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Prescribing practices

In their paper "Relation between physician characteristics and prescribing for elderly people in New Brunswick" (*Can Med Assoc J* 1994; 150: 917–921) Dr. Warren Davidson and colleagues draw conclusions unjustified by their figures. The authors set out to show that some physicians are prescribing far more than others, even though their practices are the same size. These doctors are said to have seen their patients more often and for a shorter time and to have treated them less well.

The statement that practice sizes are the same should be looked at carefully, since it is central to the authors' argument. The average practice sizes given are 2296 patients seen annually by the high prescribers and 2152 by the low prescribers (standard deviation approximately 1100). These figures suggest that the physicians saw 836 224 patients between them, rather more than the total number of people in New Brunswick: 733 900. With 506 family doctors caring for these people the average practice size for the province works out to be only 1450 patients. We have to conclude that over half of the study patients were seeing more than one doctor, that the true practice size is about half the number quoted and that practices may be far from equal in size.

Patterns of practice vary. Some physicians do extra emergency shifts. In four shifts a month one could easily see 1500 patients a year but could not consider them members of one's practice. Physicians cannot consider someone their patient unless they are the preferred physician for that patient. Most drugs taken by a patient will be those prescribed by his or her usual family doctor and not physicians seen on a casual basis.

The authors conclude that the high prescribers spent less time with each patient than the low prescribers. This is no more than a wild guess. They present not a single figure to show that this is the case.

Table 2 in the article shows that the high prescribers wrote more prescriptions for every class of drug than the low prescribers. Since the original selection was into high and low prescribers this is not a big surprise. It is akin to dividing people into fat and thin groups and then concluding that the fat group is fatter than the thin group.

The article purports to be a scientific study. It does not seem to have been subjected to the same kind of scrutiny that would have been given to articles devoted to the treatment of patients.

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The article by Dr. Davidson and colleagues has attracted much attention in New Brunswick and nationally, but the focus of the attention has not been on the study's conclusions. In fact, no real conclusions are drawn, other than that further research is needed to determine whether there is any significance to the correlations reported. In this regard the New Brunswick Medical Society (NBMS) does not take issue with the study itself.

The focus of the attention has been on the authors' comments upon the study's release: essentially, that the fee-for-service method of payment for physician services must be eliminated. In a *Globe and Mail* article one of the authors, Dr. D. William Molloy, was quoted as saying that "we may actually be promoting greed and incompetence with the fee-for-service system" and went on to talk about paying physicians a flat fee based on the number and ages of their patients.[1] The same article quotes Davidson's discussion of physicians who routinely see 100 patients per day, even though the physicians in the study billed for 24.7 visits per working day on average.

By making such statements in conjunction with the publication of their study, the researchers seem to be deliberately encouraging the public (and the government) to draw conclusions that cannot be substantiated by their research. Such behaviour is irresponsible and a clear indication of their bias.

The authors of the study wish to work with the CMA, the Pharmaceutical Manufacturers Association of Canada (PMAC) and the NBMS in conducting further research aimed at testing new educational strategies for providing unbiased drug information to physicians. Such research has the potential, without question, of making a valuable contribution to the

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body of knowledge on continuing medical education. However, it appears that these researchers have something to learn about bias, and until they do perhaps they lack the credibility to establish a cooperative working relationship with physicians.

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Dr. Davidson and colleagues found a significant relation between certain physician characteristics, such as sex and training, and high prescribing for elderly people. Other research has highlighted further differences between low and high prescribers.

In contrast to Davidson and colleagues' results, Inman and Pearce[1] found that a relatively high proportion of non-British-qualified physicians were the heavy prescribers of drugs recently introduced into Britain. Melville[2] found that high prescribers, particularly of drugs prone to cause adverse reactions or deemed by medical consensus to be inappropriate, were less satisfied with their jobs than low prescribers. According to a 1989 survey of 842 Ontario physicians[3] those who wrote the largest number of prescriptions appeared to have more significant problems than the other physicians with key aspects of their knowledge about prescription drugs and more serious problems "keeping up."

Ferguson[4] used data from the US National Ambulatory Medical Care Survey and showed that physicians in nonmetropolitan areas wrote more prescriptions than did those in metropolitan offices. The former group also wrote more potentially undesirable prescriptions. The link between high-volume prescribing and inappropriate prescribing has been suggested by others. Miles[5] found an inverse association between the number of prescriptions written per visit and the appropriateness of the prescribed drugs.

However, McGavock, Wilson-Davis and Niblock[6] stated that the volume of prescribing cannot be judged independently of the therapeutic category of the drug. They divided drugs into those used for specific problems, those used primarily to relieve symptoms and those used habitually for a presumptive diagnosis. According to the study criteria the physicians who were high prescribers of the drugs for specific problems were diagnosing more cases of disease and therefore were doing a better job than the low prescribers. For the other two groups of drugs, low prescribing was judged to be more appropriate.

Last, the source of information for high prescribers has also been explored. Inman and Pearce[1] linked heavy prescribing of new drugs in Britain to the influence of postmarketing studies by the pharmaceutical industry. Older research undertaken for the American Medical Association found that there was a strong positive correlation between the number of prescriptions written per week and the number of pharmaceutical sales representatives seen per week.[7] The 1989 survey of Ontario physicians[3] confirmed and extended this finding. High prescribers, in addition to attending more profession-sponsored courses and seminars than other physicians, had significantly more contacts with the pharmaceutical industry, received a wider range of corporate benefits and judged industry contacts as relatively more important sources of information about prescription drugs than other physicians. Finally, Blondeel and coworkers[8] found that "proneness" to prescribe — a measure of how frequently physicians used drug therapy versus nondrug therapy (nondrug therapy was the best option in some of the cases) — was related to how useful physicians considered sales representatives to be.

In summary, current research suggests that high prescribers have less job satisfaction, are more often located in nonurban settings and have more problems with their knowledge about drugs than low prescribers. Although high prescribing does not equate with a greater level of inappropriate prescribing under all circumstances, it often does. High prescribers are more likely to receive their knowledge from the pharmaceutical industry.

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I was interested that the article suggesting an inverse relation between the time physicians spend with patients and the number of prescriptions written appeared in the same is-

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