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Voices from the Field

Promoting System Change for Communication Access in Acute Care Hospitals

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ABSTRACT

Improving communication access for patients is a vital step toward improving healthcare in the United States and worldwide. A growing body of research supports the use of communication strategies, including augmentative and alternative communication and assistive technology tools, as a fundamental aspect of quality patient care and recovery. Unfortunately, a number of barriers prevent the consistent implementation of these tools in acute care hospitals, and these barriers have been amplified since the advent of the COVID-19 pandemic. This paper documents existing barriers to patient-provider communication within hospitals and presents recommendations, resources, and case studies to highlight the benefits and positive outcomes of communication interventions to guide clinical practice in this setting.

Specifically, recommendations are presented across a number of systems that impact healthcare delivery including: (a) healthcare policies and regulations, (b) healthcare providers, (c) hospital units and departments, and (d) patients and families.

Keywords: Patient-provider communication, augmentative and alternative communication, hospitals, healthcare

INTRODUCTION

A 20-year-old man with cerebral palsy and severe dysarthria tested positive for COVID-19 and was admitted to the intensive care unit (ICU) of a large hospital. He used a speech-generating device (SGD) at baseline, but due to the emergent nature of his admission, he only had a low-tech communication board at his bedside. Due to complex social circumstances, he was alone in a negative-pressure room for the duration of his hospitalization, with face-to-face visitors restricted to nurses and physicians wearing full personal protective equipment (PPE).

Thankfully, supports were in place at his hospital to ensure that he could successfully interact with staff and his family using a variety of tools and techniques. First, the medical team placed a consult order to the speech-language pathology department to assess his communication needs and provide recommendations. Through a virtual visit with the patient and his nurse (with the speech-language pathologist [SLP] calling from outside the room), and subsequent discussions with outpatient providers who treated the patient prior to his admission, the patient was given a loaner SGD with his personal page sets and settings, a rolling floor mount so he could easily touch the screen while in his hospital bed, a hospital-issued tablet for virtual consultation provided by unit leadership, and an additional tablet mount for optimal visualization. The SLP set up all the equipment outside the patient's room, demonstrated to the nurse how to use the equipment, and educated the nurse on strategies to promote carryover at the bedside. Signage was posted in his room to inform nurses at change of shift how to set up all the equipment to ensure accessibility throughout the patient's admission.

Once optimally set up, this patient was in full control of conversations with staff and his family. He was able to express his needs, communicate his desires, and socialize freely. Conversations, both face-to-face and via virtual technologies, quickly turned from staff only asking "How are you feeling?" or "What do you need?" to the patient directing his music therapists on which artists to cover during virtual therapy. He readily connected with his medical providers and asked questions about their interests.

In this case, hospital policies were in place to purchase and stock communication equipment on the unit; leadership was committed to training staff how to implement techniques to support communication using a variety of technology; staff specializing in communication technology were consulted; and the patient and his nursing staff were able to communicate successfully throughout his admission. Practices, policies, and staff, each a component of the larger hospital system, worked together to unlock a world of communication beyond this patient's basic wants and needs.

The need for patients and providers to communicate effectively throughout the entirety of a hospital stay is paramount to medical recovery and social-emotional well-being. A growing body of literature supports the use of augmentative and alternative communication (AAC) and assistive technology (AT) interventions to enhance patient-provider communication. These strategies, which encompass a wide range of solutions (e.g., communication boards, speech-generating devices) for people with communication difficulties and disorders, have long been used to solve everyday communication challenges; however, there is often little infrastructure for service provision in hospital settings. In the United States, policies and regulations must be in place within the hospital system to address patient rights to access appropriate communication supports (e.g., The Joint Commission, 2010), but providing nonspeaking patients with the necessary means to communicate effectively with providers is not often consistently addressed (Beukelman & Light, 2020). System change across hospital enterprises is urgently warranted to ensure that all patients' communicative needs are met during what might be the most vulnerable time in a person's life.

Hospital systems are comprised of several layers of organizational structure, each of which must recognize and support communication needs as a vital aspect of patient care to collectively address patient needs at the bedside. Unfortunately, many hospital leaders and providers are unfamiliar with the patient-provider communication literature, implementation of best practice in AAC/AT, and current regulations that mandate communication access for patients with limited speech. Though some institutions in the United States are implementing best practices (e.g., Blackstone et al., 2015; Santiago & Costello, 2013), barriers exist that may prevent the advocacy, creation, and implementation of new protocols and services to improve patient-provider communication. Despite a growing body of research that demonstrates the benefits of AAC/AT interventions to support patient-provider communication and existing policies mandating use of these interventions as a standard component of patient care (e.g., The Joint Commission, 2010), individuals within all levels of hospital systems are not fully aware of the importance of these interventions nor how to effectively implement them. This paper aims to describe barriers, responses, and solutions to promote hospital-wide system change to enhance patient-provider communication, access to AAC/AT in acute care settings, and ultimately, to reform patient care.

