

Over-the-counter medicines: What parents use and why



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Detailed report

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Report highlights:

- 92% of children have received an over-the-counter (OTC) medicine in the past 12 months, 65% have received more than one different type of medicine
- A third of children under six years of age received OTC cough and cold medicine. These medicines are not recommended for this age group by the Therapeutic Goods Administration as there is no credible evidence of benefits and there is potential for harm from serious side effects.
- Three quarters of parents who are treating children under six years of age with OTC cough and cold medicine said they had received advice to give their children this medicine from a pharmacist, and almost two thirds from a doctor
- Almost half of all children have taken vitamins or supplements in the past year, with over three quarters of parents indicating that the main reason was to boost their child's immune system
- A substantial proportion of parents have given their children paracetamol or ibuprofen to treat cough (27%) or induce sleep (10%) in the absence of any evidence for these medicines being effective in these areas
- One in seven parents reported using over-the-counter medicines to aid sleep or relax their children for travel, such as on flights or car trips
- Parents across Australia are spending an estimated \$67 million per year on cough and cold medicines, and \$74 million on vitamins and supplements for children aged less than 15 years

In a survey fielded in July 2016, Australian parents were asked to report their use of over-the-counter (OTC) medicines and supplements for their own children over the past 12 months. They were also asked about the reasons for using certain medicines and supplements, as well as the sources of advice influencing these behaviours. In addition, parents were asked to report where they had purchased OTC medicines and to estimate how much money they had spent on these products in the past 12 months.

OTC medicines and supplements can be purchased for self-treatment without a prescription from pharmacies, with selected products also available in supermarkets, health food stores and other retailers. Medicines were grouped into six types, based on existing pharmaceutical research, along with input from the Australian public via a pilot survey. Listed medicine types included (1) pain relief medicine, (2) cough and cold medicines, (3) vitamins and supplements, (4) antihistamines, (5) probiotics and (6) herbal medicines. Parents reported their use of each medicine type for each of their children over the past 12 months. Parents also indicated their reasons for using each of these types of medicine.

Reported use of over-the-counter medicines in children by parents

Across a sample population of 2,157 parents, data were collected for a total of 3,992 children aged between one month and 18 years. Parents collectively reported having administered at least one type of OTC medicine to 92% of children in the past 12 months, with the majority (65%) of children being administered more than one type of OTC medicine. The most commonly administered medicine type was for pain relief (such as paracetamol and ibuprofen), with 82% of all children having been administered this medicine in the past 12 months, followed by cough and cold medicines (44%) and vitamins and supplements (42%) (see Figure 1).

Rates of medicine use varied depending on the age of the child, with 68% of those children aged less than one year being administered one or more OTC medicines by their parent as compared to more than 90% of children across all other age-groups from two through to 18 years.

Rates of OTC medicine use by parents did not differ meaningfully by age of parent, gender, household income, level of education, migrant status, geographic location of respondent or whether the parent had a regular general practitioner providing care to their child.

Percentage of Australian children given over-the-counter medicines by parents in the past 12 months

