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Harnessing public and patient involvement for upper limb prosthetics design

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Abstract

Increasing numbers of people in Lower Middle Income Countries (LMICs) are living with upper limb absence, however, access to P&O services are limited. This can have a devastating impact on engagement in activities of daily living, as when living at a subsistence level and without appropriate prostheses, daily tasks can be challenging to perform. The overall aim of this study is to develop a 'fit-for-purpose' upper limb prosthesis. However, to optimise the use and acceptability of a new prosthetic device, it is essential to understand the social, cultural and historical context of the environment.

Scoping and exploratory work was carried out to underpin the research and design parameters of a 'fit-for-purpose' body-powered upper limb prosthesis suitable for two LMICs, Uganda and Jordan. This involved three key aspects:

1. Informal scoping interviews within a 'Public, Patient Involvement' (PPI) framework with clinicians, technical staff, and people with upper limb absence
2. The development of thorough 'scoping reports' through the observations and note taking across a range of public, NGO and charity services
3. Telephone and Skype PPI interviews with International Committee of the Red Cross (ICRC) Rehabilitation Managers

The collated findings provide clear insight into the specific needs of the users and wider stakeholder. This is essential for the next stage of the research in the following ways: a) an insight into key social and cultural issues, b) influencing the remit of the study in terms of adjustable socket designs, c) establishing system and manufacturing considerations to ensure sustainability, and d) developing relationships and partnerships.

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