of health human resource personnel in the rural and remote areas. The Report notes that there are no physicians living north of 70° latitude yet there are 3000 people living in that region. They have to travel more than 100 km, often in rough weather, to see a physician. It is safe to assume that the many who are unable

to undertake the necessary travel suffer the health consequences.

Issues facing rural and remote communities

The Report highlights the fact that there is no coherent national approach to address the issues of rural communities. Instead, provinces and territories are developing their own approaches in isolation. Briefly, the Report identifies the following as important issues dealing with health care in rural and remote communities:

- Identifying what “adequate access” should include.
- The need for effective linkages with larger centres.
- The special challenges faced in serving the smallest and the most remote communities where the numbers are too small even to sustain basic services.
- Focus on availability of health care services and not on the “health deficit.”
- The predominance of urban approaches to rural communities.
- The lack of research and gathering of evidence for improving health and health care in smaller communities.

Developing a vision

After identifying the issues, the Report calls for development of a vision “where Canadians residing in rural and remote regions and communities are as healthy as people living in metropolitan and other urban centres.”³ The Report does not elaborate on such a vision in any detail, but provides a moving quote from Jose Amaujaq Kusugak who said during a public hearing in Montreal: “I believe that ... the success of our Health Care System as a whole will be judged not by the quality or service available in the best urban facilities, but by the equality of service Canada can provide to its remote and northern communities.”³

The Report considers this as the vision guiding “all rural health initiatives, including policy development, program planning, clinical practice, research and health human resources development.”³ It lists a series of principles to support the vision, which essentially states that rural and remote areas need solutions that address their unique features in the Canadian landscape.

The Report recognizes that provinces and territories are constitutionally responsible for delivering

health care services, but the federal government could play a “coordinating and facilitating role by working closely with the provinces and territories and other stakeholders.”³

Recommendations

Having set the stage, the Report articulates the recommendations (paraphrased) as follows:

- Recommendation 30: The Rural and Remote Access Fund should be used to attract and retain health care providers.
- Recommendation 31: A portion of the Rural and Remote Access Fund should be used to support innovative ways of expanding rural experiences for physicians, nurses and other health care providers as part of their education and training.
- Recommendation 32: The Rural and Remote Access Fund should be used to support the expansion of telehealth approaches.
- Recommendation 33: The Rural and Remote Access Fund should be used to support innovative ways of delivering health care services to smaller communities and to improve the health of people in these communities.

The Report elaborates on the rationale of these recommendations and expresses the hope that in the long term “it means the disparities between the health status of people in smaller communities and the rest of the Canadian population can be considerably reduced.”³

Other chapters in the Report contain related recommendations. For example, chapter 3 contains the following recommendation:

- Recommendation 14: Steps should be taken to bridge current knowledge gaps in applied policy areas, including rural and remote health, health human resources, health promotion, and pharmaceutical policy.

And in chapter 4, we find the following recommendation:

- Recommendation 15: A portion of the proposed Rural and Remote Access Fund, the Diagnostic Services Fund, the Primary Health Care Transfer, and the Home Care Transfer should be used to improve the supply and distribution of health care providers, encourage changes to their scopes and patterns of practice, and ensure that the best use is made of the mix of skills of different health care providers.

Budget proposal

In addition to its recommendations, the Romanow Report proposed the provision of a budget for these initiatives. The proposed budget figures are itemized in Table 1.

The Report urged that these funds be set up as soon as possible. One problem with these funding proposals is that, while the aggregate allocations are spelled out, the budget is not broken down by programs envisaged within these proposed funding envelopes. It is not clear, for example, how much should be spent on Recommendations 30, 31 and 32 that pertain to the Rural and Remote Access Fund.

Despite ignoring suballocations, the Report has done better than the Kirby Panel Report, which did not specifically allocate any funds to be provided to the rural and remote communities. The Kirby Panel Report was satisfied with simply identifying the problems and urging action to ameliorate them. In this sense, the Romanow Commission Report can be considered an improvement over the Kirby Panel Report.

THE 2003 FEDERAL BUDGET

A recent editorial⁶ in the *Canadian Medical Association Journal* referred to the 2003 health care budget as adding items to a shopping cart. Although many items from the Romanow Commission Report made it into the shopping cart, the Rural and Remote Access Fund was definitely not one of them even though all the other items in Table 1 did. It is not clear why this was the case.

Territorial leaders frustrated

The 3 territorial leaders, Paul Okalik (Nunavut), Stephen Kakfwi (Northwest Territories) and Den-

nis Fentie (Yukon), attempted to draw attention to the special health care needs of the North during the meeting of the premiers and territorial leaders in February 2003 to reach an agreement on health care funding, but their views were side-stepped. They were offered, respectively, about \$11 million, \$15.6 million and \$12 million.⁷ They argued that these amounts do not meet the special health care needs of the territorial residents. It costs, for example, \$10 000 per patient for a helicopter transfer to Vancouver from some of the remote communities. Despite their efforts, the *per capita* funding formula was retained. As the result, the frustrated territorial leaders refrained from signing the final deal.

After the February 2003 meeting, however, the 3 territorial leaders met with the Prime Minister and the Minister for Health privately and were able to gain a promise of separate floor funding of "at least" \$60 million in short-term funding.⁸ It was, of course, only a beginning, with the promise of more to come. With this agreement, the dispute seems to have been resolved.⁹ This separate funding for the territories, over and above the per capita funding, has set a precedent. It remains to be seen whether this practice will continue.

The verdict

The problems and concerns of the rural and remote communities were well-recognized by both the Kirby Panel and the Romanow Commission. The Romanow Commission went so far as to recommend an immediate transfer of \$1.5 billion to a Rural and Remote Access Fund to be used to grapple with the problems of recruiting and retaining health care personnel, exposing students to rural and remote areas during their education and training and expanding telehealth initiatives. These proposals, however, did not find room in the 2003 federal

| | 2003/04 | 2004/05 | Cumulative targeted 2003/04 to 2004/05 | Additional Cash Investment 2005/06 |
|--------------------------------------------|---------|---------|----------------------------------------|------------------------------------|
| Diagnostic Services | | 1.5 | 1.5 | |
| Rural and Remote Access | | 1.5 | 1.5 | |
| Primary Health Care Transfer | 1.0 | 1.5 | 2.5 | 6.5 |
| Home Care Transfer | 1.0 | 1.0 | 2.0 | |
| Catastrophic Drug Transfer | – | 1.0 | 1.0 | |
| Total cash base for Canada Health Transfer | | | | 15.32 |

Source: "Building on Values: the Future of Health Care in Canada." Table 2.3 found on page 71, (c.2002). Reproduced with the permission of the Minister of Public Works and Government Services Canada, 2004, and courtesy of the Privy Council Office.

budget for health care. Therefore, much work remains to be done, not only to put these issues into the shopping cart but to make sure they get to the checkout counter.

A VISION FOR THE HEALTH CARE OF RURAL AND REMOTE RESIDENTS

The first requirement is to bring the special health care needs for residents of rural and remote areas back onto the public agenda. Given the provisions of the CHA, the emphasis made in the Kirby Panel and Romanow reports and the support Canadians have expressed for Medicare, this situation is not just unacceptable; it is untenable.

If the overall health status of Canadians needs to be improved, as seems to be the objective of the 2003 budget, it cannot be done if the health care of roughly one-third of Canadians is ignored. It is a truism that if one wants to raise the average, the status of those below average must be raised above average to have any impact. It is common knowledge that the health status of rural and remote area residents is below average compared with that of other Canadians, so it is imperative that this segment of the population be given special attention. A vision for a healthier Canada has to include a new vision for healthier rural and remote area residents.

“Rural Health in Rural Hands”

Health Canada does not have to look far to find this new vision. Most of what is needed is already contained in a report submitted to the federal Minister of Health,¹⁰ This report is appropriately entitled *Rural Health in Rural Hands*. It contains important strategic directions that should be taken to deal with the special health and health care needs of the rural, remote, northern and Aboriginal communities.

The Report’s overarching vision is “Healthy people living in healthy rural, remote, northern and Aboriginal communities.” To bring this vision to fruition, the Report points to some strategic directions and makes a number of policy recommendations.

Strategic directions

The strategic directions extend to the following areas:

- Building healthy communities.
- Infrastructure for community capacity-building.
- Intersectoral collaboration.
- Rural health research.

- Health information technology.
- Health human resources.
- Aboriginal health.

