



Published in final edited form as:

Intensive Crit Care Nurs. 2012 February ; 28(1): 16–25. doi:10.1016/j.iccn.2011.11.005.

NURSES' PERCEPTIONS OF COMMUNICATION TRAINING IN THE ICU

Jill V. Radtke, MSN, RN¹, Judith A. Tate, PhD, RN¹, and Mary Beth Happ, PhD, RN, FAAN^{1,2,3}

¹Department of Acute & Tertiary Care, University of Pittsburgh School of Nursing

²Department of Critical Care Medicine, University of Pittsburgh School of Medicine

³Center for Bioethics and Health Law, University of Pittsburgh

Summary

Objective—To describe the experience and perceptions of nurse study participants regarding a communication intervention (training and communication tools) for use with nonspeaking, critically-ill patients.

Research Methodology/Design—Small focus groups and an individual interview were conducted with six critical care nurses. Transcripts were analysed using qualitative content analysis and constant comparison.

Setting—Two ICUs within a large, metropolitan medical centre in western Pennsylvania, United States of America.

Main Outcome Measures—Critical care nurses' evaluations of (1) a basic communication skills training program (BCST) and (2) augmentative and alternative communication strategies (AAC) introduced during their study participation.

Results—Six main categories were identified in the data: 1) communication value/perceived competence; 2) communication intention; 3) benefits of training; 4) barriers to implementation; 5) preferences/utilization of strategies; and 6) leading-following. Perceived value of and individual competence in communication with nonspeaking patients varied. Nurses prioritized communication about physical needs, but recognized complexity of other intended patient messages. Nurses evaluated the BCST as helpful in reinforcing basic communication strategies and found several new strategies effective. Advanced strategies received mixed reviews. Primary barriers to practice integration included patients' mental status, time constraints, and the small proportion of nurses trained or knowledgeable about best patient communication practices in the ICU.

© 2011 Elsevier Ltd. All rights reserved.

Contact Information:

336 Victoria Building, 3500 Victoria Street, Pittsburgh, PA 15261, Fax: 412-383-7227

Jill V. Radtke (Corresponding author), jvr5@pitt.edu,(724) 622-6371

Judith A. Tate, jta100@pitt.edu, (412) 624-5872

Mary Beth Happ, mhapp@pitt.edu, (412) 624-2070

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

CONFLICT OF INTEREST STATEMENT: All authors certify that no competing financial interests or sources of bias exist.

Conclusions—The results suggest that the communication skills training program could be valuable in reinforcing basic/intuitive communication strategies, assisting in the acquisition of new skills, and ensuring communication supply availability. Practice integration will likely require unit-wide interdisciplinary dissemination, expert modelling and reinforcement.

Keywords

augmentative and alternative communication; patient communication; intensive care; critical care; communication training; nurses health knowledge; attitudes; practice

INTRODUCTION

As a direct result of critical illness and its management, ICU patients and their caregivers are vulnerable to communication breakdown and associated adverse sequelae. Nurses are the most frequent communication partners to critically ill patients during the period in which they are unable to speak. However, nurses do not typically receive training in specialized communication assessment or techniques to use with nonspeaking patients. Rather, ICU nurses report learning how to communicate with intubated patients through trial and error and by observing others (Hemsley et al., 2001; Leathart, 1994a; Magnus and Turkington, 2006). Nurses report feeling frustrated by communication difficulties and admit to avoiding patients with whom communication is difficult (Alasad and Ahmad, 2005; Bergbom-Engberg and Haljamae, 1993; Magnus and Turkington, 2006). Interpreting patients' communication attempts may be de-prioritized in ICUs, where management of complex medical equipment and delivery of life-sustaining treatment takes precedence. Communication exchanges are often limited to brief, task- or procedure-related statements initiated and controlled by the nurse or healthcare provider (Ashworth, 1980; Hall, 1996; Happ et al., 2011; Salyer and Stuart, 1985). Such one-sided communication thwarts novel patient messages, excludes the patient from treatment decision-making, and leads to patient distress, frustration, loss of sense of control, and withdrawal (Bergbom-Engberg and Haljamae, 1989; Happ, 2000; Patak et al., 2009; Wojnicki-Johansson, 2001).

Communication training programs for nurses have been developed and tested in oncology and long-term care settings (Buckwalter et al., 1988; Burgio et al., 2001; McCallion et al., 1999). Researchers in Mexico evaluated the effect of a nurse training program on perceived well-being and medical recovery of ICU patients (de los Rios Castillo and Sanchez-Sosa, 2002). The training program focused on relational interactions (e.g., smiling, touching, praising, eye contact) rather than assistive communication assessment and techniques. There are no published reports of nurses' experiences of training in assistive communication assessment and techniques with nonspeaking patients in the ICU. The SPEACS (Study of Patient-Nurse Effectiveness with Assisted Communication Strategies) study is the first to test the efficacy of training and the provision of communication materials on nurse-patient communication in the ICU (Happ et al., 2008).

The purpose of this article is to describe nurses' experiences and perceptions regarding a communication intervention (nurse training and communication tools) for use with non-speaking patients in the intensive care unit, implemented as part of the SPEACS study (Happ et al., 2008). We obtained nurses' opinions about their experiences in the basic communication skills training program (BCST), delivered in Phase 2 and 3 of the SPEACS study, and their perceptions of electronic communication devices and speech language pathologist support, delivered in Phase 3 only.

