

## A PILOT STUDY TO EVALUATE A COMMUNITY PHARMACY BASED MONITORING SYSTEM TO IDENTIFY ADVERSE DRUG REACTIONS ASSOCIATED WITH PAEDIATRIC MEDICINES USE

### Researchers

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### Aim

Adverse drug reactions in children, are often under reported and represent an important medical problem.

The aim of our study was to undertake a formal pilot evaluation of a community pharmacy led adverse drug reaction monitoring system. The objectives were to assess participant recruitment levels, describe adverse drug reactions and to determine the views of pharmacists and parents/guardians/children to the scheme.

### Project Outline/Methodology

The setting was community pharmacies in Scotland. . All community pharmacies in five Health Board areas of Scotland (n=827) were invited to participate. The subjects were parents, guardians, and children old enough to understand, getting prescriptions dispensed for treatments for depression, epilepsy and attention deficit hyperactivity disorder (ADHD), for children under 16. Over a three month period participating pharmacists were asked to identify these prescriptions, and to give out an adverse drug reaction questionnaire and study information leaflet to the individual collecting the prescription, and encourage participation. Questionnaire content included child demography duration of medicine use, indication, perceived side effects, description and severity of any reaction. Participating pharmacists, parents, and guardians were also asked to indicate willingness to take part in a follow up telephone interview to discuss their experiences of and attitudes to the system.

### Key Results

Seventy-two community pharmacists (8.5% of those asked) agreed to take part. Two hundred and twenty-nine questionnaires were handed to parents and 55 (24%) returned. Thirty-one questionnaires (56.3%) reported 44 possible ADRs, the majority of which were related to methylphenidate, a drug for ADHD. These were: reduced appetite and loss of appetite (38.9%), stomach upset (33.3), sleep disturbance (11.1%), headache (11.1%), and emotional problems (11.1%).

Twenty-two parents/guardians and 17 pharmacists were interviewed. The majority of interviewed

parents (95%) were happy to take part in the study and felt this was an important topic. Just over half (55%) indicated a preference for telephone reporting of adverse drug reactions. The majority of pharmacists (94%) believed that they should be routinely involved in reporting, and 52% thought this method of monitoring could become standard practice.

### Conclusions

The system utilised in this study, was able to identify adverse drug reactions for the study medicines together with their frequencies, which were similar to those reported from prospective trials, thus demonstrating validity. However the process was limited by community pharmacist participation rates, which were disappointingly low.

### What does this study add to the field?

Adverse drug reaction monitoring can be targeted at specific patient and drug groups, using community pharmacies. Parents are concerned about paediatric adverse drug reactions and were found to report appropriate adverse drug reactions. However there is a need to optimise the recruitment of pharmacists and parents.

### Implications for Practice or Policy

The development of systems to ensure appropriate and informed use of medicines in children is a key NHS priority. Despite the extension of the current routine system to public reporting, it is believed that there is still underreporting. We have demonstrated that community pharmacies can contribute to the detection and reporting of paediatric reactions but barriers to participation need to be addressed.

### Where to next?

Further research to determine the optimum method for ensuring pharmacy participation is warranted. In addition, given the high levels of ADRs reported, the significant levels of concern expressed by parents, and the lack of information on ADRs given to parents/guardians there is a need to focus further research on paediatric medicines and associated adverse drug reactions.

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