Another day, another variation: When is enough enough?

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Editorial

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See related articles pages 29 and 63

There is nothing remarkable about small-area variations in medical practice — other than their durability. In most other industries, huge variations in practice raise alarms about quality, efficiency and competitiveness. Those who "get it wrong" lose, their fate sealed by the market. In health care, prominent analysts such as Berwick[1] have decried the persistence of huge practice variations unrelated to variations in need. But health care is not an industry like all others, and identifying variations in itself provokes neither alarm nor change.

Medical practice changes in response to discovery, innovation, patient demand, incentives, expert opinion and a host of other factors. There are explanations and models, some derived empirically, for the diffusion of innovation.[2,3] Moreover, medical cultures can be as nuanced and diverse as literary cultures. These factors often combine to exacerbate practice differences, at least in the short run.

The findings reported in this issue (page 29) by Dr. John N. Lavis and colleagues contribute to the growing literature on international variations in practice. The difference in hospital admission rates for surgical treatment of mechanical neck and back problems (164% higher in the US than in Ontario in 1992) is both startling and startlingly typical. Of the 12 surgical categories reviewed in the first edition of the *ICES Practice Atlas*,[4] 10 exhibited small-area variations whose extremes were larger than those presented by Lavis and colleagues. Physicians and society at large seem comfortable with vastly different approaches to similar problems, particularly when lives are not hanging in the balance. Local practice conquers all.

Lavis and colleagues' study raises vital, if old, questions. The most obvious of these is Which jurisdiction has it right? Are Ontarians underserved, or are Americans overserved? The authors candidly point out that the data cannot answer this question because they do not reveal comparative outcomes. However, in practice areas for which outcomes data *do* exist, there is striking evidence of diminishing — and marginal — returns: for instance, the higher surgery rates in the US versus Ontario for elderly patients with myocardial infarction (5-fold higher for coronary angiography and 8-fold for coronary angioplasty and coronary artery bypass grafting) confer no added survival benefit 1 year after the event.[5] Sometimes more is better; sometimes it isn't.

The very notion of "better" is defined by values, probabilities, preferences, risk assessments, technical capabilities and opportunity costs. Lavis and colleagues describe the surgical treatments they examine as "discretionary." More and more of medical practice is becoming discretionary as the possibilities and tools for intervention proliferate. In the absence of frameworks for assessing the value of these interventions in various circumstances, our storehouse of data is increasing at a far faster rate than our ability to incorporate it into coherent and transparently fair allocative decisions.

A second question is whether Lavis and colleagues' findings reveal different responses to medical and scientific uncertainty in the 2 jurisdictions they compare. Interventionist medical cultures often interpret the absence of proof of efficacy (let alone effectiveness) as a rationale for permitting wide variations in practice. Conservative and resource-poor medical cultures might consider the same evidence to mean that the procedure should not be done. "When in doubt, do" leads to different practices than "When in doubt, don't." Nevertheless, different uti-

lization rates alone do not prove that the orthopedic cultures in the US and Ontario differ.

Cultural differences are complex and multifaceted; arithmetic is simpler. The US–Ontario ratio of surgical rates corresponds closely to the US–Ontario ratio of the supply of orthopedic surgeons. In spite of enormous efforts to project and plan physician supply, this science remains inexact, and even when there is consensus on desired numbers, optimal distribution remains elusive. Moreover, there is no consensus on the expected relation between numbers of physicians and expected benefits vis-à-vis access, mortality rates, quality of life, cost–benefit ratios, and so on. Until we do have such a consensus, wide variations in supply and distribution will continue, and these will be mirrored in wide variations in practice.

Lavis and colleagues' study leads us to contemplate the fairness of Canada's health care system or, more formally, its distributive justice. If rates of discretionary surgery are too high in Canada, there are 2 categories of victims (leaving aside those who suffer the adverse effects of unnecessary surgery): physicians who are denied both income and access to beds taken up by low-yield cases, and patients from whose collective pool of health care resources the needless surgery is funded. (This logic applies in any system with capped budgets and no second tier of fully private care.) The fairness issue plays out within the health care system. Hence, spinal fusion competes implicitly (and sometimes explicitly) with other procedures.

The situation is different in the US, where — despite serious concerns about escalating costs — the size and growth of the health care envelope remain comparatively unconstrained. US health care has not become zero-sum: new or more services and technology are permitted to increase total costs without diminishing the volume of other services. Increase in spinal fusion rates, for example, are in implicit competition with other parts of the economy (e.g., schools, roads, sports stadia) rather than simply with other health care services. Such competition is less direct, the impact of skewing more diffuse, and the health care system less internally disciplined — although it may be more highly scrutinized. In Canada, if we wanted to add, say, $50 million for spinal fusion surgery, we would have to find it within the $53 billion pool of public health care funds. If Canada were more like the US, a good portion of that $50 million would come from elsewhere in the economy and there would be a good chance that the $53 billion would become $53.05 billion. Here, spinal fusion patients and surgeons would gain at the expense of their colleagues and their colleagues' patients; in the US, they would gain at the expense of a more diverse set of constituents in the overall economy.

The results reported by Lavis and colleagues confirm the indifference of most health care payment systems to the outcomes of interventions. According to the literature cited by the authors, spinal fusion surgery lacks supportive science; nevertheless, rates have risen steadily on both sides of the border. Although capitation or some form of non–fee-for-service payment has been touted as creating more appropriate incentives in primary care, the discussion has not generally extended to specialty services. Lavis and colleagues' findings suggest that capacity (i.e., supply) rather than need determines volumes. If volume alone generates support, volume there will be, particularly if the worst outcome is relatively benign.

And what of the future of small-area variation research? Is a successful study one that results in publication or one that influences practice and policy? There are encouraging signs that funding for health services research will increase in Canada, but there will be a quid pro quo. Research without a plan for dissemination and, if warranted, for change may receive jaundiced scrutiny from funding agencies expected to demonstrate their own enhanced accountability. Researchers need not be the disseminators and agents of change, but they may be prodded to seek partnerships with those who are. To paraphrase Karl Marx: Health services researchers have understood the world; the point is to change it.

Should the results reported by Lavis and colleagues change practice? The challenge is for medical leaders and society to agree on what constitutes a legitimate need that can be addressed and to align payment and other incentives with the principles and priorities so articulated. To a considerable extent this is civic rather than technical work. Until we do it, there will be a vast ore of practice variations for researchers to mine. And, until practitioners decide that such variations represent intolerable quality problems (either under- or overutilization), the studies will evoke a collective shrug. Meanwhile, the public will be hostage to practice variations about which they know little, but which they would not countenance in their airlines or fast-food outlets.

References

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