METHODS

Study Background

The SPEACS study was guided by a model of nurse-patient communication, developed and refined by Dr. Happ and colleagues (Campbell and Happ, 2010; Happ, 2000), in which the intervention is posited to impact communication performance (proximally) and nursing care quality and clinical outcomes (distally) for communication vulnerable ICU patients. Intervention content was consistent with the principles of augmentative and alternative communication (AAC) (Beukelman et al., 2007) and relationship-centered care (Koloroutis, 2004). Nurses in Phase 1 of the study were considered a control group, and therefore received no communication training. In Phase 2, nurse participants received the BCST. This program, taught by a speech language pathologist (SLP), introduced augmentative and alternative communication (AAC) techniques relying on familiar, intuitive communication modalities, including writing, mouthing, and gesturing, in addition to more specialized communication boards, hearing and vision aids. For example, patients with intact cognition and mouthing abilities (i.e., those with tracheostomy) are presented with an alphabet board and asked to point to the first letter of the intended word or phrase while mouthing it to improve interpretability of lip-reading. This technique is referred to as “mouthing with first letter spelling” (Beukelman and Yorkston, 1977; Yorkston et al., 2004). Examples of additional strategies taught as part of the BCST are listed and described in the glossary (Table 1).

Nurses participating in Phase 3 of the SPEACS study received additional instruction on the use of electronic communication devices, including electrolarynxes, hearing-aid amplifiers, and electronic typing and menu-selection devices with speech generating functions. Nurses in Phase 3 had ongoing, individualized consultation with a speech-language pathologist interventionist who assessed and initiated implementation of the communication devices/strategies with each study patient.

Setting

Study nurses were recruited from a medical intensive care unit (MICU) and cardio-thoracic surgical intensive care unit (CT-ICU) in a large, metropolitan medical centre in western Pennsylvania, United States of America (USA). Discussions took place in a private hospital conference room away from the clinical units. A light dinner was provided for all participants.

Ethical Approval

This study received Institutional Review Board approval and maintained compliance with ethical standards set forth by the University Institutional Review Board.

Participants

All SPEACS nurse participants who received BCST (Phase 2 and 3) and were still practicing in their study ICUs were invited to participate in focus groups. Recruitment was dependent on nurse availability to attend a focus group and aimed for variability in ICU, gender, and critical care experience. Two small groups (2-3 nurses per group) and an individual interview for a nurse unable to attend a group were conducted after Phase 3 (2009). In total, six critical care nurses participated. This was considered a representative proportion of the 26 ICU nurses who originally received BCST training in the SPEACS study (>20% of the total number of nurses trained). Several SPEACS nurse participants left the unit or hospital before this follow-up study was conducted. Although the timing of the focus groups “limited” our sample to mostly Phase 3 nurses (5 out of 6), we consider these nurses “best” informants, as they received all components of the communication

intervention (BCST and advanced training with electronic devices). Informal group feedback after Phase 2 was used for intervention monitoring and was not included in the results. See Table 2 for participant characteristics.

Data Collection

The focus group interviews utilized a traditional research-oriented format (e.g., moderator interviewing participants as a group regarding a common experience), though groups were unconventionally small (e.g., 2-3 participants). Focus groups were considered a suitable data source for this study due to their utility in generating rich discussions based on individual perceptions and reactions to others' perceptions of a shared experience (Patton, 2002). Because the interviews were conducted some time after actual study participation, the group approach was considered advantageous in stimulating recall among participants. The interviews were conducted by the principal investigator (MBH), an experienced qualitative researcher, and followed a semi-structured interview guide pertaining to aspects of the communication skills training and communication tools (see Table 3 for script and summary of responses). The interview guide was influenced by informal feedback sessions held with nurses during data collection and at the conclusion of Phase 2. The SPEACS training manual and materials were available during each interview session and reviewed with participants. Discussions were audio-recorded, transcribed verbatim and reviewed for accuracy. As recommended by Krueger (1994), a research assistant recorded observational fieldnotes during the interviews to allow the facilitator to focus on the dual task of moderating and interviewing. In this case, fieldnotes were used to capture non-verbal behaviours and to differentiate speaker and tone within the group (Patton, 2002).

Data Analysis

Qualitative content analysis was used. Transcripts were first analysed using constant comparison by all authors in a joint, collaborative effort, and initial categories were developed. A more detailed analysis then commenced in the form of line-by-line coding to identify sub-categories and to validate the initial categories. Two authors (JVR, MBH) met regularly to review and discuss the analysis. The third author (JAT) provided review, critique and validation of the emerging analysis. Categories were further validated by comments gathered in earlier, informal feedback sessions with Phase 2 study nurses. Fieldnotes were reviewed to clarify non-verbal agreement/disagreement among participants and to ensure the mood and tone of the groups were accurately conveyed in the final analysis.

RESULTS

Six major content categories were identified in the transcripts: 1) communication value and perceived competence; 2) communication intention; 3) benefits of training; 4) barriers to implementation; 5) preferences and utilization of strategies; and 6) leading and following. To facilitate transparency in reporting of comments and agreement among participants, each participant is referred to in-text with a unique, non-identity linking number (i.e., 01-06).

