Situational Analysis of Manual Wheelchair Provision in Nepal - Proposal

Introduction

Assistive products are used by people with disabilities (PwDs) and elderly people as well as by people who temporarily acquire a disability (e.g. broken leg). Therefore it is likely that each person on the planet will need an assistive product at some point in their lives, and the WHO estimates 2 billion people will require one or more assistive products by 2030. Low Resource Environments (LREs) have higher rates of people living with disabilities, however, they often also have poorer reporting mechanisms of AT need. This can be seen in the discrepancy between, for example, the 2004 World Health Survey found that the prevalence rate of disability in the adult population in low-income countries was 18% [2]. However, according to census data, the estimated population of people with disabilities in Nepal is around 2% (approximately 550,000 people) [3].

In Nepal there are several institutions - NGOs, INGOs, governmental agencies, private clinics and P&O centers actively working to provide AT and rehabilitation. They do excellent work with the constrained resources available, however a majority of the population in need still go without provision. Without improved national and local services to ensure the right products reach the right people at the right time, those desperately in need of AT (including low-cost items like the crutches or walking sticks) are frequently left with inappropriate or inadequate items or simply none at all. This is often due to poor and unsustainable processes (assessment, delivery, follow up, repair and maintenance) and infrastructure (policy and guidelines, skilled personnel, local manufacturing, supply and repair, refurbishment, recycling and accessibility) .

The Enabling Friday Community (EFC) Nepal has proposed a vision for change based on 3 working sessions over the past few months - Enabling Fridays Vision. We now want to propose this work to governing bodies in Nepal.

While we want to focus on building sustainable assistive technology innovation and systems, we as a group recognised the obvious need for specific data to inform the work. Collaboratively we have agreed that a situational analysis and action plan for sustainable manual wheelchair provision should be prioritised to develop a working methodology and service system template, noting them as a major priority product for Nepal [4].

Our wider plan on locally-centered action on Manual Wheelchair Provision

1. Local collaborative direction setting group development
    1. Enabling Friday Vision
2. **Situational Analysis focused on a subset of AT (Manual Wheelchairs) and targeted rich data collection**
    1. **Population/regional level investigation**
    2. **Individual level journey mapping (of people and products)**
    3. **Local Innovation Pathway Identification**
3. Upcoming Actions based on No.1 & 2
    1. Local Innovation across product-service elements
    2. Advocacy
    3. Global peer linked work (educational across stakeholders, live labs, innovation coaching)
4. Expansion and iteration of local collaborative process across other AT sectors

Situational Analysis of Manual Wheelchair Provision

Wheelchair provision in Nepal and around the world is challenging to provide sustainably - due to the complex nature of in-country contexts based on population need, availability of skilled personnel and the provision and maintenance of appropriate products and services [5]. The impact of inappropriate wheelchair provision presents human security threats including poverty, unemployment, lack of basic healthcare and education resources and access to appropriate products, personal and community inclusion and participation. An integrated approach is needed to develop services.

Adopting a sustainable community of practice (SCOP) model provides an implementation framework that builds the foundations for long-term sustainability of wheelchair service provision in Nepal, and should work to ensure that wheelchairs as a primary assistive technology for living are appropriate and safe throughout life [6].

Soft systems approach (SAA) offers a distinct process applied within SCOP, which allows in-depth investigation of complex systems by connecting multi-stakeholder perspectives linking thoughts and ideas with material conditions, in this case wheelchair provision. This is a long-standing participatory method designed to identify problems indicators for service delivery and act as a vehicle for negotiation among stakeholder groups who share a common goal.

The process enables stakeholders to develop a clearer understanding of each other, identify shared meaning and goals to implement change, SAA can be used to design policies and procedures, developing current practices in a logical and sustainable way. The process involves

key stakeholder's active participation and enables the identification of sustainability for positive change indicators and wheelchair service improvement [7][8].

This will be conducted in the following workstreams, with focus regions to be decided, potentially 1 urban 1 and 1/2 rural locations to allow for hub and spoke models.

2.1 Population/regional level investigation

Desk-based Research

Beginning with desk based research to address what data is already available nationally and regionally. This aims to understand what the identified clinical and user needs are at the macro level

Mapping of current provision ecosystem

Geographic and capacity mapping of what formal and informal AT services and relevant complementary industries are present in-country, e.g.. manufacturing and material processing.

Mixed method data collection across WC Provision stakeholders

This will be conducted through DPOs and otherwise with data collection including a survey, and stakeholder workshops aimed at understanding what localised product-service systems innovation that could address gaps in provision models *(please see appendix for collated ideas from EFC meetings)*

2.2 Individual level journey mapping of people and products

People

To understand the perspective of different stakeholders across formal and informal realms we would gather AT Service Stakeholders Journey Maps in the following categories:

a. AT Users
b. AT Service Providers
c. AT Brokers and Facilitators

A fuller potential list of stakeholders is found in the appendix. A stakeholder identification process to involve an appropriate range of people at every level of the system, both proximal and distal will be implemented

Product

Lifecycle analysis of different categories of AT known to be present, looking at quality issues in manufacturing & repair, true lifecycle cost along with parts & labour, resource barriers to repair, end of product life:

a. Imported AT that needs local repair
b. Locally produced AT via in-clinic expertise
c. Hacked / informally produced AT without clinical or specialist input

2.3 Local Innovation Pathway Identification

Using the above workstreams, the aim is for the identification of key product-services that could be strongly benefited by local innovation and developed into a pilot infrastructure aimed at increasing local system capacities. There is an interest to fulfill designated next step 6 from the Priority Assistive Product List [4]:

6. For a long vision strategy, G/MoHP should start partnership with research, technical and medical institutions from public and private sectors to develop advanced AT by using local resources. [4]

References

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Appendix

Stakeholders to investigate/involve:

User groups/DPOs
Experienced WC users / Users brand new to the system
Resellers
Hospital and Clinic's store keepers
Repair and service center technicians
Service Providers
WC Suppliers
Manufacturers - what is being provided from the global and local space
Informal WC services currently not operating with formal guidance?
Professionals
Community Services
Wheelchair designers(may not be available in Nepal)can be resourceful for innovating current technology

Potential Questions

List of collated questions from EFC session , which is non-exhaustive. Many questions below are also likely not exclusive to any set stakeholder group.

Questions for WC Users

- What you do if your accessories of wheelchairs are damaged?
- Can you trust your repairs when you get them? When can you? When can you not?
- What stops you from using your WC?
- What do you know about wheelchair service provision? What you do if you need one?
- Users can be asked what can be added or removed from a Wheelchair to make it more user friendly
- What can't you get fixed?
- Can you afford a wheelchair if you do not get financial support for the service?
- Is it possible to acquire spare parts? What about the different models? Which models you prefer?

- What kind of information you get on wheelchairs from User groups/DPOs?

Questions on product, parts & service

- What data already exists - whether already formal or otherwise?
- Are products suitable for the context in which it is being used?
- Individual approaches with suppliers would be good to know the information regarding wheelchair supply
- Making products repairable locally is our focus so assessment of local technicians skill might be beneficial
- Who is doing the repair and servicing? Are they skilled in this space?
- Is the 8-step process in place from access to services to follow up, maintenance and repair
- What education and training is required for service users and providers?
- What do services currently look like - enablers / inhibitors?
- Like other mechanical devices WC needs servicing regularly. We need to find out who does this right now
- Community Services - what are the current service look like?
- How would you ensure the availability of appropriate wheelchairs? Ranges of Choice?
- Are products and parts readily available? How long does it take?
- Are people getting the right wheelchairs to meet their needs - good assessments?