Canadian Journal of Rural Medicine | Journal canadien de la médecine rurale

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Physician on-call frequency: Society of Rural Physicians of Canada discussion paper

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CJRM 1998;3(3):139-41

[résumé]

This article was endorsed by the Executive of the Society of Rural Physicians of Canada at its policy meeting in St. John's in May 1998.

This article has been peer reviewed.

This document was endorsed by the SRPC council as a discussion paper. We realize that the subject, although of great importance to rural doctors, will generate considerable debate, not only within the SRPC but outside it as well (e.g., in some provincial divisions of the CMA.) The SRPC council is determined to lead this debate to a successful conclusion and may host a national conference. First, the debate should start. Let us know your views. Keith MacLellan, MD, Past-President, SRPC

See also:

- President's message: building bridges - don't let them crumble!

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Abstract

The Society of Rural Physicians of Canada (SRPC), considering the evidence of excessive working hours and on-call periods on physician performance and well-being, recommends that formal on-call schedules include at least 5 participating physicians.

In communities or facilities where there are less than 5 physicians available to share the after-hours work, it is the position of the SRPC that these physicians neither be required nor expected to provide continuous 24-hour per day coverage. Possible solutions such as cross coverage of regional institutions or periods of no coverage must be determined on an individual community or facility basis.

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Résumé

Compte tenu des retombées démontrées que les heures de travail et les périodes de garde excessives ont sur le rendement des médecins et leur mieux-être, la Société de médecine rurale du Canada (SMRC) recommande qu'au moins cinq médecins participent aux horaires officiels de garde.

Dans les communautés ou les établissements où il y a moins de cinq médecins disponibles pour se partager le travail après les heures, la SMRC est d'avis que ces médecins ne devraient pas être obligés d'assurer une couverture continue 24 heures sur 24 et qu'on ne devrait pas s'attendre à ce qu'ils le fassent. Les solutions possibles comme la couverture réciproque entre établissements régionaux ou les périodes sans couverture doivent être définies selon la communauté ou l'établissement.

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The Canadian Medical Association's Code of Ethics states that a physician should, having

accepted professional responsibility for a patient, continue to provide services until they are no longer required or wanted; until another suitable physician has assumed responsibility for the patient; or until the patient has been given adequate notice that [the physician] intend[s] to terminate the relationship.1

This concept, to "continue to provide services," is expanded by other regulatory bodies to imply a full 24 hours:

An ethical physician will ensure continuity of, and availability of the medical care of his/her patients. When unavailable, the physician will make a specific arrangement with another physician or group for the care of his/her patients. Physicians with whom these specific arrangements have been made will accept responsibility for the care of these patients.

It is not sufficient for physicians, or their offices, or their answering services, to simply direct patients to the nearest emergency department unless they have made prior arrangements with the physician(s) working in that department to care for their patients.2

This burden of responsibility seems to apply equally to general practitioners and specialists. In addition to being continuously available for their own patients, rural general practitioners are usually expected to provide primary emergency care for nonpatients and transients. This expectation is sometimes formalized in employment contracts or as a hospital medical staff regulation. Rural specialists, fewer in number, also have the responsibility of being on call more frequently than their urban counterparts.

With a sense of dedication and self-sacrifice, physicians have largely, without question, accepted this role. Some have organized themselves into call groups to cope with the after-hours demand. However, where there are very few or only 1 physician in the group, the workload can lead to exhaustion. Despite all this, the CMA Code of Ethics exhorts physicians to "practise the art and science of medicine competently and without impairment."1

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Research

It is clear that irregular hours of work can affect sleep and this in turn can lead to many psychosocial problems in workers. In shift workers, a maladaptation syndrome has been described, characterized by chronic sleep disturbance and waking fatigue, gastrointestinal symptoms, alcohol or drug misuse or abuse, higher accident or near-miss rates, depression, malaise or personality changes, and difficult interpersonal relationships.3

Most of the research applicable to physicians is focussed on hospital interns, residents and house officers. Asken and Raham4 and Samkoff and Jacques5 have reviewed this research. Surveys of residents' moods and attitudes demonstrated deleterious effects of sleep deprivation and fatigue, including decreased work efficiency and poor relationships with patients. Psychological testing has revealed that mood disturbances such as anger and depression are negatively correlated with the amount of sleep. Tests on residents have shown no deterioration in the performance of high-intensity short-duration tasks but have revealed significant impairment in tasks requiring sustained vigilance and repetitive or routine work.

Studies are scarce on the effects of being on call from home. One study comparing 2 similar groups of French utility supervisors, half of whom were on call 24 hours a day for 1 week every 2 to 5 weeks showed the on-call group to be less socially active and to have significantly lower scores on Global Well Being and Psychological Equilibrium indices.6 In this small study group there was a trend for those more frequently on call to have lower scores than those less frequently on call.

