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Healthcare Transformation

[Dr. Doug Vogel](#), Professor of Information Systems
eHealth Research Institute Director, Harbin Institute of Technology, China
Fellow and Past-President, Association for Information Systems – AIS
Member, Cross-border eCollaboration Consortium
Fellow, Australian Institute of Digital Health – AIDH, South Melbourne,
Victoria, Australia in association with the University of the Third Age
Vogel.Doug@gmail.com

Healthcare as we currently know it is increasingly unaffordable and incapable of dealing with emerging population dynamics and disruptions (e.g., Covid). Life expectancy has increased dramatically in less than a century and birthrates are significantly lower. There is also a higher incidence of chronic diseases. As such, no country in the world is producing enough doctors and nurses to satisfy future demands for health care in the way it is currently being consummated, i.e., hospital centric and treatment oriented. A change in thinking is required taking advantage of the best that technology can offer coupled with revised responsibilities for citizens, medical professionals and governments. Ultimately, we can envision a more wholistic consideration of the healthcare environment in which disease prevention and a focus on wellness become integral. The remainder of this paper will discuss these issues and opportunities.

Technology advances have enabled new forms of healthcare extending beyond the domain of traditional approaches. Some of these are extensions of existing models. For example, telehealth can reach out beyond hospital and clinic walls to support patients at home. This can be accomplished in a number of ways from phone calls to video conferencing. Monitoring technology can also be installed in the homes of chronically ill patients to provide continuous feedback and alert medical professional in case intervention is required. For the most part, patients can live comfortably and confidently in their own homes without requiring frequent visits to clinics. This also eases the burden on hospitals and other care facilities.

Citizens can additionally use technology to become better informed about healthcare in general and get answers to questions and concerns that may preclude a face-to-face visit with a clinician at a dedicated facility. For example, online health communities enable patients to ask questions which can then be answered appropriately by medical professionals or, as can be easily imagined, by artificial intelligence - AI chatbots taking advantage of the vast stores of medical knowledge available through the Internet. Prescriptions could be handled electronically with appropriate review and sent to the patient's home or nearby pharmacy for pickup. If necessary, a recommendation could also be made (along with an appointment) to visit a clinician's office or hospital depending on the circumstances.

As citizens begin to engage more in managing their own health, the focus can begin to shift towards enhanced consideration of disease prevention and wellness. Many chronic diseases (e.g., diabetes type 2 brought on by obesity) can be managed (and monitored) through diet and exercise. Wearable technology is currently available to assist in motivating exercise habit and providing feedback to assist in sustaining behavioral change. Personalized coaching can be incorporated as well as encouragement from family and friends to help patients with chronic diseases better cope with their situation and appreciate improvement. People with similar chronic diseases can join support groups which can help reinforce good behavior as well as become better informed with medical professional intervention as appropriate. We are just beginning as a society to appreciate the opportunities that can be afforded through the effective application of technology in a context of social and professional support. The future is challenging but bright.