Communication Value and Perceived Competence

There was wide variation among participants in the value they placed on communication in the ICU and their perceived competence in communicating with critically-ill, non-speaking patients. The perceived value of effective communication ranged from "low priority" or merely "interesting," to "critical" to recovery.

Several participants became outspoken advocates for improved communication (01, 02, 03). They described efforts to share training information, the communication strategies and the

many benefits they had observed first-hand with their colleagues. One nurse viewed poor communication and the resultant stress for patients as a primary barrier to timely hospital discharge and recovery from critical illness (03). Several nurses also reported a change in their attitudes about communication with ICU patients after the SPEACS training:

“The part that really enlightened me was watching the [communication training] videos...and just the whole, seeing the miscommunication and how the patient ends up giving up, [they] become really passive, and it happens all the time...and that’s me and my patients...but before [training], it’s not brought to your attention [it is] a problem, so you don’t think about it a lot until you go the class.” (02)

“I do make more eye contact with my patients which I didn’t really kind of do in the beginning...I guess it taught me patience.” (05)

Alternatively, some nurses noted that communication techniques were “interesting,” but required ample time and a responsive/non-sedated patient (02, 05, 06). Participants admitted that these conditions rarely occurred. For patients with compromised mental status, in particular, medical tasks took priority over communication, and assistive communication strategies, such as the eye gaze board, that were perceived as too time-consuming were dismissed by some as impractical (05, 06).

“I mean, you know the one thing where you have to, like “gaze eyes,” [sarcastic tone] that, half those people are on Fentanyl so they’re gazing and you don’t know where they’re gazing... I mean it was interesting but that would be not very practical for us.”(05)

Two participants described abdicating to the SLP interventionist for communication with patients beyond ascertaining basic needs (05, 06). Their perspectives on communication and communication success were framed as “basic needs” and “what I need” from communication with patients rather than attempting to meet or determine patients’ communication needs. One nurse (05) described taking communication materials away from patients and families, citing her own rationale that some patients are “not appropriate” for communication assistance, using an example of a cognitively impaired older adult.

Nurse participants attributed the low priority that facilitating patient communication receives in the ICU to a variety of causes, including time constraints inherent in caring for critically ill individuals, as well as lack of training and attention to learning technical aspects of care. “It got overlooked in ICU orientation because you were too busy trying to learn the skills,” “how to set up those [arterial] lines.” (02)

Most participants found themselves increasingly more comfortable with communication and communication interventions with non-speaking ICU patients after training.

“I have different tools now, whether it be an actual physical tool or just the skills that I have gotten where I can work with [the patient] a little bit better. It benefits both of us. I don’t get so frustrated...it cuts down on my time trying to figure out what they are saying. They don’t get as frustrated. They get their needs met, you know, whether it be a physical need or just an emotional need like needing a question answered.” (01)

Communication Intention

Communication intention encompassed the perceived topics and complexity of patient messages to healthcare providers and family. Nurses’ opinions of communication intention vacillated. Group discussions typically began with nurse participants agreeing that patients primarily intend to convey basic needs, such as symptoms and requests for treatment or comfort measures. Over the course of the discussion, participants revealed that more novel

patient messages related to thoughts, feelings, and participation in treatment decisions were likely misinterpreted, ignored, or stifled:

“And the nurse is asking things like pain, family...water, and the patient’s asking about their dog at home.” (02)

“And we had a patient the other day...it was something he wanted to eat...he did a lot of hand gestures, so we knew it was eating or drinking, and I was sure he’d want ice chips...it was cold outside and we were talking about snow and cold and he wanted... ‘Swiss Miss,’ [an instant hot cocoa]...and that’s what he was dreaming of: his first thing to drink, and I would not have guessed that.” (04)

However, interventions to facilitate patients’ abilities to express novel messages were sometimes perceived as double-edged. Nurses reported being placed “in the middle” as interpreters of patient messages, even before participating in the SPEACS study (01, 02, 04).

“And people do go towards the--, to the nurse to say ‘what’s he trying to say?’ The doctor will turn to you, [indicating doctor’s response] “well you’re the nurse, what’s he trying to say?’ And I’ll say, ‘well...you know as much as I do.’” (04)

This comment illustrates the sentiment to which other SPEACS nurse participants had alluded in informal feedback sessions: that improved communication may ethically obligate the nurse to the time- and emotionally-intensive endeavour of being the intermediary between the non-speaking patient and entire healthcare team. For example, during the SPEACS study, a nurse related an instance in which a patient, who was enabled to communicate, expressed a treatment preference in conflict with that of the physicians and family.

Our interview participants revealed other practical ethical dilemmas as well.

“I find myself pulling the (isolation) mask down...Cause it’s like, you’re reading, trying to read *their* [emphasis] lips, and I’m thinking, “oh, they’re trying to read *my* [emphasis] lips and they can’t hear me cause I’m yelling.’ And it’s like, can they hear me? I guess, why am I yelling?” (05)

Benefits of Training

Nurses ascribed personal, patient, and family benefits to the communication training program. Personal benefits included practical and professional gains, as well as ego enhancement. For instance, nurses noted a reduction in stress and change in their attitudes and practice as a result of the training. They reported feeling “less frustrated” and “more patient” during communication attempts, as well as more persistent in aiding patients with communication impairments (03, 05, 06). Nurses provided several examples of how they used the new techniques with their nonspeaking patients.