TARGET AUDIENCE AND RELEVANCE

This paper is intended for healthcare providers including but not limited to speech-language pathologists, occupational therapists, physical therapists, nurses, physicians, mental health professionals, and hospital leadership. Information presented will inform these stakeholders how to promote effective and meaningful patient-provider communication and to advocate for changes within hospital systems to ensure access to appropriate communication tools, strategies, and trained staff during an acute care hospitalization. This manuscript represents the perspectives of the authors and was not subject to IRB insight.

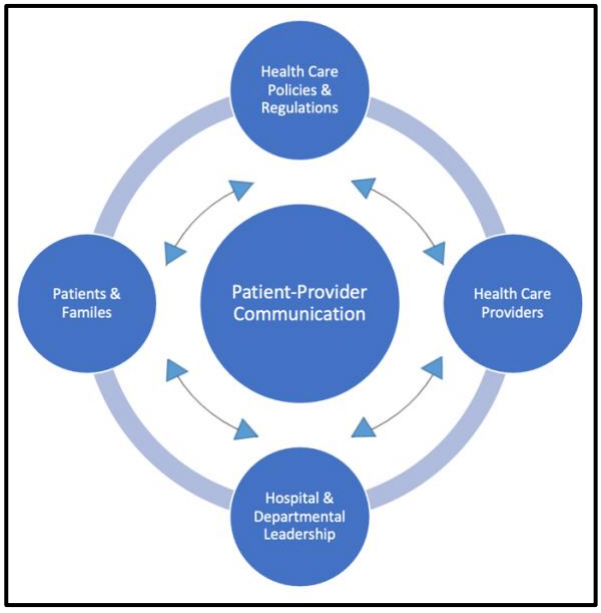
THE CASE FOR "COMMUNICATION ACCESS" IN HOSPITALS

In a study by Bartlett et al. (2008), patients identified as having communication disorders were three times

more likely to experience a preventable adverse event (e.g., medication errors, falls) compared to patients without communication disorders. These researchers also found that one-third of patients who experienced adverse events required hospital readmission. Adverse events have been linked to poorer patient outcomes, increased patient suffering and dissatisfaction, and longer hospital stays (Bartlett et al., 2008; Cohen et al., 2005; Joint Commission, 2010). Reducing communication barriers with this population could also lead to an estimated reduction of 671,440 preventable adverse event cases and a cost savings of 6.8 billion dollars (Hurtig et al., 2018). These high associated costs may be avoided when patient problems are understood, diagnosed, and treated in a timely manner.

In addition to an increased risk of adverse events, research has shown that when patients are unable to communicate and participate in their care, they are more likely to report dissatisfaction following a hospital admission. For instance, in a study of intubated patients with chronic obstructive pulmonary disease, researchers found that patients with access to AAC strategies while intubated reported higher satisfaction with care and spent less time ventilated in ICUs (El-Soussi et al., 2015). Emotionally, patients who experienced communication barriers have reported feelings of anxiety, fear, frustration, pain, and an overall loss of control (Baumgarten & Poulson, 2015). Patients who have had access to supportive communication strategies while unable to speak, whether temporarily or for extended time periods, experience reduced medical errors, increased positive patient outcomes, increased patient satisfaction, and reduced medical costs (Blackstone et al., 2015; El-Soussi et al., 2015; Hosseini et al., 2018; Rodriguez et al., 2016). They additionally receive less sedation, are transitioned faster to less intensive levels of care, report less pain, and report feeling more in control (Balas et al., 2014; Happ, et al., 2004; Patak et al., 2009; Wieczorek et al., 2015).

Figure 1: Healthcare and Hospital Systems Organization: A Radical Cycle



Ultimately, stakeholders at all levels of healthcare systems (as shown in Figure 1) must be committed to providing effective communication access to each patient; however, the route to achieving this goal is

unique to each healthcare organization. Promoting and implementing effective patient-provider communication practices does not necessarily have to start from the top (i.e., healthcare policy, laws, regulations); it can also begin with a patient, family member, or practitioner who is committed to promoting patient-provider communication. Regardless of the starting point, these practices can later expand to impact other internal and external systems.

