

Improving health care in the Internet age

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Faster and more widely available internet access has improved our lives in many ways but healthcare is lagging behind, according to researchers writing in the *International Journal of Medical Engineering and Informatics*.

The US team suggests that there is immense potential for the utilization of digitized personal health records (PHR) in chronic disease management. They have reviewed the state of the art in healthcare portals, assessed the standardization and the legality of health record s and point to a need to improve interoperability, which still represents a major obstacle to widespread adoption.

Chif Umejei and Daniel Wiafe of the Department of Medical Informatics State University of New York, Brooklyn, explain that self-management of chronic disease, such as diabetes, high blood pressure, cancer and COPD (chronic obstructive pulmonary disease) can improve patient health and reduce hospital visits. Disease management itself can be significantly improved by using current technological advancements such as the Internet and digitized personal health records. PHRs have been used to store patient clinical history but coupling their use to disease management could make capable patients more active participants in their healthcare.

Currently, a PHR will contain the following information about a patient, which is usually accessible to <u>healthcare workers</u> and may also be available to caregivers and the patient themselves.



- Identification sheet registration form with contact and insurance details.
- Problem list the patient's significant illnesses and operations.
- Medication record Medicines prescribed and medication allergies.
- History and physical Major illnesses and surgery, significant family history, health habits, and current medications. Physician's findings on examination.
- Progress notes Notes made by the healthcare workers on observations and treatment plans.
- Consultation Healthcare worker opinions about health conditions.
- Physician's orders Directions to other healthcare workers regarding medication, tests, diet, and treatment.

Other entries might include X-ray and imaging reports, laboratory results, immunization record, consent forms and details of hospital visits.

For patients with a chronic disease, there is a need for continued patient education as well as ongoing documentation of symptoms, medication and side effects, the above summary of PHR opens up many possibilities for two-conversation between patient and healthcare workers. "With computer technology there is the opportunity to provide dynamic data communication and real-time patient education specifically at the point of care," the team says. The team's survey of healthcare workers and patients suggests that demand for a PHR portal-type system would be



high, yet no current implementations fulfill the various demands.

A healthcare portal that utilizes PHRs would improve the dialogue between patient and healthcare worker and so could improve patient health overall, the team concludes. Such an "application provides an opportunity to facilitate communications as well as make the consumer an active part in the management of their care," the say.

More information: "A patient portal for chronic disease management" in *Int. J. Medical Engineering and Informatics*, 2010, 2, 395-407

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