Myriad disparities exist in our health care system. Hospitals are often absent from communities that need them the most. Rates of diabetes and hypertension increase with reduced socio-economic status. Nearly half of patients are non-compliant with physician recommendations or prescribed medications, be it for low health literacy, insufficient funds, or insufficient social support. [1] Technology cannot solve all these problems. Its judicious application, however, can lead to improved health outcomes and reduce disparities.

The most transformative advancements in the past twenty years have come from information technology: computers, cell phones, and wireless networks. These technologies that have increased our interconnectedness are also in the process of being applied to health care. Dr. Shantanu Nundy of the University of Chicago has a program that texts glucose check reminders to diabetes patients, to which they can respond with values or questions. In Baltimore, Dr. Kenzie Preston of the NIH gives phones with GPS to recovering addicts and then sends them positive reinforcement texts when they visit areas where they previously relapsed. These exciting projects, however, both leave the often heavy burden of care on the individual.

Using technology currently under development, a community's health could rely on more than the isolated struggles of individuals. Implantable biosensors that communicate wirelessly with an external device are becoming reality. Combining these biosensors with social networks could help care of individual health concerns become a community issue. A good example of how this could work is diabetes management.

An implantable biosensor that communicates its data to an external device could provide a first step in diabetes management. In the face of noncompliance, however, enhanced communication would be beneficial. The external device would also contact a medical professional, who could contact patients who neglected action. With a patient's permission (perhaps as a prerequisite for having such an advanced piece of equipment implanted), the device could also contact family members or neighbors that have volunteered to help manage the patient's diabetes care. Personal contacts could actually go to the patient's home, something the medical provider cannot efficiently do, and help ensure their compliance. This community involvement need not solely be for corrective action: it could also provide a means of positive reinforcement, creating an opportunity for peer approval of the successful management of the patient's diabetes. Sharing the information with supportive neighborhood keystones as diverse as churches or barbershops could transform individual struggles into a communal effort, transforming individual pride at successful disease management into community pride as well.

Technology has and will continue to change health care. It is important that we are sure to harness technology in innovative ways not only to create new expensive devices and treatments that benefit the best insured and most health

literate but also to develop treatment and care methods that benefit everyone. These universal approaches will help reduce the inequities present in health care today.

1. Wertheimer, AI, Santella, TM. Medication Compliance Research: Still Far to Go. J Applied Research Clinical Experimental Therapies 2003, 3(3)