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Rural Family Practice Part I: A County Profile

SUMMARY

Rural family practice is a varied and challenging career combining both office- and hospital-based medicine. Most rural family physicians do emergency medicine rotations and obstetric deliveries, while many do GP anesthesia. These tasks, as well as age distribution, educational backgrounds, trips to the hospital, and time spent at other select activities, are illustrated and discussed in this demographic study of full-time rural family physicians. (*Can Fam Physician* 1988; 34:1029–1032.)

Key words: rural family practice

RÉSUMÉ

La pratique familiale en milieu rural est une carrière diversifiée et stimulante parce qu'elle combine une médecine de bureau et d'hôpital. La majorité des médecins de famille en milieu rural font du service dans les salles d'urgence et des accouchements, tandis que plusieurs pratiquent l'anesthésie. Tous ces facteurs, en ajoutant les distributions selon l'âge, la formation antérieure, les trajets à l'hôpital et les heures de travail consacrées à certaines activités font l'objet des illustrations et des discussions que propose cette étude démographique des médecins de famille oeuvrant à plein temps en milieu rural.

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IN HIS BOOK *Before the Age of Miracles*,[1] Dr. Victor Johnston, father of The College of General Practice of Canada[2] (now the College of Family Physicians of Canada) paints a vivid picture of early rural practice in the 1920s, '30s and '40s. For 30 years, from 1924 to 1954, he practised in Lucknow at the edge of Huron and Bruce counties. Huron County, as in Dr. Johnston's time, is still a rural county. This paper presents a demographic profile of modern rural family practice throughout Huron County.

Rural family practice is a unique and challenging career. Each rural practice is different and presents interesting variations. *A Fortunate Man*[3] and *A Country Doctor's Notebook*[4] provide in-depth accounts of interesting rural practices from other times and countries. *Medical Practice in Rural Communities*[5] is a helpful American textbook, but much of the information can not be applied directly to Canada because of the markedly different socioeconomic health-care structure. Descriptions of individual Canadian practices are helpful for understanding practice in rural areas, including small communities.[6-10] In order to give a better perspective of Canadian rural practice, there is a need for broader demographic studies.

The Setting

Huron County, on the east shore of Lake Huron, has a population of 55 553 people.[11] Farming is the major industry. Salt mining, manufacture of iron goods, road graders, light industry, and tourism are also important. Sixty-four per cent of the population lives in the country; the remaining 36% live in small towns.[11] Stats Canada defines centres with a population of fewer than 10 000 persons as rural communities.[12] The County's administration seat and largest town, Goderich, has a population of only 7282 persons, served by a 94-bed hospital.[11] There are four other towns with smaller hospitals in Huron County. Winter storms may close roads for several days, thus isolating the communities and hospitals from outside expertise by making patient transfers difficult to impossible. In good weather, London, where there are major university tertiary-care hospitals, is about one-and-a-half hours away.

There are 40 physicians in Huron County with active family practices. In addition, the following FRCS and FRCP

specialists live in and serve the County: four general surgeons, one general internist, one psychiatrist, one radiologist and one dermatologist (semi-retired). Several non-resident specialists hold monthly clinics at some of the hospitals. Referral sources are thus generally fewer and more distant than in urban centres.

Study Method

In May 1987, questionnaires on practice profile and educational preferences were distributed to the 40 Huron County physicians with active family practices; 82.5% (33) were returned. This response rate minimizes any potential non-response bias. In our study, three of the respondents stated that they were doing fewer than 20 hours of patient-related work per week. This brought them into the OMA-defined category of part-time practice. Therefore the data they provided were not included in the analysis. The responses from the 30 full-time family physicians were analysed and provided the following rural family-practice profile. The 30 respondents' continuing medical education preferences were analysed and are presented in Part II of this article.[12]

Results

Our group of 30 full-time rural family physicians included 27 (90%) men and three (10%) women. The age distribution is illustrated in Figure 1. The mean and median ages were 44 and 40 respectively. One physician in the 65+ age group was Dr. Victor Johnston's partner in Lucknow, who received the OMA Dr. Glenn Sawyer Service Award in 1985. The other physician in that age group limits his practice to office and house calls. Figures 2, 3, and 4 demonstrate that physicians are deeply involved in direct care of hospital patients, as well as in the office practice of medicine. Two physicians, one in the over-65 age group and the other in the 45-54) year age group, do no hospital work at all. The remaining 93% are deeply involved in hospital aspects of family medicine: 93% do emergency medicine rotations; 77% do obstetric deliveries; and 37% practise GP anesthesia, as illustrated in Figure 2.

Figure 3 shows average time per week spent on specific activities per physician. While patient-related office work averaged 30 hours per week (mean & median), patient-related hospital work had a mean of 18.3 hours per week and a median of 15. Figure 4 documents the mean number of trips to hospital per physician per week and the periods within which the trips were made.

