

Remote fitting procedures for upper limb 3d printed prostheses

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Background: The objective of the current investigation was twofold: i) describe a remote fitting procedure for upper limb 3D printed prostheses and ii) assess patient satisfaction and comfort with 3D printed prostheses fitted remotely. **Methods:** A qualitative study using content and score analysis to describe patient satisfaction after remote prosthetic fitting. Research participants reported QUEST and OPUS scores that allow for perceived rating of general aspects and functionality of upper limb prostheses. **Results:** Six children (three girls & boys, 6-16 years of age) and 2 adult males (25 and 59 years of age) with congenital (n = 7) and acquired (n = 1) upper limb loss participated in this study. Highest device satisfaction items of the QUEST include weight (4.50 ± 0.76), safety (4.38 ± 0.52), and ease of use (4.13 ± 0.64). Functional tasks of the OPUS observe that prosthesis donning and doffing (1.5 ± 0.84) and drinking from a paper cup (1.75 ± 0.89) were the easiest functional tasks. **Conclusion:** The presented methodology for remote fitting of 3D printed upper-limb prostheses exhibits significant potential for rapid fabrication of functional prostheses to developing countries due to increased availability of digital devices in rural areas. © 2019, © 2019 Informa UK Limited, trading as Taylor & Francis Group.

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upper-limb prosthetics

Artificial limbs

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Developing countries

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Fitting procedure

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Upper limb prosthesis

Upper limb prosthetics

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clinical article

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