“You know, letter boards are really good when you get frustrated and the patient gets frustrated, and ... just as long as they’re able to point, or able to nod their head, and are, you know, alert and oriented, you can get them...[to] just, follow the letter board and go on this column, “Is it in this column? Is it in this one, this one, this one...?’ That’s time consuming, but at the same time, you can get to, you know, where you want to be, so...I always go to that, when all else fails.” (01)

In terms of patient benefits, several nurses linked improved communication to relief of patient anxiety and enhanced patient well-being (01, 02, 03, 04), and a quicker recovery from critical illness:

“...I so...believe that information and communication relieve anxiety. And when people are less anxious they heal better... I think that these people that are

depressed and anxious and frustrated are the ones that are still in the ICU six months after the operation.” (03)

A connection between improved communication and enhanced patient affect was also observed:

“[Communication] brings their spirits up.” (01)

“[Patients] just love it when they can communicate...finally, they’ve been trying— [now they can] get through...you have a patient that’s involved in their healthcare, progressing, even if they say strange things. They feel good, they’re communicating.” (04)

One participant (03) reported that families were intrigued by and grateful to her for introducing new communication strategies. She commented that families had more time to invest and a greater stake in utilizing the communication strategies to decipher more complex thoughts and emotions. This was consistent with comments from nurses who participated in the informal feedback sessions.

Barriers to Implementation

Nurses encountered multiple barriers that impeded full implementation or utilization of their new communication knowledge and skills. Most notably, they evaluated certain communication aids and strategies, such as eye gaze boards and partner-assisted scanning, as unfeasible, too time-consuming, or inappropriate for use in critical care, where cognitive debilitation and sedation frequently accompanied motor limitations. Alternatively, patient condition and unit time constraints sometimes served as a motivator to implement communication devices and AAC techniques. For example, several nurses reported that the electronic speech generating devices allowed the nurse to multi-task during communication interactions with nonspeaking patients, thus saving time (01, 02, 03). Nurses also found certain AAC strategies, including partner assisted scanning, communication boards and patient signal dictionaries (see Table 1), helpful when simpler techniques were hampered by patient anxiety or physical limitations (e.g., writing affected by hand oedema, mouthing ineffective when patient was anxious or having difficulty weaning) (02, 03, 05).

Participants acknowledged that it was difficult to fully implement the AAC strategies and electronic devices when other nurses on the units did not share their communication expertise, training, and/or enthusiasm. This sentiment was echoed in the informal feedback session, as well; these nurses acknowledged the difficulty in changing practice within an established culture, such as the ICU.

“You would find that machine [electronic communication device] laying over on the windowsill, battery’s dead. I’m like, ‘Why aren’t you using this?!’ And the [nurses un-trained in the communication program] are like, ‘I don’t know, no one does it’...so that’s frustrating.” (01)

In particular, it was difficult for participants to direct other nurses to use certain assistive communication strategies when the terms or descriptions of techniques were not intuitive or familiar. For example, although participants described utilization of “partner-assisted scanning,” a technique involving pointing to letters or words on a communication board until the patient signals the correct selection (Beukelman et al., 2007; Beukelman and Mirenda, 2005), none were familiar with the term when it was introduced in the focus groups.

“I think the most difficult thing that I found was trying to explain to other nurses, because you went through the classes, ‘use this!’ and always forgetting the name of

it. So, here you are representing something you went through and you're *supposed* to remember and you *couldn't* remember." (01)

Nurses suggested implementing communication training during new nurse critical care orientation, forming communication committees, offering the training as an online module, increasing the availability of SLPs, and having ample communication supplies on hand in the ICU. They advocated retaining the real nurse-patient video exemplars in future training programs (01, 02, 04, 05, 06).

Strategy Utilization and Preferences

All nurses reported informal incorporation of the SPEACS communication assessment algorithm into their daily assessments after training, and one described passing this information on in shift reports (03). However, some participants still described using a trial and error approach when incorporating communication enhancement strategies, which tended to be time-consuming (01, 05). As a workaround, Phase 3 nurses described successfully consulting with the SLP for assistance at the assessment stage.

The nurses found training to be very helpful in reinforcing natural communication strategies, such as gaining the patient's attention prior to a communication exchange, maintaining eye contact, using voice inflection, and confirming all patient responses. They described these techniques as often the most effective and frequently utilized. Participants also described continued use of patient writing, mouthing, gestures, and communication topic boards. Some described incorporating minor variations on these strategies to improve communication success as a result of the training, such as encouraging printing rather than writing (01), watching the patient as they write (04), and establishing clear, patient-specific gestures and signals (03).

The most positive responses were about the communication supplies made available to the ICUs throughout the study. In particular, participants noted the convenience and utility of communication supply carts on the study units, Velcro-mountable storage pouches for hearing aids or spectacles, notebooks, and simple alphabet, picture and word boards. Consistent with nurses in the informal feedback session, a focus group participant (05) reported high-interest in and utilization of these materials among other staff members:

"I actually showed someone else [the communication training binder]...cause they're like 'what are you doing?'...You know they were nebbly [curious], and I showed them, and they liked it...there's the SPEACS [communication] cart, like most or almost everyone on our unit knows about the cart, you know..."