OUTCOMES AND BENEFITS

AAC & AT Strategies to Promote Effective Patient-Provider Communication

Modifying providers' interactions at the bedside to support patient participation does not always require specialized training; however, various tools and strategies are particularly effective to promote a *mutual* exchange of information. A range of communication strategies and tools exist to support healthcare interactions and should be used to prevent communication breakdowns at the patient's bedside. Providers must be equipped with basic skills like identifying patient communication signals (e.g., facial expressions, gestures), responding to these signals, and checking for understanding, which can help ensure that patients comprehend the situation and are prepared for future events and actions (Blackstone et al., 2015). Prior to defining how stakeholders within a hospital system can modify their practices, protocols, or policies to promote change, it is helpful to understand how communication can be enhanced so both providers and patients comprehend, express, and exchange meaningful messages.

AAC strategies range from *no technology* (e.g.*,* gestures, eye movements, facial expressions, manual signs) to *low-technology* (e.g.*,* communication boards and static visuals) to *high-technology* (e.g., speech-generating devices on various technology platforms). Inexpensive strategies like paper, pencil, dry-erase boards, and magnifying glasses can be made available in the absence of AAC specialists (e.g., speech-language pathologists, occupational therapists) for patients who have trouble speaking, seeing, understanding, and/or hearing. Patients may use written communication or simple letter boards to convey concerns and questions to providers and vice versa. Picture-communication boards and other inexpensive, low-tech tools (e.g., like materials available on www.patientprovidercommunication.org) can further support expressive and receptive communication across a variety of topics based on individual patient needs and experiences (e.g., patients who are not literate).

Some patients benefit from the use of speech-generating applications, which may be downloaded to personal or hospital-issued devices, while others may benefit from high-tech speech-generating devices to communicate broader and more diverse messages using a variety of alternative access strategies (e.g., eye-tracking, switch-scanning, mouse controls) across a variety of media platforms. Importantly, patients who cannot activate the standard nurse-call system due to muscle weakness or motor impairments need adapted nurse-call switches or systems to ensure a reliable line of communication to providers outside the room (Zubow & Hurtig, 2013).

Patients without communication impairments may also benefit from the use of communication strategies during hospital interactions including AAC/AT tools (Blackstone et al., 2015). For instance, patients who do not speak the same language as hospital providers are also at risk for communication breakdowns.

Access to interpreters, through virtual or live means, and use of low-tech and high-tech strategies that promote mutual exchange of information are essential to effective patient-provider interactions.

A *feature-matched AAC assessment* remains the gold standard for evaluating a patient's unique needs and skills to ensure that the most appropriate strategies are provided to promote effective communication (Beukelman & Light, 2020). For example, assessment of vision and hearing may support the need for large print, amplifiers, or other assistive devices. If a patient experiences difficulty with mobility, strength, and coordination, adjustable mounts for communication devices, alternative writing tools, adapted nurse-call switches, and other assistive technology solutions may be warranted. If patients have difficulty pointing to pictures, letters, and other targets to access messages, they may benefit from partner-assisted scanning of messages or speech-generating systems that incorporate eye-tracking technology or switch-scanning. In some hospital settings, emerging evidence supports the more frequent recommendation for low-tech strategies; however, a range of no-tech, low-tech, and high-tech tools should be available to support the wide spectrum of patient needs (Santiago et al., 2017).

BARRIERS TO CHANGE, RESPONSES, AND SOLUTIONS

Unfortunately, AAC/AT techniques are often underutilized in healthcare settings due to practitioners' lack of knowledge, limited access to AAC tools, and/or limited referral to speech-language pathologists and other professionals with AAC/AT skills. While there is no one-size-fits-all solution to communication access in hospitals, themes and trends from current literature highlight potential barriers and offer solutions to support service provision. As previously mentioned, healthcare decision-makers and providers at different levels of institutional organization may face a myriad of barriers that affect these efforts. Identifying barriers faced in hospitals is a first step in responding to problems and identifying solutions (Beukelman & Light, 2020). Next we discuss the different systems that impact patient-provider communication within acute care hospitals: (1) healthcare policies and regulations, (2) healthcare providers, (3) hospital and departmental leadership, and (4) patients and families. Each system is dynamic and intricately interrelated with the other systems when influencing patient care. Table 1 summarizes major barriers and potential responses and solutions based upon existing research, policy, and the clinical experiences of the authors.

Table 1: Barriers, Responses, and Solutions to Enhance Patient-Provider Communication

Opportunity Barriers in Hospitals	Potential Responses and Solutions
Attitudes: *Communication access is not prioritized in hospitals*	- Encourage providers to embrace change. - Participate in trainings to foster empathy when providing care to patients with communication disabilities (e.g., Baron et al., 2018). - Employ inter-professional practice and collaboration in patient care. - Recognize that providing communication access is within all health care providers' scope of practice. - Review policy and hospital regulations that address patients' rights to communication access. Advocate for integration of practices that adhere to hospital regulations and standard policy.