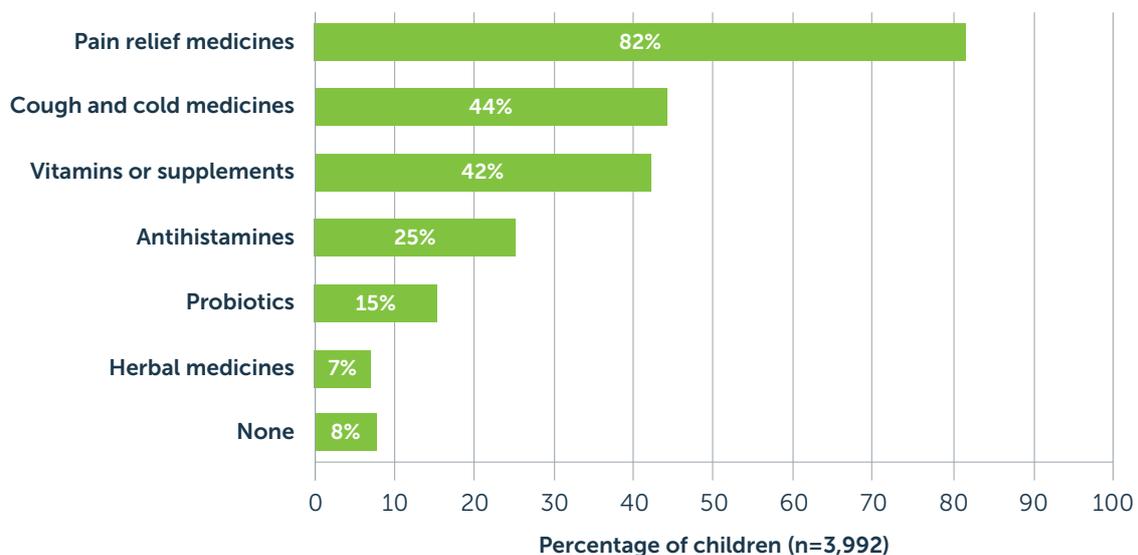


Figure 1.

Cough and cold medicines

The Therapeutic Goods Administration (TGA) issued a recommendation in September 2012 that cough and cold medicines should not be given to children under six years of age. Cough and cold medicines include decongestants, expectorants, antitussives and some antihistamines. This advice followed a review that showed little credible scientific evidence for the benefits of cough and cold medicines and potential for harm from uncommon but serious side effects.

Forty-four per cent of all children studied had been given OTC cough and cold medicine by their parent or caregiver in the past 12 months. Of note, 32% of children aged less than six years had been administered cough and cold medicine by a parent. Of those parents who had administered cough and cold medicine to their children aged less than six years, 74% indicated they had received advice to give their child cough and cold medicine from a pharmacist, and 64% from a doctor (see Figure 2).

Pain relief medicines

Pain relief medicines, such as paracetamol and ibuprofen, were the most frequently administered OTC medicine by parents for children. Almost 90% of parents reported having given one or more of their children pain relief medicine in the past 12 months. The lowest reported usage was in children aged less than 12 months (62%), compared with over 80% of all children aged two years and over.

The leading reasons given by parents as to why they gave their child paracetamol or ibuprofen were for appropriate indications, including to relieve pain (82%) and to lower fever (67%). Of concern however, was the significant proportion of parents who reported giving these medicines to treat problems for which there is no evidence that they work, such as to relieve cough (27%) and to induce sleep in an otherwise well child (10%).

Parent-reported sources of advice to give children under six years cough and cold medicine

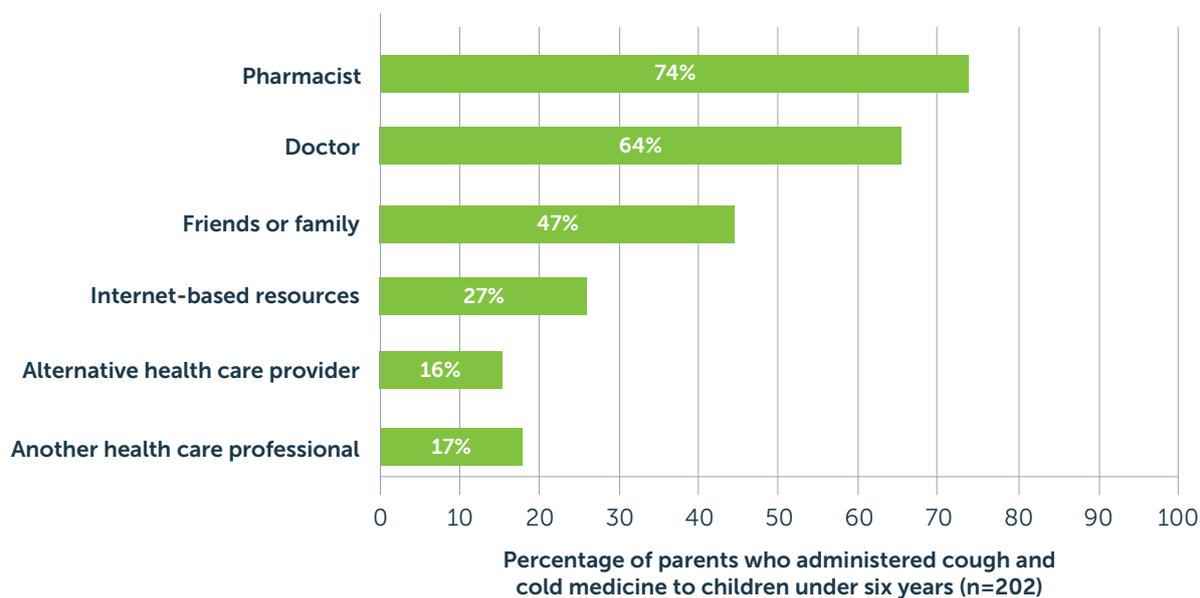


Figure 2.