Nurses found the patient signal dictionary, message strategy, and orthotic writing devices useful, but reported using first-letter pointing with mouthing words and the tagged yes/no strategy more extensively. The partner-assisted scanning and written choice strategies, as well as electronic speech generating devices and eye gaze boards received mixed or unfavourable reviews. Nurses who disliked or reported non-use of these strategies tended to find them "interesting," but too time-consuming (01, 02, 05). See Table 1 for a description of strategies.

Leading and Following

Advocacy for and dissemination of knowledge and skills acquired through the communication training program existed along a continuum. At one end, nurses' comments connoted pessimism regarding unit and system-based change and deference to ("following") the SLP (05, 06). Others were supportive of the program, and reported passing on information about patient communication abilities and techniques during shift reports (01, 03). Several study participants became champions on their respective units for the

techniques and strategies. These nurses demonstrated perseverance and leadership in teaching patients, families, and colleagues learned skills (01, 02, 03). Generally, participants who saw more benefits than risks in the program displayed greater commitment to educating colleagues and generating unit buy-in.

“... I tell everybody. ‘Here’s this, use this!’ Not only just on my patients, but I am passing out copies [of the communication boards]...I taught many a family member to use [first letter spelling and mouthing] and they use it.” (03)

Because most of the nurses who participated in these interviews had the benefit of interaction with the SLP, they were advocates of an increased role for the SLP in the ICU.

“I think almost all the patients, it seems like, deserve to have speech pathologists work with them. It was almost...unfair for patients who decided that they didn’t want to do the study. I think they *really* missed out.” (02)

LIMITATIONS

This study was limited by a number of factors, including small groups and sample size and issues inherent in focus group data collection (e.g., self selection). Although divergent responses by sex, study phase, study unit, and years of critical care experience were not observed in this study, judicious comparisons are constrained by the small sample. Sample size also limits extrapolation of study findings to ICU nurses in other settings. Likewise, the voluntary nature of focus group and SPEACS study participation increases the likelihood that participants differed in important ways from those who chose not to take part in the groups or study. For example, those that participated in the focus groups may have had more extreme views of the intervention, and those who chose to take part in the study at all may have been more amenable to practice changes than the general ICU nursing population. Finally, though focus groups are reputed to stimulate flow of ideas among participants and enhance data quality (Krueger and Casey, 2000), our groups were conducted by the study’s principle investigator (PI), who had an interest in the success of the intervention. Although unlikely, it remains a possibility that some participants screened their true feelings or responded in ways during the groups that they thought the PI desired or the group would deem socially desirable.

DISCUSSION

Nurse participants in our study reported changed and improved attitudes and practices regarding communicating with nonspeaking ICU patients after basic communication skills training. Their descriptions of feeling “less frustrated” and “more patient” after training are consistent with findings of previous nonintervention studies in which nurses admitted to feeling frustrated and avoiding patients whose nonvocal messages are difficult to understand (Alasad and Ahmad, 2005; Bergbom-Engberg and Haljamae, 1993; Leathart, 1994a; Magnus and Turkington, 2006). Our findings clearly support that lack of appropriate training, unavailability of communication materials, and lack of access to speech language pathologists are barriers to adequately addressing patients’ communication needs in the ICU (Hemsley et al., 2001; Leathart, 1994b). Training did not change the value that these nurse participants placed on patient communication in relation to more pressing physical and biotechnical duties in the care of critically ill patients. This prioritization reflects the life and death context of critical care nurses’ work and training. Time constraints surfaced repeatedly as the threshold or determining factor in critical care nurses’ preferences and decisions to use or reject AAC techniques, as well as in their perceptions of barriers to implementation of the assistive communication techniques.

Not all study participants accepted or adopted the training program principles as evidenced by their self-reports of removing communication materials from the patients' bedside and belief that patients with complex communication disabilities (i.e., those who were delirious) are not "ready" to communicate. Techniques that required greater assistance from the nurse (e.g., written choices, eye-gaze boards) were not popular or were rejected outright. Informal feedback from nurses throughout the SPEACS project further confirmed that critical care nurses sometimes preferred patients, particularly those with complex physiological needs, to be silent. One ICU nurse who shared this perspective labeled it a "deep dark secret," suggesting shame or guilt about communication avoidance as a means to facilitate work or to avoid emotional engagement.

The nurses' descriptions of *communication intention*, the perceived complexity and topics of patient messages to healthcare providers and family, are some of the most interesting and novel findings in this study. These nurses raised important ethical, social, and practical concerns about facilitating communication with seriously ill patients who have a high likelihood of cognitive impairment and high risk of dying (Nelson et al., 2010; Tonelli, 2005). Participants' comments illustrated some everyday, ethical dilemmas involved in facilitating patient communication in the ICU. Moreover, our data show that nurses occupy a relational space in which the critical care nurse may be caught "in-between" patients, families and physicians as interpreter of a patient's treatment preference or request (Happ, 2002; Varcoe et al., 2004).

