Pediatric Injuries Attributable to Falls From Windows in the United States in 1990–2008

AUTHORS: Vaughn A. Harris, BS,[a,c] Lynne M. Rochette, PhD,[a] and Gary A. Smith, MD, DrPH[a,b]

[a]Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio; and Department of [b]Pediatrics and [c]Medical Student Education, College of Medicine, The Ohio State University, Columbus, Ohio

KEY WORDS
injury, falls, trauma, window, children

ABBREVIATIONS

CI—confidence interval
CPSC—Consumer Product Safety Commission
ED—emergency department
IPR—injury proportion ratio
NEISS—National Electronic Injury Surveillance System
SD—Standard Deviation

www.pediatrics.org/cgi/doi/10.1542/peds.2010-2687

doi:10.1542/peds.2010-2687

Accepted for publication May 19, 2011

Address correspondence to Gary A. Smith, MD, DrPH, Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, 700 Children's Dr, Columbus, OH 43205. E-mail: gary.smith@nationwidechildrens.org

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

FINANCIAL DISCLOSURE: *The authors have indicated they have no financial relationships relevant to this article to disclose.*

WHAT'S KNOWN ON THIS SUBJECT: Preschool-aged children have the highest risk of falling from windows, boys fall more frequently than girls, and the number of falls from windows peaks during warmer months.

WHAT THIS STUDY ADDS: This study is the first to use a nationally representative sample of children treated in US hospital emergency departments, over a 19-year period, to identify risk factors and trends for pediatric window fall–related injuries.

abstract

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OBJECTIVE: To examine the epidemiological features of pediatric injuries related to falls from windows.

METHODS: By using the National Electronic Injury Surveillance System, emergency department (ED) data for pediatric injury cases associated with window falls in 1990–2008 were reviewed.

RESULTS: An estimated 98 415 children (95% confidence interval [CI]: 82 416–114 419) were treated in US hospital EDs for window fall–related injuries during the 19-year study period (average: 5180 patients per year [95% CI: 4828–5531]). The mean age of children was 5.1 years, and boys accounted for 58.1% of cases. One-fourth (25.4%) of the patients required admission to the hospital. The annual injury rate decreased significantly during the study period because of a decrease in the annual injury rate among 0- to 4-year-old children. Children 0 to 4 years of age were more likely to sustain head injuries (injury proportion ratio [IPR]: 3.22 [95% CI: 2.65–3.91]) and to be hospitalized or to die (IPR: 1.65 [95% CI: 1.38–1.97]) compared with children 5 to 17 years of age. Children who landed on hard surfaces were more likely to sustain head injuries (IPR: 2.05 [95% CI: 1.53–2.74]) and to be hospitalized or to die (IPR: 2.23 [95% CI: 1.57–3.17]) compared with children who landed on cushioning surfaces.

CONCLUSIONS: To our knowledge, this is the first study to investigate window fall–related injuries treated in US hospital EDs by using a nationally representative sample. These injuries are an important pediatric public health problem, and increased prevention efforts are needed, including development and evaluation of innovative prevention programs. *Pediatrics* 2011;128:455–462

In recent decades, the subject of pediatric falls from windows has received increasing attention, leading to epidemiological studies, evaluations of morbidity and mortality rates, and the development of prevention programs.[1–14] Initial studies were performed with large urban populations, primarily in New York, New York, and Chicago, Illinois. Children living in high-density, multifamily, housing structures and high-rise buildings were thought to be at greater risk of serious injury resulting from window falls.[2,7,8,10,11] More-recent studies showed that these injuries occur throughout the nation, in both urban and suburban settings in such metropolitan areas as Dallas, Texas, Los Angeles, California, and Cincinnati, Ohio.[1,3–5,12,13] Most of those studies drew similar conclusions, that is, preschool-aged children have the highest risk of falling, boys fall more frequently than girls, window falls have high morbidity rates, and falls demonstrate seasonal trends, with peaks during warmer months.[1–8,10–13,15–17] The studies generally have been limited to 1 hospital or 1 city/metropolitan area. A national epidemiological study on pediatric falls from buildings and structures, based on a data sample from 27 states, was published in 2005.[9] However, that study was based on hospitalization data, which did not include multiyear trends or details regarding the circumstances of the injury events, which are important for developing prevention strategies.

The current study retrospectively evaluates window fall–related injuries among children treated in US hospital emergency departments (EDs) during a 19-year period. To our knowledge, this is the first study to examine the secular trends for these injuries over almost 2 decades and the first to investigate window fall–related injuries treated in hospital EDs by using a nationally representative sample. This study provides a comprehensive understanding of the magnitude of the problem and associated risk factors, which should help inform prevention efforts.

