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Innovation processes to meet the needs of people with disabilities

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Calling all innovators, innovation sceptics, and purse-string holders - come and chat with us this PMG about how we can improve our services to better meet our users' needs!

Why do we need innovation?

In a context of ever-tightening budgets, ever-increasing demand for services and complexity of clinical need, making time for high-quality innovation can be a big ask, even when many of us agree that going on as we have done is no longer realistic.

Approach to innovation

Part presentation, part workshop, this session will define innovation and the approach to healthcare innovation developed by Devices for Dignity NIHR HealthTech Research Centre in Long term conditions, focusing on co-creation of solutions through patient and public involvement and engagement (PPIE). Laura will share her recent experience of the Healthcare Science Innovation Fellowship and her innovation project, 'Exploring power assistance for self-propelled wheelchair users during rehabilitation'. The project focused on the adoption and spread stage of the innovation process, which historically is poorly resourced in the NHS (Collins 2018).

The workshop will ask attendees about their own interest in and experience of innovation for patient benefit and will be very interactive! Innovation is challenging in the best of circumstances. The authors feel there are issues specific to the field of assistive technology and rehabilitation, which we would like to explore with you and consider different routes and resources for obtaining support.

If you have an interest in healthcare innovation, we would love you to attend!

Background

The Healthcare Science Innovation Fellowships Programme is an opportunity for qualified Healthcare Scientists and aims to equip Fellows with the knowledge, skills and confidence for the development, evaluation and implementation of new technologies, and the ability to initiate and lead their own technology innovation projects in the future. Fellows have access to blended project-based and online learning and training resources and mentoring to undertake a technology innovation project.

The programme is a collaboration between the Office of the Chief Scientific Officer for NHS England, and the National School of Healthcare Science (NSHCS) and is delivered by Devices for Dignity NIHR HealthTech Research Centre in Long term conditions (D4D). D4D work with people living with long-term conditions (across the life course from very young children to older adults) and bring together teams to catalyse technology development in response to unmet needs, which, if addressed, will deliver the most impact for patients, carers and health and social care.

Devices for Dignity works across four clinical themes:

- Long-term neurological conditions (LTNC)
- Diabetes
- Kidney care
- Women's Health

which are supported by four cross-cutting themes:

- Rehabilitation, Assistive and Restorative Technologies (RART)
- Mental Health and Wellbeing
- Methodological Innovation (MI)
- Pathways to Implementation and Impact (PII)

Reference

Ben Collins 'Adoption and spread of innovation in the NHS', 2018, The King's Fund

B1.B

Igniting the Conversation Regarding Indoor Walking as a Determining Factor in Eligibility Criteria for NHS Wheelchair Provision

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Summary

A need has been identified to engage in conversations regarding indoor walking ability assessments as this is often a determining factor for provision of NHS wheelchair services. This paper explores experiences, guidelines, and research in the hopes of making recommendations to wheelchair services for improved and consistent assessment method and decisions in this area of provision.

Aims and Objectives

The aim of this paper is purely to ignite the conversation regarding assessing mobility indoors linked to wheelchair provision. It is to highlight the lack of clear and consistent guidelines available currently to wheelchair clinicians for determining when a person can safely and functionally mobilise indoors despite this often being a determining factor of eligibility for provision through wheelchair services. From these conversations, objectives will be set to create clearer guidelines and tools on how to approach wheelchair provision when being required to implement eligibility criteria which outline indoor mobility as a defining determinant of provision through wheelchair services.

Background

Wheelchair services' clinicians are required to draw on many skills to assess and prescribe appropriate mobility and postural systems to best enable function and mobility. Each service is provided with eligibility criteria which serve as a guidance on what the service can provide to facilitate mobility and postural support within the greater conceptualisation of an individual within the International Classification of Function (ICF) model.

One aspect of these assessments includes assessing an individual's ability to mobilise safely and functionally in an indoor setting. This is often a determining factor in eligibility for provision, however there is no apparent guidance on how to assess this consistently and for the variety of people seen across the lifespan in the wheelchair services.