Recommendations

The list of recommendations is long and can be found in Appendix A of the Report. The following are some of the key policy recommendations, paraphrased:

- Health Canada recognizes that rural, remote, northern and Aboriginal communities are different from urban communities; it supports the development and implementation of the health communities models and promotes them among the stakeholders.
- Health Canada works with stakeholders to sponsor the rural health innovation centre model.
- Health Canada works with the Conference of Deputy Ministers of Health to establish a focal point for developing policies, programs and action plans for common rural health care issues.
- Make rural health research a high priority and make long-term investment in the CIHR strategic initiative in rural and northern health research and in the CHIR’s Institute on Aboriginal Peoples’ Health.
- Health Canada seizes the opportunities provided by broadband network to reach and respond to the needs of the rural and remote communities; this means protecting the investments already made in telehealth programs such as the Health Infostructure Support Programme, the Canada Health Infostructure Partnership Programme and the Canadian Network for the Advancement of Research, Industry and Education, Inc. until a sustainable strategy for a nationwide rural telehealth initiative is identified.
- The Minister of Health develops a nationwide health human resource strategy, with particular emphasis on recruitment and retention issues for rural, remote, northern and Aboriginal communities.
- Health Canada strengthens community-based health promotion and disease prevention programs developed and delivered by and for Aboriginal people and provides sufficient funding for First Nations and Inuit health services.

These recommendations are well thought out and will go a long way toward addressing the health and

health care needs of the rural, remote, northern and Aboriginal communities. The recommendations call for a coherent national approach, instead of the current “crazy quilt” of policies and programs. That is the reason for involving Health Canada in a facilitating and coordinating role, as found in these strategic directions and policy recommendations.

Another important point is that these recommendations are interrelated in many ways. For example, the success of the recruitment and retention policies depends on access to broadband technology and telehealth initiatives, because one of the most serious problems besetting health care personnel in rural and remote areas is isolation, some of which can be alleviated by access to telehealth facilities. Telehealth can be used not only for clinical purposes but also for consultations, continuing medical education, patient education and administrative meetings.

CONCLUSIONS

The Kirby Panel and the Romanow Commission reports both recognize the special nature of the health and health care problems faced by rural and remote communities in Canada. The Romanow Commission Report even recommended an immediate infusion of \$1.5 billion for a Rural and Remote Access Fund. The federal budget of 2003, however, did not adopt this recommendation.

Lack of funding in rural health puts the health and health care needs of almost one-third of the Canadian population at risk. The current state of “benign neglect” goes against the spirit of the CHA. It is time to put the health care needs of rural and remote communities back on the national agenda and follow the vision and policy recommendations articulated by the Ministerial Advisory Council on

Rural Health. A good starting point is to institute the Rural and Remote Access Fund as recommended by the Romanow Commission at the next available opportunity and build from there. The residents of rural, remote, northern and Aboriginal communities deserve no less.

Competing interests: None declared.

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THE PRACTITIONER LE PRATICIEN

Country cardiograms case 26

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This article has been peer
reviewed.

This 34-year-old farmer presents to your rural hospital with a history of syncope lasting 5 seconds. Onset occurred after 5 minutes of heavy manual work rapidly forking manure. He does not recall any chest pain. He has a family history of sudden death, but no other risk factors and no past history of cardiac problems. His vital signs and physical exam-

ination are normal, apart from a short, flow-type 2/6 systolic murmur at the left sternal border with no radiation. His cardiac enzymes, troponins and chest x-ray are also normal (see Fig. 1).

For the Answer, see page 266.

Competing interests: None declared.

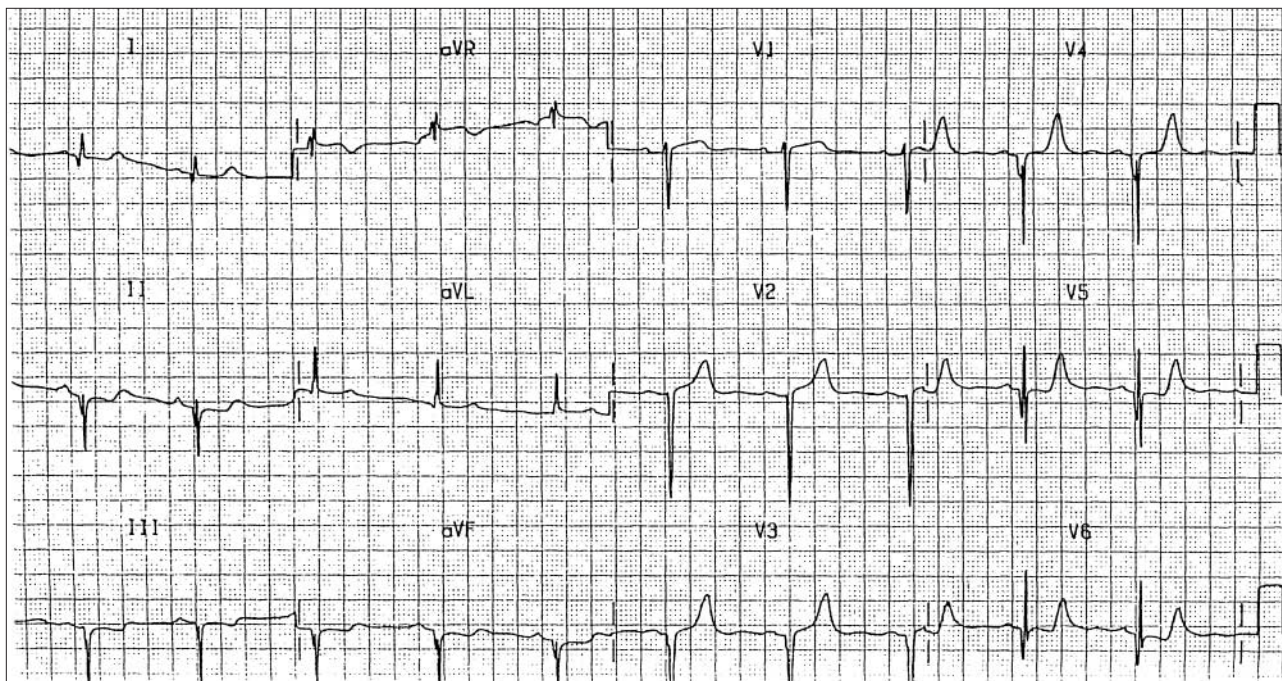


Fig. 1. Results of chest x-ray performed shortly after patient arrived at the hospital. ECG courtesy of Dr. Martin Green, Ottawa Heart Institute, Ottawa, Ont.



THE PRACTITIONER LE PRATICIEN

The occasional palliative care patient: lessons we have learned

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Palliative care is an ideal and creative part of rural general practice. It's an opportunity for deepening relationships with families and patients, and a healthy challenge for our medical skills.

Rural physicians are used to being "Jacks of all Trades." Palliative care falls within our role of treating patients throughout their life cycle. As with other neglected areas of clinical care, palliative care is the focus of extra training initiatives. Extra training is fine for those who take the courses, but it shouldn't send the message that it's a skill beyond the scope of all rural physicians called upon to help their patients die comfortably, often in their own homes.

For ease of reading, we will refer to the patient as "he."

THE PATIENT (Box 1)

A palliative care patient usually comes to us with a terminal diagnosis; but sometimes we're the ones to give the news. Either way, the art and science of palliative care begins after the patient is informed. Denial is a powerful coping mechanism, and it is not our role to disallow it. Although Kübler-Ross¹ described 5 stages of dying, the process

is an intensely individual one and doesn't always travel the same route.

The patient may have been told, yet may seem to not understand. This sometimes requires re-explaining, but sometimes not. There are times when he has all the knowledge he needs but, emotionally, it's too much to digest. In this scenario, we simply ask if he has any questions. Over time, he may ask about his prognosis, but he may not. A qualitative study discovered that patients want us to give them information only when they ask for it. They often felt information was being forced on them.²

Patients who were clearly going to die soon have asked for more treatment (e.g., chemotherapy), and we've struggled between "informing" them again or leaving them in denial. We've handled this by saying they'll get more therapy if they are well enough for it. Attending family members are told the appropriate facts, and that the patient has been given the same information but is dealing with it in a very different manner.

The patient and family may move from denial to acceptance,¹ but not necessarily. Our job is to find common ground. This may be different for the patient than for his family. Dying patients set the agenda through which we deal with them. We'll likely have a more directional role with the family, ensuring they have a realistic view and time to prepare for the inevitable.

Patients may want to discuss future symptoms, sometimes only present concerns. When they ask a question they're telling us they're ready for an honest answer. There's a wide range of

Box 1. The patient

- Pain versus Confusion is the simple equation.
- May want to remain in denial of diagnosis, and that's okay.
- May want to "know" very little, once already informed.
- Patient's wishes win out over family need for more therapy or treatment.
- End most sessions by asking if there are any questions.

topics: pain, bleeding, privacy, control, dying, the afterlife. When discussing with the patient the overall approach he prefers, we generally ask how he'd like to handle the balance between pain and confusion. This is a fluid course, and patients will tell us when they want comfort above all other considerations.⁵ This may not occur until symptoms worsen and the family have gathered.

THE PHYSICIAN (Box 2)

Rural physicians have one advantage over their urban counterparts: no traffic. House calls and home deaths are more feasible to attend. It's often good to involve a second physician if the care is onerous or will be prolonged, especially when house calls need to be done twice a day.

