

Introduction

Background and Significance:

- A routine part of physical therapy practice in post-acute care (PAC) is to decide whether:
 - To use an assistive device (AD) for ambulation such as canes and walkers.
 - Train patients to use the canes/walkers.
 - Determine whether it is efficacious for the individual.
 - Prescribe an AD by discharge.
- A large number of patients admitted to Skilled Nursing Facilities (SNFs) and Inpatient Rehabilitation Facilities (IRFs) have been diagnosed with a cerebrovascular accident (CVA) or traumatic brain injury (TBI):
 - Prevalence of Hospitalization in the United States/ year:
 - Stroke: 1 million**
 - TBI: 275,000**
- Health Care Expenditure:
 - Strokes comprise of **34 billion health care dollars/year**
 - Patients with stroke are **twice as likely** to fall compared to healthy age equivalent individuals (2.2 – 4.9 falls/year)
 - 40% of health care dollars are attributed to strokes are due to falls**
- Prevalence of AD prescription in the United States/ year: **6.5 million**
- There has been no protocol for PTs/PTAs to follow when choosing an AD for patients with CVA or TBI.**
- There has been little research describing the decision making process and such a description could be the basis for improvements in entry-level training and the development of a clinical decision making tool.

Purpose

- To determine the factors PTs/ PTAs, practicing in IRFs and SNFs, used to make decisions regarding assistive device prescription for patients with TBI and CVAs.
- To explore whether there are differences in approaches when prescribing assistive devices for these populations between PTs working in IRFs and SNFs.

Methods

Data Collection:

- A survey was created and emailed to PTs/PTAs working in 171 IRFs/SNFs affiliated with Nazareth's PT program.
- Reminders were sent out once a week for 4 weeks from May 9th -June 9th, 2016.
- 57 responses received, with 43 valid responses analyzed.
- 14 total responses removed for incomplete data (n= 7) or were not PT staff (n=7).
- Response rate was 25% (43/171).

Data Analysis:

- The survey contained both quantitative and qualitative questions to produce factors chosen by PTs/PTAs to help the decision making process.
- Quantitative data was downloaded into SPSS and analyzed using descriptive statistics.
- Qualitative data was organized by question, answers were tallied and arranged into themes by consensus.

Results

Quantitative Report of Decision Making

Demographics

Table 1: Description of Subjects

Factor	Frequency
Practice Setting (n=43)	
IRF	30
SNF	13
Years in Practice	
≤5	6
6-20	14
>20	19
No Response	4
Entry-Level Degree	
DPT	10
MS/MPT/BS	32
No Response	1
Treat Stroke/BI Regularly	
Yes	33
No	9
No Response	1

Table 2: Device Choice Based on Diagnosis

Diagnosis	Device		
	Cane	Walker	Hemiwalker
Stroke	29	31	30
Brain Injury	29	31	23

Qualitative Report of Decision Making

Table 5: Objective Outcome Measures

Objective Measure	Frequency
Berg Balance Scale	21
Timed Up and Go	14
Tinetti Gait and Balance Instrument	6
Dynamic Gait Index	4
6 Minute Walk Test	3
2 Minute Walk Test	2
Gait Speed	
5 Time Sit to Stand	
10 Minute Walk Test	
Modified Clinical Test of Sensory Integration and Balance	
None	
Functional Reach	1
Elderly Mobility Scale	
Functional Gait Assessment	
30 second Sit to Stand	
4 Square Step Test	
Activity-Specific Balance Confidence Scale	
Rhomberg Test	
Functional Independence Measure	

Table 3: Do you Always Prescribe a Cane or Walker?

Diagnosis	Yes	No	No Response
Stroke	3	31	9
Brain Injury	0	33	10

Table 4: Hierarchy of Factors Used in Decision Making

Variable	Frequency	
	Stroke: Device Training (Initiate/Change/Cease)	TBI: Device Training (Initiate/Change/Cease)
Gait	28-31	28-30
Balance	21-31	20-31
Weakness	21-30	18-30
Objective Tools	18-23	17-23
Patient Preference	10-22	9-16
Expectations	9-20	9-18
Living Environment	9-23	18-22
Fears	7-12	8-12
Diagnosis	5-8	6-12
Patient Age	3-7	4-9
Clinical Preference	2-6	3-6
Payer	0-3	0-3
Race	0	0

Definitions of 5 Themes Derived From Therapist Responses

- Safety:** Decreased risk of injury or harm during ambulation
- Balance:** Equal distribution of weight enabling person to remain upright and steady
- Cognition:** Person's awareness and/or ability to comprehend information
- Strength:** Level of force generated (by muscle contraction) for physical support
- Function:** Ability to execute physical tasks to participate in life situations.

Discussion

- PTs and PTAs are the professionals who choose ADs in PAC for individuals with CVA and TBI.
 - A hierarchy of preferred factors was created from practicing PTs/PTAs in IRFs and SNFs.
 - There was consistency in factors chosen across episode of care and regardless of diagnosis and setting.
 - A device was not always provided to patients with CVA or TBI
 - Diagnosis type did not alter choice of device (cane, walker, hemiwalker).
 - Many different objective tools were used to aid decision making.
 - Most common were the BERG and TUG.
 - Payer was only considered during discharge planning.
 - Developed 5 themes consistently utilized by PTs/PTAs when prescribing ADs.
- Objective tools test the most frequently used factors in decision making.**
- Limitations include:**
 - Small number of responses
 - Could not confirm results with respondents.
 - Convenience sample may not be representative of IRFs/SNFs throughout the United States.

Conclusions and Recommendations

- PTs and PTAs have the training and knowledge for AD prescription
- This study described for the first time how PTs and PTAs choose and prescribe ADs in patients with CVA and TBI. Five specific themes together with many other factors were used in decision making.
- Recommendations for further research:
 - Further development of qualitative research to develop understanding in PT and PTA decision making process to enhance consistency and outcomes throughout profession
 - Goal: To determine a protocol from combination of qualitative and quantitative response from PTs and PTAs

Clinical Implications

- Patients with CVA and TBI comprise a large population that utilizes the health care system.
- Due to the lack of evidence-based decision making support for the process of AD prescription, even experienced therapists are without clear direction.
 - May lead to bias and inconsistent approaches, which could lead to inappropriate prescriptions for mobility ADs.
- Having a clear description of practice could lead to a method of PTs/PTAs to systematically approach the prescription of ADs
- The potential for a systematic approach could save healthcare dollars in the United States.

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