Seventy per cent of the physicians earned their MD at an Ontario university and 7% at other Canadian universities, while 23% received their medical degree abroad (Figure 5). The mean and median number of years of postgraduate training was 2.57 and 2.5 years respectively. Thirty-three per cent had completed specific family-medicine residency-training programs (Figure 6); 63% are certified by The College of Family Physicians (CCFP). Almost half of the group obtained Certification as practice-eligible candidates.

Discussion

In comparison to the CMA Databank Survey Table of full-time physicians,[13] Huron County has a larger proportion of younger physicians (Figure 1). Our findings are similar to those of Black's study of Northern Ontario hospitals of fewer than 100 beds.[14] This finding may indicate increasing interest in rural practice. Other factors such as the increasingly high density of physicians in large urban areas and the availability of many rural practice openings may be partly responsible. Physician burn-out and mid-career transfer to urban practice are also factors that should be considered.

CMA Databank figures for all of Canada in 1982 show that 11% of men and 10% of women practise in rural areas (i.e., in communities of fewer than 10 000).[13] While their data showed that a large proportion of part-time rural physicians were women, only 10.4% of full-time rural physicians were

Figure 1
Distribution of Rural Family Physicians

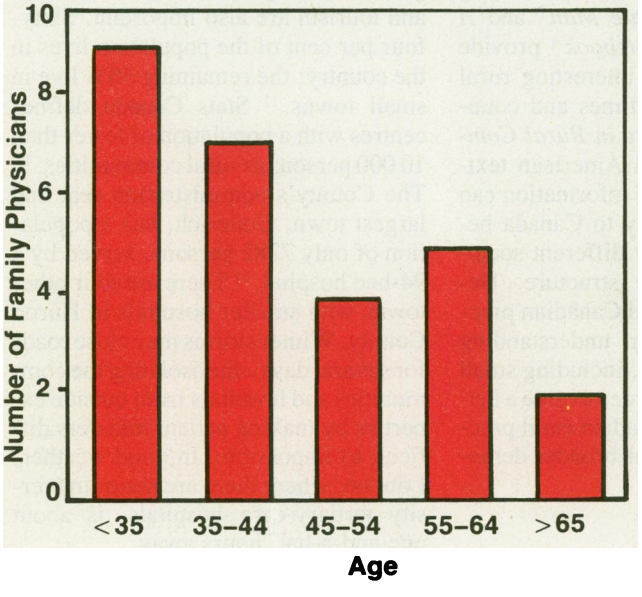
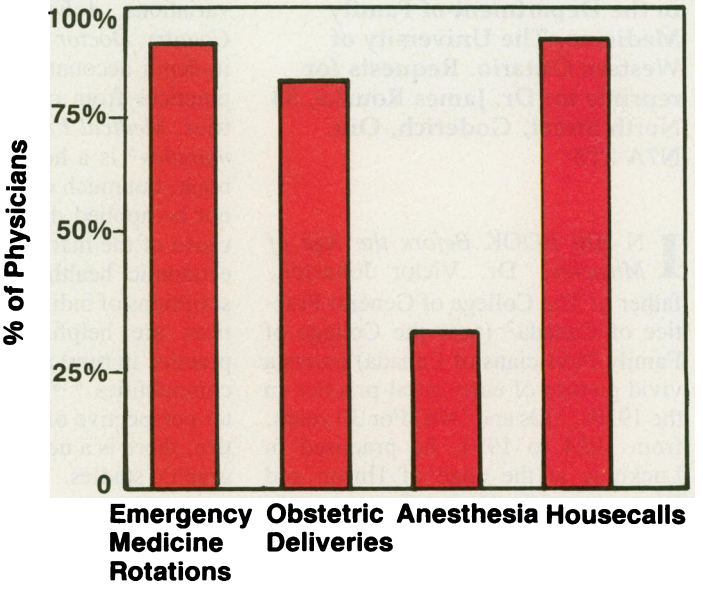


Figure 2
Percentage of Physicians Who Do Select Activities



women.[13] This figure is analogous to our finding that 10% of the physicians in our full-time study group were female.

A random survey[15] of Ontario family physicians, made in 1987, showed that 17% practise in rural communities. CMA Databank figures for 1982 showed that 12.2% of Ontario GPs and 2.5% of Ontario specialists practise in rural communities.[13] The naturally lower density of specialists in rural areas results in fewer and more distant referral sources, adding to the challenge of rural family practice.

