ADDRESSING COMPLEX COMMUNICATION NEEDS IN PEDIATRIC REHABILITATION SETTINGS

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BACKGROUND

CURRENT INTERESTS

AAC implementation within inpatient rehabilitation settings to optimize outcomes of children and adolescents with complex communication needs (CCN)

Goals:
1. Tool development and design enhancement to optimize use of high-tech communication methods in pediatric rehab settings
2. Development of training models and tools to empower pediatric rehabilitation professionals to implement evidence-based AAC strategies

COMMUNICATION DISABILITIES AND HEALTH OUTCOMES

- Individuals with CCN are particularly vulnerable within the inpatient environment to experience:
  - Adverse medical events
  - Communication breakdowns with professionals
  - The nature of the individual’s communication disability and/or inadequate preparation of key stakeholders to effectively engage in medical encounters (Blackstone, Beukelman, & Yorkston, 2015; Hurtig & Alper, 2016; The Joint Commission, 2014).
- Negative medical outcomes can be the result of:
  - For children with CCN, vulnerability may further magnified due to developmental challenges related to processing the unfamiliar and potentially frightening experience of an inpatient stay (Costello, Patak, & Pritchard, 2010).

RESPONSIBILITIES OF REHABILITATION FACILITIES

- Rehabilitation hospitals are mandated to design and implement services to meet the unique communication needs of all patients, including those who have a severe communication disability.
- Patient- and family-centered services
- Standards set by agencies such as The Joint Commission and the Commission on Accreditation of Rehabilitation Facilities (CARF) (The Joint Commission, 2010; Commission on Accreditation of Rehabilitation Facilities, 2014)

ROLE OF SPEECH-LANGUAGE PATHOLOGISTS

- Speech-language pathologists (SLPs):
  - Work within an interdisciplinary group of professionals who work in the rehabilitation setting
  - Are experts in AAC service delivery

Problem: Present service delivery practices, barriers and facilitators to this process are relatively unknown in this setting.
BIOECOLOGICAL THEORY

• Application of bioecological theory to health care practice can assist in conceptualizing the components vital to the provision of patient- and family-centered care (Tallon, Kendall, & Snider, 2015).
• Bioecological theory states:
  • Individuals exist within a broad social context, or ecology, which is comprised of nested layers of systems (Bronfenbrenner & Ceci, 1994).
  • When examining individuals who have complex communication needs within the context of inpatient rehabilitation, the quality of patient-provider communication has the potential to profoundly impact the individual’s participation in the rehabilitation process.

BIOECOLOGICAL THEORY APPLICATION: INPATIENT REHABILITATION

Socio-Cultural Beliefs
• Views of AAC and disability
  • Culture
Social Policies Governing Relational Networks
• Rehabilitation policies
  • Insurance regulations
Interactions Between Relationships
• Interactions among patient, provider, and family members
Personal Interactions
• Patient-provider
  • Patient-family
• Age
  • Skills (e.g., communication, mobility)
Individual
• Views of AAC and disability
  • Culture

PATIENT-PROVIDER COMMUNICATION AND AAC

A growing body of information exists regarding effective patient-provider communication practices with AAC users in medical settings.
Past inquiries focus on:
B. Hospital experiences of children with CCN diagnosed with cerebral palsy (Heynderickx, Konst, Bostick, & Scarinci, 2004; Heynderickx et al., 2003).
• A paucity of information exists regarding patient-provider communication practices and AAC use in pediatric inpatient rehabilitation contexts.

PATIENT-PROVIDER COMMUNICATION IN INPATIENT REHABILITATION

Project 1: Online Focus Groups of IP SLPs
Project 2: Basic Interaction Strategy Intervention for Pediatric Rehab Staff
Future Projects...

PROJECT 1: ONLINE FOCUS GROUPS OF INPATIENT SLPS

Research Questions
1.) What are the experiences and perceptions of speech-language pathologists who work within the inpatient rehabilitation setting when interacting with patients with complex communication needs (CCN)?
2.) What are the challenges and facilitating factors of patient-provider communication within inpatient rehabilitation to support individuals with a severe communication disability to fully participate in the rehabilitation experience?

PARTICIPANTS AND SAMPLING

• Purposive sampling techniques used to recruit SLPs to participate in an asynchronous online focus group
• Two groups were formed:
  • Focus Group A: 8 participants
  • Focus Group B: 11 participants
• Inclusion criteria: participants must:
  a) be over the age of eighteen years,
  b) hold the Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language Hearing Association, and
  c) have experience providing direct clinical services to individuals with CCN in the inpatient rehabilitation setting within the past year
MATERIALS AND SETTING

- The researcher served as the system administrator and group moderator.
- Asynchronous online focus group discussions were conducted with use of a private, password-protected website through www.blogger.com.
- This online platform was selected due to:
  - ease of use for participants to post individual text responses, read other members' responses, and comment accordingly
  - security features (i.e., password protection, access to website by invitation only) to ensure only group members will be able to view content (Caron & Light, 2015).