Opportunity Barriers in Hospitals	Potential Responses and Solutions
Knowledge & Skills: *Staff do not know about communication supports, how to use them, or effective communication strategies.*	- Review literature on outcomes of communication access including cost savings, cost benefits, patient and provider satisfaction, quality and safety (e.g. Hurtig et al., 2018; The Joint Commission, 2010). - Review literature related to best practice in AAC in acute care settings (e.g., Blackstone et al., 2015; Beukelman et al., 2007). - Include patient-provider communication and practices into pre-service staff training and routine in-service training (e.g., orientation, annual competencies) with all members of the health care team (e.g., medical students, SLPs). - Participate in professional development focused on best practices in AAC in acute care.
Resources: *Hospitals/units do not have access to communication supports or are not staffed with AAC/AT professionals that can help meet the needs of patients with limited motor, speech, cognitive, or diverse linguistic needs.*	- Allocate funds for staff, materials, and equipment to enhance patient-provider communication efficacy. - Explore alternative funding options (e.g., hospital foundations, community grants) to support the purchase of communication equipment. - Set aside time for materials preparation, delivery, and modification within productivity demands. Prepare ahead when possible (e.g., build communication symbol banks). - Create communication toolkits to support communication access at all phases of recovery (e.g., Happ et al., 2014). These toolkits should not replace the skilled evaluation and treatment by an AAC/AT professional, rather it should supplement and support the screening, assessment, and treatment process. This should include face-to-face communication, mobile communications, and nurse-call access. Decision trees and disclaimers to inform use of tool kits should be included. - Consider the needs of patients who do not speak the language of the hospital environment and integrate that into resource development. - Create a plan to prevent lost or stolen equipment, abide by infection control practices, and have practical storage solutions for tangible resources.
Practice: *Staff do not know when or how to use the communication supports; tools are available on units but are not used; AAC referrals are not routinely made*	- Adopt the mindset that providing communication access does not end with “the tool,” but instead should span *tools and strategies* that may evolve across the recovery continuum (Beukelman et al., 2007; Blackstone et al., 2015; Santiago and Costello, 2013). - Perform a feature-matched AAC/AT assessment at bedside and conduct diagnostic reevaluation as the patient recovers. - Include patient-provider communication and practices into routine staff training (e.g., orientation, annual competencies) with all members of the health care team (e.g., medical students, SLPs). Education should target: - Strategies to support provider-to-patient communication and patient-to-provider communication for patients with baseline or acute communication impairments. - General communication trainings (e.g., Happ et al., 2014) and personalized trainings based on the patient’s unique skills and needs.

Opportunity Barriers in Hospitals	Potential Responses and Solutions
Environment: *Strict infection control policies, patients are interacting with many people and in [potentially] different units; dense presence of medical equipment at bedside*	- Keep recommended equipment at the bedside and ensure that the patient can access the equipment during all cares, procedures, and interactions. - Provide signage regarding the patient's communication strategies, equipment operation/troubleshooting, and AAC/AT provider's contact information. - Ensure that the patient can access communication tools and strategies upon transfer within hospital (e.g., between units). - Ensure mutual exchange of medical information and AAC/AT recommendations prior to discharge as the patient transfers to inpatient rehabilitation hospital, home, etc. - Label communication devices and create a system for equipment storage - Follow hospital infection control protocols at all times to reduce the spread of communicable diseases (e.g., COVID-19). - Have a low-tech backup at all times in case of AAC/AT equipment malfunction, low battery, etc.

Healthcare Policies, Laws, and Regulations

In 2020, the COVID-19 pandemic revealed how existing laws and policies, intended to support patients with disabilities and communication impairments during hospitalizations, were not sufficiently integrated into the culture of daily practice. Laws, outlined in the Appendix, have been in place for decades to support a person's right to equal care, yet healthcare disparities continue to exist for people with communication disabilities. The Joint Commission, the accreditation body for the majority of healthcare organizations in the United States, has mandates and scoring standards that specifically address identification and provision of communication tools and strategies. Unfortunately, hospitals often do not have protocols in place that address the daily delivery of services needed by patients with communication disabilities.

Despite these known accreditation regulations and the urgent need to address communication access issues, healthcare decision makers may be unaware of communication intervention practices and potential communication tools that are readily available (Beukelman & Light, 2020). This gap in knowledge at the administrative level puts institutions at risk regarding their bottom lines, the effectiveness of their outcomes, and most importantly, the health and well-being of their patients (Hurtig et al., 2018).