There seems to be inconsistency in these decisions, likely influenced by various factors, e.g. subjectivity of assessors, varying levels of experience, conceptualisation of an individual, ambiguity and interpretations of eligibility criteria, variety in or lack of formal clinical qualifications of wheelchair service clinicians. Clinical qualifications in wheelchair services generally include physiotherapy, occupational therapy, clinical science, and rehabilitation engineering, often supported by unqualified staff e.g. assistants and technicians. These varied training backgrounds could lead to varied outcome of how an individual is assessed for indoor mobility needs, and therefore eligibility to provision through the relevant wheelchair service.

Consulting with various health care professionals that advocate for the provision of wheelchairs for individuals provided valuable input what they consider to be important when assessing walking ability to determine wheelchair provision. One identified that it is "hard to assess if only mobility is

considered as a service user might be able to get themselves from point A to B indoors, but hardly tells anything about their function, quality of movement, or effort involved” (Pardiwala, 2024). Another healthcare professional emphasized that function may not be limited to indoors as individuals have various environments in which they engage with (Taylor, 2024). It was also identified that physiological cost index is not commonly looked at when assessing mobility but highlighted as something that should be considered (Taylor, 2024). Physiological cost index includes how difficult, or energy consuming walking is. Another suggested that effort of walking, distance of walking, repeatability and replication, and safety should be considered when assessing functional mobility when determining wheelchair provision (Smith, 2024). From these discussions, it was clear that there was no clear outcome to determine what is safe and functional mobility, but only components to consider when assessing it.

Research and existing guidelines for best practice shows to have non-specific and unclear guidance in making clinical assessments to determine what is safe, functional indoor walking when determining eligibility to wheelchair provision. These include many assessment tools such as the 6-minute walking test, berg balance scale, gait analysis, functional motor scale, and Gillette Functional Assessment Questionnaire. However, no outcome or suggestions on how to intervene with the results from these are available and are left open ended. This may be due to these being used in a variety of settings, but there is a clear need for a wheelchair provision assessment tool to determine consistently when wheelchair provision is required.

The evaluation of the safety of walking is multidimensional (Kaegi et al., 2008), however, “no standardized clinical assessment of gait safety has been identified” (Kaegi et al., 2008). Quinn et al. (2011) identify that many outcome measures have gross motor sections but there is limited that concentrate specifically on the assessment of functional walking.

The research has also shown to be specific to groups of people, such as children with cerebral palsy, older adults, or specific diagnoses and provides no clear definition of what safe, functional mobility is with measurable outcomes to be able to determine this. These assessment tools also do not take into consideration whether a person’s condition is stable, deteriorating, or rapidly deteriorating.

Walking ability is a complex element of individuals to assess as it is multidimensional and has no clear definition. However, there is a need for clearer guidelines to allow for consistent indoor walking ability assessment for improved clinical reasoning for fair provision of wheelchairs through wheelchair services.

Discussion

Experience working as a wheelchair clinician has revealed that there are many factors and perspectives that can influence assessment outcomes of determining walking ability, but limited guidance in having a framework or set of guidelines to assist in making consistent decision regarding provision of wheelchairs for mobility needs when indoor walking is often the determining factor.

This has highlighted that there is a need for service development to assist in providing consistent and fair provision of wheelchairs to people. Quinn et al. (2011) reiterates that there is a need for a simple tool to measure functional mobility consistently and precisely. More so, to provide guidance on when provision of wheelchairs is needed from the outcome of this assessment tool.

It is recommended that this paper instigates the discussion and identification of the lack of consistent guidance around functional mobility related to wheelchair provision. It is hoped that this prompts further discussions to delve deeper into this topic and results in a future set of guidance to for wheelchair services. How that might look is unknown currently, but one idea is an easy-to-use assessment tool to guide the clinical reasoning and assessment process to allow for consistent and objective outcomes of the assessment of walking ability related to wheelchair provision. This might evolve, but the aim to keep it a simple tool/guideline that can be used at ground level by all clinicians.

References

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