Foreword

To paraphrase a very important speech made by British Prime Minister Harold McMillan in South Africa in February of 1960, “The wind of change is blowing through Healthcare...”

Healthcare in the US is in crisis. Report after report has chronicled the poor quality of care provided on average, the exorbitantly high costs of care (which are rapidly leading the US into a fiscal nightmare), poor health outcomes and poor health status as compared with other industrialized countries, and – more recently – a decrease in consumer trust in the healthcare system.

This is happening despite the continued and even accelerating technological and therapeutic advances that have occurred in medical devices, surgical techniques, and imaging technologies, as well as the dramatic biologic advances such as the use of stem cells.

Frankly, this situation is not all that surprising if you consider its root causes, i.e. the use, almost exclusively, of the centuries old “medical model” of thinking to drive change in healthcare, and perpetuating an incentive system among almost all stakeholders that results in precisely the outcomes it is designed to give, but which are not those compatible with a highly functioning, cost-efficient, consumer-friendly system of healthcare.

In our current US healthcare sector we have highly trained, superbly skilled clinicians and healthcare professionals functioning at the top of their skill levels, but who are by and large not supported by an equally high-functioning operational system(s) that effectively prevent errors, insure high reliability of outcomes in the population, appropriately conserve resources, and incentivize all those in the system to “do the right thing.” Further, largely because of the perpetuation of the “medical model” approach to change, few healthcare professionals are exposed to concepts outside the medical “comfort zone” such as systems thinking, process engineering, change management, et cetera, either in their formal education or in their practical training.

In addition, in healthcare, we now have many highly paid, well-trained executives and administrators who – in accordance with their training – are focused almost exclusively on the business of developing, acquiring, maintaining, and financing new healthcare products, services, and treatment facilities. Motivated by recent regulatory and legislative changes requiring more efficiency, more accountability, and better results, these executives and administrators are just beginning to realize the potential of developing a total culture of quality (e.g. Virginia Mason) and of the systematic use of process and systems engineering tools and techniques (e.g. Theda Care, Virtua Hospital and others).

Almost five years ago, the Institute of Medicine (IOM) and National Academy of Engineering (NAE) published the third in a series of IOM reports on the sad state of our healthcare system. This report noted that “a real impact on quality, efficiency and sustainability of the health care system can be achieved only by using health care delivery engineering.” Sadly, this report was all but ignored.
Dr. Kolker and Mr. Story are to be congratulated for bringing this text to those working in healthcare at this time, when – as never before – the potential for our nation’s people to have accessible to them needed healthcare services, depends on the degree to which all those working in the healthcare system can expeditiously and successfully abandon their disciplinary silos and traditional modes of thinking to embrace and actualize a team-based approach to facing and overcoming the ills of our system.

Such a team must include not only those who have always been there (doctors, nurses, hospital administrators, etc.) but now must also include professionals from fields that have a huge potential to contribute effective solutions such as industrial engineering, cultural anthropology, health informatics, etc. whose practitioners use proven, validated tools that have been successfully deployed elsewhere in science, industry, government, and even in the military.

I do not mean to imply that for there to be success in the use of engineering sciences and methodologies in the transformation of our health system that every physician, nurse or healthcare administrator has to possess advanced engineering skills sets, or – conversely – that process engineers, change management professionals, etc. need to be able to practice medicine. Far from it! Rather, what needs to happen, and what I think is the beauty and genius of this text, is that everyone working in healthcare needs to have some familiarity and a working awareness of the power and utility of system thinking when applied correctly and adequately to health care.

This text is easy-to-understand, authoritative, and includes twenty well-referenced chapters, authored by leaders in their respective fields. It helps to those in healthcare faced with the current chaotic situation, at whatever level in whatever venue, to begin to understand how engineering principles can be applied to the situations and settings that everyone knows need to be improved but which have not been – due largely to bias against and/or ignorance of the solutions that the Institute of Medicine and National Academy of Engineering Report indicates can and must be applied.

I believe that this text ushers in a “New Dawn” of understanding and teamwork. I believe that in a short time (because we do not have very much time), if effectively and widely used, this text can contribute toward realizing the dream of the authors of the Institute of Medicine and National Academy of Engineering Report for creating and sustaining a new “partnership between engineering and medicine”. As such, I believe that this book should become de rigueur reading for healthcare professionals in training and/or in practice.

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Joseph A. Fortuna is the Co-Founder and CEO of PRISM, a non-profit corporation providing sustainable transformative services to medical practices. He is also the current Chair of the Health Care Division of the American Society for Quality, is a member of the Executive Committee of the Michigan Primary Care Consortium (MPCC), and is a member of the Steering Committee of the Detroit Beacon Communities Program funded by the Office of the National Coordinator of HIT. Dr. Fortuna has also served as a Divisional Medical Director of the DELPHI Corporation where he supervised the medical and occupational health activities in 73+ facilities worldwide, and where - using process improvement tools - he directed the design, development, and implementation of Delphi’s Corporate Medical-Safety-Workers Comp Health Information System. He is also a member of the Patient Centered Primary Care Coalition (PCPCC) Executive Committee. He has served as the Speaker of the House of Delegates of the American college of Occupational and Environmental Medicine (ACOEM) and as a member of its Board of Directors.