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| Box 2. The physician |
| <ul style="list-style-type: none"> • Role model a non-intervention style of care. • Allow for a sense of humour. • Consider involving a second MD, where required. • Focus on where the patient is at; the vibe. |

We're the model for calmness for the other caregivers and the family. We must accept that this patient's dying is a part of his life and that caring for him is an important part of our job. We need to normalize the loss of function and consciousness he will experience.

Anuria and Kussmaul–Kien respiration is normal for a dying patient. We should have an almost "welcoming" attitude toward whatever direction his condition takes. It is all okay, except for pain and distress — those symptoms we must medicate. Dyspnea and pain usually respond to narcotic administration.

DO NOT PROLONG DYING (Box 3)

Do not prolong dying if you can avoid it. However, patients sometimes have a visitor they're waiting for, or an upcoming special event. Otherwise, IV hydration just prolongs the dying process and exhausts the patient and the caregivers.⁴⁻⁶ The use of oxygen therapy and bloodwork makes home deaths less feasible in many areas and adds little in the way of comfort for patients.^{7,8}

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| Box 3. Do not prolong dying |
| <ul style="list-style-type: none"> • No intravenous • No bloodwork • No oxygen |
| These are not comfort measures. |

If a patient has been transferred from a tertiary care centre and is still receiving IV hydration and oxygen, the family will often resist the removal of these modalities. Try to get them to agree that the IV will not be restarted if it comes out, because it would be unfair to the patient. Often the best that can be done in this situation is to decrease the IV to a minimal flow rate.

If the transferred patient is not receiving hydration, expect someone in the family to ask why. We usually tell them that it would prolong the dying process and, again, is not fair to the patient.

THE FAMILY (Box 4)

The family may take out their stress on one another or on caregivers, including the physician. Expect some dysfunction. Attempt to work closely with just one spokesperson. This is often the hardest part.^{9,10} Try to 1) develop a communication strategy; 2) outline the patient's wishes and how you intend to fulfill them; and 3) recognize that family members are often also a part of your rural practice and they'll need time for their own needs to be met as well.

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| Box 4. The family |
| <ul style="list-style-type: none"> • Expect some conflict. • Try to stay out of it. • Discuss opportunity for some reminiscing, joy. • Stay firm once non-treatment is accepted by patient. • First priority is to patient wishes and comfort. • Family is often fearful of physical manifestation of death. • Non-intervention care may seem like poor care to family. • They may need reassurance that nothing urgent needs to be done. |

Family caregivers may have a wide interpretation of physical symptoms, and they often need reassurance.¹¹ They may fear dramatic events such as major hemorrhage or a seizure. Explain that these are unlikely and that any symptom development is okay, as long as the patient is not in pain or distress.

Stressed families often "scare" away caregivers. The nurses may not want to disturb a close family gathering, but the family may see this well-meaning action as neglect. Therefore, it's important to persevere and for the family to understand that routine comfort and nursing care has to be given.

It's difficult to navigate the change from active care to comfort care for many families. Try to take the perspective that there's nothing that can be done to stop the disease, and it's our role to maintain comfort.

When family members who live farther away finally arrive, they are often out of synch with

where in the dying process their loved one is and with the decisions that have been made. This disadvantage may translate into suggestions to “do more” — almost a lobbying effort for increased intervention to assuage any guilt for not being there sooner. Our role is to listen, but to remain firmly committed to comfort measures for the patient and an acceptance of the dying process.

ABORIGINAL FAMILIES (Box 5)

Aboriginal families present more facets to the care of a dying patient.¹² There are areas of meaning for the patient and family that non-Aboriginal physicians may not understand.¹³ Often, several spokespersons are involved, which requires repeat discussions.

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| <p>Box 5. Aboriginal families</p> <ul style="list-style-type: none"> • Difficult for non-Aboriginal MD to fully understand. • Be consistent that comfort measures will not cause death. • Loss of patient may have far-reaching past and present meaning for family. |
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These families may have preferences about when the body should be moved, and that must be discussed with the funeral home. Often the death of an elder will bring many visitors, and this should be anticipated and planned for ahead of time.

There may be many phone calls from distant communities, and a workable communication strategy that balances patient confidentiality and community information should be worked out.

MEDICATION (Box 6)

Medications can be legion, yet need not be. Keep it simple. When the patient can no longer swallow effectively, morphine, administered subcutaneously, will manage most pain and shortness of breath.^{8,14} Train family members to administer morphine injections and have them do one while you are present (see Appendix 1). Setting up a simple schedule can make the caregivers at ease with this new task. Dose and volume can be increased as required. Prime the butterfly tubing with morphine and do not flush; that way the patient is always getting a reasonably predictable dose. Increase doses by 50% when inadequate. There is no upper limit. Start early because catch-up is hard to play.

There is nothing more distressing to caregivers and family members than a distraught, thrashing, dying patient. This patient needs to be urgently and aggressively medicated. Intramuscular (IM) injections of phenobarbital, diazepam and haloperidol every half hour until the patient settles are very

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| <p>Box 6. Medication</p> <ul style="list-style-type: none"> • Subcutaneous morphine site usually suffices. • Do not flush; keep primed with morphine. • Teach family members to do injections. • Reassure them they will not kill the patient with this medication. • When deep sedation for agitated, dying patient is required: phenobarbital 300 mg + diazepam 20 mg + haloperidol 5 mg intramuscularly; Q hourly until sedated, then qid prn. • Scopolamine 0.6 mg subcutaneously useful for “death rattle.” |
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effective. Use medications that work on divergent pharmacological pathways because it’s never clear which pathways may be shut down.¹⁵ This may also be a time to decrease narcotics. In the patient with failing kidneys, narcotics can cause delirium.

The “death rattle” is difficult for caregivers to listen to, and is effectively managed with scopolamine (0.6 mg), administered subcutaneously. This dries up upper airway secretions; it may need to be repeated prn.¹⁶

NURSING AND HOME CARE (Box 7)

Nurses are the main caregivers in the hospital setting, just as family and friends are in the home setting. The physician and nurses often need to troubleshoot issues together before the physician goes in to see the patient and family.

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| <p>Box 7. Nursing and home care support services</p> <ul style="list-style-type: none"> • Often limited resources. • Very important for comfort, bathing, nursing care. • Ensure they are aware of your non-intervention approach. • Incontinence brings many patients into hospital; strategize. • Modest constipation: fleet enemas, better than incontinence • Bedside commodes and Foleys are invaluable when needed. • Get family to step outside room when regular care is required. |
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Nurses are key players and, as such, bear much of the brunt if the family is very stressed about the palliation of their loved one. They need our understanding and support when issues arise, and after the patient has died. They are often far more in tune with where the patient is “at” than the visiting physician is, and, in an extended-care unit scenario, they may have known the patient for years.

Do not underestimate the effect the death of a patient may have on the home support personnel and on the nursing staff. Nurses and family caregivers need to know that the patient is expected to

die. They should also be prepared for the fact that the death may occur after one of their medication administrations, and that this is okay.¹⁷

SUMMARY (Box 8)

Palliative care is a routine, creative and important part of rural practice, well suited to practitioners who are used to finding practical solutions for their patients' care. A simple, clear approach may be effective for the physician, the patient and his family.

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| <p>Box 8. Summary</p> <ul style="list-style-type: none"> • Less is more. • Comfort of patient is focus. • Appropriate sense of humour. • Model peacefulness and acceptance. <p>The bottom line is that we are not interfering with the dying process. We are keeping the patient comfortable. If the patient is "meant" to get better, nothing we do is standing in their way. We are doing nothing to end their life; their illness is doing that.</p> |
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Competing interests: None declared.

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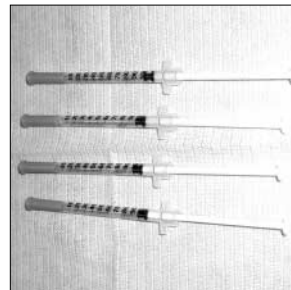
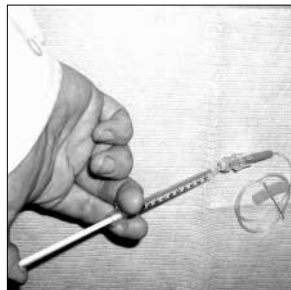
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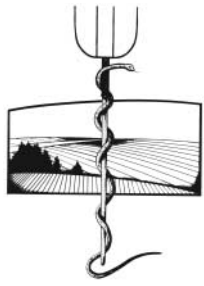
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Appendix 1. Administering morphine injections

1. 25-gauge butterfly needle, opsite dressing, injection site lock (Fig. 1).
2. Fill a butterfly needle with morphine, do not flush with anything (Fig. 2).
3. Place site on upper chest for easy access (Fig. 3).
4. Needle in place.
5. Cover with transparent dressing.
6. Dressing in place.
7. Leave prepared syringes for caregivers to administer prn (often useful to demonstrate the first dose) (Fig. 4.).