Hospitals that adhere to policies and regulations designed to protect patients' communication access are likely the exception to the rule (Blackstone et al., 2015). However, these institutions, along with organizations that advocate for policy change, are setting the stage for hospital-wide change. For example, CommunicationFirst, a nonprofit organization advancing civil rights of people with communication disabilities or conditions, advocated for states and hospitals to adhere to their obligations for communication access under federal civil rights laws. In response to collective efforts from CommunicationFirst and other groups, the Office for Civil Rights at the U.S. Department of Health and Human Services announced a resolution that requires hospitals to ensure patients with disabilities can access in-person support personnel during the COVID-19 pandemic (U.S. Department of Health and

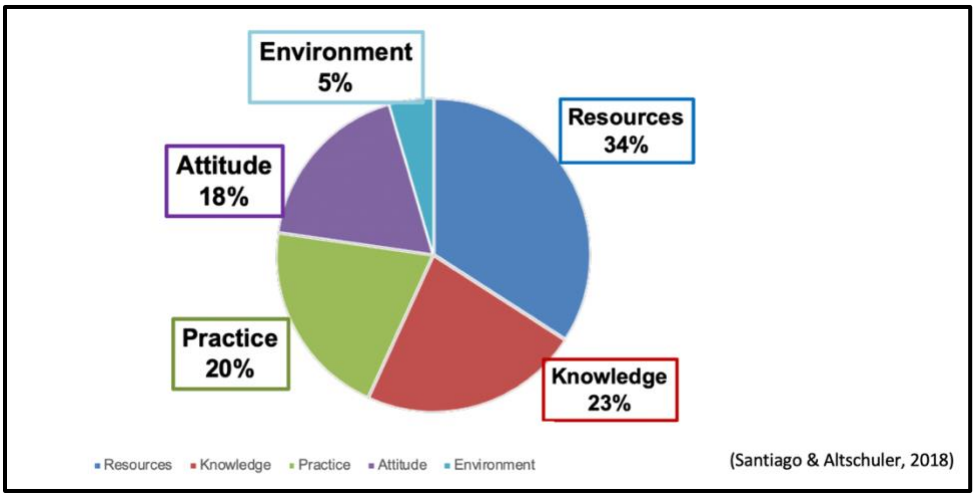
Human Services, 2020).

Department and Unit Specific Providers

To promote enhanced patient-provider communication, providers can take the following actions to integrate strategies into routine practice: (a) evaluate current barriers to successful patient-provider communication; (b) identify and participate in existing initiatives that incorporate communication access and AAC services; (c) collaborate with existing teams to broaden the reach of provider consultation to patients in need, including participation in unit rounds; and (d) promote, provide, and attend staff training focused on patient-provider communication and communication access. In the following sections, we discuss each of these actions and provide potential solutions for providers to take to engage in effective patient-provider communication with patients who benefit from communication strategies and tools.

Evaluate Barriers. The first step to understanding how to improve patient-provider communication and intervention is to understand existing barriers. Common barriers reported by patients and providers include: (a) time constraints for providers to interact with patients, (b) limited staff knowledge and skills in implementing communication interventions, and (c) limited access to AAC/AT resources and equipment (e.g., Blackstone et al., 2015; Gormley & Light, 2019; Hemsley & Balandin, 2014; Santiago et al., 2018). Although these barriers are frequently cited in the literature and should be considered when addressing AAC/AT interventions in healthcare settings, every hospital, unit, and team experience a unique mixture of challenges that should be investigated. For example, to identify the state of AAC bedside service delivery in acute care, Santiago and colleagues (2018) distributed a 35-question survey to SLPs in the United States. Many respondents indicated that there are multiple barriers to bedside AAC practice related to the available resources (e.g., limited funding, time, and equipment), staff knowledge (e.g., limited pre-service learning experiences), healthcare practices (e.g., clinical priorities do not align with communication access), staff attitudes (e.g., care provision is easier without devoting significant time to communication access), and the hospital environment (e.g., difficulties related to equipment storage, infection control precautions). Only 10% of 116 respondents reported feeling “well supported” by a hospital culture that embraces communication enhancement efforts (Figure 2).

Figure 2: Barriers to AAC Implementation



Identify and Participate in Existing Initiatives. There are many initiatives occurring in hospitals to implement organizational change for optimal patient care. For instance, early mobility programs have received considerable attention over the past several years and numerous studies demonstrate that rehabilitation services provided to critically ill patients improve function, enhance quality of life after discharge, are cost-efficient, and are safe (e.g., Corcoran et al, 2017; Wieczorek et al., 2015). Including interventions to support communication within early mobility treatment enables patients to participate in their care early in their recovery process with a variety of professionals (e.g., nurses, physical therapists). An interprofessional treatment model involving the collaboration between the physical therapist, occupational therapist, and speech-language pathologist facilitates mobility, access, and cognitive-linguistic expertise for optimization of AAC evaluation and treatment (Altschuler et al., 2018).

Communication enhancement may be part of other hospital initiatives that providers can champion. These may include program development committees that target areas such as developmental care for pediatric patients receiving lengthy hospitalizations, promoting an autism-friendly hospital environment, intensive care unit delirium prevention and treatment, programs for patient safety and quality, and multidisciplinary tracheostomy care.

