

Helping patients in intensive care to communicate

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Developing communication software for people with special needs can be a challenging task. Special attention needs to be given to interface design, the cognitive load placed on the user and to make systems intuitive and transparent. This approach to software development was used to develop a specific communication aid for intubated patients in the intensive care unit (ICU). These patients are temporarily unable to communicate. The literature states that current low tech communication solutions such as alphabet charts or picture boards are often unsatisfactory, slow and frustrating for the patient and nursing staff. ICU-Talk is a prototype computer based communication aid which has been developed to meet the specific needs of the ICU patient and ICU environment. This was a three year funded research project that involved collaboration from the departments of Applied Computing and Nursing and Midwifery at Dundee University and the Speech and Language Therapy Department and the ICU at Ninewells Hospital, Dundee. By pooling knowledge from all these areas the research team developed and tested the ICU-Talk device.

The ICU-Talk device used specially developed software, which allowed the patient to select a phrase or question from a prestored database. The database of phrases and questions was developed using expert testimony from ICU nurses and observations of ICU patients communicating. In order to personalise the database a computer interview was also developed to allow relatives to enter information about the patients' friends, family and interests. This information was then automatically changed into a phrase or question and added to the database. The patient had a choice of two interfaces, which allowed them to select what they wanted to say from the database using touch screen, scanning or mouse emulation.

This presentation will discuss the challenges faced when developing and testing the ICU-Talk prototype, the results from this project and future developments.