Photos by Dr. Yogi Sehgal.





POLICY PAPER ÉNONCÉ DE POLITIQUE

SRPC Policy Paper on Regionalization, Spring 2004

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All provincial governments in Canada except Ontario have embraced regionalization of health care services. In some provinces this has included a broad range of services, such as acute care, home care, public health, mental health. In other provinces regionalized services have been more limited. Some provinces have made many smaller units, and others have made fewer larger units, but all exercises in regionalization have driven a centralization of services. This has had significant impact in rural communities.

Many communities have lost services, sometimes including their hospitals. Even in provinces that indicated that a goal of regionalization was to increase local input into the health care system, residents and health care professionals of most rural communities now have less input into the health care system than before.

Regionalization has been put forward as the means by which provincial governments will be able to cure many of the problems plaguing the health care system, yet very little research is available to supply evidence that regionalization is the method by which these problems can be fixed. As recently as September 2003 the Canadian Centre for Analysis of Regionalization and Health (CCARH) stated:¹

“Many changes in health region boundaries have been implemented without a strong evidence base. Yet the implications for the effectiveness of regionalization policy are great. Not the least of these is the destabilization to health delivery systems that is wrought by the constant changes.”

There is a lack of Canadian research into issues of the effects of regionalization, among other things, on access to care, quality of care and recruitment and retention of health care professionals. There is little research on the optimum size and design of health regions. Regions range from those concentrated mainly in a large urban agglomeration, to huge rural regions, to multiple small regions (or districts) with varying abilities to deliver services.

Rural regions may have no common trade patterns, no identifiable regional centres, no other organizational principles that might help them to function as regions other than the dictate of the provincial government that created them. Within the same province, some regions will be able to fully integrate health care services, including home care, public health, primary care, all levels of acute care and tertiary care services. Other regions are so disparate that integration at the primary care level is hard enough, and many secondary services and all tertiary care services are unavailable.

There is also the anomaly that “regional” centres can refuse patients from rural communities without access to the services that these regional centres provide, and it is easy to understand the growing divide between the regions that include large urban centres and regions that are rural in nature.

Given the growing inequities between the residents of rural and remote Canada and their urban counterparts, the Society of Rural Physicians of Canada (SRPC) recommends the following principles regarding the regionalization of health care in Canada.

#1 – STATED, MEASURABLE GOALS

Regionalization experiments have been initiated by governments without clearly outlined goals and the tools of evaluation needed to monitor and measure these goals. Many governments turned to regionalization as a means to contain the increasing costs of health care, yet the massive reorganization of many provinces' health delivery systems has not demonstrated savings. The information about the cost to the system of regionalization is not available, in some cases 10 years after the initial experiments, and this speaks to the need for a rigorous review of the successes and failures of regionalization. A clear definition of the problem(s) to be solved by regionalization and the method in which this will be evaluated is essential.

#2 – EVIDENCE-BASED DECISION-MAKING

Changes to existing regionalization schemes or the institution of new structures must be based on the best available evidence.

In many instances regionalization has been accompanied by closure of smaller rural hospitals without recognition of the attending potential risks for rural communities. There is evidence, for example, that women with low-risk pregnancies, and their babies, suffer more morbidity and mortality in the first few weeks after delivery if they have to travel out of their home communities.^{2,3} In addition, it has been shown that the longer the interval between myocardial infarction and hospital care, the greater the mortality.⁴⁻⁶ There are too many instances of obstetrics programs being closed in communities in the name of regionalization when there is evidence to suggest that this will increase, not decrease, the negative outcomes.

#3 – RIGOROUS COST ANALYSIS BEFORE CHANGES

Changes to regionalization have been done without rigorous cost-benefit analyses being performed. Analyses must include the hidden costs to patients in the form of missed work to travel to distant services, the cost of travel to and from regionalized services, and the costs for family members who must accompany their loved ones. Citizens of rural and remote Canada often carry a significantly greater financial burden when services are regionalized, compared to their urban counterparts.

#4 – DEFINITION OF A VIABLE REGION

It is hard to believe that there are not standards and definitions for viable, effective regions in this country. There are many examples of rural regions with communities that have no historical ties, no common trade patterns (except with communities outside the region) and no regional centre. Regions must be based on sound operational principles. All aspects of care, from primary through to tertiary care, must be available to all citizens of a region. The inability of the system to integrate vertically calls into question the viability and applicability of regionalization.

When determining regional borders, the realities of geography must be taken into account, from the vagaries of local weather patterns, to impassible mountain passes, and average number of days per year when air evacuation is impossible, to name a few.

All regions within a province must have equitable services, and these services must be available in an equitable fashion to the citizens of each region.

When determining what services will be provided where and by whom, the following elements must be taken into consideration.

- Local economic conditions, including the role that health care institutions and services play in the local economy
- Geography
- Effect on the retention and recruitment of health care professionals
- Transportation, which includes everything from ambulance services to public transport to the state of the roads or air services to the regional centres. The effect of weather on the ability to travel must be considered.
- Ensuring that services such as home care, ambulance services, telehealth are available in communities from which hospitals and/or services are being removed
- Equity of access

#5 – EQUITY OF ACCESS

The Canada Health Act guarantees equal access for all Canadians. Regionalization of health care delivery has exacerbated already existing inequities.

Geography has become a determinant of health in Canada and must be addressed. Regionalization is an urban idea imposed on rural realities and has exacerbated some of the issues that geography places in the way of equity of access to health care services.

#6 – CORE SERVICES

Governments must define the core services for local, regional and provincial levels of care. Regionalization has continued to whittle away at services in smaller rural communities with no commitment from government that there is a fundamental core of services that must be available as close as possible to all citizens.

The health care needs of the population will be the basis for the delineation of these core services. Determination of the health care needs must be sought through rigorous needs assessments at all levels from individual through community to the regional and provincial levels.

Regional centres are often given more money to fill this role but are then allowed to refuse to take patients from the smaller communities of a region when they are full. The inequities of regional centres continuing to care for the population in the community in which it is situated while turning away citizens from communities without comparable services and for whom the regional centre is to be delivering those services, must not continue. Australia has instituted a law that forbids regional centres from refusing patients from their regions. It is time for Canadian provinces to do the same.

#7 – MEANINGFUL INPUT FROM LOCAL CITIZENS

Communities expect and deserve the ability to influence the decisions made regarding regionalization. Governments have a responsibility to supply relevant information in a non-partisan, neutral fashion.

If provincial governments persist in appointing members of regional health boards, there must be strong, broad-based community councils to advise and question the decisions and assumptions of regional health boards.

#8 – MEANINGFUL INPUT FROM LOCAL HEALTH PROFESSIONALS

Health care professionals are in a unique position to provide useful observation and input into the organization of regions and into the policies for service delivery. Modern management theory supports the development of policy and procedures as close to the service provision as possible.

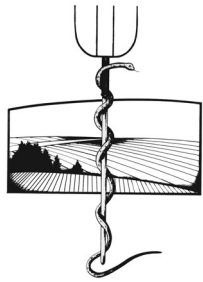
#9 – EDUCATION OF HEALTH PROFESSIONALS AND RESEARCH

Those implementing or changing regional systems must be cognizant of the need for support for continuing education of health professionals and the conducting of health research within the system.

Competing interests: None declared.

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ÉNONCÉ DE POLITIQUE POLICY PAPER

Document stratégique de la SMRC sur la régionalisation, printemps 2004

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Tous les gouvernements provinciaux du Canada, sauf celui de l'Ontario, ont adopté la régionalisation des services de santé. Dans certaines provinces, la régionalisation a englobé un vaste éventail de services comme les services de soins actifs, de soins à domicile, de santé publique et de santé mentale. Dans d'autres, les services régionalisés sont plus limités. Certaines provinces ont créé beaucoup d'entités plus petites et d'autres en ont créé de plus grosses qui sont moins nombreuses. Tous les exercices de régionalisation ont été la force motrice d'une centralisation des services qui a eu des répercussions importantes sur les communautés rurales.

Beaucoup de communautés ont perdu des services, y compris leur hôpital dans certains cas. Même dans les provinces qui ont indiqué que la régionalisation visait notamment à augmenter l'apport local dans le système de soins de santé, la population et les professionnels de la santé de la plupart des communautés rurales interviennent maintenant moins qu'auparavant dans le système.

On a préconisé la régionalisation comme moyen pour les gouvernements provinciaux de guérir un grand nombre des problèmes qui touchent le système de santé, mais il existe très peu de recherches prouvant que la régionalisation soit la solution. Aussi récemment qu'en septembre 2003, le Centre canadien de l'analyse de la régionalisation et la santé (CCARS) affirmait¹ :

«Plusieurs des modifications des frontières des régions ont été faites malgré un manque de données probantes sur le sujet. Les effets de ces modifications sur l'efficacité des politiques de régionalisation sont donc considérables — l'un

de ces effets étant la déstabilisation de la prestation des services de santé.»

