University of Iowa Nursing Survey: Communication Needs of Non-Oral Patients

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ASHA 2006
When Would You Use AAC in Acute Care Settings?
Why Rethink AAC in Acute Care?

- Patients often experience significant difficulties communicating with nurses, doctors, family members and loved ones.
- Patients report having experienced feelings of anxiety, insecurity and panic during their hospitalization or stint on mechanical ventilation (Bergbom-Engberg, 1989).
- The nursing literature notes the use of non-vocal behaviors (i.e., mouthing words, gestures, and head nods) as primary modes of communication used by critical care patients (Etchels, et al., 2003; Carroll, 2004; Robillard, 1994).
- Inconsistency in the choice of communication and a wide variety of variability in nurses’ and family members’ abilities to lip read or interpret gestures can create confusion and frustration for critically ill patients,
- These feelings of frustration and/or anxiety are not temporary or limited to the patient’s hospital stay, (Etchels, et. al., 2003).
- Enhanced communication for these patients is emerging as a treatment priority for critical care units (Menzel, 1994; Dowden, Beukelman & Lossing, 1986).
- **JACHO Requirement as of 1/2006**
New JACHO Standards

- **New JCAHO Requirement for IM.6.20**
- **Effective January 1, 2006**
- **Information Management**
- **Standard IM.6.20**
  Records contain patient-specific information, as appropriate to the care, treatment, and services provided.

- **Elements of Performance for IM.6.20**
  - C 2. (Medical records) contain, as applicable, the following demographic information:
    - Patient’s name, sex, address, date of birth, and authorized representative.
    - Legal status of patients receiving behavioral health care services
    - The patient’s language and communication needs
Current Practices For Enhancement of Communication Difficulties in Acute Care Settings

- Low-end AAC options
  - Pen, Pencil, and Paper
  - Mouthing Words
  - Gesturing Words

- These strategies have been proven to be ineffective and frustrating for the patient (Etchels, et al., 2003; Carroll, 2004; Robillard, 1994).

- The literature suggest it is critical that we equip nurses with more suitable and flexible “tools” or “strategic options.”
The use of more high-end voice output devices has not been widely implemented in acute care settings. Despite the fact that such individuals often cannot communicate and are unable to participate in their own care (Baker & Melby, 1996; Robillard, 1994).

Traditionally, high-end AAC systems have been used with individuals for whom oral language is no longer an option or whose oral communication attempts required repair.

Typically, this has included individuals with developmental disabilities, mental disabilities, and significant neuromotor involvement who require intensive outpatient assessment (Zangari, Lloyd, & Vicker, 1994; Buekelman & Mirenda, 2005).
Perceived Barriers To High-end Use of AAC in Acute Care Settings

- The patient’s overall cognitive status resulting in an inability to process information due to his/her medical condition and/or medications.
- The patient’s limited motor abilities.
- The patient’s reduced sensory status.
  - Temporary lack of access to hearing aids or glasses
- The patient’s need for restraints to avoid treatment interference.
Overcoming Barriers To Implementing AAC
The Genesis Of Implementation Of AAC In Acute Care Settings

- John Costello’s (2000) work at Boston’s Children’s Hospital
- Mary Beth Happ’s (2005) research at the University of Pittsburgh Medical Center
- The body of work done by Etchels, et., al. (2003) at the Ninewells Hospital in Dundee
- Richard Hurtig and Debora Downey’s (2005; 2006)
Costello’s Work

- Studied a model for preoperative AAC interventions for patients with planned admissions to critical care units due to anticipated surgical management needs.
- He studied 43 patients ranging in age from 2.8 to 44 years of age who experienced temporary loss of speech secondary to intubation, tracheostomy, and/or mechanical ventilation.
- He outlined the details of preoperative and postoperative interventions as well as strategies for patient directed vocabulary selection and digital voice message banking using a range of low to high-end AAC devices (Step by Step to DynaVox).
- Conducted discharge interviews with patients and family members
  - Suggesting that the Boston Children’s Model successfully addressed the anticipated need to communicate via alternate means, as 100% of the participants denied feelings of frustration, or stress due to their inability to speak.
Mary Beth Happ’s Work

- Investigated the use of voice output systems with patients following surgical procedures for head and neck cancer.
  - 10 patients with a mean age of 57 years who received electronic speech-generating devices,
  - Retained functional writing abilities following their surgical intervention.
- Two different voice output device,
  - Message Mate a multi-level communication aid that uses digital speech and offers the patient up to 32 messages per level;
  - DynaMyte a high-end communication device with unlimited vocabulary/message options, on-screen text to speech options and environmental control capabilities; as well as allowing patients the option of hand writing.
- Findings
  - most patients preferred writing and gestures to a voice output devices,
  - noted that voice output device maybe more practical for patients who want to construct complex messages in the immediate postoperative period
Possible Explanation for Happ’s Findings

- Message Mate limits the user’s vocabulary and does not provide the user with environmental control options, which can be critical in empowering the patient and lead to the patient’s “buy in” to use the designated communication system.

