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Reflections

Beyond Diagnose-and-Adios: Musings of a Retired Stroke Neurologist

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I'm not missing the 4:00 am code stroke alerts! But how did all that come about anyway – stroke catapulting, seemingly overnight, from the depths of therapeutic nihilism to an extremely time-sensitive medical emergency? Someone said that a medical specialty that offers no treatment has no future; a teacher of mine opined that neurology offered nothing between diagnosis and the grave. But in the 1990s, clinical trials demonstrating the efficacy of stroke unit care and thrombolytic therapy started a revolution. The experiences of my involvement in it I have distilled into seven aphorisms.

System, Organization, and the *Right* Process are Key

We quickly realized that a systems approach was needed to reorganize the healthcare system in order to be able to treat stroke patients within a matter of hours and provide coordinated multidisciplinary care for them on a dedicated stroke unit.[1] A momentous legacy of the Canadian Stroke Network, the Canadian Best Practice Recommendations for Stroke Care, included system implications, and performance indicators and targets, in addition to robust, clear, up-to-date evidence-based treatment guidelines.[2] But gaps in our knowledge and obstacles to the implementation of best practices continue to pose many challenges: how can there be a guideline if there is no good evidence? How to strike the right balance between investigator-initiated research and clinical studies targeted to generate that much needed evidence? How can we boost funding for clinical trials to approach the target advocated by David Sackett more than two decades ago? Fortunately, some directions for the better integration of clinical research in the healthcare system were recently and clearly articulated in the Canadian Medical Association Journal.[3] Healthcare administrators remain seemingly overwhelmed by competing priorities. Carefully constructed arguments favoring upfront investment to reap cost savings later or in a different segment of society fail to convince those operating in an environment of silo budgeting. Comments from administrators along the lines of "stroke care doesn't fit our org chart" grate against Louis Sullivan's famous axiom that "form follows function" and fly in the face of mission statements purporting more holistic and integrated healthcare.

Person Power and Perseverance Paramount in the Push for Progress

Undeniably, advances in neurovascular imaging technology and endovascular thrombectomy transformed stroke diagnosis and treatment. The first human cranial CT scan was performed at the Atkinson Morley's Hospital in southwest London just 7 years before my neurology rotation there as a St. George's medical student. But my later career experiences made me value the humanistic elements of medicine over its technical aspects. The improvements in stroke care in Nova Scotia[4] were all brought about by the dedication and determination of a group of committed and focused individuals who certainly used all the tools available to them but succeeded mainly because they persevered in the face of a continuous string of setbacks, and against that ancient archenemy of progress: resistance to change. And working alongside them was a most satisfying aspect of my career.

Perfectionism is the Greatest Enemy of the Possible

It took me a while to realize that there is a certain arbitrariness about excellence, which perhaps is best considered an aspirational goal, seldom attained. Most of us are trying to do the best we can where we are with what we've got. More important than insisting on perfection is building and maintaining morale among healthcare professionals by sustaining and rewarding continuous improvement.

There is no Compression Algorithm for Experience

Internship was humbling (and stressful) because despite thinking that I knew all the theory I kept finding myself in clinical situations where I didn't have a clue what to do! Looking back over my career now, I think that one of the most useful clinical skills to learn is what to do when you don't know what to do, which – in my line of work – usually meant how to work things through when the diagnosis was unclear. A long-standing joke with the residents that tended to come out on my jaded cynical days was that medicine doesn't get easier or better over time, it just changes. In medical education, the move away from didactic teaching to lifelong learning is an acknowledgment of what it takes to accrue true wisdom. Much of medicine is pattern recognition that is only possible though experience. Students stand out because of what they get right, but practitioners learn more from what they get wrong. All this to say that while there is no substitute for experience, I think that we could do a better job of recognizing, rewarding, and mining it.

Healthcare is too Important to be Left to a Group of *<insert name>*

What a mess we're in. The COVID pandemic has made chasms of the cracks in healthcare that have been wallpapered over for

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decades. It has also brought a new perspective on debt, economic priorities, and the old adage, *it's only money*. Finding the cure for healthcare has proved remarkably elusive; in Nova Scotia, we have had physicians as premiers, and ministers and deputy ministers of health yet our system is still as broken as any in the country. Of course, I don't have the answer(s) either, but my observations and experiences lead me to suggest that the healthcare system needs to be de-politicized and democratized. De-politicized to break the chain of disruptive, hindering upheavals, camouflaged as "reforms," occurring every time there is a new government. Democratized to promote diversification and help protect us all against the foibles, idiosyncrasies, and cultural quirks of medicine, healthcare administration, or any other single group or organization. After all, the advances in stroke care in Nova Scotia and other provinces came about through the brokership and advocacy of the Heart and Stroke Foundation at a time when the healthcare system was hesitant to implement best practice recommendations.

The System Needs a Working Memory

We must stop throwing the baby out with the bath water and re-inventing the wheel over and over again. This requires harnessing our collective experience and wisdom, while remaining wary of modern fads such as machine learning. Computers are to work for us, not the other way around. After the completion of my training, the hardest lessons to learn were the time it takes to build trust and capacity in the healthcare system, and how quickly advances can be undone.

If it's Man-Made, it Must Surely be Woman-Emendable

Justifiably, much has made of the importance of diversification in the organization and delivery of healthcare. My observations and experience have been that of all the things to juggle, gender balance is most important. Men and women think, act, and lead differently but in ways that can be complementary. I would say that some of the key influencers in the evolution of stroke care in Canada have been women who demonstrated particular strength in organizational and communication skills, collaborative leadership, social cognition, and the art of compromise – qualities that we will need in abundance to move healthcare forward.

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