

Attacking generalism: using numbers when your argument is weak

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It has often been said that there are 3 types of lies: lies, damned lies and statistics. The latter is often used to provide the appearance of substance to an argument that would otherwise be laughable. One of those arguments is the health-policy concept that volume is a proxy for quality.

On the face of it, the proposition is simple. You cut out low-volume concerns because of “inherent” difficulties in quality (e.g., Rolls-Royce and rural obstetrics) in favour of high-volume concerns (e.g., General Motors, and medical and surgical specialists). This will “of course” improve outcomes ... well, except for the 30 million cars recalled by GM this year¹ and the thousands of pathology reports found to be inaccurate in New Brunswick.²

Indeed, volume is not a predictor of quality. High volumes only guarantee large numbers of affected people when the quality goes south.

In our highly centralized medical system, only some very specialized services (e.g., the Whipple procedure and coronary artery bypass grafting) have been found to have outcomes that are volume-dependent.³

Specifically, low-volume obstetrics has been found to be at least as safe as obstetrics practised in big centres.^{4,5} Furthermore, just because the outcomes are equivalent when services are provided in both rural and urban locations does not mean you will get the same outcomes if you ship everyone to the larger centre. Distance to services does matter. Grzybowski and others⁶ found that, in rural British Columbia, adjusted odds ratios for perinatal mortality in newborns from catchment areas more than 4 hours

from services was 3.17 (95% confidence interval 1.45–6.95). This evidence applies to rural obstetrics, which is a well-studied area, but the principles it illustrates apply equally to rural family practice–anesthesia, rural surgery and others.

When faced with evidence of safety at low numbers, and evidence that closure of local services can worsen outcomes, why are we talking about numbers at all? Shouldn't the conversation be about determining and ensuring a correct density of local health services that most effectively provides care for the population?

And when it comes to safe, efficient and effective health care at many levels of care, I suspect Canada may benefit from more rural doctors and more rural hospitals providing more services, and not fewer. Prove me wrong.

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