Collaborate with Existing Teams. Providers invested in enhancing patient-provider communication practices should partner and collaborate with multidisciplinary teams across the hospital setting. For example, the speech-language pathologist or AAC practitioner has a vital role as a core member of the Palliative Care team to provide early communication intervention before a condition worsens. Given access to appropriate strategies, patients can participate in decision-making for life-sustaining treatment or end-of-life care, which empowers patient autonomy and may reduce the burden of responsibility shifted to a healthcare proxy serving as a decisional surrogate. Additional examples of teams that can partner and champion patient-provider communication efforts might include tracheostomy care teams, complex care services, rehabilitation teams, neurology and oral surgery departments, and ventilation support teams. The ability to partner with social workers, child-life specialists, psychologists, chaplains, and other mental health professionals can ensure access to the appropriate communication strategies to bolster their important conversations with patients. Discussing patient feelings, concerns, perspectives, social supports, coping needs, spiritual preferences and more can effectively promote continued recovery, participation, and healing.

The Case for Staff Training. Communication skill training is part of pre-service education for many healthcare providers; however, the ability to support a patient's expressive communication during an acute hospitalization is much more nuanced. Integration of communication strategies into bedside interactions involves an understanding of the patient's baseline and current communication needs and skills, a mutual exchange of information using developmentally appropriate language, the potential use of materials that support this exchange, and the implementation of strategies to promote the patient's access to such materials.

In the case example highlighted above, communication access did not come to fruition by chance. Rather, years of staff education for hospital leadership, bedside providers, and referring physicians ensured that

healthcare providers were empowered with the knowledge to recognize the patient's needs and provide the appropriate resources. Only then could the SLP provide just-in-time training to the bedside nurse, who in turn helped inform her fellow nurses across shifts.

All healthcare professionals must learn how to use strategies and tools to effectively communicate with patients from diverse cultural and linguistic backgrounds, as well as patients who have difficulty speaking, hearing, understanding, remembering, and thinking. The knowledge and skills of providers impact the effectiveness of their service delivery and patient outcomes; therefore, pre-service and in-service training must be completed to equip healthcare workers to provide high-quality communication practices. Invested stakeholders may champion in-service education. Champions can then inform frontline care providers of best practices and provide training in implementation of potential tools and strategies.

Several education modules exist to support institutions that may not have such stakeholders available for in-service education. For example, the SPEACS-2 Communication Skills Training Program (Happ, 2014) is a research-based course for nurses aimed to teach them how to provide bedside assessment of nonvocal and ventilated patients and to select appropriately matched low-technology communication aids. Alternatively, AAC professionals may provide direct instruction and training to unit or departmental champions, who then disseminate that information to their respective colleagues. Collaboration between speech-language pathologists and nurses is key for developing a successful culture of communication (Altschuler & Happ, 2019).

Investing time and energy into evidence-based staff training on patient-provider communication practices yields positive outcomes (e.g., Baylor et al., 2019; Happ et al., 2014). For example, Boissy and colleagues (2016) found that patients reported higher satisfaction scores with physicians who completed communication skills training courses than with physicians who did not. Furthermore, Noguchi and colleagues (2019) demonstrated that staff training and interventions can promote increased awareness of patient communication needs among nurses and result in better identification of a patient's intent to communicate, even when the patient is mechanically ventilated and sedated. In this study, patient satisfaction in nursing care and self-dignity also increased when nurses enhanced their bedside communication practices.

Hospital and Departmental Leadership

Providing quality healthcare and ensuring patient safety are top priorities for hospitals. Including communication as a quality and safety concern can begin from the patient's first contact with healthcare providers (e.g., emergency department interactions, upon admission). For instance, a screening tool for baseline communication skills and needs can be utilized in the emergency department or in pre-operative testing. Clinical pathways or order sets for patients with diagnoses or surgeries that result in difficulty speaking (e.g. planned prolonged intubation, tumor resection, diagnosis of stroke, post-operative tracheostomy, etc.) can also be developed in electronic medical record systems to ensure that all providers are aware of the patient's communication needs and to ensure that supports are available at all levels of care.

