Topic: 8. Physiotherapy

Title: **Technical support requirements for remote monitoring of physiotherapy in children with CF**

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Text: **Objectives:** The top 10 research priorities in CF from the James Lind Alliance include "What technologies can help people with CF?". Project Fizzyo uses electronic sensors in airway clearance (AC) devices and Fitbit AltaHR for remote monitoring of daily AC and physical activity (PA) in children and young people with CF (CYPwCF). New technology must be inclusive, with appropriate support available, which must not be prohibitively time consuming or expensive for clinical teams. This report summarises technical support required during the first 4 months of recruitment to Project Fizzyo.
Methods: CYPwCF (aged 6-16y) synchronise daily PA and AC treatment data for 16months, via 2 apps on a Linx computer tablet (Fitbit, bespoke FizzyoHub). Participant contacts to the study team for technical support were logged and summarised.
Results: 65 CYPwCF were recruited (mean duration in study 58 days, range 5-128). 122 requests were logged for technical assistance. On average 1 enquiry per day was made (0 on 64/128 days, maximum 10 in one day). Half of all enquiries occurred within 3 weeks of each participant recruitment. 17/65 (26%) of participants never contacted the team (8 were participants for ≤7 days, 9 for 29-92 days). 6 (9%) contacted the team ≥5 times (participants for 36-128 days).
17% of enquiries were about the Fitbit (tracker and app) and 45% were about the AC monitoring system. These triggered updates to the FizzyoHub app and AC sensor which should reduce reported problems for the remainder of the study. The remaining 38% of contacts related to the tablet computer (eg wifi or bluetooth) or account login details.
Conclusion: Remote monitoring technology is feasible in CYPwCF and technical support is essential, but the amount required varies by participant. The technical support required should be manageable within a normal clinical work load. The power of these methods to gather large amounts of data justify the time spent supporting users.

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Back