- DynaMyte, while providing its users with an on-screen keyboard, is not as efficient as more standard text to speech devices such as the DynaWrite or LightWRITER.
  - Does not provide users with a standard keyboard allowing for actual keyboarding skills

- Happ’s device selections may have been viewed by the users as either being too limiting or too slow.
The ICU-Talk project

- Collaboration between the Department of Applied Computing and the School of Nursing and Midwifery at Dundee University, along with the Department of Speech-Language Pathology and Intensive Care Units at Ninewills Hospital, Dundee.
- Examine the co-existing communication problems of their patients, for intubated patients.
- Surveyed nurses who cared for 19 patients, 36-76 years of age, who used ICU-talk. The patients involved in this study were unable to write.
ICU-Talk—Findings

- 68% of the nursing staff indicated they needed to remind the patient to use ICU-Talk;
- 44% indicated that the patients used ICU-Talk with someone other than themselves;
- 12% indicated that patients used ICU-Talk as the first means of communication;
- 44% indicated that ICU-Talk assisted with patient care;
- 24% indicated that ICU-Talk did not obstruct their observation or care of the patient;
- 72% indicated that the patients did stop using ICU-Talk and resorted to other forms of communication; and
- 76% indicated that they did not find it harder to understand the patient when they used ICU-Talk.
Piloted the use of high-end communication systems in all critical care units (PICU, SICU, MICU, IPCU) and step-down units at the University of Iowa Hospitals and Clinics

- DynaMyte 3100, DynaVox 3100, DynaVox DV-4 and MT-4, Vanguard Plus, Mercury and the Mini Mercury.
- Focused on evaluating the benefit(s) of AAC, which included the use of switch activated systems, in recovery outcomes of patients who required the use a mechanical ventilation system or had compromised motor function.
- The majority of their patients desired enhanced communication or the ability to exercise environmental control during hospital admission.
- Studied more than 100 patients ranging in age from toddlers to the elderly.
- Findings indicated that assistive technology can be implemented with a variety of patients across the lifespan with various etiologies and prognoses.
- The protocol has been effectively used with trauma victims, patients with cancer, neurodegenerative diseases, Guillain-Barre, organ failure and transplant patients who have required ventilatory support.
Nurses Are Integral To Success?

- Nurses need to communicate with their patients
- Referral source
  - Have established a yes/no response
  - Have identified possible access sights
- Aware of patients alertness levels
  - Time of day
  - Medication levels
- Assist and monitor implementation of AAC
UIHC AAC Nursing Survey—2006

- We conducted a needs assessment of UIHC nurses through an online anonymous survey to gain knowledge of their need for AAC training.

- During the two week interval, 133 registered nurses and 2 advanced practitioner nurses responded to the survey.

- The respondents represented all levels of years of nursing experience and varied across a wide range of acute care services.
Years of Nursing Experience

