



FOCUS ON RESEARCH

REMinD - Research on electronic medication devices

Researchers

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Aim

We aimed to explore the advantages and disadvantages of electronic multi-compartment medication devices (eMMDs) to patients, carers and professionals. eMMDs are pillboxes which not only have reminders but have added extras such as being able to contact carers if a medication has not been taken. We wanted to find out if we could conduct a study, called a randomised controlled trial which would measure the benefits of supplying medicines in eMMDs compared to using standard containers. We wanted to find out which would be the best devices to compare, which medical conditions would be most suitable to study and what we could measure to show if people were getting benefits. We also wanted to find out if people would take part in this kind of study and if there were enough people likely to take part.

Project Outline/Methodology

First we searched the medical journals to find out what other studies had already been carried out. We found six studies and although most reported improvements in patients remembering to take their medications, the studies were small and of low quality. Then we arranged group meetings (called focus groups) or individual interviews with 11 pharmacists, 9 GPs, 12 community nurses, 8 social care managers, 15 patients and 3 lay carers. At the focus groups, participants were able to try out a range of eMMDs and they were then asked for their views. The focus groups and interviews were recorded and analysed to identify themes. Thirty pharmacists took part in a survey to find out the numbers of patients using electronic and non-electronic pillboxes, and what conditions they have.

Key Results

When we analysed the results of the focus groups and interviews we found that eMMDs may be useful for some patients particularly those who although they may be a bit forgetful do not have serious memory problems, and have good enough use of their hands to use the devices. There are currently no checklists or other tools to find out who would be likely to benefit from using eMMDs. Such a tool

would need to include a check of the patient's understanding of the device and their physical ability to use an eMMD. No single device suited everyone. Preference for a particular device depended on many factors such as if it was necessary to be taken out of the home. Personal alerts to prompt a patient to take their medication seemed to be acceptable but an alert to carers to signal if a medication had not been taken was more problematic. Carers were not always available to receive and act on these messages. Diabetes may be a suitable condition for a future research trial of the devices as it is possible to measure if patients are showing an improvement in their condition using a routine blood test. The pharmacists' survey showed that diabetes is a sufficiently common condition to make it possible to recruit enough patients to take part in a trial. Most patients and carers who took part in the study stated they would be happy to take part in a trial.

Conclusions

We found that forgetful people may benefit most from eMMDs. Any future trial would have to allow a variety of devices to be used. Diabetes would be a good condition to test as it is fairly common and with easily measured outcomes.

What does this study add to the field?

There is not much evidence to show that eMMDs are effective and the information gathered here can inform the design of studies in this area.

Implications for Practice or Policy

There is not enough evidence to support the use of eMMDs in practice. Research efforts should focus on evaluation studies in a range of contexts and populations.

Where to next?

We propose to carry out a pilot trial with patients with diabetes to find out the potential for recruitment and acceptability of assessments.

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