Integrating Clinical Theory and Practice in an Epilepsy-Specific Electronic Patient Record

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Abstract. This study’s objective was to assess the usability of the epilepsy history module of the electronic patient record, developed at Beaumont Hospital, and to identify opportunities for improvement. Observation, interview and document analysis methods were used. Results indicated that the module was usable but the design did not work as well in practice as anticipated by theory. The next iteration of the module included identified enhancements; this iteration is currently in use.

Keywords. electronic patient record, epilepsy, evolutionary prototyping

Evolutionary prototyping [1], a process of iterative development based on requirements gathered from clinical experts, was used in the creation of an Electronic Patient Record (EPR) at Beaumont Hospital, Dublin.

The Epilepsy History module (EPHx) of the EPR facilitates recording, storing and review of a patient’s epilepsy diagnosis and classification. The EPHx is closely aligned to the International League Against Epilepsy (ILAE) [2] clinical protocol with its four axes – semiology, seizure classification, syndrome classification and aetiology.

The EPHx was introduced within controlled conditions to routine clinical use. Ten experts in epilepsy care were recruited and trained to use the module. Their interaction with it was assessed [3] in terms of performance, recall, accuracy of use and user satisfaction. Users rapidly became familiar with the module; data validation confirmed its accurate use; its potential for enhancing patient care was acknowledged; suggestions for improving its clinical effectiveness were included in the next iteration of EPHx.


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