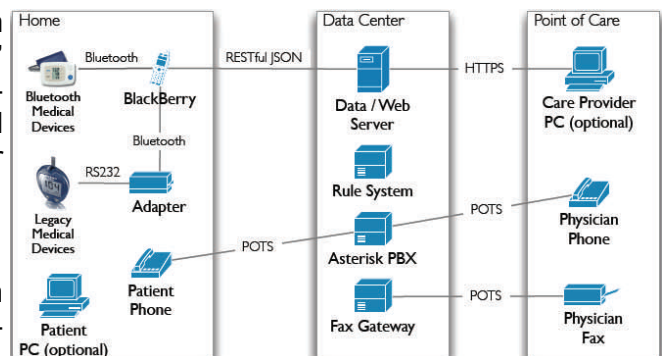


Mobile Phone Disease Management

Overview of Technology:

Chronic diseases, such as heart disease, chronic respiratory diseases, and diabetes, account for the majority of all deaths (60%) and healthcare costs worldwide. Mobile phone-based remote patient monitoring enables the cost-effective management of chronic disease. University Health Network (UHN) has developed a user-centric remote monitoring system that allows patients to take various physiological measurements (e.g. blood glucose, blood pressure, and weight) and record symptoms at home. These measurements are then automatically and wirelessly sent via Bluetooth from the medical devices to a mobile phone, which in turn sends the data to the application servers. Clinicians are able to access their patients' summary data and are sent alerts as required. In addition, patients are able to view their own physiological data and are provided with alerts and instructions for self-care.



Key Features

- **User-Centric Design** – System design has been informed by extensive input and systematic usability testing by clinicians and patients.
- **Efficacy Supported by Clinical Trials** – Efficacy of the system has been shown through clinical trials conducted by University Health Network and Mount Sinai Hospital researchers.
- **Multiple Chronic Disease-Area Modules** – The system allows the development of modular disease area-specific rule sets and modules such as:
 - Type II Diabetes and Hypertension: Two trials completed (see publication list below) and randomized controlled trial underway
 - Gestational diabetes: Trial currently underway
 - Congestive heart failure: Randomized controlled trial underway
- **Flexible Platform** – The system currently supports blood pressure, blood glucose, weight, symptom, and ECG monitoring. Additional medical devices can be integrated to support monitoring of a variety of chronic illnesses.
- **Low-Cost Solution** – Equipment and maintenance costs are substantially lowered by using commodity mobile phones and UHN-developed Bluetooth/USB adapters and software systems that allow seamless data transfer from legacy medical devices (e.g. glucometers).

Licensing Opportunity

UHN's remote monitoring technology is currently available for licensing on an exclusive or non-exclusive basis, either as a full-product platform or on an individual component basis.

Related Publications:

Logan, A.G., *et al.* "Mobile phone-based remote patient monitoring system for management of hypertension in diabetic patients." *Am J Hypertens.* **20(9)**:942-8 (2007)
 Halifax, N.V., *et al.* "Telemanagement of hypertension: a qualitative assessment of patient and physician preferences." *Can J Cardiol.* **23(7)**, 591-4 (2007)

UHN Reference # - 9026