

## **Exploring the Views of Children, Parents and Clinicians to Contribute Towards the Development of Upper Limb Prostheses.**

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Upper limb (UL) dysfunction can have an impact on development at all stages of childhood (Ibbotson, 2002). There is, however, a rejection rate of UL prostheses of up to 50% amongst children (Shida-Tokeshi, et al., 2005). Research has suggested that children may choose to use a different prosthesis depending on the task (Egermann et al, 2008), but there is a distinct absence of the views users. Inclusion of end, lay and professional users is crucial to successful development of medical devices as unless devices are examined in the cultural and social context in which they are used the effectiveness of the devices will be limited (Ram et al, 2005).

This research explores the views of children, parents and professionals on UL prostheses to contribute towards the design of prosthetic ULs for children. Stage 1 of this study has been completed. This involved eight children (aged 8 – 15), with experience of using an UL prosthesis, and five parents participating in focus groups and interviews.

Preliminary findings demonstrated that children may choose to use a prosthesis as an aid in activities, to prevent unwanted attention and to have fun. They may choose not to wear a prosthesis because it is more of a hindrance than a help or because they are satisfied with who they are. Areas for development identified included appearance, comfort, weight, movement, ease of use and for assistance with specific activities. These findings were used to inform the development of new prototype prostheses.

In stage 2 of this study (May 2012) prototype prostheses will be shown to participants in focus groups and interviews in order to further develop the designs and explore themes in

more depth. Stage 3 of this study (May–Sept 2012) will involve exploring the views of clinicians and gaining their feedback on prototypes developed.