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Conference Abstract

Remote monitoring of Attention-Deficit Hyperactivity Disorder (ADHD) symptoms using mobile phone technology

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Abstract

Introduction: Attention Deficit-Hyperactivity Disorder (ADHD) is characterised by developmentally inappropriate and impairing levels of inattention, hyperactivity and impulsivity. ADHD affects between 3-5% of school aged children and young people in the UK, with an increased awareness that these symptoms typically continue into adulthood.

NICE Guidance recommends medication for the treatment of severe ADHD. During the medication initiation and titration phase, NICE recommends that clinicians should maintain weekly contact with their patients, and monitor treatment response and adverse effects at each dose change. However, because of constraints on time and resources, routine monitoring of response to treatment and changes in symptoms over time currently falls short of NICE guidelines in many NHS Trusts. This results in treatment optimisation taking longer, causing delays in the alleviation of symptoms.

Mobile phone technology offers the potential for more effective real-time monitoring to ensure treatment optimisation is reached in a timely way, without increasing the strain on clinic resources.

Aims and objectives: The aim of the study, currently in progress, is to explore the barriers and facilitators to using mobile phone technology to assist in the careful monitoring and optimisation of treatment for ADHD.

Methods: A user workshop was held in February 2014 with a number of children and adults with ADHD, parents of children with ADHD and NHS staff working in the field, to gain some preliminary insights into the needs of each user group. The findings from this workshop are being used to

shape the focus groups (April–June 2014), which aim to gain a greater understanding of the needs of each stakeholder group. Data from the focus groups will be thematically analysed (June–August 2014) with the aim of developing overarching analytic categories to describe the barriers and facilitators to using mobile phone technology. To enhance the rigour of the analysis, more than one researcher will be involved in these tasks and regular checks of the coding, category refining and identifying overarching themes across the research team, including the patients and parents who form the study Reference Group.

Results: The results of this study will inform the design, development and testing of a smartphone App. Critically, the results will enable a clearer understanding of the functions all stakeholders wish to see incorporated into the App and their design preferences. For example, the user workshop suggested that while prescribing practitioners are likely to be interested in receiving regular reports of symptoms and side effects which are easily integrated into electronic patient records (EPR), additional features such as appointment and medication reminders will increase the likelihood that patients and parents will use the App. The focus groups will enable a more thorough and systematic exploration of these issues with a wider sample of potential users, full results of which will be presented.

Conclusions: Working with an industry partner, the results of this study will feed into the development and testing of a new App designed to monitor symptoms regularly and remotely, with the ultimate aim of ensuring clinician and patient usability and acceptability.

Keywords

remote monitoring; ADHD; app