Nous manquons de recherches canadiennes au sujet des effets de la régionalisation sur l'accès aux soins, la qualité des soins, le recrutement des professionnels de la santé et le maintien des effectifs, notamment. Les recherches sur la taille et la conception optimales des régions de santé sont peu nombreuses. Les régions vont de celles qui sont concentrées principalement dans une grande agglomération urbaine, jusqu'aux vastes régions rurales, en passant par de multiples régions (ou districts) peu étendues dont la capacité de prestation de services varie.

Les régions rurales n'ont souvent aucune tendance commerciale commune, aucun centre régional distinct et aucun principe organisationnel susceptibles de les aider à fonctionner comme région, autres que les édits du gouvernement provincial qui les a créées. Dans la même province, certaines régions seront en mesure d'intégrer entièrement les services de santé, y compris les soins à domicile, la santé publique, les soins primaires, tous les niveaux de soins actifs et les services de soins tertiaires. D'autres régions sont très disparates et l'intégration au niveau des soins primaires y est déjà si difficile, qu'elles ne peuvent offrir tous services secondaires aucun des services de soins tertiaires.

Il y a aussi une anomalie : les centres «régionaux» peuvent refuser des patients de communautés rurales n'ayant pas accès aux services dispensés par les centres en question et il est facile de comprendre le fossé qui se creuse entre les régions comportant d'importances agglomérations urbaines et les régions rurales.

Compte tenu des inégalités croissantes entre les populations des régions rurales et éloignées du Canada et celles des centres urbains, la Société de la médecine rurale du Canada (SMRC) recommande les principes suivants pour la régionalisation des soins de santé au Canada.

1 – OBJECTIFS ÉNONCÉS ET MESURABLES

Les gouvernements ont lancé des essais de régionalisation sans buts clairement définis ni outils d'évaluation nécessaires pour les surveiller et les mesurer. Beaucoup de gouvernements se sont tournés vers la régionalisation comme moyen de contenir l'escalade des coûts des soins de santé, mais la restructuration massive des systèmes de prestation des soins dans de nombreuses provinces n'a pas produit d'économies. On ne sait pas combien la régionalisation a coûté au système, dans certains cas 10 ans après les premières expériences, ce qui démontre qu'il faut examiner rigoureusement les réussites et la régionalisation et ses échecs. Il est essentiel de définir clairement les problèmes que doit régler la régionalisation et la façon dont on évaluera celle-ci.

2 – PRISE DE DÉCISION FACTUELLE

Les changements apportés aux programmes actuels de régionalisation ou la mise en place de structures nouvelles doivent reposer sur les meilleures données probantes disponibles.

Dans beaucoup de cas, la régionalisation était conjuguée à la fermeture de petits hôpitaux ruraux sans que l'on reconnaisse les risques connexes possibles pour les communautés rurales. Des données probantes indiquent, par exemple, que les femmes qui ont une grossesse à faible risque et leur bébé présentent des taux de morbidité et de mortalité plus élevés au cours des premières semaines suivant l'accouchement si elles ont dû se rendre à l'extérieur de leur communauté^{2,3}. On a en outre démontré que plus l'intervalle qui s'écoule entre un infarctus du myocarde et les soins à l'hôpital est long, plus le taux de mortalité est élevé⁴⁻⁶. On a fermé trop de programmes d'obstétrique communautaires au nom de la régionalisation, lorsque les preuves démontrent qu'il en découlera une augmentation et non une diminution des résultats négatifs.

3 – ANALYSE RIGOREUSE DES COÛTS AVANT LES CHANGEMENTS

On a apporté des changements à la régionalisation

sans en analyser rigoureusement la rentabilité. Les analyses doivent inclure les coûts cachés pour les patients qui doivent s'absenter du travail pour se déplacer afin d'obtenir des services au loin, le coût des déplacements en direction et en provenance des services régionalisés et les coûts pour les membres de la famille qui doivent accompagner leurs proches. La régionalisation des services impose souvent aux populations des régions rurales et éloignées du Canada un fardeau financier beaucoup plus lourd qu'à leurs homologues des centres urbains.

4 – DÉFINITION D'UNE RÉGION VIABLE

Il est difficile de croire qu'il n'existe au Canada aucune norme ou définition de ce qui constitue une région viable et efficace. Les exemples de régions rurales constituées de communautés qui n'ont aucun lien historique, aucune tendance commerciale commune (sauf avec des communautés à l'extérieur de la région) ni aucun centre régional ne manquent pas. Les régions doivent reposer sur de solides principes opérationnels. Tous les aspects des soins, depuis les soins primaires jusqu'aux soins tertiaires, doivent être disponibles pour toute la population d'une région. L'incapacité du système de s'intégrer verticalement remet en question la viabilité et l'applicabilité de la régionalisation.

Lorsque l'on établit les frontières des régions, il faut tenir compte des réalités de la géographie, depuis les aléas de la température locale jusqu'aux défilés montagneux impassables, en passant par le nombre moyen de jours par année pendant lesquels l'évacuation par avion est impossible, pour ne nommer que quelques facteurs.

Toutes les régions d'une province doivent bénéficier de services équitables qui doivent être disponibles de façon équitable pour la population de chaque région.

Lorsque l'on détermine les services qui seront dispensés, l'endroit où ils le seront et qui les dispensera, il faut tenir compte des éléments suivants.

- Conjoncture économique locale, y compris le rôle des établissements et des services de soins de santé dans l'économie locale.
- Géographie.
- Effet sur le recrutement des professionnels de la santé et le maintien des effectifs.
- Transport, ce qui inclut tout, depuis les services ambulanciers jusqu'aux transports en commun, en passant par l'état des routes ou les services

aériens vers les centres régionaux. Il faut tenir compte de l'effet de la température sur la capacité de voyager.

- Il faut assurer que les services comme les soins à domicile, les services ambulanciers et les services de télésanté sont disponibles dans les communautés où l'on ferme des hôpitaux ou des services.
- Équité d'accès.

5 – ÉQUITÉ D'ACCÈS

La Loi canadienne sur la santé garantit l'équité d'accès pour tous les Canadiens. La régionalisation de la prestation des soins de santé a exacerbé des inégalités qui existaient déjà.

La géographie est devenue un déterminant de la santé au Canada et il faut en tenir compte. Concept urbain imposé aux réalités rurales, la régionalisation a exacerbé certains des problèmes créés par la géographie sur le plan de l'équité d'accès aux services de santé.

6 – SERVICES DE BASE

Les gouvernements doivent définir les services de base dans le cas des niveaux locaux, régionaux et provinciaux de soins. La régionalisation a continué de miner les services dans les petites communautés rurales sans que le gouvernement s'engage à assurer un noyau fondamental de services devant être disponibles le plus près possible de toute la population.

La délimitation de ces services de base reposera sur les besoins en soins de santé de la population. Il faut chercher à déterminer les besoins en soins de santé en évaluant rigoureusement les besoins à tous les niveaux, de celui de la personne à celui de la province, en passant par la communauté et les régions.

Les centres régionaux reçoivent souvent plus d'argent pour jouer ce rôle, mais on leur permet ensuite de refuser les patients des petites localités d'une région lorsqu'ils sont pleins. Il faut mettre fin aux injustices que créent les centres régionaux qui continuent de s'occuper de la population de la communauté où ils sont situés tout en refusant des citoyens des communautés qui n'ont pas de services comparables et que le centre régional devait desservir. L'Australie a adopté une loi qui interdit aux centres régionaux de refuser des patients de leur région. Il est temps que les provinces du Canada fassent de même.

7 – CONTRIBUTION SIGNIFICATIVE DE LA POPULATION LOCALE

Les communautés s'attendent à pouvoir exercer de l'influence sur les décisions prises au sujet de la régionalisation et méritent de pouvoir le faire. Les gouvernements doivent fournir l'information pertinente de façon non partisane et neutre.

Si les gouvernements provinciaux persistent à nommer les membres des régies régionales de la santé, il doit exister de solides conseils communautaires à représentation générale pour conseiller les régies régionales de la santé et remettre en question leurs décisions et leurs hypothèses.

8 – CONTRIBUTION SIGNIFICATIVE DES PROFESSIONNELS DE LA SANTÉ LOCAUX

Les professionnels de la santé sont dans une position unique pour fournir des observations et apporter des contributions utiles à l'organisation des régions et aux politiques de prestation des services. La théorie de la gestion moderne appuie l'élaboration de politiques et de procédures le plus près possible du point de service.

9 – ÉDUCATION DES PROFESSIONNELS DE LA SANTÉ ET RECHERCHE

Les responsables chargés de mettre en œuvre ou de modifier les systèmes régionaux doivent reconnaître que les professionnels de la santé ont besoin d'appui pour se prévaloir des possibilités d'éducation continue et effectuer des recherches sur la santé à l'intérieur du système.