Our data describing perceived barriers, strategy utilization, and leadership have several important implications. AAC strategies that nurses perceive to involve greater nursing time and attention may require SLP support, modelling and reinforcement. In addition, to achieve a more pronounced and sustainable change in communication practice in ICUs, development of nursing leaders, support for graduate nurses, wider dissemination of training among units and healthcare providers, and practical and fiscal support from healthcare systems is warranted. Major changes in communication training within healthcare organizations will likely be slow, however, as most ICUs lack any communication training program, and as this study indicates, entrenched attitudes and practice patterns may be difficult to transform. Reasonable starting points, as suggested by our study participants, may involve formation of a communication committee, development and implementation of a nursing training program or continuing education module, and provision of communication supplies that can be cheaply procured or easily constructed by staff. In time, with more evidence-based justification linking communication programs to improved patient outcomes, healthcare systems may be willing to finance more intensive training, greater SLP presence, and provision of advanced electronic AAC devices. In the USA, new hospital accreditation standards may spur faster change. These standards became effective January 2011 and require assessment of patient communication needs, including the communication impairments that are a consequence of treatment. Hospitals will be required to provide augmentative and alternative communication support (The Joint Commission, 2010). Our study illustrates that change can begin with several nursing champions, simple communication supplies, and a curious staff.

CONCLUSIONS

The BCST program and AAC materials used in the SPEACS intervention were generally well-received by nurses and increased their skill and confidence in communicating with nonspeaking ICU patients. Nurses also perceived patient benefits to strategy utilization. Communication techniques and materials perceived as time-saving, natural, and effective for patients who were without major motor and cognitive limitations were favoured and utilized.

Acknowledgments

Funding by the National Institute of Child Health and Human Development (R01-HD043988, Improving Communication with Nonspeaking ICU Patients) and National Institute of Nursing Research (K24-NR010244), Mary Beth Happ, Principal Investigator; Judith Tate, project director; and Jill Radtke, graduate student researcher and PhD candidate.

FUNDING SOURCES: National Institute of Child Health and Human Development (R01-HD043988, Improving Communication with Nonspeaking ICU Patients) and National Institute of Nursing Research (K24-NR010244).

References

- Alasad J, Ahmad M. Communication with critically ill patients. *J Adv Nurs*. 2005; 50:356–62. [PubMed: 15842442]
- Ashworth, P. *Care to communicate: An investigation into problems of communication between patients and nurses in intensive therapy units*. Whitefriars Press; London: 1980.
- Basil C. Social interaction and learned helplessness in severely disabled children. *Augment Altern Commun*. 1992; 8:188–99.
- Bergbom-Engberg I, Haljamae H. Assessment of patients' experience of discomforts during respirator therapy. *Crit Care Med*. 1989; 17:1068–72. [PubMed: 2791570]
- Bergbom-Engberg I, Haljamae H. The communication process with ventilator patients in the ICU as perceived by the nursing staff. *Intensive Crit Care Nurs*. 1993; 9:40–7. [PubMed: 8485349]
- Beukelman, DR.; Garrett, KL.; Yorkston, KM. *Augmentative communication strategies for adults with acute or chronic medical conditions*. Paul H. Brookes Publishing Company; Baltimore: 2007.
- Beukelman, DR.; Mirenda, P. *Augmentative & alternative communication: Supporting children & adults with complex communication needs*. Paul H. Brookes Publishing Company; Baltimore: 2005.
- Beukelman DR, Yorkston K. A communication system for the severely dysarthric speaker with intact language system. *J Speech Hear Disord*. 1977; 42:265–70. [PubMed: 67278]
- Binger C, Light J. The effect of aided AAC modeling on the expression of multi-symbol messages by pre-schoolers who use AAC. *Augment Altern Commun*. 2007; 23:30–43. [PubMed: 17364486]
- Buckwalter KC, Cusack D, Beaver M, Sidles E, Wadle K. The behavioral consequences of a communication intervention on institutionalized residents with aphasia and dysarthria. *Arch Psychiatr Nurs*. 1988; 2:289–95. [PubMed: 2465742]
- Burgio LD, Allen-Burge R, Roth DL, Bourgeois MS, Dijkstra K, Gerstle J, et al. Come talk with me: Improving communication between nursing assistants and nursing home residents during care routines. *Gerontologist*. 2001; 41:449–60. [PubMed: 11490043]
- Calculator S. Promoting the acquisition and generalization of conversational skills by individuals with severe disabilities. *Augment Altern Commun*. 1988; 4:94–103.
- Campbell GB, Happ MB. Symptom identification in the chronically critically ill. *AACN Adv Crit Care*. 2010; 21:64–79. [PubMed: 20118706]
- Connolly, MA. Unpublished doctoral dissertation 1992; (UMI# 9224758). Rush University; Chicago: Temporarily nonvocal trauma patients and their gestures: A descriptive study.
- de los Rios Castillo J, Sanchez-Sosa J. Well-being and medical recovery in the critical care unit: The role of the nurse-patient interaction. *Salud Ment*. 2002; 25:21–31.
- Garrett, KL.; Beukelman, DR. Augmentative and alternative communication approaches for individuals with severe aphasia. In: Yorkston, KM., editor. *Augmentative and alternative communication in the medical setting*. Communication Skill Builders; Tucson: 1992. p. 245-321.
- Garrett K, Beukelman D. Changes in the interaction patterns of an individual with severe aphasia given three types of partner support. *Clinical Aphasiology*. 1995; 23:203–34.
- Garrett, KL.; Happ, MB.; Costello, JR.; Fried-Oken, MB. AAC in the intensive care unit. In: Beukelman, DR.; Garrett, KL.; Yorkston, KM., editors. *Augmentative communication strategies for adults with acute or chronic medical conditions*. Paul H Brookes Publishing Co.; Baltimore: 2007. p. 17-57.
- Garrett KL, Huth C. The impact of graphic contextual information and instruction on the conversational behaviours of a person with severe aphasia. *Aphasiology*. 2002; 16:523–36.

