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RESEARCH

Pediatric medication use experiences and patient counseling in community pharmacies: Perspectives of children and parents

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ABSTRACT

Objectives: This study aimed to explore the perspectives of children and parents regarding: 1) pediatric patients' knowledge and medication use experiences for chronic conditions; 2) how they want to learn about medicines; and 3) perceptions of community pharmacist–provided counseling.
Design: Qualitative study using semistructured interviews and thematic analyses.
Setting: Three community pharmacies in 2 eastern states: one in rural western North Carolina, and 2 in an urban region of western Pennsylvania.
Participants: A total of 39 study participants: 20 children using medications for chronic conditions and 19 parents interviewed July-December 2015.
Main outcome measures: Child and parent perspectives regarding pediatric medication use, knowledge, experiences, and pharmacist-provided patient counseling.
Results: Children and parents had similar perspectives on pediatric medication use and pharmacist counseling experiences. Six themes emerged: 1) child's knowledge, self-management, and medication use experiences; 2) essential medication information and sources; 3) child's frequent absence from the pharmacy; 4) patient counseling needs and recommendations; 5) use of interactive technologies to facilitate learning about medicines; and 6) perceptions of pharmacists. Participants reported that children were independently managing their medications, although they had minimal knowledge about medicines. Children and parents stated that the child's absence during medication pick-up at pharmacies was a barrier to receiving counseling by pharmacists. Children were comfortable and receptive to pharmacists educating them about their medicines, particularly how medications affect the human body, how they were manufactured, and research studies on their medications. Parents and children recommended the use of interactive and educational technologies for pediatric counseling.
Conclusion: Children are frequently not present at pharmacies during prescription pick-up; however, children and parents are comfortable with and receptive to pediatric medication counseling by pharmacists. Interactive and educational technologies need to be developed and used by pharmacists to facilitate counseling and educate children about the effective and safe use of medicines.

In the past 2 decades, the number of children diagnosed with chronic conditions has steadily risen.[1] As a result, children are taking significantly more medications than ever before.[2,3] Recent trends in drug use indicate that more than 263 million prescriptions are dispensed annually for pediatric patients and more than 6 million children use medications for chronic conditions.[2,4] Children with chronic diseases have a higher risk of encountering drug therapy problems which may include improper administration, dosing errors,

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Key Points

Background:

- The number of children diagnosed with chronic conditions has rapidly increased in the past 20 years. Many children are independently managing their medications with limited knowledge, which may predispose them to improper administration, dosing errors, and nonadherence.
- Pharmacists in the community are accessible to children with chronic conditions and their caregivers; however, very little is known about children's perceptions of their counseling needs.
- This study advances our knowledge of children's and parents' perspectives of community pharmacists to implement medication counseling services for this vulnerable population.

Findings:

- Participants reported that children were independently managing their medications, although they had minimal knowledge about medicines.
- Both participant groups stated that the child's absence during medication pick-up at the pharmacy prevented them from receiving counseling by community pharmacists.
- Children were comfortable and receptive to pharmacists educating them about their medicines, particularly how medications affect the human body, how they are manufactured, and research studies on their medications. Parents and children recommended the use of interactive and demonstrative technologies.

and medication nonadherence.[5-7] Despite having very limited knowledge about prescriptions, many children are independently managing their medications.[8] Medication dosing errors in children are 3 times more likely than in adults to cause harm or lead to treatment failures, adverse events, or even death.[9,10] Parents and other family caregivers often overestimate how much medication management responsibility their children can assume.[11] Therefore, children's safe and effective use of medications is a growing patient safety concern.

The National Council on Patient Information and Education has recognized that the improper use of medicines in children is a national health problem affecting children of all ages, in all parts of the country, and of every ethnic and socioeconomic group.[6] Because many children are regularly taking medications, pharmacists can help to improve pediatric patients' knowledge regarding safe use of medicines through provision of direct patient counseling. Pharmacists as medication experts are potentially well positioned to educate children about their medicines, because more than 93% of Americans live within 5 miles of a pharmacy, and there are more than 60,000 pharmacies, often in areas that are more geographically accessible to families than other types of health care facilities.[12,13]

Furthermore, the U.S. Pharmacopoeia emphasizes that health care professionals should directly speak with children about their medicines using developmentally appropriate methods; this has been shown to improve medication adherence, disease self-management, and clinical outcomes.[14-17] Children with chronic conditions have expressed a desire to be more involved in their treatment, health care decisions, and medication-taking processes.[16,18] A study found that adolescents typically have difficulty communicating with health care professionals and accessing appropriate medical services.[19] Most studies examining medication counseling in pharmacies have focused on adult patients' and pharmacists' perspectives.[20] There has been limited research exploring children's and parents' perspectives on pediatric medication use experiences and their need for pharmacist-provided counseling; this study begins to address this research gap.

Objectives

We explored the perspectives of children and parents regarding: 1) pediatric patients' knowledge and medication use experiences for chronic conditions; 2) how they want to learn about medicines; and 3) perceptions of community pharmacist–provided counseling.

Methods

Study setting, recruitment, and participants

Participants were recruited from 3 community pharmacies: 1 located in rural western North Carolina and 2 in an urban region of western Pennsylvania. Based on the study objectives and earlier observational findings,[21] children participants were eligible if they could speak English, were 7 to 17 years of age, and took medication for a chronic condition, such as asthma, diabetes, depression, or attention deficit–hyperactivity disorder. We purposefully included children with various chronic conditions and ages who might have different capabilities and cognitive development to better understand pediatric day-to-day medication use experiences and communication with pharmacists. Parent interviews were conducted to understand their perspectives of their children's medication use and pharmacist-provided counseling; eligible participants could speak English and picked up medication for a child at the pharmacy. Flyers describing the study were distributed to families picking up medications for children with chronic conditions. Pharmacy staff contacted the research team when eligible families showed interest in study participation. Parents and children provided written informed consents and assents, respectively. The University of Pittsburgh and University of North Carolina Institutional Review Boards approved this study.

Data collection

Semistructured interviews were used for data collection. Interview guides (Appendix) using open-ended questions were developed by 4 members of the research team to elicit perspectives of children and parents regarding pediatric knowledge and medication use experiences, facilitators of