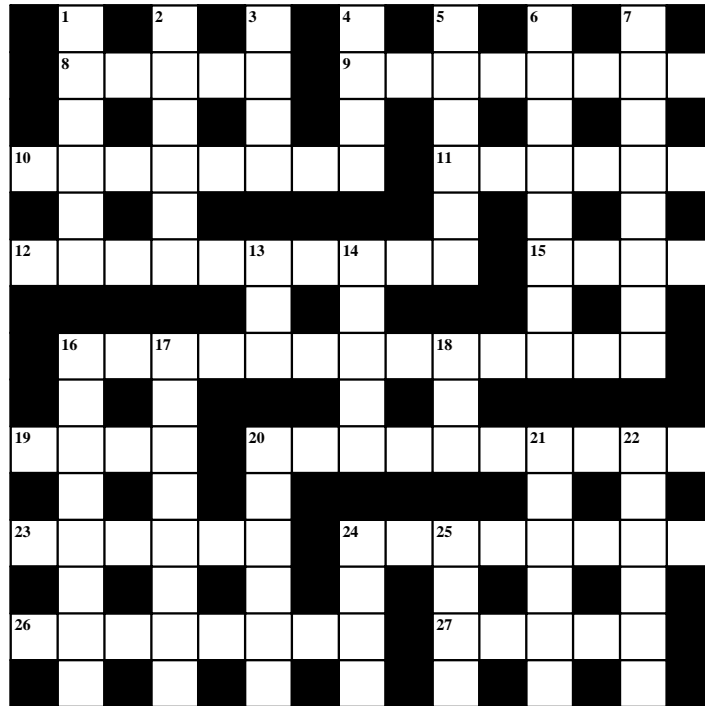
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Cryptic Crossword

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Answers to this Cryptic Crossword are on page 267.

When the puzzle is completed, the perimeter, reading clockwise from the top left corner, will reveal something worth joining. (7,2,5,10)

ACROSS

8. Entrance to hospital after cut-back (5)
9. 6.50015000. That's hot! (8)
10. Nurse Pam is not a bird or a plane (8)
11. Most of a greeting is very loud and heard at the end of the line (3,3)
12. Leukemia victim sounds unwell after a fresh cup is cut short (10)
15. Prince and I turn right (4)
16. Nurse smooths within the limits of her experience (7,6)
19. A refusal from the unknown writer (4)
20. Make coloured bun this way? (6,4)
23. I might roast Greek MD (6)
24. A filter is what raises tension (8)
26. The French shout very softly at the invalids (8)
27. Intended to be nasty to model (5)

DOWN

1. Clean up tree (6)
2. Change 10-10? Right, east (6)
3. Friend holds part of each umbrella (4)
4. He was terrible but not vain (4)
5. Involve alien with time travel (6)
6. Five pipe cleaners conceal emission source (8)
7. Solver does trick. That's a rude thing to say (3,5)
13. Cry heard by duckweed (3)
14. He does not like to plough earth (5)
16. I follow beast to star (with a Greek) (8)
17. Frenchman and Spartan break up cruel devices (8)
18. ID, for example, duck (3)
20. Rubs oils into a young pitcher in a friendly way! (6)
21. Sounds like, sounds like, rain in a type of shower (6)
22. Throw out a piece of waste (6)
24. Second wood window (4)
25. Some tramps slope off (4)



OUT BEHIND THE BARN DANS LE FEU DE L'ACTION

Drug information resources

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www.ruralnet.ab.ca/medinfo/

Searches for drug-related information are one of the most common information-seeking tasks for physicians. This article reviews Internet sources of drug information and software products for handheld computers (a.k.a. personal digital assistants [PDAs]).

CMA DRUG INFORMATION

www.cma.ca

The Drug Information link on the CMA Web site provides access to a number of Lexi-Comp databases, including Lexi-Drugs and the related Pediatric, Geriatric and Natural Product databases, a drug interaction analyzer and drug identification tools. Canadian drug names, such as Clavulin and Reactine are recognized. As well as drug-related information, the site includes databases on infectious diseases, toxicology, laboratory tests and diagnostic procedures.

CMA PDA INFORMATION

The CMA's PDA Centre offers discounts on drug-related products for PDAs, from Skyscape, Lexi-Comp and PEPID. Click on the Types of Applications link, and then select Drug Guides or Drug Interaction Analyzers.

MDCONSULT

www.mdconsult.com

MDConsult includes Mosby's Drug Consult. It is available in the Osler section of the CMA Web site. It recognizes Canadian brand names.

COMPENDIUM OF PHARMA- CEUTICALS AND SPECIALTIES

www.pharmacists.ca

CPS is produced by the Canadian

Pharmacists Association and is available in paper, in CD-ROM form and, as of Mar. 31, 2004, online. A PDA version is planned for later in 2004.

HEALTH CANADA

DRUG PRODUCT DATABASE

www.hc-sc.gc.ca/hpb/drugs-dpd/

This site provides brief information about medications available in Canada.

MEDIRESOURCE PRESCRIPTION DRUG INFORMATION

www.mediresource.com/pages/ndrug.htm

This Canadian site contains selected patient-oriented drug monographs that include lists of potential interactions.

MEDLINE PLUS

DRUG INFORMATION

www.nlm.nih.gov/medlineplus/druginformation.html

Drug monographs from the US Pharmacopeia (USP). It does not recognize Canadian brand names. Sponsor: US National Institutes of Health.

US DRUG RESOURCES

Canadian physicians should be aware that in the US, some drugs have different names, doses or indications. If you can't find a particular brand name, try searching for the generic name.

PDAS

Several drug databases are available for Palm OS or Pocket PC PDAs. The April 2002 issue of *Canadian Family Physician* and the November 2003 issue of *Canadian Journal of CME* contain reviews of these products.^{1,2} Most vendors offer a free trial version of their software.

LEXI-COMP

www.lexi.com

Lexi-Drugs is a comprehensive drug database but is more expensive than similar products. Drug information is cross-referenced with other Lexi-Comp products. It recognizes Canadian drug names, supports the use of memory cards and is available for both Palm OS and Pocket PC PDAs. Lexi-Interact and Lexi-Natural Products are separate drug interaction and alternative medicine products.

TARASCON PHARMACOPOEIA

www.tarascon.com

Tarascon includes information about alternative medications, a drug interaction analyzer and a medical calculator that recognizes SI units. It supports the use of memory cards and is available for Palm OS and Pocket PC PDAs. This is the current drug database used in the PocketProf program, which encourages PDA use by rural preceptors in Alberta. If you are not yet a PDA user, Tarascon publishes pocket-sized handbooks.

SKYSCAPE

www.skyscape.com

Skyscape sells several drug-related products, of which the most popular seems to be DrDrugs, which recognizes Canadian brand names, supports the use of memory cards and is available for both Palm OS and Pocket PC PDAs. It is cross-referenced with other Skyscape products, including the iFacts drug interaction analyzer.

PEPID

www.pepid.com

PEPID provides suites of medical software for emergency and primary care physicians. Part of each suite is the Portable Drug Companion, which is also available as a stand-alone product. It recognizes Canadian brand names, supports the use of memory cards and is available for Palm OS and Pocket PC PDAs.

EPOCRATES RX

www.epocrates.com

The free version of ePocrates is only available for Palm OS PDAs, and includes a drug-interaction analyzer. However, it does not recognize Canadian drug names, does not support the use of memory cards, and repeatedly nags you to update it regularly. It will shut down if not updated at least once a month. It

also reports your usage whenever you synchronize your PDA, so *read the user agreement very carefully.*

EPOCRATES RX PRO & EPOCRATES DX

The commercial version of ePocrates adds information on alternative medications and infectious diseases. It is available for both the Palm OS and Pocket PC PDAs. Even though you have paid for the product, it still reports your usage, the same as the free version. The ePocrates Dx product is a combination of the Rx Pro with the popular *Griffith's 5-Minute Clinical Consult.*

THE BOTTOM LINE

A review³ of PDA drug databases in *Medical Software Reviews* contains this sobering quote: "The content within these products is more fallible than any of us would like to acknowledge." This is a reminder that we should never completely trust the information from any single source when making clinical decisions.

RESOURCES**DALHOUSIE PDA DRUG REFERENCE**

<http://handheld.medicine.dal.ca/software/drugs.htm>

This site reviews several PDA drug databases. It favours the DrDrugs and Lexi-Drugs products. The site also contains a review of Alternative Therapy References.

MEDICAL INFORMATION SERVICE (MIS)**WEB SITE**

<http://ruralnet.ab.ca/medinfo/>

The Handheld Computer section of the University of Calgary's RuralNet Web site contains links to the Web sites and references mentioned in this article. It also provides information about other PDA drug databases.

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Competing interests: None declared.



