When evidence and common sense collide

Resident hours and systems of care

Robert F. Woollard MD CCFP FCFP

The issue of mandatory limits on the working hours of medical resident trainees calls forth a range of debates. The thoughtful reflections of Drs Lajoie[1] (**page 132**) and Cools-Lartigue[2] (**page 133**) are but one dimension of the effects restrictions on resident service hours have on the educational development of physicians and the care provided to patients. Often characterized as an irresolvable tension between intense learning necessities and patient safety, it is comforting to see our young colleagues propose a much more nuanced approach and seek evidence to support their respective positions. As with many issues in the complex realm of health care, the evidence is frequently sketchy, limited in its generalizability, and hence subject to interpretations crafted to support a preheld (or preassigned) position. Like beauty, its worth is in the eye of the beholder.

But there are 2 larger issues at play in this particular question, and it is worth thanking our debaters and moving to address these larger trends that have great effects on both effective education and patient safety. They cut to the core of the idea of professionalism as it is currently formulated.

These 2 issues are the *dilution of relationships* as a foundation for caring and the *ascendency of "management science"* as the overwhelming influence on the design and function of caring institutions such as hospitals. These 2 trends have proven both synergistic and sadly persistent over the past half century during which our hospitals have become increasingly large, concentrated, and effectively distanced (except at fundraising events) from meaningful relationships with the communities they putatively serve. During those 5 decades, our uncritical love affair with technology and increasing hyper-specialization has made them remarkably expensive and dangerous. Baker and colleagues carried out an extensive review of adverse events (AEs) in Canadian hospitals and noted:

> The overall incidence rate of AEs of 7.5% in our study suggests that, of the almost 2.5 million annual hospital admissions in Canada similar to the type studied, about 185 000 are associated with an AE and close to 70 000 of these are potentially preventable.[3]

The suggested remedies most frequently proposed advocate further "re-engineering" of already complicated management systems drawn from industrial models of production wherein those who serve are seen as production units and those who suffer are expected to conform to systems built around their disease state rather than who they are. The process of persistent re-ordering of upper management structures will have little to do with front-line education and service if it persists in this misdirected and impersonal folly that is well described by one of the foremost thinkers in organizational behaviour, Margaret Wheatley:

> [W]hen you look at these organizations, the re-engineering is still going on trying to perfect an org-chart as a way of perfecting an organization, and excluding people, and pretending that loyalty and love and the desire to work together are not important criteria for productivity.[4]

She then goes on to point out:

> We believe that we can best manage people by making assumptions more fitting to machines than people. So we assume that, like good machines, we have no desire, no heart, no spirit, no compassion, no real intelligence—because machines don't have any of that. The great dream of machines is that if you give them a set of instructions, they will follow it.[4]

As would be expected, suffering characterized by multisystem chronic disease does not match well with increasingly specialized ward systems. The front end of this challenge is the emergency ward, where patients spend excessive time awaiting beds. The back end is the wait by patients for more appropriate long-term care facilities—patients who receive suboptimal care by inappropriate stays in acute specialized beds and who are inelegantly referred to as *bed-blockers* by industrially inspired efficiency managers (and frustrated health professionals).

The emergency ward challenge for both service and teaching is nowhere more succinctly expressed than by the chief of emergency medicine at one of the largest and best tertiary hospitals in Canada. After describing residents spending hours calling several specialist services in order to admit a typical patient with multisystem disease and being deflected to yet another alternate service, the chief said, "We call this *not my problem*–based learning."

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We have thus allowed our institutional health care system to evolve to the place where young doctors are taught from the early days of their professional development to depersonalize their healing encounters, to place patients in algorithms of "evidence-based practice," and to be frustrated when the disease state of patients does not conform to the kind of linear thinking that is behind our system design. And this is not an accident because, as Professor Gerald O'Connor points out: "Every system is designed to get the results it gets."[5] This is the consequence of our collective abandonment of the idea that organizing healing and caring is qualitatively different than running a biscuit factory or producing automobiles.

This qualitative difference rests in the fact that the fundamental unit of caring and healing is the *relationship* between those who care and those who (at this moment in their lives) need our caring. It is not managing so many "full-time equivalents" of this kind of care provider or so many "heart patients"—it is the connection between each healer and sufferer. As well, and as important, it is the relationships *among* all of the caregivers and all of those important in the life of patients—"those who suffer." This might seem an alternately facile and complex observation but it is grounded in a profound understanding of what being human in a human society is all about. As Arnold Toynbee, one of the pre-eminent historians of the 20th century points out:

> Society is the total network of relations between human beings. The components of *society* are thus not human beings but the relations between them. In a social structure individuals are merely the foci in the network of relationships .... A visible and palpable collection of people is not a society; it is a *crowd*. A crowd, unlike a society, can be assembled, dispersed, photographed, or massacred [emphasis added].[6]

Addressing this is not as simple as institutional anointment of a slogan such as *patient-centred care*. Indeed, that misses the point. The point is to structure the entire health care system as if people mattered and as if the relationships *between* people mattered. Thus the unit of analysis moves from individual units of whatever stripe to the complex array of ways in which humans can and must *relate* if organized healing is to take place. Proceeding from this assumption leads to a radically different view of the problem and opens the way to far more imaginative and productive solutions than continuing with re-engineering under a bewildering array of fashionable organizational acronyms. It would, instead, engage front-line workers and *whole* patients in finding solutions. Experiments in social media are already paving the way. This is hardly new, and as long ago as 2002, in a seminal paper for the Romanow Commission, Glouberman and Zimmerman wrote eloquently of the different approaches needed to address each of *simple, complicated,* and *complex* problems.[7] Sadly, in the intervening decade we persist in approaching our *complex* and human caring system as a *complicated* problem in engineering and business.