Vitamins and supplements

Respondents reported that almost half of all children had been given vitamins or supplements by a parent in the past year (see Figure 1). Primary school aged children (between six and 12 years) were the age group most frequently reported as being given vitamins or supplements by their parents (50%), followed by teenagers (45%) and pre-schoolers (39%).

Over three quarters (76%) of parents indicated they gave their child vitamins or supplements to boost their immune system and almost half (47%) said the vitamins and supplements were given to supplement their child's diet. Other reasons provided by parents included to improve growth, to improve concentration and to improve behaviour (see Figure 3). Interestingly, parents born outside of Australia were more likely to indicate 'improving their child's growth' as among their reasons for vitamin and supplement use (36%) than those parents born in Australia (21%).

Sedation for travel

Fourteen per cent of parents reported they have given one or more of their children OTC medicine to help them sleep or relax them for travel, such as on flights or car trips. Among those who had administered medicine for travel, the most commonly used medicine was an antihistamine, such as promethazine (Phenergan) and trimeprazine (Vallergan) (40%), followed by paracetamol (39%), ibuprofen (22%), cough and cold medicines (14%) and medicines containing codeine, such as Painstop (14%).

Purchasing patterns

The leading place of purchase of OTC medicines reported by parents was pharmacies, with 92% of those parents who reported giving their children over-the-counter medicines indicating that they purchased one or more of the medicines from a pharmacy. A third (33%) had bought medicines from a supermarket and a minority from health food stores (0.5%) or online (0.5%). The purchase of medicines from non-pharmacy outlets means parents are obtaining OTC medicines without access to professional advice at the point of sale.

Those parents who indicated they had administered cough and cold medicines and/or vitamins and supplements to their children were asked to estimate how much they had spent on each of these types of medicines in the past 12 months. Using this information in combination with population data from the Australian Bureau of Statistics, an estimated annual expenditure "for children aged less than 15 years by Australian parents was calculated. It is estimated that Australian parents are spending approximately \$67 million (range: \$45 million–\$89 million) on cough and cold medicines and approximately \$74 million (range: \$50 million–\$98 million) annually.