While some institutions have developed formal services to address patient-provider communication, others may have services driven by individual providers, and therefore, practices may vary across units and wards. These inconsistencies may result in staff confusion, reduced referral to appropriate consulting services, varied care delivery, and decreased staff training. Hospitals may also be at increased risk for program disintegration when dedicated staff members or patient-provider communication advocates transition jobs or settings. Nordness and Beukelman (2017) describe several ways hospital institutions can promote regulatory practices, guidelines, and policies to promote enhanced communication. These include: (a) establishing a formal process to order referrals to appropriate consulting services in order to assess communication needs at the bedside; (b) create streamlined daily documentation formats across disciplines that integrates communication access needs and updates; (c) incorporate communication support needs into patient rounds (e.g., daily medical rounds, rehabilitation rounds, multi-disciplinary unit rounds); and (d) establish clinical pathways or care plans to guide referral to multidisciplinary providers, for necessary accommodations and for needed services. These may also include order sets, or a series of orders that are intended to capture multiple needed consults for a specific diagnosis or medical condition.

Hospital leadership should also develop or incorporate communication access needs into regular staff training and in-services for new hires as well as seasoned employees across disciplines. Enhancing patient-provider communication hospital-wide requires commitment to hiring knowledgeable staff with experience in AAC practices and AT solutions. For hospital and departmental leadership, this also means investing in the procurement of materials and equipment, ranging from low-tech to high-tech tools, to support a wide range of patient needs. The cost of these investments may pose a barrier to departments that are not currently budgeting for these needs, despite evidence that addressing communication barriers can have quality, safety, and cost-saving benefits (Hurtig et al., 2018). As previously mentioned, the potential cost-savings and improvements in patient care suggest that it would behoove hospitals to invest the time and money in addressing patient-provider communication as effectively and supportively as possible in addition to supporting staff training and expansion.

The Patient and Family

Patients in hospitals may have baseline or acute communication impairments. Although many patients with baseline communication disabilities and their families may be aware of their rights and needs outside the hospital walls, patients must understand their rights within the healthcare system (see “Patients’ Bill of Rights” in Appendix). Patients with communication impairments may be unaware of available resources ranging from supportive staff with expertise in AAC, tangible materials on ICU or acute care floors to facilitate improved communication, and/or tools to support access to needed materials and technologies. Patients and families should partner with hospital leadership and providers to ensure communication needs are identified, respected, and supported through appropriate interventions.

When a hospital admission is planned for elective surgeries or procedures, patients and families can take collaborative action during a less stressful time prior to admission to yield more positive outcomes, experiences, and interactions. Patients with an anticipated loss of speech may also benefit from advanced planning in the context of more acute nonspeaking conditions, like emergent tracheostomy

(Santiago et al., 2019). Table 2 highlights ways patients and families can prepare ahead of a hospitalization.

Table 2: Communication Planning Ahead of a Hospital Admission

Patients with Preexisting Communication Challenges	Patients Who Anticipate a Loss of Speech
- Program medical page sets and relevant vocabulary into AAC systems - Bring communication tools and devices to the hospital along with any other needed equipment (e.g. mounts, switches, Bluetooth interfaces, etc.) - Learn about hospital policies regarding loss and theft prevention - Become familiar with the hospital's "Patient Bill of Rights" as well as state and federal laws to advocate for needs while inpatient. - Prepare signage depicting communication preferences - Complete a "Medical/Communication Passport" (Blackstone et al., 2015) with information related to medical needs and preferences, preferred communication methods, physical needs, and social information. - If over 18, identify a health care proxy and outline advanced care directives	- Learn about the anticipated impact of surgery or procedure on speech production, respiration, and physical skills - Work with a speech-language pathologist or independently create custom communication tools - Practice communicating with these tools using a variety of strategies (e.g. direct selection or pointing, eye gaze, partner-assisted scanning, etc.) - Participate in Message Banking™ if able by recording chosen messages to be programmed into a speech-generating device (Costello, 2000) - Complete a "Medical/Communication Passport" with information related to medical needs and preferences, preferred communication methods, physical needs, and social information. - If over 18, identify a health care proxy and outline advanced care directives

CASE EXAMPLE

In March 2020, as the COVID-19 pandemic swiftly spread in the United States, a no-visitor policy was immediately enforced for all patients and families at a hospital in New York City regardless of their COVID-19 status. A 25-year-old male in the Neurological Intensive Care Unit underwent a tracheostomy, was ventilator-dependent and unable to speak, and had bilateral upper-extremity weakness. Following SLP evaluation, he was trained on the use of an alphabet board to spell messages and, over the course of several therapy sessions, he learned to efficiently and effectively use partner-assisted scanning. The communication partners at his bedside were trained in implementation of this strategy and nurses provided education and demonstration to the incoming nurse during shift changes. Patient-provider communication was successful across partners, shifts, and contexts, but due to the visitor restriction, he still expressed feelings of social isolation. He wished to communicate with his wife, especially given that she was pregnant and due in several weeks. Communication access went beyond the confines of the bedside, and the SLP began conducting therapy sessions via teleconference using his cell phone so the patient could interact with his wife. His wife printed the alphabet board at home and was able to communicate with her husband during scheduled video-chat calls. He even participated in the decision making for selecting a baby name through partner-assisted scanning using virtual technology. As he regained fine motor control and strength, he was able to independently access the alphabet board and initiate the video calls to his wife and other family members. The patient was eventually able to write on a dry-erase board and use his own phone to download a text-to-speech app. During such a time of anxiety for all, he was able to ask his family questions regarding their own safety and well-being. When he was

discharged from the hospital, he expressed having had feelings of satisfaction, empowerment, and a sense of control as a caregiver himself, even while physically apart from his family.

