



Aarhus Kommune enables preventative care with pervasive computing.

Overview

Business challenge

Aarhus Kommune was determined to improve the quality of life of its elderly citizens, and wanted to explore recent technological advancements to improve quality of care and better sustain the health of its aging populace. The key challenge was to involve elderly citizens actively in coordinated care and improve management of the chronic ailments of this growing demographic.

Solution

In a collaborative innovation process with Aarhus Kommune and University, IBM Global Business Services developed the “ElderTech” solution for pilot use. Eight elderly citizens volunteered to use the solution to automatically capture and monitor their status. Vital-signs data were fed back via the Citizen Portal, as well as care plans and convenient reminders about medications and appointments.

Benefits

- Demonstrated the potential of a flexible healthcare ecosystem solution to support the empowerment of elderly citizens and the coordinated delivery of care, which is essential to enable preventative chronic care

Industry

- Government, Healthcare

The second-largest municipality in Denmark, Aarhus Kommune provides its 300,000 citizens and residents throughout 24 other small cities in the region with a wide variety of services, including healthcare, homecare, social, education and infrastructure services.

Challenge

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Solution

With assistance from IBM Global Business Services, Aarhus Kommune developed a blueprint for an integrated solution based on pervasive technology that could improve the quality of care its healthcare and homecare divisions were able to provide. Eight elderly patients volunteered to test the solution through a pilot program called “Eldertech,” which involved providing each test subject with IBM Personal Care Connect devices and Lenovo ThinkPad X Series Tablet devices for home use over a four-month trial period.

Patients used the home devices to monitor their health. Embedded Bluetooth-enabled sensors on the monitoring devices automatically captured vital-sign data and sent it via a IBM Personal Care Connect software architecture to IBM WebSphere Everyplace Connection Manager V5 software and on to an IBM DB2 for Windows V8 data server, which accommodates 10MB of raw data capacity and stores important medical data, such as information regarding patient medications.

Elderly patients were able to use their ThinkPad Tablet devices to access the solution’s Citizen Portal. In addition to viewing new blood pressure and weight results via the portal, the patients had access to convenient reminders about which prescription medications to take at specific times or which healthcare provider was scheduled to visit the patient’s house on a specific date.

Thirty healthcare providers participating in the pilot were able to use their PCs or personal digital assistants (PDAs) to access the solution’s Provider Portal, which offered a dashboard view of patient information and ongoing patient care.



Benefits

The Eldertech pilot project provided Aarhus Kommune with an innovative model for developing and maintaining a flexible healthcare ecosystem solution that will support the secure exchange of private healthcare information among elderly patients, healthcare practitioners and other stakeholders.

The elderly test subjects appreciated the solution's ability to increase their awareness of their own health without needing onsite assistance. They also liked the solution's ability to support effective communication with their healthcare providers and other healthcare stakeholders.

Meanwhile, the healthcare provider volunteers for the pilot program liked the timely access to updated information on patient conditions. Expected benefits from remote tracking include the ability to treat patients proactively through preventive healthcare treatments.

The communication features tested in the Eldertech pilot will also support the delivery of unified services across all healthcare system boundaries—an added bonus that will become increasingly important in the future.

“The city of Aarhus collaborated closely with public researchers and private companies to explore and develop technology in pervasive computing. This project will help us meet the challenge of supporting our aging population by empowering our elderly citizens and improving their quality of life.”

—District Manager, Aarhus Kommune

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