

Prescribing canes for older adults: physician and physical therapist practices

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INTRODUCTION

As the population ages, there is an increasing number of people with mobility impairments that impact participation in everyday life. The most common mobility device used amongst adults age 65 and older is a cane. [1] According to the World Health Organization, canes are the fifth item on their assistive technology priority list which “includes 50 priority assistive products, selected on the basis of widespread need and impact on a person’s life.”[2] According to researchers, rehabilitation health care workers are responsible for detection of needs, information about assistive devices (AD), and who receives the device. [3] While these providers may receive some information and education regarding assistive devices in their educational programs [4- 6], one of the main barriers that prevents people from getting the AD that they need is that health care workers lack the training they need to provide these services.[7] Moreover, while the cane, is the most frequently recommended ambulation device used by older users, it is often purchased without professional advice, leading to inefficient and unsafe use.[8] Research reports that although older adults who use canes benefit from cane use, they also experience related problems including decreased stability and increased fall risk due to improper cane length and pain associated with improper cane height. One study found that older cane users still fall frequently despite the use of a cane.[8] Canes can cause other side effects for users such as discomfort, pain, injury, and increased risk of conditions such as tendonitis, osteoarthritis, carpal tunnel syndrome, and fractures. [9] Many older adults who buy or obtain a mobility device do so on their own without a prescription or training from a doctor or medical professional. A 1993 study found that only 48 out of 144 cane users in the sample were prescribed the device by a professional healthcare worker. [10] A later study by Lui et al. identified problems associated with the lack of education provided to cane users.[8] reporting that only 18% of participants received instruction on how to use their cane by a medical professional, while the other 82% were either self-taught or taught by family/others. They found that 97% had seen their physician since obtaining their cane, but the cane was never assessed or reassessed. Medical consultation is lacking and is necessary to ensure patients receive education on correct cane height, gait pattern, and maintenance. Kumar et al. found that a 20-30 degrees of elbow flexion decreases pain associated with cane usage. Although this was found to be the best method for cane usage, people are still using canes incorrectly. [11] Overall, literature suggests that cane users are not receiving proper fitting of their canes or they are obtaining their canes on their own, resulting in incorrect cane height, which causes other problems such as falls and pain. Additionally, conceptual models such as the Matching Person and Technology Model (MPTM) which guide the practice of assistive technology provision encourages practitioners to consider multiple factors when matching a person to the AT that they use.[12] The approach to provision of AT according to this model follows these steps; evaluate (match the person to the device they need), select (the correct device), accommodate (fit the device to the person) and use (train the person how to use the device and follow up on this). Given the importance of training as a successful indicator of AD use, our study will focus on determining whether or not physicians (MDS & DO’s) and or physical therapists (PTs) prescribe canes, how much and what type of information they provide to their patients about proper cane usage and if they follow-up on cane usage with their clients .

METHODS

This study used a non-experimental survey research design to examine the following questions [13]:

1. What training did you receive regarding how to prescribe canes to your clients?
2. How do you prescribe canes to your clients who need them?
3. To what extent do you follow-up on cane use with your clients who use these devices?

The study was approved by the Ithaca College IRB. Participants were recruited using convenience, specifically snowball sampling. Snowball sampling is used when participants are difficult or impractical to obtain.[14] Recruitment was done through contacting local physicians and PTs, phone calls, flyers, Facebook groups and the college online message center. The participants included were licensed physical therapists (PTs), medical doctors (MDs), and Doctor of Osteopathic Medicine (DOs). All participants were at least 18-years-old and worked with people at least 65-years-old or older.

Instrument

An online survey was used to collect our data. The survey questions were based on our literature review and Matching Person and Technology conceptual model. The survey consisted of 20 multiple choice questions, and two write in questions. The first four questions addressed participant demographics. The next three questions investigated the training that the participants received regarding assistive devices specifically canes and devices for mobility. The next 11 questions asked participants to indicate to whom and how they prescribe canes. The next three questions asked participants to what extent they follow up with their clients who use canes. The final question allowed participants to write-in any additional information that they would like the researchers to know about cane prescription and use with clients. The survey was pilot tested with experts in the field who took and provided feedback on the survey. Responses from experts were incorporated into the final survey to increase content validity.

Procedure

Participants who were recruited, accessed the online survey via Qualtrics. [15] A link to the Qualtrics survey along with instructions and informed consent were distributed in recruiting materials, online postings, and emails.

Data Collection and Analysis

Data were collected through the online survey questionnaire using Qualtrics. Descriptive statistics were used to analyze the data.

RESULTS

Demographics

Of the 45 respondents who agreed to participate in the survey, only 41 completed the survey in its entirety. Thirty-one reported they practice as Physical Therapists and 10 reported they practice as Physicians. The median years of practice was 14.2 for both physicians and PT's. While over 50% of the patients seen by the respondents are 65 years or older and have mobility problems, participants state that less than 50% of their patients are using mobility devices.

Research Question #1 What training did you receive regarding how to prescribe canes to your clients?

Most respondents reported receiving pre-service education training regarding the use of assistive devices mostly within a course (n=14), having one course dedicated to assistive devices(n=10), or in multiple courses(n=10). There were no notable differences between the amount of pre-service education received by PTs versus physicians. Regarding, AT focused continuing education, 10 participants (27.78%) reported they received more than one course regarding the use of assistive devices, 3 participants (8.33%) reported that they received one course, 10 (27.78%) reported that they received some continuing education, and 13 (36.11%) reported that they received no continuing education regarding the use of assistive devices There were no notable differences between PTs and Physicians.

Research Question 2: How do you prescribe canes to your clients who need them?