LETTERS / CORRESPONDANCE

Please send us your comments and opinions. / Nous serons heureux de recevoir vos commentaires et opinions. Letters to the editor should be addressed to: / Prière de faire parvenir les lettres à la rédaction à l'adresse suivante :

CJRM, Box / CP 1086, Shawville QC J0X 2Y0; fax 819 647-9972, cjrm@ca.inter.net

KNEE ASPIRATION

To the Editor:

In "The occasional knee aspiration or injection" the authors describe how to change syringes if more than one is needed to aspirate a knee.¹ A much easier way is to use a 3-way stop-cock.

David Howe, MB
Advocate Harbour, NS

REFERENCE

1. Wootton J, Potvin E, Friedman J. The occasional knee aspiration or injection. *Can J Rural Med* 2004;9(2):111-3.

[ONE OF THE AUTHORS RESPONDS:]

Dr. Howe makes a very good point. I only wish he had also provided me with a mnemonic to remind me which way to turn the handle on the stop-cock.

John Wootton, MD
Shawville, Que.

TYPE 2 DIABETIC FLOW CHART, 2004 UPDATE

To the Editor:

I read with frustration and disappointment the Type 2 Diabetic Flow Chart, 2004 Update, that appeared in the Summer issue of *CJRM*.¹

As a practising family physician I am an enthusiastic supporter of the concept and use of flow charts as practical tools to improve care of patients with diabetes. However, I am seriously

concerned because this flow chart does not reflect current guidelines and therefore does little to promote and encourage optimal patient care based on evidence.

The Canadian Diabetes Association (CDA) published the "2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada" in December 2003. These evidence-based guidelines do not appear to have been considered in the revision of this flow chart and are not referenced.²

There are numerous deviations from the most recent set of CDA guidelines and the most recent lipid guidelines, and I feel your readers deserve to be made aware of these differences. I offer the following specific examples, cross-referenced to the 2003 CDA guidelines pages.²

Screening (CDA pages S10-13)

There is no mention of screening for type 2 diabetes. The age for routine screening has been lowered from 45 to 40, and several risk factors have been added. In addition, a detailed screening algorithm provides guidance on when to use the OGTT. This is important and practical information for FPs and is a notable omission.

Diagnostic criteria (p. S7-9)

A confirmatory test should be done on another day in the absence of unequivocal hyperglycemia accompanied by acute metabolic decompensation.

Random ≥ 11.1 mmol/L + symptoms of diabetes

GDM (p. S99-105)

7.8 – 10.2 (not 10.3) do a 75-g OGTT and measure fasting, 1 h and 2 h values.

Screening sensory foot exam (p. S72-3)

New guidelines have simplified the recommended screening. Detection of peripheral neuropathy should be conducted by assessing loss of sensitivity to a 10-g monofilament at the great toe or loss of sensitivity to vibration at the great toe. The proper monofilament test is as follows: Press the monofilament against the plantar surface of the great toe until the filament bends. If the patient is unable to feel the pressure they have lost protective sensation and are at high risk of a foot ulcer.

Lipid values (p. S58-65)

This method of assessing risk based on 10-year risk of CVD event is outdated and was recently revised.² The CDA guidelines were written to reflect the current lipid guidelines and present lipid targets as follows. High risk: LDL-C < 2.5 mmol/L and TC:HDL-C < 4.0 mmol/L; moderate risk: LDL-C < 3.5 mmol/L and TC:HDL-C < 5.0 mmol/L. Note that the optimal TG value is < 1.5 mmol/L, not < 2.0 mmol/L.

Management approach (p. S37-42)

This stepwise approach has been replaced by a management algorithm that emphasizes the importance of achieving glycemic tar-

gets quickly through the early use of combination therapy (including initial therapy with insulin). New guidelines recognize that the stepwise approach could lead to unacceptable delays in reaching targets and that even short-term hyperglycemia can result in vascular changes.

Glycemic control (p. S18–20)

The CDA targets have been simplified as follows and apply regardless of method of treatment (i.e., there are not specified targets for the elderly people or those on insulin or glyburide). The guidelines provide a chapter on the elderly, with the recommendation to aim for the same targets as those of otherwise healthy adults, but to be more conservative in those with multiple comorbidities, limited life expectancy or high functional dependency (p. S106-9). The recommended HbA1C target for most patients is $\leq 7.0\%$, whereas a “normal range” ($\leq 6.0\%$) should be considered for patients in whom it can be achieved safely.

Creatinine clearance is a recommended test and is not included. 24-hour urine collections are *not* recommended. ASA therapy is recommended for all people with diabetes with evidence of CVD as well as those with atherosclerotic risk factors that would increase their risk of CV events (not only those over age 30). There is no line for other antihypertensive medications (e.g., diuretics, long-acting calcium channel blockers, cardioselective beta blockers).

All physicians in Canada should be following the same guidelines to ensure consistency of care across this country. I am disappointed that the flow chart

you have provided for rural physicians is promoting a standard of care that is now outdated and in some instances inaccurate.

Stewart B. Harris, MD, MPH, FCFP, FACPM

Associate Professor, Centre for Studies in Family Medicine
The Ian McWhinney Chair in Family Medicine Studies
University of Western Ontario
London, Ont., and
Chair
Canadian Diabetes Association
2003 Clinical Practice Guidelines Expert Committee

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[DRS. KELLY AND SEHGAL RESPOND:]

We are pleased to clarify some of the reservations expressed by Dr. Harris with regard to the 2004 update¹ of this flow chart. Hopefully the discussion will also be of interest to readers.

The process of updating the flow chart included a careful examination of earlier CDA guidelines and of the literature published since the publication of the 2001 SRPC flow chart.² We had completed our literature review and flow chart before the

2003 CDA guidelines³ were published in December of that year. We did, however, examine them before publication of our flow chart update.

We were pleased that the 2001 flow chart had stood the test of time.² While the CDA guidelines have undergone some changes, the evidence has not substantially changed.

Many of the clinical recommendations in the 2003 CDA guidelines are Grade D (i.e., expert opinion, not supported by significant research data). It is not surprising that generalist rural physicians may differ from their urban colleagues in some regards. The 12 members of the Steering Committee of the 2003 Clinical Practice Guidelines Committee of the CDA are internal medicine specialists, and the Expert Committee included 3 family physicians and 45 internists.³ Rural physicians' expertise lies in being generalists who balance the uniqueness of their patients and geography with multi-disease management.

Since the evidence had changed very little, scant content change was indicated. The HbA1C target was lowered to be consistent with recent previous CDA recommendations.

Screening

This is an important issue but remains a Grade D recommendation. It is not necessary to include screening in a chart that is for patients already diagnosed with type 2 diabetes. We note it is also absent from the 2003 CDA sample flow chart (p. S122).³

Footcare

The literature cited as evidence for annual foot exams (Grade D recommendation, p. S72)³ in the

2003 CDA guidelines clearly recommends that testing (Grade A recommendation, p. S72)⁵ be done on the “dorsum of the great toe, just proximal to the nailbed.”⁴

Glycemic control

The recent CDA guidelines do warn about the risk of hypoglycemia in the elderly, especially with glyburide. The UK Prospective Diabetes Study⁵ has already documented the 18% incidence of hypoglycemic events with “tight” control (HbA1C of 0.07) in 1998 using insulin. Clinicians dealing with frail and elderly patients and those living in remote areas need to be cautious, as the CDA admits (p. S18, S106, S37),⁵ and the evidence suggests that less tight control would avoid these hypoglycemic episodes (Grade A, Level 1).⁵ We concur with the CDA suggestion that “significant risk of hypoglycemia often necessitates less stringent glycemic goals” (p. S43).⁵

Lipid values

Even the Working Group on Hypercholesterolemia and Other Dyslipidemias⁶ admits that triglyceride levels are not a treatment target. This value was included because several rural physicians felt the lipid values were incomplete without it. The level has been lowered from 2.0 to 1.5 in that Oct. 28, 2003, publication,⁶ but our literature review and chart were completed before that date. Both values are Grade D recommendations, and this change has been added to our online version of the 2004 flow chart (www.srpc.ca).

Management approach

This is up to the patient and clinician. Patient safety and compliance is always a key issue to clinicians on the front lines, and it

seems wiser to introduce one medication at a time to manage side effects and ensure a long-term therapeutic relationship. Our patients may well not model urban patients attending a tertiary care endocrinology/diabetic clinic. The reference by Harris to the CDA management algorithm (p. S39)⁵ to initiate 2 oral hypoglycemic medications simultaneously at times or to begin therapy with insulin is a Grade D recommendation, which may have theoretical advantages (quicker achievement of glycemic control), but is fraught with practical problems for rural physicians and their patients, where a step-wise approach makes more sense.

Renal

It was interesting to see that the CDA no longer recommends 24-hour urine collections; they are a cumbersome test in rural areas, with poor compliance and daily variation. However, when referring a diabetic patient to a nephrology service for declining renal function, a 24-hour urine test makes a good addition to the referral. We agree with Harris that simply following serum creatinine and spot albumin/creatinine ratios are the optimal tests. Creatinine clearance is not a value many primary care physicians routinely calculate, so including it in our flow chart was unnecessary.

