

C.M. GALAMBOS, M. RANTZ, M. SKUBIC. *The involvement of users and clinical teams in technology development: A case study.* *Gerontechnology* 2014;13(2):198; doi:10.4017/gt.2014.13.02.155.00

Purpose Exacerbation of illnesses can result in dramatic changes and decline in the health of individuals, the frequency of hospitalizations, the complexity of treatment interventions, and the resulting high cost. We have demonstrated that the early detection and treatment of disease contributes to improved health of individuals, the stabilization of medical conditions, and control of medical costs¹. We have attained these results using an interdisciplinary clinical team to test the technology in a senior living community called TigerPlace. This paper focuses on the use of clinical teams and users in health service environments as a necessary component of technological development. **Method** Initially, an Eldertech Research Team was used to develop the initial sensor technology. This team consisted of an interdisciplinary team of nurses, social workers, physician, physical therapists, informatics experts, computer scientists, and electrical and computer engineers. This research team tested the effectiveness of a variety of unobtrusive, inexpensive, non-wearable sensors designed for use in monitoring people continuously as they go about daily activities in their home (*Figure 1*). Once the technology was developed to the satisfaction of the team, it was installed in the apartments of selected volunteers who consented to be participation in the testing. A clinical team along with the research team tested the effectiveness of the technology to capture movement and activity for the purposes of alerting for signs of early illness. Clinical measures were also conducted at periodic intervals. The volunteer participants were interviewed to obtain feedback on their experience with the sensors. **Results & Discussion** The combination of the interdisciplinary clinical team, testing in a clinical setting, and involving users in the process enhanced the development of the sensor network and early alert system for a product that will be used by seniors². Additionally, through the involvement of the clinical team, workflow issues were considered as the technology was being developed. The clinicians and users were also involved in the design of a web interface. Testing is being conducted in other clinical environments and other types of sensors are being developed using this team approach.

References

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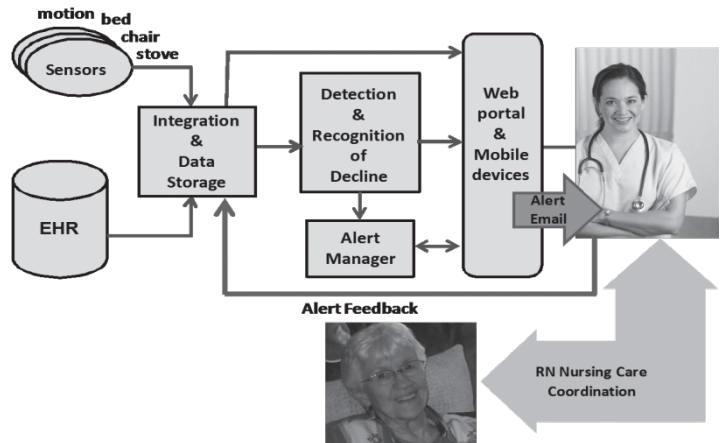


Figure 1. Integrated sensor network with health alerts