Outside the Box and Inside the Shelter

Preventing Injuries to Children Who Are Homeless

by Susan Fliesher, Mary Curtis, and Katie Linek Puello

The terms unintentional injury and accident are often used synonymously, but are in fact very different. The word "accident" implies an incident was random and unpredictable. Unintentional injuries on the other hand, are both predictable and more importantly, preventable—especially when it comes to children.

According to limited research, homeless children are statistically more likely to suffer unintentional injury than housed children from poorer families.

Mary Curtis had the van refitted to look like a home environment and outfitted it with simulated safety hazards.

Unintentional injuries, such as suffocation, choking, poisoning, falls, fire or burns, cuts, drowning, and motor vehicle accidents, can be predicted based on a child's age, location, behaviors, and more. For example, young children who put things in their mouths are at increased risk for choking on small objects and poisoning. Toddlers are very curious and love to run, climb, and explore, putting them at an increased risk for falls which can lead to head injuries, broken bones, and cuts.

Despite the predictability of these injuries, they continue to be a leading cause of death and disability for children and adolescents. The Child Trends Data Bank Report on Unintentional Injuries reported that over 8,000 children annually—more than 20 per day—die in the U.S. because of such injuries. The report further estimated that for every child death resulting from an injury, more than 1,000 children receive medical treatment for non-fatal injuries. Much of this data is collected by medical offices and hospitals, but how many more children are injured who do not seek medical help?

In addition to the tragedy of events that leave a child with lifelong injuries or disabilities, the cost to society is staggering. In 2012, the Centers for Disease Control and Prevention's National Center for Injury and Control estimated the costs related to childhood injuries at $87 billion dollars annually in the United States. The cost of an injured child's medical care is often considered; however, many forget the secondary expenses—the lost wages of a family member staying home to care for an injured child, equipment, needed environmental changes, and more.

Homeless Children and Unintentional Injuries

The risk of such injuries is even higher among homeless children. One study found that when housed, lower socio-economic families with children were compared to homeless families with children, the rate of unintentional injury was 13 percent higher among the homeless.

Why this occurs more among homeless children is unclear. "Is it because they are poor?" asks Mary Curtis, a professor at the Goldfarb School of Nursing at Barnes Jewish College, specializing in injury prevention. "Is it because they have never been taught? Or is it because they have so many other issues on their plate they can't even think about it?"

What's more, this higher rate of injury does not take into account unreported injuries or patients who may not be identified as homeless. "We don't know the real numbers of injuries because if you fall down, but you look relatively good, no one is going to report it," explains Susan Fliesher, a pediatric nurse practitioner and assistant professor at Goldfarb School of Nursing at Barnes Jewish College. "Plus, you're probably worried someone is going to take away your kid if they have injuries that look like you were negligent."

While it is unknown what the true incidence of unintentional injury among homeless children is, with a staggering 2.5 million children in the United States experiencing homelessness, the prevention of injuries in this targeted population is critical.

An Innovative Program

Studies have shown a positive relationship between child safety hazard education and a decrease in childhood injuries. One study reviewed parent education programs and reported fewer injuries in children of families who had received safety hazard education training. It concluded that interventions largely associated with home visits provided to disadvantaged families are effective in reducing unintentional injuries in children and improving home safety in this population. But how do you provide a home visit when the family is homeless?

Curtis and Fliesher found a solution: bring the home to them.

After seeing what she calls a "revolving door" of children coming into the emergency room with injuries that could have been prevented, Curtis knew something had to be done. "What we really noticed is that these mothers have not been taught how to identify hazards to prevent injuries from ever happening," says Curtis. "We decided they had to be taught. It's a skill and it's not intuitive to many of these mothers."

"A lot of mothers don't realize they need to have the attention to the children that they do," Fliesher adds. "If you haven't had much experience, you don't think about that safety until someone gets hurt."

Curtis went down to the Goodwill and bought items that she had seen cause injuries to children coming into the emergency room—curling irons, marbles, etc. Piling all the items into a plastic rolling cart, she began working with women in poverty who were suffering from substance abuse issues. Getting the cart in and out of her car and to the facility proved difficult however.

