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The CURE (Community Urgent Response Environment): Pods and Packs for Pre-Hospital Care

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Context of Research

About 40% of the 10.3 million visits to NHS emergency departments in England in 2009/10 ended with the patient just needing advice and no actual treatment¹. It has previously been suggested that these needs could be met in the community through the delivery of urgent (or pre-hospital) care² by Emergency Care Practitioners (ECP)³. A first research project (Smart Pods) was carried out with 6 NHS Trusts (acute, primary care and ambulance) with 125 staff and 88 patients to explore the technology requirements needed to support this new professional role⁴.

Research question

This paper describes how the outputs from Smart Pods have been taken forward to develop a market-ready pod/pack system and a design specification for the ambulance interface in a knowledge transfer collaboration between 2 universities, 2 manufacturers and the NHS to develop a Community Urgent Response Environment (CURE).

Method

An iterative prototyping approach was taken (figure one) starting with the 8 design concepts and equipment/consumable requirements from Smart Pods. These manifested as pod/pack prototype 1.0 and were reviewed by clinical, design and ergonomic experts to produce prototype 1.1. This was tested in 4 simulated clinical scenarios with ECPs (n=10) and patient actors. The face validity of the simulations was maximized by using, for example, pig skin for suturing. After Pod/Pack User Trials (1) the vehicle interface design commenced (February 2011). This followed a similar iterative prototyping approach (in conjunction with the pod/pack prototype ergonomic and design review). User trials (2) will use clinical scenarios to test the functionality and usability of pod/pack and vehicle interface designs. The final output will be a market-ready pod/pack system and a design specification for the ambulance interface.
Results and conclusion

The results from Pod/Pack User trial (1) will be reported at the conference.

References

1. HESonline. A&E Data (experimental statistics) 2009-10
   http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=1272
   (accessed 21 January 2011)
Figure 1. Iterative prototyping process used in CURE