



Communiqué de Presse

The remote patient care : an IBM innovation developed in conjunction with the oncology department of the Hôpital Européen Georges Pompidou

With the growth in home healthcare, the ability to rely on technologies such as the Internet, intelligent sensors and machine-to-machine (M2M) communications is becoming an essential part of providing accurate monitoring of patients, improved coordination between healthcare professionals and increased interaction with patients themselves. A new system now being evaluated with HEGP patients is already producing some very positive results.

Paris, France, August 30, 2006 – IBM (NYSE: IBM), Dr. Florian Scotté (a cancer consultant in the Oncology Department of the Hôpital Européen George Pompidou (HEGP)) and GEP Santé have been working together on the design and evaluation of a pilot remote home patient care solution for chemotherapy patients. This new solution incorporates the Personal Care Connect system developed by IBM Laboratories, which has been adapted specifically to monitor patients undergoing chemotherapy.

Based on the principle of using communication-enabled sensors installed in the patient's home and connected to the Internet, the solution enables data to be transmitted directly from measurement devices (such as weighing scales, blood pressure meter and oximeter) to a central secure healthcare portal. Healthcare teams can then access patient data directly every day, or even more frequently if required.

This new technology allows these patients to have their state of health monitored actively and remotely, at the same time as enabling the monitoring team to improve treatment coordination by anticipating any change in the patient's health.

"The initial results from the evaluation are very promising", confirms Dr. Florian Scotté, "Patients feel that they are receiving better care, are being more closely monitored by the team and are more involved, because they have a more active role to play in their own care. This form of monitoring makes it easier to anticipate changes in the health of the patient, and therefore to limit the number of visits to the ER". Improved coordination between medical teams, an active relationship between patient and doctor and closer monitoring : all are vital issues that have a considerable influence on the positive development of patient care. This new monitoring technique complements other patient care support systems already in place to improve care conditions and comfort.

The process works in two stages. Every day, the patient measures his or her blood pressure, pulse rate, weight and blood oxygen saturation. The resulting data are transmitted automatically from sensors built into the scales, blood pressure meter, oximeter (and any other instruments) over a wireless system to a mobile phone via a Bluetooth interface. The phone then transmits the data in secure form via GPRS to a telemedicine portal via the Internet. In addition to this data, the patient completes a questionnaire to provide a more subjective impression of his or her general health (evaluation of pain, fatigue, nausea, diuresis, etc.). Selectively accessible by the medical healthcare team, the portal allows doctors to conduct a daily virtual examination of each patient. The results can then be applied to guide the care provided by the nurse or doctor and to anticipate any changes in general patient health.

This system will not replace face-to-face examinations or human contact, but it does provide additional monitoring and allows the care team to be more proactive and better coordinated. *"We have a large number of patients undergoing chemotherapy. This system allows us to anticipate and modify treatments or react to changes in all our patients in a more targeted and responsive way on the basis of the measurements recorded, whether those patients are being treated in outpatient clinics, are receiving oral chemotherapy or have their chemotherapy treatment at home (Home Healthcare)",* explains Dr. Florian Scotté,



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Developed by the Sensor & Actuator Department and Health & Life Sciences Division of the IBM European Solution Center (La Gaude – 06), the team has involved and hosted the adapting Personal Care Connect solution based on the Websphere Portal. The work done in collaboration with Dr. Florian Scotté of the HEGP oncology department has enabled the solution to be refined and further adapted to meet the needs specific to patient home monitoring. Installation of the system in the patient's home is handled by GEP Santé, a company experienced in the home provision of oxygen therapy equipment, closely involved with the development of home healthcare and with this pilot project in particular.

"We have created a pilot initiative in France to support the development of home healthcare as we do in other countries", explains Gérard Manrique, Innovation Director at IBM Health & Life Sciences. "That's why we have built such a close partnership with Dr. Florian Scotté and GEP Santé, both of whom are contributing vital expertise to the development of a user-friendly system that exploits the flexibility delivered by the Internet. The case notes are accessible by both the medical team and the patient, and both know that access to the data is selective and that data is encrypted for transmission."

Given the prospect of home healthcare being generally introduced for the management of infectious, chronic and age-related diseases, this pilot project marks a real advance in maximizing cooperation between all the healthcare professionals involved in order to make this alternative to hospitalization effective and reassuring for patients.

About AESCO

The purpose of the *Association Européenne pour les Soins de Confort en Oncologie* is to promote the development of support treatment for cancer patients. Established in 2004, it holds an annual public conference for all medical and paramedical specialists concerned with advances in cancer treatment. Full information about AESCO, as well as the conference proceedings, can be found on the association's web site at: www.aesco.fr

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For the twelfth year running, IBM registered more patents in the US, with 3,248 registrations in 2004. Every year, over 30% of these patents find their way into the products and services marketed by IBM.

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