Then she found the answer: "I was walking between buildings on campus and found an old College of Nursing van." The old Winnebago had sat idle for years. "It had flat tires and it was ugly," explains Curtis. Funded by the college of nursing research faculty grant program, the van was retrofitted to look like a home environment and outfitted with the simulated hazards.

Some of the safety hazards that were placed in the van included: electrical outlets not covered, frayed electrical cords, coffee cup on the edge of the table, space heater next to flammable material, cigarette lighter on end table, TV in

More than 8,000 children die annually due to unintentional injuries, many of which are predictable if a parent knows what hazards to look for in their environment. How many safety hazards can you spot in this picture?

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position to tip over, poison cleaning agents under sink, hot plate on edge of counter, bucket of water, button batteries on a side table, beads on table (not a safe toy), medication bottle on coffee table, smoke detector without batteries, older crib with rails that were too wide, stuffed animals in the crib, and pans on the stove with the handles turned outward that a small child could easily reach.

Working with Homeless Mothers

Fliesher adapted the program to work with mothers experiencing homelessness for her scholarly project as part of her Doctorate of Nursing Practice, a clinical doctorate for nursing. The van was parked outside a shelter for homeless mothers, who were invited to participate in the program. Participants then boarded the van and were asked to identify the various child safety hazards they noticed. The van had several areas with intentionally placed safety hazards that might be seen in any living room, kitchen, dining room, or bedroom. A checklist was used and a check was made when a mother verbalized seeing a safety hazard.

Following the initial van experience, a class was provided for mothers to talk about safety hazards that could be dangerous for their children. "This enables people to have some time where you can really dig into 'What's my child like? Why would he be at more risk for this? What makes it easy for a child to get hurt?" explains Fliesher.

Laminated pictures of safety hazards were shown and passed around. They talked about the age at which a child might have an increased risk from the safety hazards in each picture, discussed how children develop, and examined the risks at different stages. "You really have to know your own child," clarifies Fliesher. "All three year olds are not the same. Some are more prone to danger than others. It depends on the temperament of the child."

Mothers who participated in the program boarded the van and pointed out the hazards they noticed. The group then attended a class, discussing topics such as different types of hazards, the levels of severity of various injuries, and if they thought their child was at risk.

There were also discussions about the severity of the injuries and whether moms thought their child(ren) might be at risk. According to Fliesher, "If you perceive that there is a risk, that it's a severe risk, and that there might be something you can do to prevent it, you're more likely to do it if there aren't a lot of barriers."

Participants were encouraged to tell stories about their experience with childhood injuries to make the discussion more real. One mother spoke about her child's burn on his hand after touching an electric stove burner that was turned off, but was still hot. She did not think he was tall enough to do that or that he would want to touch that surface. Another mom spoke of her child falling off the bed when she did not think the infant could roll. "Giving the mothers time to verbalize is the most essential aspect for success," says Curtis. "Giving them the time to share stories with each other. … I think a lot of them have some guilt around these injuries and it helps them process through that. They also learn from each other."

When moms were asked about making changes in the environment or in supervision to prevent injuries, they were able to talk about what they might be willing to do differently. "You see why some people will do different health behaviors and others won't," describes Fliesher. "It makes a lot of sense that if you don't perceive something is much of a risk, or that you're at risk for it, you're not going to do it."

When speaking about what is required to make the environment safer, it was important to discuss the fact that homeless families are in a unique position, often staying with others, with less control over their environment. They talked about ways to advocate for making changes if they thought something was unsafe. If they were unable to get changes made, they discussed other options. "This empowers people to be an advocate for their children," Fliesher continues. "To provide more supervision and to have the self-confidence to say this isn't right and I have to do something about it." When mothers were asked if they would they feel comfortable asking others to make environmental changes regarding safety hazards, sixteen out of seventeen mothers said they would. The mother who said she wouldn't feel comfortable explained that while it wasn't her place, she would "watch out more."

Upon completion of the class, the mothers returned to the van and were found to identify a statistically significant increase in the number of safety hazards in the van, with scores improving by 23.9%. That shows a real improvement in women's ability to identify safety hazards after child safety hazard education.

The Value of Safety Hazard Identification on a Mobile Van

What is the value of using a mobile van refitted for safety hazard education? Beyond the added ease of transporting simulated hazards, the van offered the ability to provide what is essentially a home visit.

