

Widespread parental misuse of medicines puts children at risk

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Many children are being put at risk by parents over-use of widely-available over the counter (OTC) medicines for fever, coughs and colds, says a study from Australia to be presented to the annual conference of the International Pharmaceutical Federation (FIP) today. The researchers, led by Dr. Rebekah Moles from the University of Sydney, New South Wales, say that dosing errors and inappropriate use of such medicines lead to a large number of calls to poison centres as well as emergency hospital admissions.

"We were surprised and concerned to find that some people thought that medicines must be safe because you can buy them without prescription", said Dr. Moles. "For example, one parent said to us that if Panadol® is available over the counter, administering a double dose couldn't do any harm and asked: What could be the worst that could happen?"

Dr. Moles and her team studied 97 adults from day-care centres in Sydney; 53 mothers, 7 fathers, and 37 day care staff over a five month period ending in February 2010. The age range of children at the centres was from four to five years old. The researchers went through a number of scenarios with the participants, for example telling [parents](#) that their youngest child felt hot and seemed a little irritable, but was still drinking, eating and playing. For parents, the child was always their own; for day-care workers the example of a child of an average size for its 2.5 years was used. They then asked participants what they would do.

Common OTC medicines were made available, together with different

types of dosing devices, including household spoons. Participants then chose whether or not to give a medicine, at what stage, and at what dose. They were asked to measure the dose for the researchers. Because doses for children are often small, the risk of getting the measurement wrong is greatly increased, the researchers say.

"Taking all the scenarios together, 44% of participants would have given an incorrect dose, and only 64% were able to measure accurately the dose they intended to give. We found that 15% of participants would give a medicine without taking their child's temperature, and 55% would give medicine when the temperature was less than 38 degrees", said Dr. Moles. Paracetamol was the preferred treatment, even for coughs and cold, and was used most often - 61% of the time - despite the child having no fever. Only 14% of carers managed the [fever](#) scenario correctly.

The New South Wales Poisons Information Centre, who also receive all out of hours calls from around Australia, say in their 2008 Annual Report that of the 119,000 calls they received during that year, 48% concerned accidental overdose in children, with 15% needing hospitalisation. Over 85% of all calls regarding accidental overdose in children involved those under five, with almost 80% of incidents involving those under three.

"Given these figures and our findings, there is an urgent need to review the use of children's OTC medicines by parents," said Dr. Moles. "We are following up this research by using mystery shoppers to visit pharmacies and see what advice they are given when presenting similar scenarios. If we feel that the advice given is inappropriate, we will give immediate feedback and coaching so that it can be improved.

"However, the most important thing is to improve carers' understanding of when and how to give medication. We are extending our research to

look for any associations that make parent and carer skills better or worse, for example their level of education and socio-economic status. If we find patterns of behaviour associated with these factors we will target educational interventions specifically at these groups."

Australia is unlikely to be a special case, the researchers say, believing that the inappropriate use of children's medicines is widespread throughout the world. "We would be interested in collaborating with groups in other countries in order to undertake similar studies so that appropriate educational programmes may be put in place. It is vital that parents worldwide should understand the proper usage of medicines so that they do not continue to put their children's health at risk," Dr. Moles concluded.

Provided by International Pharmaceutical Federation

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