Aquatic therapy for children with Duchenne muscular dystrophy: a pilot feasibility randomised controlled trial and mixed-methods process evaluation

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Declared competing interests of authors: Lisa Hampson reports grants from the Medical Research Council (MRC) and the pharmaceutical industry outside the submitted work. Francesco Muntoni reports grants from the European Union 7th Framework Programme, MRC, Ionis Pharmaceuticals/Biogen, Inc., PTC Therapeutics, Summit Pharmaceutical International, Roche, L’Association Française contre les Myopathies and Muscular Dystrophy UK and personal fees from Pfizer, Biogen, Inc. and Summit outside the submitted work.
Plain English summary

Aquatic therapy for children with Duchenne muscular dystrophy
Health Technology Assessment 2017; Vol. 21: No. 27
DOI: 10.3310/hta21270

NIHR Journals Library www.journalslibrary.nihr.ac.uk
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Background

Physiotherapy is thought to help children with Duchenne muscular dystrophy (DMD) stay physically active. Aquatic therapy (AT; also known as hydrotherapy), that is, physiotherapy in warm water, allows exercise and stretching that are not possible on land. It is not clear that AT works, so NHS access is limited.

Objectives

To see if a full-scale controlled trial (experiment) was feasible, we wanted to enrol 40 children to a pilot study, 20 of whom would have AT. We also tested the design and procedures.

Methods

All children were asked to do stretching and exercise at home. We planned that half would have AT in hospital pools for half an hour, twice a week, for 6 months. We measured how well they could use their legs at the beginning and end of the study. After this, children, parents and physiotherapists told us how they felt about AT and the study.

Results

We screened 348 children with DMD for the study. Only 12 could enter the study. This number is too low to show whether or not AT works. Those involved said that it should be offered nearer to their homes than we managed. The cost to the NHS for 6 months of hydrotherapy treatment was £1970–2734 per child.

Conclusions

An insufficient number of children could be found for a full-scale study run only from hospitals. Local AT programmes should be designed by specialist physiotherapists in liaison with children, parents, community physiotherapists and teaching assistants. Standard trial designs may not be feasible. Other research designs might be needed to test AT.
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This report

The research reported in this issue of the journal was funded by the HTA programme as project number 12/144/04. The contractual start date was in May 2014. The draft report began editorial review in July 2016 and was accepted for publication in November 2016. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health.

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