Chronic Disease Management and Remote Patient Monitoring

Chronic Diseases are one of the greatest and fastest growing burdens on our ever aging society in the 21st century. They represent close to 80% of the costs associated with Health Care. Chronic Diseases are defined as conditions in which patients are permanently affected but which are non terminal when managed correctly. Although conditions are unique, in general disease management is achieved through therapy, life style changes and self monitoring.

Remote Patient Monitoring offers a promise to reduce healthcare costs and improve patient lives in the 21st century. The basic idea behind the concept is to allow the patient to test their own vital signs, communicate results to their health professional and get timely assistance. This is made more possible in developed nations like US and Europe with the advent of nearly ubiquitous cellular network connectivity and pervasive computing devices. Our device IGlucometer is designed to enable these principles.

We chose Diabetes as the disease to design our device for, because it is the 6th leading cause of death in US. The iGlucometer is envisioned as, a personal medical device, able to use readily available commercial glucose testing sensors to read the user’s blood level and then transfer the test results onto user’s mobile phone or computer via USB. The device is mobile and does not require batteries, instead it uses USB connection for power. The software on the mobile phone or computer visualizes the results and makes statistical calculations helping patient make decisions about their glucose levels.

Other Possible Future Applications Include:

- Fitness
- Heart Monitor
- Blood Pressure Monitor
- ECG
- Digital Thermometer
- Other Device Networking

Members

Akhsar Kharebov
axarharebate@gmail.com

Christian Mundo
cmbruner@yahoo.com

Chris Brunner
cmbruner@yahoo.com