More than 50% (65.7%) of participants reported that they prescribe canes to 1-25% of their patients while 25% reported that they prescribe to 26-50% of their patients. There was little difference between PT and physicians in response to this question. When prescribing canes 30.56% of participants reported prescribing canes to those with balance/ coordination difficulties, 24.07% to those with musculoskeletal disorders, 22.22% for post-surgery protocols, and 18.52% to clients needing pain management. Participants also stated other purposes for prescribing canes including to decrease fear of falling, to improve mobility compliance or they prescribe walkers instead. In regard to recommending canes to patients, 21 (51.22%) of all participants reported that they prescribe canes, 12 (29%) referred patients to another provider, and 8 (19.51%) do not prescribe canes. Six physicians (54%) prescribe canes, 5 (45%) refer to another provider, and 0% reported not prescribing canes. Fifteen (50%) of the PT's reported that they prescribe canes, 7 (23%) refer to another provider, and 8 (26%) do not prescribe canes. Referrals to another provider noted were to a case manager, provider, physician, and CVS/drugstore. Both PTs and physicians estimated that their clients get their canes mostly from drug stores and family or friends. Regarding training, out of 34 responses from both PT and physician, 26 participants (75.47%) reported that they provide training in a face-to-face session on cane use, three (8.82%) responded that they provide instructions on how to use their cane, three (8.82%) responded that they do not train the client on how to correctly use their cane and two (5.88%) responded by writing in their answer. These responses included that they do not personally prescribe canes but that they will always train a patient who comes in using a cane if they

notice it is used incorrectly. Ninety-two% of the PT's reported that they provided training in a face to face session compared to only 44% of physicians.

Research Question 3: To what extent do you follow-up on cane use with your clients who use these devices?

Sixteen of all the participants (47.06%) responded that they always follow up with a patient. Twelve (35.29%) responded that they sometimes follow up with a patient. One participant (2.94%) responded that they never follow up with a patient. Three (8.82%) responded that they usually follow up for a different medical reason. Two participants (5.88%) responded other. One reported that they always follow up just on the next visit; one reported that they were confused by the term prescribed as used in the question. PT's had a higher percentage of always following up (56%) compared to physicians (22%). Fifty-five% of physicians reported that they sometimes follow up compared to 28% of PTs who sometimes follow up. If they follow up with their patient, they were then asked how often they follow up with them? Out of 16 responses, two (12.50%) responded that they follow up 3 or more times. Fourteen (87.50%) responded their follow up frequency depended on the individual needs of the client. Regarding asking a client about a cane they are using that the participant did not prescribe it, out of 35 responses, 32 (91.43%) responded they do ask their client about their cane. Three (8.57%) responded they do not ask their client about their cane. Write in comments at the end of the survey were varied and included statements such as wanting more AT related education, financial issues related to AT purchase, concerns about not being able to adjust or provide training about canes that clients already owned and preferences for recommending walkers rather than canes

Limitations

The first limitation of the study is that we used a convenience sample. Because of this the findings of the study cannot be generalized to a larger group of physicians and PTs who work with older adults. Another limitation was the survey tool. While it was reviewed by experts in the field to ensure content validity some of the wording in the questions especially the term prescribe was questioned by participants. In particular the PT's stated that they "recommend " but do not prescribe mobility devices. In addition, participants may have responded in a way they thought the researchers would find favorable, a concept known as a social desirability bias.[16]

DISCUSSION

To answer our first question, what training/education do physicians and PT's receive regarding how to prescribe canes to their clients, we found that consistent with the literature while participants stated they received some education regarding assistive devices in preservice and or continuing education, for the most part this education was included in within one course. The literature reports that while many educational programs require the inclusion of content related to AD in their educational standards the amount of this content or how it is delivered varies from program to program[4-6]. One of the respondents commented that they would like more AT related education for physicians. In regard to whom do practitioners prescribe canes to, our findings were consistent with the literature in that most were recommended for those with balance and coordination difficulties or musculoskeletal issues and that over 50% of all respondents make these recommendations themselves rather than referring to another practitioner. It was interesting to note that in the write in comments several respondents reported preferring to recommend walkers versus canes for their clients with mobility difficulties. The findings regarding training and follow-up were surprising based on the literature which states that many cane users do not receive fitting, training or follow-up regarding cane use. Over 75% of both groups of respondents to this survey reported that provide face to face training and always or most often follow-up with their clients. Additionally, 91% of respondents reported that they ask clients about canes that they have even if they were not the ones who recommended them. These findings are not consistent with the literature which did states that elders who use canes often report obtaining these devices by themselves and not receiving any fitting or training information about them. This finding may be due to social desirability bias where respondents to a survey answer the way they think that researchers want them to. Another possibility is that there is a disconnect in understanding of information that clients receive from their health care providers. This problem with health literacy is well documented in the literature and should be further investigated as it relates to instruction in use of mobility devices[17]. Certainly, more research investigating this disconnect between client and practitioner reports is warranted given that respondents in this research reported that clients obtain their canes from a variety of places including drug stores, friends, family members and loan closets and that the devices they use often cannot be adjusted for proper fit. Moreover, in the comments posted at the end of the survey a statement was made that financial considerations impact where people get their canes and the extent to which they are open to buying new devices.

Conclusions

This study investigated educational preparation, prescribing and training patterns of PTs and physicians who work with older adults. Despite findings reported in the literature that most elders obtain their own canes and do not receive training in their use resulting in problems for the users, participants in this study reported that they do train and follow-up with their clients who use of canes. Further study is needed to research the disconnect between PT and physician reported training and client's receipt and retention of this information.

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