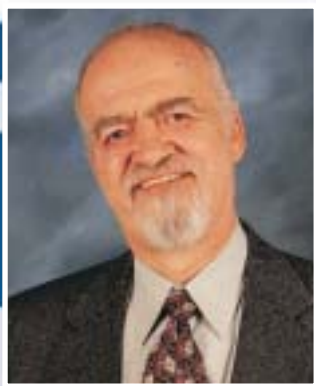


- STEVEN A. HUESING, EDITOR/PUBLISHER -



Flirtations?

Many of us who are “COACHies” will remember INFOcus 2000, the first “COACH “ conference that was jointly sponsored by COACH: Canada’s health Informatics Association and CIHI, the Canadian Institute for Health Information.

The most memorable Keynote presented at the Conference, in my mind at least, was “*The Genetic Revolution in Healthcare*” by Dr. Alan Bernstein, then the President of the Canadian Institutes of Health Research, Director of the Samuel Lunenfeld Research Institute of Mount Sinai Hospital and Professor of Medical Genetics at the University of Toronto.

Personally, it was more than memorable; it was a “Eureka” experience. *“We are in the midst of a profound revolution in health research, a revolution driven by our emerging understanding of the molecular basis of human biology and disease. This scientific revolution will ultimately transform the healthcare system, with rational diagnosis, individualized treatment decisions, and preventative strategies replacing empirical and symptom - based diagnose and treatment”*. Bernstein was straightforward about some of the socio-ethical challenges that the use of this information would raise both from a privacy perspective and the potential disparities of access to the science. *“This revolution is also raising new ethical and social issues and creating new challenges and opportunities for the health care system and public policy For example, issues centring around the presymptomatic identification of individuals who are genetically predisposed to certain disease(s) and growing disparities between those who do not have access to the fruits of this new science require an entirely new level of responsiveness for all of us in the healthcare system.”*

While the prevailing thought at the time was that the general scientific curiosity of genomics was of interest, no one conceived that it would become part of routine, daily clinical practice. But that appears to be what is coming to fruition today. The unveiling of the human genome has resulted in a parallel explosion of data in the field of proteomics - the study of proteins that are the building blocks of our lives.

While the genome is the “blue-print” of our genetic design, the proteins are the lumber, the glass, and the steel that comprises our bodies, and the diseases we encounter throughout our lives. While the initial ethical considerations of designing our progeny was of interest, clinicians today, as well as pharmaceutical companies, are largely focused on understanding the protein activity within our cells to indicate the onset of ailments, the resolve of prior conditions, and prognostication of things to come. With thousands of proteins interacting and changing on a daily basis, the ability to monitor, track, and understand what is happening within us is becoming a daunting task.

Furthermore, with pharmaceutical companies targeting disease management and prevention tools towards specific proteins, the clinician’s ability to adequately and effectively manage patients is becoming more and more difficult, and is likely to become impossible without the aid of informatics in the very near future. But are the information systems that currently exist capable of supporting this transition?

The shift is likely to begin in the laboratory; where it all began initially with the advent of the Laboratory information System. But the systems of today are unlikely to be supportive of this endeavour. As such, healthcare enterprises are likely to have to start from scratch in replacing legacy systems, further compounding the economic constraints IT faces today. And such systems will need to embrace patient confidentiality issues we have yet to believe are of “the real world,” like the monitoring of individuals with predispositions for certain ailments.

A flirtation? For the larger healthcare community, perhaps - for now.

But no question that it’s the beginning of a long-term relationship - for some at the leading edge it’s already been consummated. As Caroline Kovac, IBM’s general manager of Life Sciences states in her article on Page 34 *“What’s happening is the marriage of information technology and medicine into the merging field of information-based medicine. It holds the promise of forever changing the way medical care is delivered.”*

