

Renewing Health applies IHE methods to verify effectiveness of tele-monitoring

"If tele-monitoring is so important, why has no one been able to move from projects with 50 patients to a full telemonitoring program with 500 patients?" asks Claudio Saccavini.

He said the answer is that there is not a shared organizational model to support remote monitoring of patients among the different actors, which include hospitals, primary care physicians, and in-home care providers.

The technical manager for the Veneto Research Center for eHealth Innovation, Saccavini is the lead spokesman for a three-year European project called Renewing Health that is conducting a large-scale clinical trial to evaluate and validate the effectiveness of telemedicine services for about 8,000 patients with chronic diseases.

Nine of Europe's most advanced regions for remote patient monitoring services will use personal health devices and a shared methodology for collecting data in the structured study of patients with cardiovascular disease (CVD), chronic obstructive pulmonary disease (COPD) and diabetes.

End points for the clinical trial include measures for patient mortality, the reduction of visits to the hospital or emergency department and quality of life metrics.

The economic benefits of telemedicine will also be calculated according to costs to patients and healthcare systems. Cost –utility and cost effectiveness will be analysed.

"The objective is to give a clear idea to healthcare administrators of the investment needed to start a telemonitoring program, and then to say when they can expect their program to break even," said Saccavini.

During the IHE European Connectathon held in Pisa, Italy in April, 2011, Katja Rääpysjärvi from the South Karelia District of Social and Health Services in Lappeenranta, Finland presented her component of the Renewing Health program as an example.

Beginning in February 2011, Rääpysjärvi said 550 patients agreed to participate in the trial with 75 patients assigned to a control group and the remainder divided into groups for heart disease and diabetes. Each patient was assigned to a health coach who visits once each month to verify the ongoing collection of data by the patient and advise them on appropriate actions to take.

Each patient is provided with monitors for glucose and blood pressure, as well as a weight scale and a pedometer to measure activity. Patients are also provided with a smart phone programmed to collect the data from the personal care devices that can be sent in a short message text format to a dedicated server.

Presentations from regional study groups for RENEWING HEALTH in Norway, Spain and Italy similarly described their implementations.

The enthusiasm for telemedicine is most often inspired by the technology behind the new generation of personal care devices. Yet this technology often poses more problems than solutions, according to the project managers for RENEWING HEALTH presenting at the IHE European Connectathon.

In some regions patients lack the internet connections required by many devices, and the cost of personal devices can be prohibitive in large scale projects.

Manufacturers of personal devices also continue to use proprietary interfaces that make integration of the data into the patient's electronic health record difficult.

In the Veneto region 1850 patients with implantable cardiac devices (ICD) and pacemakers are being followed with a robust set of data that can be transmitted by the devices, including data about devices status (battery and capacitors) and clinical-quality data (for intervention of ICD, stored arrhythmias episodes, intracardiac electrograms, heart failure diagnostic).



But manufacturers of the devices "are at the very beginning of interoperability, still believing that a lack of interoperability creates a commercial opportunity," said Saccavini.

"Telemedicine is not a technology, it is a service," said Saccavini. "It requires a different kind of cross-community and cross-enterprise interoperability, one where IHE methods continue to be very useful, not for describing a technical data exchange but for describing the workflow for communication between the people who are delivering the services."

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