Rural family physicians are very much involved in direct hospital-patient care, as well as in the office practice of medicine (Figure 3). Their involvement includes direct responsibility for patients of all kinds in hospital with little specialist back-up. Ninety-three per cent of full-time rural family physicians in our study do emergency-medicine rotations at their hospitals, reflecting a real need for emergency services. Except for busy holidays and summer months in resort areas, most rural hospital emergency departments have insufficient patient volume to justify the cost of providing the services of full-time, 24-hour, in-house, emergency physicians. They must therefore organize an on-call system with early notification and, when possible, a rapid MD-response time so that a physician can usually be present when seriously ill patients arrive at the hospital. Given a lack of specialty back-up for catastrophic emergencies, it is clear that rural family physicians need specific appropriate training in emergency medicine. Well-trained in-hospital nursing personnel are also essential.

Three-quarters of the family physicians studied do obstetric deliveries. By contrast, the 1987 study undertaken by The Ontario Chapter of The College of Family Physicians of Canada showed that only 40% of Ontario family physicians do obstetric deliveries, though further analysis of the data shows a much higher percentage (58%) of rural physicians practising obstetrics.[15] Generally, there has been an exodus of family physicians from obstetrics because of many factors including insufficient training, personal inconvenience, and inadequate fees. Rural communities will suffer reduced availability of obstetric services if this trend approaches the levels already present in urban areas. An obstetrician cannot cover two or three patients labouring in different hospitals in separate communities at one time. Even if there were enough deliveries in one community to support the practice of an obstetrician doing them all, no obstetrician could be available 24 hours a day and seven days a week. Three, four, or five family physicians working together and sharing responsibility for one another's caseload can provide the complete obstetric coverage needed.

GP anesthesia is practised by 37% of the full-time Huron County physicians in contrast to 7.5% of Canadian GPs in 1982.[13] The latter figure would probably be even lower today. British Columbia has an almost equal number of FRCS and GP anesthetists, although some members of the latter group work in urban areas and derive most of their income from anesthesia, and thus might be classified more properly as uncertified full-time anesthetists rather than GP anesthetists.[16] In B.C. hospitals with fewer than 100 beds, 92% of anesthetics are given by GP anesthetists.[16]

In rural communities, GP anesthetists will not be replaced by FRCS anesthetists in the forseeable future. One full-time FRCS anesthetist conceivably could do all of the daytime anesthetics in one small community hospital but, as with obstetrics, no anesthetist could provide the 24-hour-a-day, seven-day-a-week availability that three or four GP anesthetists sharing responsibility for one another's caseload can provide.

Adequate coverage of anesthesia is important for obstetrics, especially when required for Caesarean sections, trauma care, and other surgical emergencies such as ruptured ectopic pregnancies, where delay caused by long-distance transfer would be detrimental

Figure 3
Average Time Spent on Specific Activities per Physician

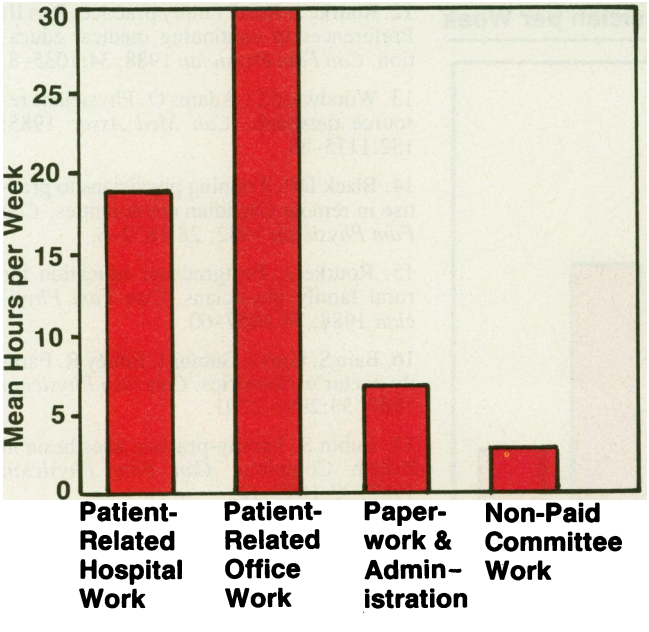
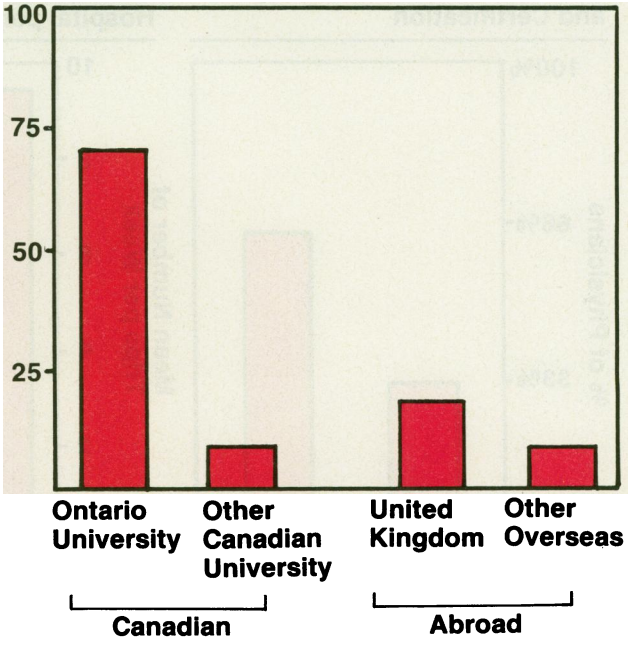