- Less than 1 year: 18
- 2-5 years: 35
- 6-10 years: 25
- 11-15 years: 17
- 16-20 years: 13
- 20+ years: 27
<table>
<thead>
<tr>
<th>Nursing Units</th>
<th>% of Response by Unit</th>
</tr>
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<tbody>
<tr>
<td>CHILD PSYC UNIT</td>
<td>27%</td>
</tr>
<tr>
<td>ADULT PSYC UNIT</td>
<td>0%</td>
</tr>
<tr>
<td>GERIATRIC PSYCH UNIT</td>
<td>8%</td>
</tr>
<tr>
<td>ADULT PSYCH UNIT</td>
<td>20%</td>
</tr>
<tr>
<td>MED PSYC</td>
<td>29%</td>
</tr>
<tr>
<td>PICU</td>
<td>24%</td>
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<tr>
<td>PEDIATRICS CARDO</td>
<td>23%</td>
</tr>
<tr>
<td>PEDIATRIC HEMONC</td>
<td>14%</td>
</tr>
<tr>
<td>CVICU</td>
<td>5%</td>
</tr>
<tr>
<td>IPCU</td>
<td>20%</td>
</tr>
<tr>
<td>MICU</td>
<td>29%</td>
</tr>
<tr>
<td>SICU/ALL BAYS</td>
<td>59%</td>
</tr>
<tr>
<td>NEUROLOGY</td>
<td>15%</td>
</tr>
<tr>
<td>SURGERY/MED (MSCU)</td>
<td>13%</td>
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<tr>
<td>MED CARDIO</td>
<td>6%</td>
</tr>
<tr>
<td>NEUROSURGERY/NEUROLOGY</td>
<td>4%</td>
</tr>
<tr>
<td>BURN CENTER</td>
<td>13%</td>
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<tr>
<td>ORTHO/UROLOGY</td>
<td>10%</td>
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<tr>
<td>OTO/EYE/ORAL SURGERY</td>
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<tr>
<td>HEMATOLOGY/ONCOLOGY</td>
<td>25%</td>
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<tr>
<td>MED/SURG ONC</td>
<td>11%</td>
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<td>MEDICINE</td>
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<tr>
<td>General MED1</td>
<td>19%</td>
</tr>
<tr>
<td>GI SURG/TRANSPLANT</td>
<td>21%</td>
</tr>
<tr>
<td>General MED 2</td>
<td>0%</td>
</tr>
<tr>
<td>BONE MARROW</td>
<td>23%</td>
</tr>
<tr>
<td>Pool RN’S</td>
<td>4%</td>
</tr>
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Survey Questions

- Have you ever had a patient with whom communication was difficult? 100%
- Have you ever had a patient that could not successfully use a conventional nurse call? 98%
- Have you ever used an alternative form of communication with a patient (paper/pencil, alphabet boards, sign language, electronic device and/or lip reading)? 99%
- Are you aware of the term Augmentative/Alternative Communication (AAC)? 35%
- Do you know if there is an AAC service at UIHC? 34%
- Do you think that there are patients you serve who might benefit from AAC? 95%
- Do you think that a form of AAC might help your patients? 96%
- Would you like the opportunity to learn more about AAC for your patients? 96%
The most striking result was that 100% of the nurses surveyed indicated that they all have had a patient for whom communication was difficult.

Of the nurses surveyed, 96% indicated that they have had patients who would have benefited from the use of AAC.
98% indicated they have worked with patients that could not successfully access a conventional nurse call system the patients’

99% reported using alternate forms of communication

- The type of alternate communication most commonly used among those surveyed included:
  - paper pencil 96%
  - alphabet board 65%
  - picture or symbol board 80%
  - sign language 35%
  - electronic voice output device 46%
  - lip reading 70%
  - other—please specify 18%
In-service Training for UIHC Nurses

- Training should provide a framework to allow for successful implementation of all forms of AAC system (i.e., low- to high-end options).
- We must educate nursing staff regarding patients’ perceived frustration and increased stress levels when low-end AAC options fail. We suggest that development of any nursing in-service(s) or training session(s) must include:
  1.) Screening protocols placing specific prominence on a hierarchy of assessment tasks permitting rapid decision making and minimal efforts by the acutely ill patient.
  2.) A set of strategies to allow the nursing staff to learn new communication techniques to allow for immediate enhancement of the patient’s ability to communicate.
Developing a protocol for tracking communication needs and success of AAC intervention strategy?

- UIHC –PICES Project
  - Requires nurses to address communication status
  - Requires nurses to consider AAC for patients
  - Requires nurse to track the effectiveness of the patient form of AAC
UIHC Intensive Care Tracking
UIHC Intensive Care Tracking
Pre-Admission Hearing & Vision
UIHC- Intensive Care Tracking Communication Status
UIHC- Intensive Care Tracking
AAC System Tracking

Communication: Mode/Device-Adult

Communication: Method/Device Status
Current & Future Iowa Projects

- Implementation of Nursing In-Service Training
- Development of free standing windows based AAC and ECU software
- Integrated IV-Pole mounting system
- Field trials of Iowa Smart Switch
- Patient Outcomes and Satisfaction Study


Contact information

www.shc.uiowa.edu/wjshc/research/ad/index.html
QUESTIONS?