CONCLUSION

Improving communication access for at-risk patients is a vital step toward improving healthcare in the United States and worldwide. Patient-provider communication and use of communication strategies in hospitals has been identified as a fundamental aspect of quality patient care and recovery. Yet without efforts to recognize communication and associated interventions, hospitals cannot effectively respond to known barriers and integrate AAC/AT and services into daily practice. Shifting hospital culture takes time, commitment, and the concerted efforts of stakeholders at each level of institutional structure. Ensuring communication access through a range of no-tech, low-tech, and high-tech AAC/AT strategies, *will* yield more positive outcomes for patients, families, providers, and hospital leadership. This paper documented existing barriers to patient-provider communication within hospitals and provided recommendations, resources, and case studies that highlight the benefits and positive outcomes that stem from provision of appropriate interventions. Change can begin at the top by recognizing and responding to barriers and gaps in care at the policy and leadership levels. Change can also begin from individual patients, families, providers, and teams through action and improvements within hospitals. Regardless of how system change is launched, support must be in place at all levels of organization within a hospital system.

DECLARATIONS

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APPENDIX

Convention on the Rights of Persons with Disabilities

In 2006, the United Nations General Assembly adopted the treaty, the *Convention on the Rights of Persons with Disabilities* to ensure that people with disabilities have access to the same rights and opportunities as everybody else. The treaty defines communication with the inclusion of augmentative and alternative communication modes which validates AAC as a mainstream approach to meeting communication needs. Furthermore, the *Convention* sets out legally binding obligations on all countries to ensure the rights of all people with disabilities to achieve equality in society.

For more information visit: https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

The Joint Commission

The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO, now The Joint Commission) in the United States strongly emphasizes (Standard of Care RI.2.100) that patient have the right to effective communication and health care organizations need to provide support to achieve effective patient-provider communication of all patients. Specifically, the Elements of Performance for RI.2.100, No. 4 state, "The organization addresses the needs of those with vision, speech, hearing, language, and cognitive impairments." Additionally, the 2007 National Patient Safety goals include (2007 National Patient Safety goals- Goal 13) encouraging “patients’ active involvement in their own care,” which requires overcoming communication barriers.

For more information visit:
http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/07_bhc_npsgs.htm

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) of 1990 is a civil rights law that prohibits discrimination against individuals with disabilities and to ensure that these individuals have the same rights and opportunities as everyone else. The ADA requires that Title II (state and local government services) and Title III (businesses and non-profit organizations that serve the public) communicate with people with disabilities as equally effective as their communication with people without disabilities.

For more information visit: https://www.ada.gov

Rehabilitation Act of 1973

Section 504 of the Rehabilitation Act of 1973 states that “no qualified individual with a disability in the United States shall be excluded from, denied the benefits of, or be subjected to discrimination under” any program or activity that receives Federal financial assistance. As all hospitals in the United States receive reimbursement and funding from Centers for Medicare and Medicaid Services (CMS), they are required to provide effective communication supports for patients.

For more information visit: https://www.dol.gov/agencies/oasam/centers-offices/civil-rights-center/statutes/section-504-rehabilitation-act-of-1973

Affordable Care Act (ACA)

Section 1557 of the Affordable Care Act (ACA) in the United States prohibits discrimination on the basis of disability and provides that no individual shall be barred from participation in or be denied the benefits of any health program that receives Federal financial assistance. This works in conjunction with other Federal anti-discrimination and civil rights legislation.

For more information visit: https://www.hhs.gov/civil-rights/for-individuals/section-1557/index.html

A Patient's Bill of Rights

"A Patient's Bill of Rights" was the name of a document that the American Hospital Association (AHA) introduced in 1973 and revised in 1992 with the expectation that observance of these rights will contribute to the delivery of effective care. The AHA encouraged each healthcare facility in the United States to adapt 12 rights to fit the needs of their patient community. In 2003, the AHA replaced its original Patient's Bill of Rights with the Patient Care Partnership, which is a brochure written in plain language and offered in multiple languages for the patient to understand their rightful expectations for their hospital stay. Each hospital may have their own Bill of Rights, however effective communication between patients and providers is most often included.

For more information visit: https://www.aha.org/other-resources/patient-care-partnership