Figure 4
Location of Medical School



and even, in some cases, catastrophic.[16] A Northern Ontario study found a shortage of GP anesthetists.[14] Clearly, training and manpower for this field must be carefully planned.

Rural practice often involves frequent unscheduled trips to the hospital with considerable disruption to office practice and personal life, including sleep (Figure 4). Fortunately, group call arrangements help add an element of regularity some of the time, but even when not "on call" the rural physician is apt to be called out for emergencies such as obstetric consultations, multiple trauma, and anesthesia for emergency surgery.

A significant 23% of the Huron County physicians studied obtained their basic medical degree abroad. This percentage accords with the 22% found in the 1987 Ontario study,[15] but is lower than the 31% found in Black's 1982 rural Northern Ontario study.[14] The 1982 CMA Databank survey found that 28% of Canadian family physicians were graduates of foreign medical schools.[13] These ratios and potential changes must be considered in planning medical education resources and policies.

For the group of Huron County physicians studied, postgraduate training beyond internship was usual (average 2.5 years post MD). Thirty-three per cent of these physicians had completed family-medicine residency programs, a percentage similar to those reported in the Ontario study, which found 34% across Ontario and 29% in rural areas.[15] Flexible postgraduate training that develops additional areas of expertise, such as emergency medicine, obstetrics and general practice anesthesia, is important to rural family practice and should be encouraged.[13,17]

Conclusions

Huron County remains a highly rural county and provides an ideal setting for this study of full-time rural family physicians. In addition to their office practice, these physicians are heavily involved in general hospital medicine, usually including emergency medicine and obstetrics, and often including anesthesia. These areas of practice are usually considered the high-risk aspects of family medicine by the Canadian Medical Protective Association and other agencies. Available referral resources are fewer and more distant than in urban areas. The varied but extensive medical education backgrounds of the rural physicians studied reflect the need for flexible additional postgraduate training in areas such as obstetrics, anesthesia, and emergency medicine.

There is a pressing need for more extensive in-depth studies of rural physicians as an aid to the planning of training and manpower resources. Such studies are currently being begun. Forums should be established to focus on the problems that face rural physicians and promote the development of this special field of medicine,[18,19] which remains a unique, challenging, and rewarding career. ■

Figure 5
Family-Medicine Residency and Certification

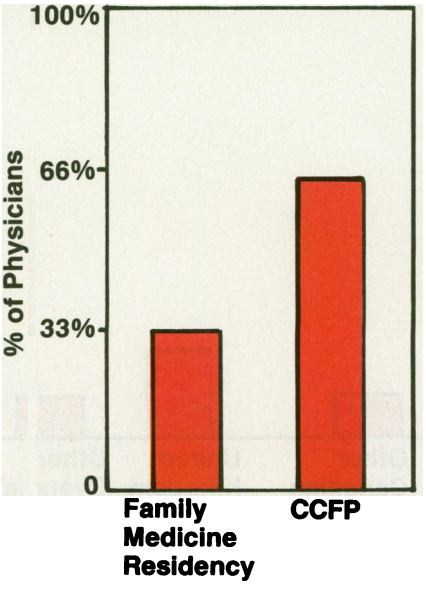
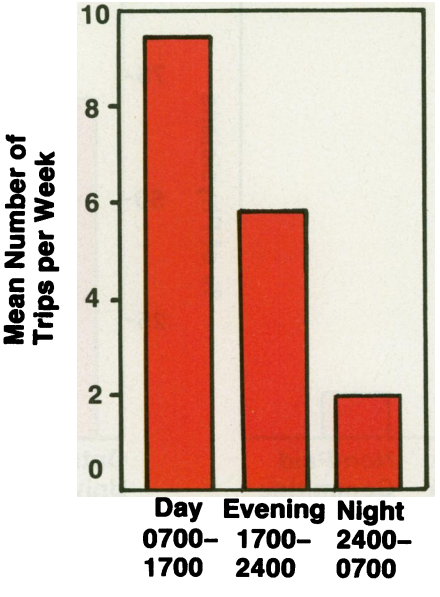


Figure 6
Mean Number of Trips to Hospital per Physician per Week



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