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Existing guidelines for other occupations

Pilots flying aircraft with crews of 2 or more are limited to a maximum flying period of 9 to 14 hours.7 With rest periods, this can be extended to 18 hours. A single "day off" must include 2 nights. Crew members must not work more than 7 consecutive days and should have 2 consecutive days off in any consecutive 14 days, a minimum of 6 days off in any consecutive 4 weeks of work. Maximum cumulative hours should not exceed 50 hours per week, 100 hours over 4 consecutive weeks or 900 hours per year.

Truck drivers are not permitted to drive more than 13 hours in 24 hours and must rest for at least 8 hours before the next trip.8 Maximum cumulative hours should not exceed 60 hours per week.

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Existing guidelines for physicians

Britain, New Zealand and some states in the United States have enacted legislation restricting the hours that residents or house officers are permitted to be on duty.7 There is no similar Canadian legislation, but some of these restrictions are written into collective agreements.

Of note, the Royal College of Physicians and Surgeons of Canada and the College of Family

Physicians of Canada have no policies regarding on-call frequency. The Canadian Medical Protective Association does not produce clinical guidelines or standards.

Few Canadian medical bodies have tackled this issue. The Canadian Association of General Surgeons endorses a maximum 1 in 5 night-call system (Dr. W.G. Pollett, St. Clare's Mercy Hospital, St. John's: personal communication, 1998). The College of Physicians and Surgeons of Manitoba addresses the problem in their guideline on cross coverage in rural hospitals:9

It is considered unacceptable by The College of Physicians and Surgeons of Manitoba for a physician to be on call "all the time" or otherwise so frequently that chronic fatigue may impair the judgment, decision or procedural skills of the physician. To help deal with this, many smaller rural institutions are organizing into physician call groups (PCGS) in order to maintain essential services within a defined region. . . . Ideally, therefore, at least four physicians should participate in a PCG. This would ensure an on-call frequency of not more than one-in three, even in the event one member is away.9

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Guideline for on-call frequency for rural phvsicians

In his review of small rural hospitals in Ontario, Scott10 suggested that the maximum on-call frequency for physicians covering the rural emergency departments be 1 in 5. Rural hospitals that provide obstetrical and surgical services will also have physicians on call for obstetrics, anesthesia, and/or surgery at frequencies greater than that for the emergency department. Specialists in larger rural referral centres might also be on call "all the time" or at unsustainable frequencies.

There are at least 2 different approaches to calculating a maximum on-call frequency guideline: (1) minimum hours of rest and (2) maximum hours of work. Although it is true that in many situations physicians may be taking call from home or hospital and often sleeping during a portion of the on-duty period, it is important to ensure that any guideline accommodates the situation where the physician is actively attending patients for the whole on-duty period.

Minimum hours of rest

After a 24-hour work day, physicians should take at least a full day off. Using the pilot's recommendation of at least 2 nights rest per day off, a minimum of 4 physicians would be required to provide uninterrupted coverage. Three are needed to create a schedule that gives 2 nights of rest before the next call period. The fourth physician enables all participants to take time off for holiday, educational or sick leave.

Maximum hours of work

Using the maximum annual 900 hours of flight time recommended for pilots, 10 physicians would be needed to provide 24-hour a day coverage for 1 year.

Alternatively, if one assumes that physicians should not be expected to work more than the standard 37.5 hours per week with 4 weeks vacation and 2 weeks educational leave per year, at least 5 physicians would be necessary to cover the 8760 hours in 1 year.

There is obviously room for individual interpretation of work intensity, the degree of responsibility associated with the work, and the amount of rest necessary to remain vigilant and unimpaired by sleep deprivation. This is exemplified by the contrast between the work standards of pilots and others.

The "hours of work" method is the more reasonable way of calculating a maximum on-call frequency, because it considers the total burden of work in a year. The scenario of 5 physicians working a standard labour work week including night duty is reasonable and should be considered a minimum standard of care.

Where rural communities do not have 5 physicians from which to draw, it may be possible for neighbouring communities to share the on-call coverage. The maximum distance between those communities participating in "cross coverage" should be the subject of another guideline. For example, the College of Physicians and Surgeons of Manitoba recommends a time of 30 minutes or 50 km for emergency room services.9

Another option, for isolated communities with fewer than 5 physicians is to have frequent locum tenens relief. This could be provided in the form of sufficient weekend and holiday coverage to give an annual individual average workload equivalent to the 5-physician roster. Obviously, there would have to be appropriate financial incentives to attract locum tenens physicians.

There may be other creative options, but the ultimate and least desirable solution for such understaffed communities is to have periods of time with no physician coverage. This would require some communities to lower their expectations regarding physician availability and to respect their doctors' time off duty. Although this is not an ideal solution, it could make the difference between having a physician some of the time or having no physician at all.

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