Project Title

Patient reported outcomes on mobility related activities of daily living (MRADLs) with powered mobility use: A pilot study

Project Lead and Members

Project lead & member: Chia Rui Min, Florence Cheong

Organisation(s) Involved

Tan Tock Seng Hospital

Project Period

Start date: Feb 2018

Completed date: May 2018

Aims

For patients with mobility limitations, personal mobility devices (PMD) are becoming an increasingly popular choice of mobility aid. With considerable resources being spent on PMD provision, the study aims to investigate 1) patients' satisfaction on Mobility Related Activities of Daily Livings following occupational therapy intervention and PMD use 2) challenges of PMD use.

Background

For patients with mobility limitations, personal mobility devices (PMD) are becoming an increasingly popular choice of mobility aid. With considerable resources being spent on PMD provision, the study aims to investigate 1) patients' satisfaction on MRADLs following occupational therapy intervention and PMD use 2) challenges of PMD use.

Methods

The study was a prospective cohort study consisting of 21 patients prescribed with PMD from the period of February to May 2018. The Functional Mobility Assessment (FMA) was administered before prescription of PMD and 1-month post-PMD use.

Results

From a baseline of 66.7%, the overall average satisfaction on MRADLs improved to 88.8% post-PMD use. 40.8% improvement in outdoor mobility satisfaction and 1.6 days increase in frequency of community mobility per week, demonstrated the ease of community mobility with PMD use. Improve satisfaction in comfort (↑34.7%), health needs (↑30.2%), reach (↑30.2%) and operate (↑28.6%) of FMA components also indicated that PMD compensated for users' loss in physical functioning. Despite the benefits, PMD usage has limited impacts on patients' satisfaction in personal care, transfer, transportation and indoor mobility components. Environmental barriers and limited PMD skills were frequently cited for the lack of satisfaction.

Lessons Learnt

A one-month period was set aside to ensure that new powered mobility users have adequate opportunities to utilize the powered mobility device prior to the re-administration of Functional Mobility Assessment to ensure better accuracy of the result.To ensure consistency between all study participants, consistent follow up at the one-month period is essential for post Functional Mobility Assessment administration. However, as the rate of procurement of powered mobility device for each study participants differs depending on the type of funding, the date for re-administration of Functional Mobility Assessment will differ accordingly as well. Therefore, having a follow up system to document date of application of funding would help to determine when a follow up call should be made. For future studies, I would have done a power analysis prior to determine the sample size required to determine of the effect of Occupational Therapy intervention. I would also like to

determine the effect of Occupational Therapy intervention has on patients' satisfaction on Mobility Related Activities of Daily Livings.

Conclusion

Environmental barriers and limited PMD skills can reduce satisfaction towards aspects of MRADLs. Occupational therapists should focus on imparting community mobility related skills on public transport and advocate for accessible environment. The study provided knowledge on the benefits and challenges PMD users faced in the local population context, but larger studies are required to provide further evidence for the effectiveness of PMD.

Additional Information

The follow up process is challenging due to differing funding process for each study participants which will affect their rate of procuring a powered mobility device and when follow up calls for the post administration of Functional Mobility Assessment should be made. Following these rise of interventions from Oct'17 to Aug'17, overall PPI utilization decreased by 10.6% from a total of 7.78 million units in Year 2015 to 6.96 million units in Year 2017.

Project Category

Quality Improvement, Care Redesign

Keywords

Quality Improvement, Care Redesign, Assistive Technology, Patient Satisfaction, Patient Empowerment, Allied Health, Occupational Therapy, Tan Tock Seng Hospital, Personal Mobility Device, Powered Mobility Device, Mobility Related Activities of Daily Livings, Effectiveness of PMD, Functional Mobility Assessment.

Name and Email of Project Contact Person(s)

- Chia Rui Min, Senior Occupational Therapist, Tan Tock Seng Hospital, rui_min_chia@ttsh.com.sg
- Florence Cheong, Senior Principal Occupational Therapist, Tan Tock Seng Hospital, florence_cheong@ttsh.com.sg