

Vocabulary Development for an AAC device for ICU

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Abstract

An AAC system designed specifically for patients in intensive care units (ICU-Talk) has been developed. In order for the system to be used successfully in ICU it had to contain appropriate vocabulary in the database. A core and a fringe vocabulary were required for each patient. This session will describe the two data collection techniques used to develop these vocabularies. It will highlight the importance of including nursing staff and patients in this process and discuss the use of computer interviewing to collect vocabulary items.

This abstract is 84 words and we have a limit of 100 words

The paper which comes next can only be 2 pages long.

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Background

The ICU-Talk project has developed a computer based AAC system for intubated patients in a medical intensive care unit (ICU). This system was designed specifically for patients in ICU so it was necessary to include vocabulary that was appropriate for the ICU environment. Intubated patients are temporarily unable to communicate and a group of these patients who are awake and alert are able to use the ICU-Talk system. It is felt that patients who are able to communicate their needs and feelings accurately may be able to participate more in their medical care and thus improve their rate of recovery (Costello, 1998; Leathart, 1994).

Inclusion of both core vocabulary and fringe (personalised) vocabulary in an AAC system is important (Beukelman & Mirenda, 1999; Millikin, 1997). Although ways of collecting core and fringe vocabulary are well documented they involve methods that would be too time consuming for patients who are in ICU. These patients may only require the AAC system for a few days so the core vocabulary has to be immediately accessible by them and a fast efficient means of collecting fringe vocabulary is required. This paper will describe the data collection methods developed to provide both core and fringe vocabularies.

Method

Two different data collection techniques were used, one for collecting core vocabulary and one for the fringe vocabulary. Core vocabulary comprises of generic phrases that can be used by all ICU patients. A survey of the nursing staff in ICU was carried out. Nurses were given eight possible conversational topics and asked to give three examples of phrases patients say for each of the topics. A patient observation tool was then developed which incorporated these phrases. Patients in ICU who were alert and attempting to communicate were observed and the actual phrases they were communicating were recorded along with information about the communication partner and the method of communication used by the patient.

The fringe vocabulary was collected using a computer interview. A short interview was developed for a relative or close friend to complete. Answers to the questions triggered a set of phrases to be automatically added to the ICU-Talk database. All of these phrases were personalised for that patient.

Results

The survey of the nursing staff generated 190 phrases. During the observation period 12 patients were observed. These patients communicated a total of 406 phrases. 44% of these were phrases that had been suggested by the nursing staff and 56% were patient specific phrases. Using the phrases suggested by the nursing staff and information from the observed patients a core database of generic phrases was developed. This core database was used as the database of phrases for the ICU-Talk system. The types of phrases that were patient specific were used to help develop the computer interview questions. Once the interview is completed by a relative or close friend an extra 80 phrases which are patient specific can be generated and form the fringe vocabulary.

Discussion

A core vocabulary has been developed specifically for the ICU-Talk system. This appropriateness of this vocabulary for patients using ICU-Talk will be assessed as part of the evaluation of the ICU-Talk system. The use of computer interviewing to collect vocabulary is a new idea and could be expanded to provide additional information about the patient that could be used to assist in their care.

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