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## **Increasing Wheelchair Utilization at the Point-of-Use.**

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About 15% of the global population – roughly 1 billion people – is living with disabilities. Of these, approximately 10% require a wheelchair. Research indicates that nearly 20 million people who need a wheelchair for personal mobility are unable to access them, but studies have also found that as many as 57% of manually propelled wheelchairs are unused or abandoned. Accelovate wanted to understand why wheelchairs were not being used and how World Health Organization's recommended services were received and associated with critical user outcomes. The Accelovate Program – a collaborative partnership between USAID and Jhpiego – aims to rapidly increase access to and usage of underused and undervalued technologies to reduce preventable mortality globally. Accelovate brings together a variety of global stakeholders to ensure that high-quality, innovative healthcare solutions make it into the hands of the people that need them most, reducing product wastage at the point-of-use.

To assess the association of wheelchair service receipt and wheelchair use outcomes, Accelovate did a cross-sectional study, which included a survey of users and a qualitative study. We collected 852 surveys and conducted 48 interviews with wheelchair users in Kenya and the Philippines. We examined the association between types of service delivery – assessment, fitting, training, maintenance, repair, follow-up – and key wheelchair use and independence variables – frequency and duration of use, unassisted wheelchair use, experience of pressure sores, and activities of daily living (ADLs) including bathing, dressing, eating, and toileting. This groundbreaking research represents the first large study conducted in a low-resource setting.

**Fitting:** In both countries, wheelchair users who were assessed for fit while propelling their wheelchairs were more likely to independently manage activities of daily living. In the Philippines, those who were assessed for fit while propelling their wheelchair were more likely to navigate independently outdoors.

**Training:** In Kenya, those who had ever received user training were more likely to report a high level of independent management of activities of daily living. In the Philippines, those who had ever received user training were more likely to report high daily wheelchair use.

**Product:** Qualitative findings revealed that wheelchairs were often mismatched to living environments and daily tasks. This may have led users to acquire multiple wheelchairs.

Given the high level of need, no assistive mobility device should be left unused, particularly in resource-constrained environments. Through this mixed-methods study, Accelovate found that services are critical to enable appropriate product selection as well as educated, safe, and autonomous wheelchair use. To avoid waste, Innovators must incorporate user-centeredness into both product and service design to ensure that products achieve their maximum utility in the field.