- Hall DS. Interactions between nurses and patients on ventilators. *Am J Crit Care*. 1996; 5:293–7. [PubMed: 8811153]
- Happ MB. Interpretation of nonvocal behavior and the meaning of voicelessness in critical care. *Soc Sci Med*. 2000; 50:1247–55. [PubMed: 10728845]
- Happ, MB. Patient 67: An 80 year-old man in respiratory failure who repeatedly removes catheters and tubes. In: Heffner, J.; Byock, I., editors. *Palliative and end of life pearls*. Hanley & Belfus, Inc.; Philadelphia: 2002. p. 212-15.
- Happ MB, Garrett K, DiVirgilio Thomas D, Tate J, George E, Houze M, et al. Nurse-patient communication interactions in the intensive care unit. *Am J Crit Care*. 2011; 20:e28–40. [PubMed: 21362711]
- Happ MB, Sereika S, Garrett K, Tate J. Use of the quasi-experimental sequential cohort design in the Study of Patient-Nurse Effectiveness with Assisted Communication Strategies (SPEACS). *Contemp Clin Trials*. 2008; 29:801–8. [PubMed: 18585481]
- Hemsley BJ, Sigafos J, Balandin S, Forbes R, Taylor C, Green VA, et al. Nursing the patient with severe communication impairment. *J Adv Nurs*. 2001; 35:827–35. [PubMed: 11555030]
- Koloroutis, M. *Relationship-based care: A model for transforming practice*. Creative Health Care Management, Inc.; Minneapolis: 2004.
- Krueger, RA. *Focus group interviews: A practical guide for applied research*. 2nd ed.. Sage Publications; Thousand Oaks: 1994.
- Krueger, RA.; Casey, MA. *Focus group interviews: A practical guide for applied research*. 3rd ed.. Sage Publications; Thousand Oaks: 2000.
- Leathart AJ. Communication and socialisation (2): Perceptions of neophyte ITU nurses. *Intensive Crit Care Nurs*. 1994a; 10:142–54. [PubMed: 8012154]
- Leathart AJ. Communication and socialisation (1): An exploratory study and explanation for nurse-patient communication in an ITU. *Intensive Crit Care Nurs*. 1994b; 10:93–104. [PubMed: 8012157]
- Light, JC.; Binger, C. *Building communication competence with individuals who use augmentative and alternative communication*. Paul H. Brookes Publishing; Baltimore: 1998.
- Magnus VS, Turkington L. Communication interaction in ICU--Patient and staff experiences and perceptions. *Intensive Crit Care Nurs*. 2006; 22:167–80. [PubMed: 16298132]
- McCallion P, Toseland RW, Lacey D, Banks S. Educating nursing assistants to communicate more effectively with nursing home residents with dementia. *Gerontologist*. 1999; 39:546–58. [PubMed: 10568079]
- Nelson JE, Cox CE, Hope AA, Carson SS. Chronic critical illness. *Am J Respir Crit Care Med*. 2010; 182:446–54. [PubMed: 20448093]
- Patak L, Wilson-Stronks A, Costello J, Kleinpell RM, Henneman EA, Person C, et al. Improving patient-provider communication: A call to action. *J Nurs Adm*. 2009; 39:372–6. [PubMed: 19745632]
- Patton, MQ. *Qualitative research and evaluation methods*. 3rd ed.. Sage Publications, Inc.; Thousand Oaks: 2002. Qualitative interviewing; p. 385-91.
- Salyer J, Stuart BJ. Nurse-patient interaction in the intensive care unit. *Heart Lung*. 1985; 14:20–4. [PubMed: 3844000]
- Tonelli MR. Waking the dying: Must we always attempt to involve critically ill patients in end-of-life decisions? *Chest*. 2005; 127:637–42. [PubMed: 15706007]
- Wojnicki-Johansson G. Communication between nurse and patient during ventilator treatment: Patient reports and RN evaluations. *Intensive Crit Care Nurs*. 2001; 17:29–39. [PubMed: 11176006]
- Varcoe C, Doane G, Pauly B, Rodney P, Storch JL, Mahoney K, et al. Ethical practice in nursing: Working the in-betweens. *J Adv Nurs*. 2004; 45:316–25. [PubMed: 14720249]
- Yorkston, K.; Miller, R.; Strand, E. *Management of speech and swallowing in degenerative diseases*. 2nd ed.. PRO-ED; Austin: 2004.