The SRPC continues to provide useful, practical information and tools for rural physicians. Our hope is that the 2004 update of the Type 2 Diabetic Flow Chart¹ meets some of those needs, because we see the ravage that this disease causes on many of our patients. We take the authors of the 2003 CDA guidelines⁵ at their word when they state: “It is important to use a

care plan that best suits your practice needs” (p. S122).

Len Kelly, MD

Sioux Lookout, Ont.

Yogi Sehgal, MD

Sioux Lookout, Ont.

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CORRECTION

In the Summer 2004 issue of *CJRM* there was an error in the Discussion section of the Original Article by Seaborn Moyse and Osmun.¹ Reference 8 (i.e., Redelmeier and Cialdini) should have been cited as reference 7. We apologize for this error.

REFERENCE

1. Seaborn Moyse H, Osmun WE. Discharges against medical advice: a community hospital's experience. *Can J Rural Med* 2004;9 (3):148-53.

gets quickly through the early use of combination therapy (including initial therapy with insulin). New guidelines recognize that the stepwise approach could lead to unacceptable delays in reaching targets and that even short-term hyperglycemia can result in vascular changes.

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3. Genest J, Frohlich J, Fodor G, MacPherson R; Working Group on Hypercholesterolemia and Other Dyslipidemias. Recommendations for the management of dyslipidemia and the prevention of cardiovascular disease: summary of the 2003 update [published erratum appears in *CMAJ* 2003;169(11):1149]. *CMAJ* 2003;169(9):921-4.

[DRS. KELLY AND SEHGAL RESPOND:]

We are pleased to clarify some of the reservations expressed by Dr. Harris with regard to the 2004 update¹ of this flow chart. Hopefully the discussion will also be of interest to readers.

The process of updating the flow chart included a careful examination of earlier CDA guidelines and of the literature published since the publication of the 2001 SRPC flow chart.² We had completed our literature review and flow chart before the

2003 CDA guidelines³ were published in December of that year. We did, however, examine them before publication of our flow chart update.

We were pleased that the 2001 flow chart had stood the test of time.² While the CDA guidelines have undergone some changes, the evidence has not substantially changed.

Many of the clinical recommendations in the 2003 CDA guidelines are Grade D (i.e., expert opinion, not supported by significant research data). It is not surprising that generalist rural physicians may differ from their urban colleagues in some regards. The 12 members of the Steering Committee of the 2003 Clinical Practice Guidelines Committee of the CDA are internal medicine specialists, and the Expert Committee included 3 family physicians and 45 internists.³ Rural physicians' expertise lies in being generalists who balance the uniqueness of their patients and geography with multi-disease management.

Since the evidence had changed very little, scant content change was indicated. The HbA1C target was lowered to be consistent with recent previous CDA recommendations.

Screening

This is an important issue but remains a Grade D recommendation. It is not necessary to include screening in a chart that is for patients already diagnosed with type 2 diabetes. We note it is also absent from the 2003 CDA sample flow chart (p. S122).³

Footcare

The literature cited as evidence for annual foot exams (Grade D recommendation, p. S72)³ in the

2003 CDA guidelines clearly recommends that testing (Grade A recommendation, p. S72)⁵ be done on the “dorsum of the great toe, just proximal to the nailbed.”⁴

Glycemic control

The recent CDA guidelines do warn about the risk of hypoglycemia in the elderly, especially with glyburide. The UK Prospective Diabetes Study⁵ has already documented the 18% incidence of hypoglycemic events with “tight” control (HbA1C of 0.07) in 1998 using insulin. Clinicians dealing with frail and elderly patients and those living in remote areas need to be cautious, as the CDA admits (p. S18, S106, S37),⁵ and the evidence suggests that less tight control would avoid these hypoglycemic episodes (Grade A, Level 1).⁵ We concur with the CDA suggestion that “significant risk of hypoglycemia often necessitates less stringent glycemic goals” (p. S43).⁵

Lipid values

Even the Working Group on Hypercholesterolemia and Other Dyslipidemias⁶ admits that triglyceride levels are not a treatment target. This value was included because several rural physicians felt the lipid values were incomplete without it. The level has been lowered from 2.0 to 1.5 in that Oct. 28, 2003, publication,⁶ but our literature review and chart were completed before that date. Both values are Grade D recommendations, and this change has been added to our online version of the 2004 flow chart (www.srpc.ca).

Management approach

This is up to the patient and clinician. Patient safety and compliance is always a key issue to clinicians on the front lines, and it

seems wiser to introduce one medication at a time to manage side effects and ensure a long-term therapeutic relationship. Our patients may well not model urban patients attending a tertiary care endocrinology/diabetic clinic. The reference by Harris to the CDA management algorithm (p. S39)⁵ to initiate 2 oral hypoglycemic medications simultaneously at times or to begin therapy with insulin is a Grade D recommendation, which may have theoretical advantages (quicker achievement of glycemic control), but is fraught with practical problems for rural physicians and their patients, where a step-wise approach makes more sense.

Renal

It was interesting to see that the CDA no longer recommends 24-hour urine collections; they are a cumbersome test in rural areas, with poor compliance and daily variation. However, when referring a diabetic patient to a nephrology service for declining renal function, a 24-hour urine test makes a good addition to the referral. We agree with Harris that simply following serum creatinine and spot albumin/creatinine ratios are the optimal tests. Creatinine clearance is not a value many primary care physicians routinely calculate, so including it in our flow chart was unnecessary.

The SRPC continues to provide useful, practical information and tools for rural physicians. Our hope is that the 2004 update of the Type 2 Diabetic Flow Chart¹ meets some of those needs, because we see the ravage that this disease causes on many of our patients. We take the authors of the 2003 CDA guidelines⁵ at their word when they state: “It is important to use a

care plan that best suits your practice needs” (p. S122).

Len Kelly, MD

Sioux Lookout, Ont.

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1. Society of Rural Physicians of Canada. Type 2 Diabetic Flow Chart, 2004 Update. *Can J Rural Med* 2004;9(3):173-6.
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4. Perkins BA, Olaleye D, Zinman B, et al. Simple screening tests for peripheral neuropathy in the diabetes clinic. *Diabetes Care* 2001;24:250-6.
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CORRECTION

In the Summer 2004 issue of *CJRM* there was an error in the Discussion section of the Original Article by Seaborn Moyse and Osmun.¹ Reference 8 (i.e., Redelmeier and Cialdini) should have been cited as reference 7. We apologize for this error.

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THE PRACTITIONER

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Country cardiograms case 26: Answer

Keith MacLellan, MD
Shawville, Que.

ECG INTERPRETATION

The striking feature of this cardiogram (shown on page 252) is the presence of Q waves in leads 1, 2, 3, AVR, AVF, and V3–V6. One also notes left-axis deviation, borderline 1st-degree A–V block and some arguable ST–T wave abnormalities, but the presence and distribution of the Q waves are alarming and puzzling. In this setting, the most likely explanation is IHSS (idiopathic hypertrophic sub-aortic stenosis).

DISCUSSION

Q waves are a normal part of the electrical activity of the heart. They represent the normal depolarization of the septum in the usual sequence, where the electrical activity starts at the S–A node in the right atrium, progresses through the A–V node and then on to the ventricles. Along the way, the septum also sparks off, producing a small Q wave. Since the septum usually has little muscle mass, Q waves are small, and masked in normal cardiograms by the far larger left and right ventricular muscle depolarizations. Because the inferior wall of the heart is thinner than the anterior wall, one can sometimes see normal septal Q waves popping through the inferior leads of 2, 3 and AVF. These should be small (<1mm) and vary with respiration.

There are 2 situations where abnormal Q waves appear in cardiograms. The first occurs when an infarction

causes an electrically dead “window” in a ventricular wall, through which the normal septal depolarizations can now be seen. These are the Q waves of infarction — the Q waves appearing a few days after the acute injury in the affected area of the heart. Of course, these are not seen in septal infarctions.

The second situation where large Q waves are seen is when the septum itself is so muscular and hypertrophied that its normal depolarization can be seen through a normal, uninjured ventricular wall, first through the thinner inferior wall, then, as the septal muscle gains mass, through the anterior wall. Such is the case in IHSS or with some athletes.

IHSS is a relatively rare condition, often presenting with syncope on effort as the hypertrophied septum obstructs left ventricular outflow during exercise. Most rural doctors will be hard pressed to see one case in their entire career. The practical point is that if you do come across one, be sure to get an echocardiogram and place the patient on beta-blockers before you send him or her to a cardiologist. Presenting a properly diagnosed and treated rare case to a cardiologist is a good way to make the specialist more pliant with your every day, garden variety problems — phone calls not only get returned, but are sometimes even answered immediately!

For the Question, see page 252.

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Answers to Cryptic Crossword

The clues to this Cryptic Crossword can be found on page 260.