Using a van also added a layer of excitement to the program. There was a lot of curiosity regarding the large van and the mothers were intrigued to be able to see what was in it. It made the education come to life. "It really gives you the idea that there's so much more out there in terms of how you present that material that brings it to life—especially if you bring it to someone's location," says Fliesher.

Participants enjoyed climbing onto the van to see what was there. "Looking for safety hazards in the van reminds me of the book, Where's Waldo?" explained one mom who thought it was fun to try to find the safety hazards. When the mothers went back onto the van for the second time, they were excited to find new hazards and wanted to know what they had missed. "The women enjoyed going into a space that was set up with safety hazards and having the challenge of finding them," says the program director at the agency where the study was done. "They thought it was fun. Going and finding things that were a problem reinforced the need to evaluate an environment in order to make it safer for their children."

"Now that we have the van set up—it's mobile, it's ready to go—we can take it wherever," says Curtis. "So now we get invited to certain events like a health fair where we can walk people through and teach them on the spot."

While the van is a great way to show safety hazards, the initial cost plus maintenance and insurance may be impractical for agencies with limited finances. Alternatively, service providers could set up a room with a traveling pack of child safety hazards, create a diorama with several rooms that could be taken from place to place, or simply use pictures with hazards that participants can circle.

Many mothers were never taught how to identify safety hazards like the one above, but studies show a positive relationship between child safety education and a decrease in injuries. For low-income families, home visits have proved an effective way to provide this education.

"The bottom line is that we have to be creative in the ways that we teach people," explains Fliesher. "Not everybody learns the same way. Practical application is the best when it comes to learning. You can talk about safety hazards and see that they get it and can apply it in real time."

Conclusions

Some parents believe injuries are just a natural part of childhood—children will learn from getting injured and will avoid similar risks in the future. "The idea of the class was if you can change their perception, then they are more willing to say 'I really need to think about this because this could be a serious injury,'" says Fliesher. "If they think it's a 'no-big-deal' injury, it might not be worth it to them." In other words, parents are more likely to adopt preventive behaviors to protect their child against injury when they perceive their child as vulnerable to a severe injury.

Less than half of the women recalled having any previous child safety hazard education. This may be due to time constraints in a busy primary care pediatric setting, with limited time to discuss topics more in depth, distractions, or too much information to absorb in such a short time. Regardless of why the mothers said they had not previously received the child safety hazard education, it is clear there is a need for more education to be offered outside of the primary care setting to homeless women whose children are at increased risk for unintentional injury.

"The beauty of this is that it doesn't have to be a nurse that does it," explains Fliesher. "There are a lot of professionals out there who are working with the homeless and people who are lower-income, who want to be excellent parents and just do not have the support. These professionals know a lot about safety hazards and development. They can provide wonderful education with this."

Upon completion of the experience, the mothers who participated in the study were asked whether they found the class helpful. Many expressed that they learned a lot gained a sense of accomplishment from the class. One participant expressed, "There is a lot I didn't know about safety." Another mom asked for additional child safety hazard education to learn more about outdoor issues, while a different mother said she would like to learn other topics with this kind of format.

Like most parents, the mothers wanted the best for their children. According to Fliesher, "They wanted to learn. If you're not paternalistic when you teach, but instead involve them and ask them 'What do you think? What would you do? What would make you want to do this and what would make you not do it?' that gives them some control. I think in life people sometimes don't have a lot of control, so it's neat to be able to say 'I can do this.'"

After the safety hazard education class, participants returned to the van to look for hazards they initially missed. For example, some participants may not have realized that a hot coffee pot or a pan could be within reach of a small child, but after discussing this type of hazard in class, it was easy to spot.

Innovative methods of safety hazard education need to be developed to support and empower parents with and without homes to provide a safer environment for their children. "I think to really connect with people," Fliesher adds, "they need to be able to apply it to real life. They need to see it and know that 'Yes, that's a problem.'" Developing a culture of safety will require those working with children and families in poverty to become more informed about childhood injury and to partner with parents, families, colleagues, and communities to create the changes needed to prevent childhood injury. ■

Resources

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