Reasons given by parents for administering their child vitamins and supplements

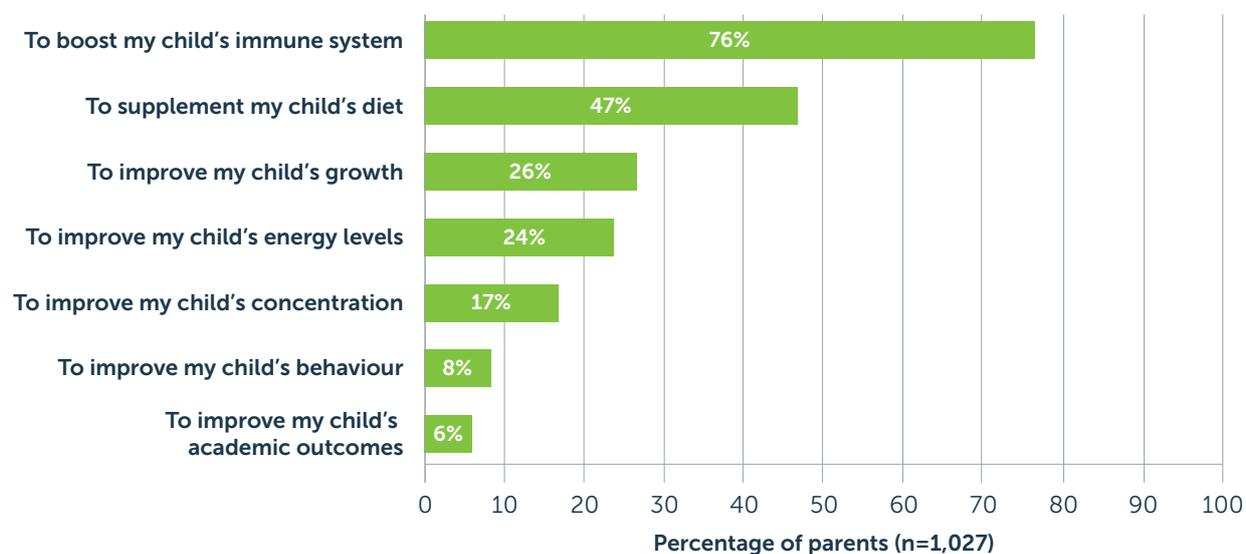


Figure 3.

Implications

Parent and carer administration of OTC medicines for children is widespread with the vast majority of Australian children having received more than one type of OTC medicine in the past 12 months. Cough and cold medicines, vitamins and supplements, and pain relief medicines are particularly commonly used, including in young children. Whilst some OTC medicines have genuine indications and proven benefits, for many there is potential to cause harm and no credible scientific evidence that they work.

Our study shows around half of Australian children are taking vitamins or supplements. In children with a regular healthy diet and no demonstrated nutritional deficiency, there is no indication for supplement use and no proven health benefits. Three out of four parents indicated they were giving their child vitamins and supplements to boost their immune system.

The evidence linking vitamin supplements to immune function in children is contradictory and controversial, and yet this poll found Australian parents are spending up to \$98 million a year on these supplements.

The Therapeutic Goods Administration (TGA) issued a recommendation in September 2012 that cough and cold medicines should not be given to children under six years of age. This advice followed a review that showed little credible scientific evidence for the benefit of cough and cold medicines and potential for harm from uncommon but serious side effects. Using these products can also sometimes delay medical advice being sought for more serious illnesses such as asthma, pneumonia or middle ear infection.

This poll reveals a third of Australian children under six years of age have been given cough and cold medicines by their parents in the past year, suggesting that parents are poorly informed about appropriate use, efficacy and safety of these medicines in young children. Even more concerning is the fact that three quarters of those parents who are inappropriately treating children with cough and cold medicine indicated they are doing so on the basis of advice received from a pharmacist, and almost two thirds from a doctor. These results raise real concerns regarding the quality and safety of practice of some health care providers when it comes to OTC cough medicines in young children. The prominent role of pharmacies as both an information source and primary place of purchase for these inappropriately used medicines warrants further investigation.

These findings bring into sharp focus worrying patterns of potential overuse and misuse of OTC medicines in Australian children for a range of common childhood complaints. Administration of medicines to children is a complex and ingrained behaviour. Parents seek assistance to optimise the health and wellbeing of their children, from relieving symptoms of the common cold through to aiding sleep and improving concentration. OTC medicines present a readily available, appealing quick fix, when in reality they can be, at best, an expensive placebo and at worse potentially harmful. Where appropriate, parents could be better supported and educated by health care providers regarding non-pharmacological ways to manage many childhood problems. Efforts should be made to better educate parents, and indeed health care providers, on current evidence-based information with respect to safe and appropriate use of over-the-counter medicines for common childhood complaints.

Data Source

This report presents findings from a nationally representative household survey conducted exclusively by the Online Research Unit for The Royal Children's Hospital, Melbourne. The survey was administered from July 11 to July 25, 2016, to a randomly selected, stratified group of adults aged 18 years and older (n= 2,157). All respondents were parents or caregivers to children aged less than 18 years. Collectively respondents had a total of 3,992 children. The sample was subsequently weighted to reflect Australian population figures from the Australian Bureau of Statistics. The completion rate was 64% among Online Research Unit panel members contacted to participate.

1. Smith SM, Schroeder K, Fahey T. Over-the-counter (OTC) medications for acute cough in children and adults in ambulatory settings. *Cochrane Database Syst Rev* 2012;8:CD001831
2. Therapeutic Goods Administration. OTC cough and cold medicines for children – Final outcomes of TGA review. Canberra: TGA, 2012 [updated 15 August 2012]. Available at www.tga.gov.au/industry/otc-notices-cough-cold-review-outcomes.htm [Accessed 9 August 2016].

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