



Robotic-Based e-Health Systems for Improving Diabetic Behavioural Change Management

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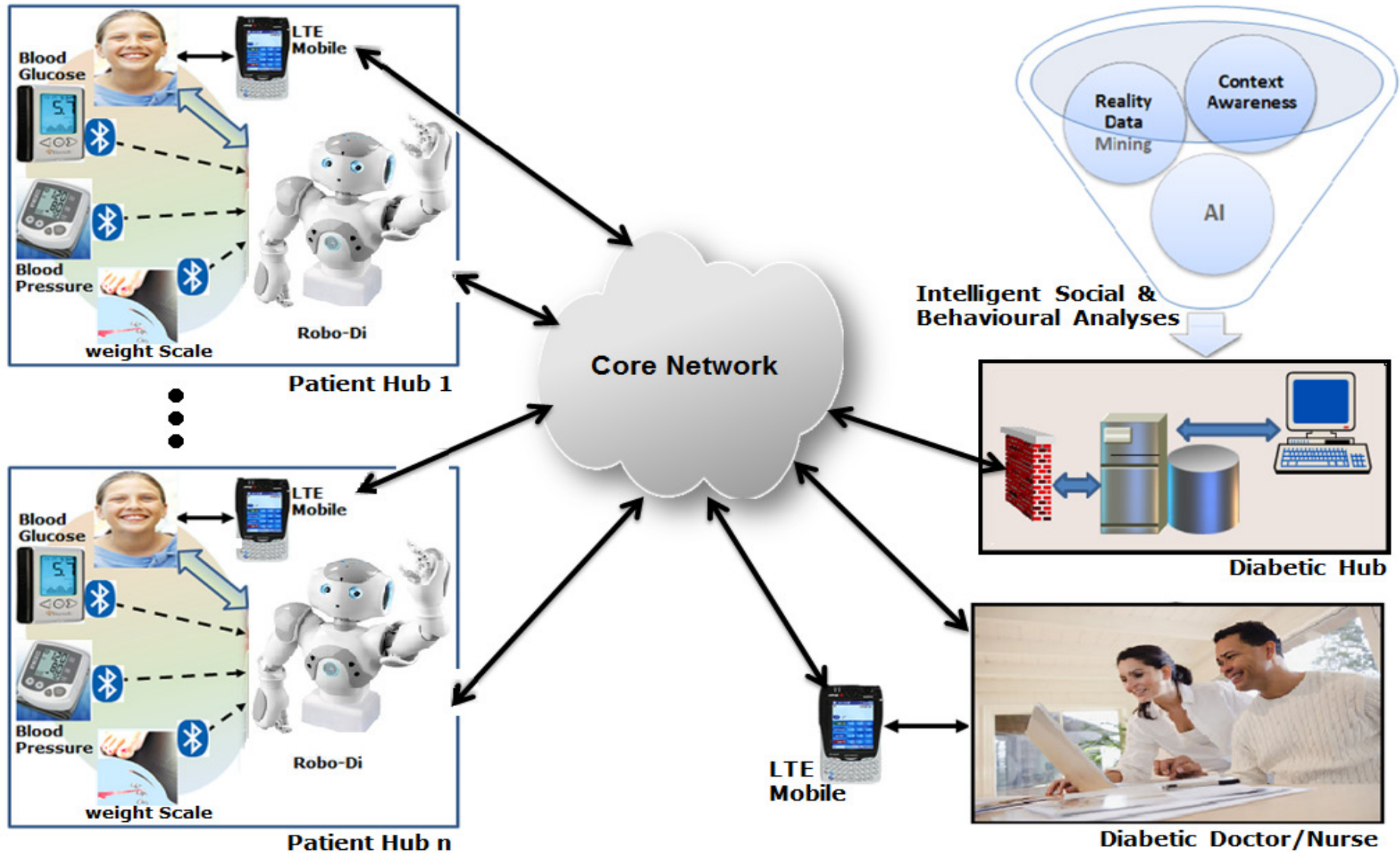
Timeline and Relevance

- ✚ The incidence of obesity and diabetes is increasing over the last decade with spiralling costs for the NHS. In contrast, the recent financial crisis does not allow a sufficient increase of healthcare budgets.
- ✚ The urgency of conducting social and behavioural studies using innovative robotic and mobile technologies to address adaptability challenges of patients with their health carers and families toward their self-care and more effective disease management.
- ✚ The emergence of cost-effective mobile and wireless network technologies in both short- and long-range connectivity systems linked with the robotic coaching system.
- ✚ New healthcare models based on these technologies are expected to provide significant cost reduction, patient-driven and better healthcare access and quality care.

Objectives

- ✚ Design and development of a new and innovative 3.5G/LTe-health system to enhance both the quality of life for young diabetics and their behavioural change
- ✚ The system will be capable of sending patient's data automatically and securely to a remote disease management hub. This hub will facilitate data collection/storage to assist the diabetic specialists, provide information and appropriate personalised feedback for the patient (via the Robot) system.
- ✚ Study of embedding life-style and behavioural change within the disease management process. This will improve behavioural changes and patients quality of life depending on their health profiles and current social and health statuses.

System Overview



Example of Initial Data Acquisition Results

Daniella Phillips's Profile - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Daniella Phillips's Profile

mytaee.com/eumc/profile.php

YAHOO!

Chronic Disease Management

Homepage Logout

Dr. Daniella Phillips, Diabetes Consultant

System Menu

- Dialogues
- Patients List
- Data Monitoring**
- Decision Support

Welcome x Data Monitoring l x **Glucose Readings** x

Links

- Google
- Yahoo!
- Facebook
- Twitter

Glucose Readings

Glucose Readings (mmHg)

Time/Date

Reset zoom

Glucose Readings

10:57 23/05/2012

- ABG Interpretation
- Meal Planner
- Others applications