Web References

The Joint Commission. Oakbrook Terrace: The Joint Commission. 2010. Advancing effective communication, cultural competence, and patient- and family-centered care: A roadmap for hospitals; p. 18 from <http://www.jointcommission.org/assets/1/6/ARoadmapforHospitalsfinalversion727.pdf>

Table 1

Glossary of Assistive Communication Strategies

Strategy	Description/Purpose
Gaining attention & making eye contact (Light and Binger, 1998)	Ensuring patient and nurse focus on each other's faces and messages
Confirming all patient messages (Beukelman and Mirenda, 2005; Hemsley et al., 2001)	Validating that messages are understood by repeating message or understanding of message
Establishing clear YES/NO signal (Beukelman and Mirenda, 2005; Hemsley et al., 2001)	Ensuring that signal for YES-NO can be consistently executed and remembered by patient, and understood by others
Patient gesture or signal dictionaries (Beukelman and Mirenda, 2005; Connolly, 1992)	Displayed list of frequently used patient-specific gestures or signals and their meanings
Pause time (Basil, 1992; Calculator, 1988; Light and Binger, 1998)	Allowing increased time between communication exchanges to facilitate patient thought processing
Partner-assisted scanning (Beukelman et al., 2007; Beukelman and Mirenda, 2005)	Patient confirms correct row of, and then actual letter/word/picture on a communication board, as CP announces it aloud
Written choice strategy (Garrett and Beukelman, 1992, 1995; Garrett and Huth, 2002)	CP asks questions, writes possible answers using key words in large print, reviews the choices aloud while pointing to them, and instructs the patient to point or signal YES/NO to the most accurate answer
Tagged YES/NO strategy (Beukelman and Mirenda, 2005; Binger and Light, 2007)	CP asks a question and tags the end with "Yes...or No?," alerting patient to response choices
Messaging strategy (Beukelman and Mirenda, 2005; Garrett et al., 2007)	Patient composes written message in advance, for CP to read upon return to room, conserving HCP time and patient energy
Eye gaze board (Beukelman and Mirenda, 2005; Garrett et al., 2007)	An eye gaze communication board is a vertically held/mounted board, made of Plexiglas or sturdy paper with a window cut in the middle. A person with severe speech and motor impairments communicates by focusing their gaze on selected items (symbols, words or letters) displayed in quadrants or sections of the board.

CP=communication partner; HCP=healthcare provider

Table 2

Study participant characteristics

	Total Participants (n=6)	Group #1 (n=2)	Group #2 (n=3)	Individual Interview (n=1)
Study Phase *				
2	1	0	1	0
3	5	2	2	1
Participant Sex				
Female	5	2	2	1
Male	1	0	1	0
Unit				
CTICU	2	0	1	1
MICU	4	2	2	0
Years of Critical Care Experience				
<1 year	0	0	0	0
1-5 years	4	2	2	0
5-10 years	1	0	0	1
11 years	1	0	1	0

* Phase 1 was a control group whose participants did not receive training or additional communication materials. Nurses who participated in Phase 1 were not interviewed.

Table 3

Focus Group Scripts and Summaries.

Script	Summary of Participant Comments
Tell us what you thought about the basic communication skills training (BCST)?	<ul style="list-style-type: none"> • Enlightening; helpful; introduced or reinforced known strategies • Could “relate” to video BCST exemplar training featuring colleagues • Some strategies novel or “interesting” but impractical (e.g., eye-gaze board)
What skills, knowledge, techniques do you use from the BCST?	<ul style="list-style-type: none"> • Encouraging printing; watching as patients write; making eye contact; voice inflection; gaining attention by addressing patient by name • Incorporation of communication assessment into shift report
If you were going to improve/enhance the BSCT, what one thing would you change?	<ul style="list-style-type: none"> • Extend training to other HCPs; emphasize need/role of SLP to physicians • More intuitive terminology • Enlarge print of some boards for patients with motor/visual limitations
Can it be shorter?	<ul style="list-style-type: none"> • Shorten to 1 hour (from 4 hours)
What do you think was the most essential information?	<ul style="list-style-type: none"> • Independent BCST strategies not requiring SLP support
What additional information would you have liked to receive?	<ul style="list-style-type: none"> • No suggestions; felt information received was sufficient
What were the most important aspects of the program to you?	<ul style="list-style-type: none"> • Learning through colleague video exemplars • Availability of communication materials on units • Consultation with the SLP
What information or strategies have you used most?	MOST: Making eye contact, tagged yes/no, 1st letter pointing and mouthing words, communication boards; electronic voice output devices (some nurses)
Least?	LEAST: Eye-gaze boards, written-choice, partner-assisted scanning, emotion boards
Was the training website valuable?	<ul style="list-style-type: none"> • No recall of website; unclear whether this resource was referenced in all training sessions
How often did you use it?	
Was the communication algorithm pocket card useful? Did you refer to it?	<ul style="list-style-type: none"> • Mixed reactions: helpful vs. too “busy” • Great for new graduate nurses • Intuitive design for ICU nurses familiar with treatment algorithms • Misplaced pocket reference card frequently
How would this work as an on-line	<ul style="list-style-type: none"> • As part of new nurse orientation or online nurse training modules • Unit champions/leaders to supplement online information • Use real nurse exemplars/simulations

Script	Summary of Participant Comments
educational offering?	<ul style="list-style-type: none"> • Incorporate definitions and scenarios of “when to use”
What would you tell other ICU nurses about the program?	<ul style="list-style-type: none"> • Surprisingly informative; worthwhile • Improved practice: more patience, increased confidence
Any success stories that you would like to share?	<ul style="list-style-type: none"> • Multiple success stories with implementation of electronic AAC devices: permitted greater patient autonomy, gave patient purpose/voice, allowed nurse to multi-task

HCP=healthcare provider