INTERVIEW GUIDE

Questions were developed following a review of the literature related to patient-provider communication within health care settings with individuals with CCN and role of SLTs in AAC service delivery.

Topics addressed in interview guide include:
(a) participants' roles in current service delivery with patients with CCN,
(b) how each participant works within a team to deliver services to patients with CCN,
(c) success stories of supporting individuals with CCN to effectively communicate with staff,
(d) challenges to supporting these individuals to communicate with staff,
(e) current training practices and recommendations for future pre-service and in-service trainings.

RESULTS – THEMES FROM FOCUS GROUPS

- Currently completing data analysis:
  - Unitization of the focus group transcripts
  - Grouping units into themes resulting from the data
  - Analyzing within and between groups (Kreese, 2002)

PROJECT #2: INTERVENTION STUDY

Aim: What are the effects of a communication training program presented on a mobile application on the percent accuracy of interaction strategies used by pediatric rehabilitation providers during shared storybook reading with a child with CCN?

Problem: no current trainings are available to specifically train medical professionals to interact with young children with CCN

Potential Solution: develop a communication training tool and intervention to address the unique needs of training pediatric rehabilitation providers

INTERVENTION DEVELOPMENT

- Currently available partner instruction methods and materials for medical settings:
  - Study of Patient-Nurse Effectiveness with Assisted Communication Strategies (SPEACS-II) (Happ et al., 2014)
  - "FRAMEing Conversations with Patients with Communication Disorders" (Yorkston, Boyle, Burns, Harris, & McNally, 2015)
  - Dowrey (2014) use of web-based tutorials in acute care
  - Pediatric ICU/critical care models (Costello, Patak, & Pritchard, 2010)
- Partner instruction methods and materials to improve interactions with young children with CCN:
  - Stages of communication partner instruction (Kent-Walsh & McNaughton, 2010)
  - Partner instruction methods through use of online modules and in-person practice sessions (Douglas, McNaughton, & Light, 2013)
  - IMPAACT training to improve interactions between educators/parents and children with CCN during shared story reading tasks (Kent-Walsh, Binger, & Hasham, 2010)

ADULT LEARNING PRINCIPLES

1. Adults need to know why they are learning
2. Adults are motivated to learn by the need to solve problems
3. Adults' previous experience must be respected and built upon
4. Adults need learning approaches that match their background and diversity
5. Adults need to be actively involved in the learning process

(Bryan, Kreuter, & Brownson, 2009)
COMMUNICATION PARTNER INSTRUCTION

Stages of Communication Partner Instruction:
1. Pre-test and commitment to instructional program
2. Strategy description
3. Strategy demonstration
4. Verbal practice of strategy steps
5. Controlled practice and feedback
6. Advanced practice and feedback
7. Post-test and commitment to long-term strategy use

Use of video visual scene display (vVSD) mobile application (Light, McNoughton, & Jakobs, 2014)

PARTICIPANTS
- Currently waiting on IRB approval with rehabilitation network in Pennsylvania
- Inclusion criteria: participants must:
  (a) be at or above eighteen years of age,
  (b) have no known speech, language, or hearing impairments,
  (c) have at least an equivalent of a high school diploma,
  (d) provide direct care services to pediatric patients (i.e., at or below eighteen years of age) who have CCN, and
  (e) provide direct clinical services within an inpatient rehabilitation setting

STUDY DESIGN
- Randomly assign pediatric rehabilitation providers to either the treatment or control group:
  Pre-test Intervention Post-test One Post-test Two
  Pre-test Post-test One Intervention Post-test Two

MEASUREMENT PLAN
- Primary Dependent Variable = percent of communication steps accurately implemented by adult
- Secondary Dependent Variable = number of communicative turns taken by child with CCN
- Operationalize communication skills and develop coding manual:
  - Adult:
    - Read the story + provide aided AAC model
    - Ask a wh-question + provide aided AAC model
    - Wait
  - Child: turn-taking behaviors
    (Kent-Walsh, Binger, & Hasham, 2010)

DISCUSSION QUESTION #1
How can we develop trainings that address the unique needs and roles of professionals within inpatient pediatric rehabilitation settings?

DISCUSSION QUESTION #2
How can we provide opportunities for rehabilitation providers to learn and practice communication strategies in a manner that can closely approximate the clinical environment?
### DISCUSSION QUESTION #3

How can we measure the quality of patient-provider communication between rehab professionals and children with complex communication needs in the inpatient setting to evaluate the success of these trainings in future projects?

### REFERENCES


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