What has this to do with resident working hours, patient safety, and medical education? Everything. If we persist in designing our system to be a complicated exercise in the "production" of health and try to squeeze our system through the workings of manufacturing and business, why should we be surprised that the issue of resident working hours gets framed in industrial relationship terms and the blunt instrument of the law forces us to be less good than we can be at both serving patients and learning to be professionals? And why wouldn't our young professionals (as well as our managers, policy makers, and teachers) struggle to apply primarily irrelevant "evidence" to solving problems of our own making using instruments ill suited to finding solutions? As the American writer Thomas Pynchon observed: "If they get you asking the wrong questions, the answers don't matter."[8]

How different our world would look if we approached matters using the precepts of *complex adaptive systems* in the support of the vast array of human interactions that characterize each day in Canadian health care! Plsek and Wilson observe:

> Management thinking has viewed the organisation as a machine and believed that considering parts in isolation, specifying changes in detail, battling resistance to change, and reducing variation will lead to better performance. In contrast, complexity thinking suggests that relationships between parts are more important than the parts themselves, that minimum specifications yield more creativity than detailed plans. Treating organisations as complex adaptive systems allows a new and more productive management style to emerge in health care.[9]

How might this "new and more productive management style" be reflected? That is like asking how a revolution will turn out. When asked about the meaning of the 200-year-old French Revolution, Premier Chou En-lai famously observed: "It is too soon to tell." But we need neither to wait for evidence nor to be as indefinite as that. At minimum it will embrace primary care relationships that reflect the best of family medicine: *effective healing relationships that endure over time and over place of care*. It must involve the "retaking of the citadel" of our tertiary care institutions that are now in such desperate need of enduring *generalist relationships* throughout that portion of a patient's harrowing journey until they are back to the best health possible for them and into the balm of their supportive community. This is very different than the current "hospitalist" institutional care and will never result solely from an electronic medical record no matter how sophisticated. Hospitalists and electronic medical records are

2 important tools, but they will only be effective if they are *designed and applied* to support the enduring healing relationships noted above. Sound like family practice? Certainly.

But right now we are busy trying to apply the mistakes of the hospital system into the redesign of primary care—as if groups of nameless caregivers can adequately serve the needs of groups of patients through the engineering of algorithms of "chronic care management" and the expunging of *variation* from primary care. Surely the natural experiment of the Southcentral Foundation in Alaska provides ample evidence of a better pathway toward the revolution we seek.[10] By redesigning their system based on relationships and access to those relationships they cut emergency visits in half, dramatically reduced unnecessary referrals and costs, and enhanced both patient satisfaction and outcomes. One suspects there might be similar initiatives on many scales in Canada. But those would be bucking the trend.

So as we embark on our search for evidence to make our expensive system more effective and cheaper, let us avoid Pynchon's trap and look for evidence of what matters. Right now we seem bent on using outmoded measures and inappropriate approaches to complex questions. We flounder like the economists and policy makers so wedded to the gross domestic product as a guide to our collective future. As Wheatley sagely observes,

> [The gross domestic product does not] include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile.[11]

All of her descriptors mark signs of health and robustness in our *society* and are sadly lacking in the *crowds* that converge daily at our large hospitals. We can do better if we can reframe our vision to embrace relationships and caring as the basis for our health systems. New measures and effective processes abound if we can move beyond seeing our work as only complicated engineering (which only *some* of it is) and use new evidence guided by our common sense and unambiguous devotion to caring relationships.

And as we apply this wisdom to the science of our futures let us avoid the arrogance of gathering evidence to *prove* the *truth* of our positions and offer the humility that Bertolt Brecht put in the mouth of his character, Galileo: "The aim of science is not to open the door to infinite wisdom, but to set a limit to infinite error."[12]

Our young colleagues in the current debate have practised this respectful stance—we can do worse than follow their example.

Dr Woollard is a practising family physician and Professor in the Department of Family Practice at the University of British Columbia in Vancouver.

Competing interests
Dr Woollard is a member of the Editorial Advisory Board for *Canadian Family Physician*.

Correspondence
Dr Robert Woollard, University of British Columbia, Department of Family Practice, 3rd Floor, David Strangway Bldg, 5950 University Blvd, Vancouver, BC V6T 1Z3; e-mail **Woollard@familymed.ubc.ca**

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