# 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 treatment[1]. It has previously been suggested that these needs could be met in the community through the delivery of urgent (or pre-hospital) care[2] 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 role[4].

*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)
2.      DH (2005). *Taking Healthcare to the Patient.  Transforming NHS Ambulance Services*.
http://www.dh.gov.uk/assetRoot/04/11/42/70/04114270.pdf  (Accessed 2 Sept. 2005)
3.      Department of Health (2004) *The Emergency Care Practitioner report – Right skill, Right time, Right place,*.
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4093086  (Accessed 21st October 2009).
4.      Hignett, S., Jones, A., Benger, J. (2010) Designing a modular work space for urgent care. *Journal of Paramedic Practice*, 2, 3, 116-122

Functional design requirements from Smart Pods outputs

Ergonomic review

Design Group (9/12/10)
Conceptualising pods & packs
Pod/pack prototype 1.0

Design by Openhouse

Clinical Review (6/1/11)
To scrutinise contents of pods and packs

Design & build by Openhouse

Ergonomic review (20/1/11)

Pod/pack prototype 1.1
User trials (7/2/11)

Ergonomic & design review

Pod/pack prototype 1.2
Pod/vehicle interface design concepts

Design & build by and Openhouse

Vehicle prototype 1.0

Ergonomics & Design review
Design & build by WAS

Vehicle prototype 1.5
Pod/pack prototype 1.2

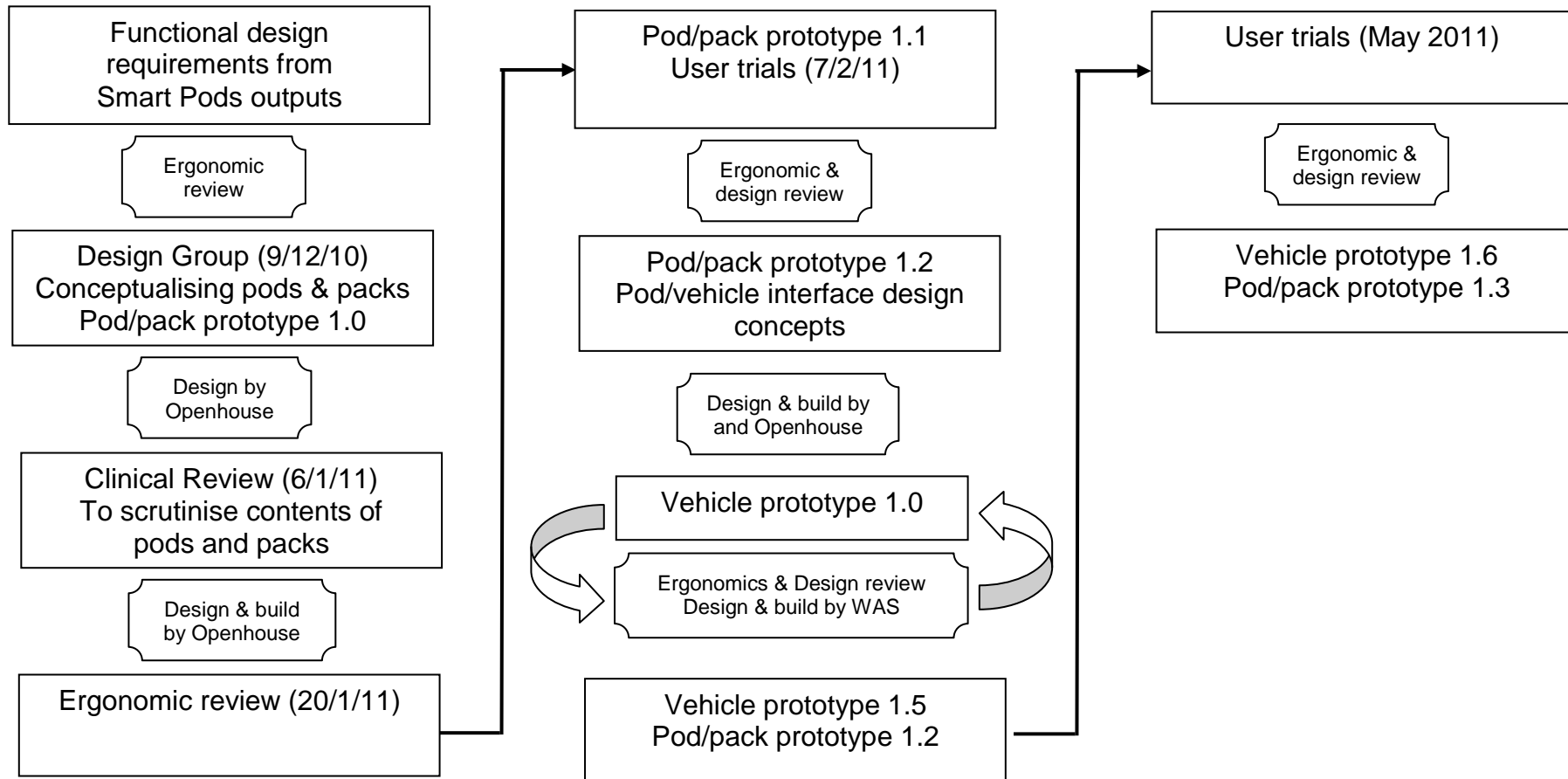User trials (May 2011)

Ergonomic & design review

Vehicle prototype 1.6
Pod/pack prototype 1.3

Figure 1. Iterative prototyping process used in CURE