When science and public policy diverge

Our ability to use logic, reason, and evidence has for millennia been woven into the social, legal, and scientific fabric, ensuring we deliver safeguards and dividends ranging from legal protections to research breakthroughs.

Efforts over time to strengthen the reliability of evidence itself and of the interpretation of evidence have taken various forms. Following the thalidomide disaster 50 years ago, great strides were made in consumer protection when the Kefauver Harris Amendment was brought in requiring pre-market evidence for drug safety and efficacy.

In scientific circles we continue to protect the integrity of scientific information by requiring things like pre-publication of trial plans, proper blinding, and peer review.

There is an understanding, not just in the sciences, but also in legal and democratic institutions that authority and power should be justified and informed by reason and evidence.

For example, the Daubert criteria (US federal court test for the admissibility of scientific evidence) refer to the importance of peer review and the input of a "relevant scientific community" as a safeguard against pseudoscience gaining credence in legal deliberations. But peer review is only as good as the peers. In the legal world, there is an understanding that the integrity of peer review could be contaminated if the peers had a vested interest in the outcome of the trial. Such an interest would negate the assumption that the peers represented the consensus of the broad scientific community.[1] More stark examples are perhaps to be found in the emergence of journals devoted to therapies such as homeopathy that fall well outside the bounds of the basic laws of physics, chemistry, and biology. In such situations, the assumption that only the practitioners of a particular art could be experts in its efficacy becomes highly questionable.

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Clearly there is always more that can be done, and the progress made in legal, scientific, and other areas is undeniable. However, the position of logic, reason, and evidence in public policy is not necessarily permanent and in some cases can be undone.

For example, Health Canada buoyantly assures Canadians that it protects health through good science. Yet, political initiatives in recent years have resulted in a deliberate lowering of evidentiary standards to be applied to various health products, particularly herbal medicines. As Joseph Volpe, MP and chair of the Standing Committee on Health, wrote in his report, "evidence that is required for certain NHP claims should be more flexible. They should include generally accepted and traditional references, professional consensus, clinical evidence including but not limited to double-blind trials, and other types of clinical or scientific evidence."[2] The extent to which Health Canada's messaging departs from the norms of good evidence is seen in its handling of homeopathic remedies. These products are so dilute that a consumer would have to consume a tablet the size of a small asteroid to ingest even a single atom of the allegedly active substance. Yet Health Canada's approval process assures the consumer of proof of safety and efficacy, stating that "A NPN or DIN-HM on a label means that the product has been authorized for sale in Canada and is safe and effective when used in accordance with the instruction on the label."[3] The only clear beneficiary of such a policy is the producer, whose return on investment for a single molecule of ingredient must truly be astronomical.

In the realm of professional regulation, standards of evidence can also be quashed. Nowhere in Canada is the granting of status as a health profession linked to an objective examination of the basis for the treatments being proffered.

One could well argue that a regrettable situation is actually getting worse given that many nonscientific "professional" providers of health care have recently had their scopes of practice expanded.

In addition to government's blindness to scientific standards are the unintended effects consequently visited on other social safeguards. In particular, the courts are hamstrung by the granting of "professional" status to non-evidence-based providers.

While regulation of health trades is often held out as a solution that protects the public, it in fact can deprive citizens from legal recourse from ineffective or disproven medical therapies. The concept of "curial deference"[4] is one that applies in situations where there is a claim of poor care brought against a "professional." In such circumstances the court (curia) is

Continued on page 251

This article is the opinion of the Council on Health Promotion and has not been peer reviewed by the BCMJ *Editorial Board.*

quate management of a patient with poorly controlled diabetes can result in many office visits, eventual admission to hospital requiring daily visits, and numerous follow-up visits after discharge. Under the fee-for-service system there is no alignment of reimbursement with the quality of care. Under the ACG model, the funding is fixed, and the practice and clinicians are motivated to prevent hospital admission and excess visits—a fundamental realignment of motivation.

While a rigorous study to measure and clarify the presumed benefits and savings has not been done, the fact that many practices are already operating under this system and their experiences suggest that such a system does in fact produce changes in practice and clinician behavior:

- These practices operate as health care teams, with numerous practice-funded ancillary providers, such as LPNs, RNs, and NPs.
- These practices have patient rosters far in excess of the average, suggesting increased capacity is possible with this model.
- All practices have embraced electronic medical records as necessary aids to the team-based care they provide.
- Hospital admission rates are significantly reduced for patients of these practices.
- All practices remain actively engaged in their local community hospital, with clinicians retaining admitting privileges.
- Patient acceptance and satisfaction is high.
- Physician satisfaction is high, with significant interest in the model among new family practice graduates.
- Attachment rates (patients receiving the majority of care) for these practices are extremely high (85% to 90%) compared with fee-for-service practices, which typically exhibit fragmented care and rates of 45% to 55%.

Given the above observations, and the fiscal imperative to manage our health care system optimally, a detailed cost-benefit analysis of the population-based funding model of primary care is critically important.

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Continued from page 231

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Continued from page 249

bound to defer to the relevant professional bodies to reach an opinion as to whether the care provided met appropriate standards. For example, a patient who felt that being prescribed a homeopathic remedy by a "professional" was poor care, would not be able to have their case heard by the court and have a scientific standard applied. Rather the court would allow the professional college to make the determination about whether the treatment given was appropriate.

Such a situation could, as the saying goes, put the fox in charge of the hen house and thwart the expectation that the best evidence and marriage of science and reason would be brought to bear for the benefit of the public.

Examples like these raise the spectre that logic and science are fragile gifts that, despite their beneficence, can easily be sidelined or lost. Hopefully, progress will continue. The gains made so far are sufficiently obvious, and the social and legal safeguards too important, to allow the course of reason in public policy to be trumped by politics and profit.

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