METHODS

Data Source

The US Consumer Product Safety Commission (CPSC) maintains the National Electronic Injury Surveillance System (NEISS) to monitor injuries associated with consumer products and sports and recreational activities treated in US hospital EDs. The NEISS is a stratified probability sample of ~100 hospitals representing the 6100 hospitals throughout the United States and its territories with a 24-hour ED with ≥6 beds. The NEISS was developed in 1972 and underwent sampling-frame revisions in 1978, 1990, and 1997. Trained NEISS coders in participating hospitals review patients' ED medical records to extract and to record data for each injury, including age, gender, injury diagnosis, body region injured, product or products involved, and disposition from the ED, as well as a brief narrative describing the injury incident. Data are weighted to provide national estimates of the frequencies of these injuries.[18]

Case-Selection Criteria

Data were obtained from the CPSC for pediatric cases (≤17 years of age) that involved windows, storm windows, window glass, window sills, window blinds, shades or shutters, window screens, plastic window panels, window barriers, or window locks (NEISS product codes 1894, 1826, 1870, 0638, 1828, 1854, 1888, and 0707) for the years 1990 through 2008.[19] Because of revisions throughout the years, some codes were discontinued, with cases subsequently being consolidated into the current codes.[18,19] This selection process yielded 33 758 reported cases of window-related injuries. The narratives of these cases were examined by using both computerized word searches and human reviews to identify injuries associated with falls out of a window, for inclusion in our study. Cases were included if the narrative indicated that the patient fell/jumped out a window, from a window, off a window, or from/off a window ledge or fell/pushed through a window screen. Cases were excluded if a window fall was not the mechanism of injury, the fall was from/off a window sill (most narratives indicated that window sill falls were back into the room), or involved car windows, tree house windows, or windows of houses under construction. Also excluded were cases in which the patient "fell through" a window, because the narratives in such cases generally indicated that the patient fell through the glass but not out the window onto the ground. Exceptions to the inclusion/exclusion criteria were made, however, if there was sufficient information in the narrative to indicate that the case should be included (eg, mention of a significant fall height or outdoor landing surface) or excluded (eg, mention of landing on an indoor surface or object). Of the 33 758 window-related injuries, 3947 met the criteria for inclusion in this study as injuries associated with falls from windows.

Variables

Patients were categorized into 2 age groups, namely, 0 to 4 years and 5 to 17 years, during analyses for comparison of higher-risk, preschool-aged children with older children. Additional age stratification was not performed because of similar injury distributions across the older age group. Body regions were grouped as head and face (NEISS categories of head, face, eyeball, mouth, and ear), trunk (upper trunk, lower trunk, neck, shoulder, and pubic region), upper extremity (upper arm, elbow, lower arm, wrist, hand, and finger), lower extremity (upper leg, knee, lower leg, ankle, foot, and toe), and other (25%–50% of body or all of body). The neck region was included with the trunk instead of the head and face, because neck injuries were more similar to trunk injuries (strains and sprains) than to head injuries (concussions, fractures, lacerations, and hematomas). NEISS diagnoses were categorized as head injuries (concussions, intracranial hematomas, internal organ injuries to the head region, and skull fractures), fractures (excluding skull fractures), lacerations (lacerations and punctures), soft-tissue injuries (contusions/abrasions, hematomas [excluding intracranial hematomas], and strains/sprains), and other injuries (burns, dislocations, foreign-body injuries, dental injuries, nerve damage, anoxia, hemorrhage, poisoning, avulsions, dermatitis/conjunctivitis, and other injuries). Disposition from the ED was grouped as examined and/or treated and released (including patients who left the ED against medical advice), hospitalized (including patients who were transferred to another hospital and those who were held <24 hours for observation), and fatalities (including patients who were dead on arrival or died in the ED).

Five new variables were created on the basis of information from case narratives, namely, fall height, landing surface, window status before the fall, furniture near the window, and risk behavior of the child. Most window and fall heights were recorded as number of stories. When the height was documented in feet, it was converted to stories in increments of 12 ft (ie, 0–12 ft = first story, 12.1–24 ft = second story, and ≥24.1 ft = third story or higher), on the basis of methods used in previous studies.[7,10,12] Landing surfaces were categorized as hard surfaces (including concrete, asphalt, pavers, and bricks), firm surfaces (including grass, gravel, dirt, roofs, and decks and balconies not specified as concrete), soft surfaces (including bushes, mulch, bark, and flowerbeds), and other surfaces. Window status before the fall was coded as open, screened, closed (including windows that do not open), or other (eg, plastic or cardboard in the window or window guard in place). If the narrative indicated that the child was elevated by a piece of furniture near the window that facilitated the fall, it was noted that furniture was involved in the fall. For children 5 to 17 years of age, a variable was created for risky behavior, to identify cases in which the child's behavior increased the risk of falling from a window (eg, climbing out a window onto a roof, jumping from a window, or climbing out a window on tied bed sheets). This allowed the differentiation of children who purposely exited the window from those whose exit was unintentional; however, it was not possible to determine whether suicidal intent was involved in the intentional jumps.

Data were analyzed by using SPSS for Windows 17.0 (SPSS, Chicago, IL), SAS 9.1 (SAS Institute, Inc, Cary, NC), SUDAAN 9.0 (Research Triangle Institute, Research Triangle Park, NC), and Epi Info 6.04 (Centers for Disease Control and Prevention, Atlanta, GA). All data reported are national estimates based on the 3947 pediatric cases included in this study and their respective weighting factors provided by the CPSC, which were based on the inverse probability of case selection. Adjustments were made by the CPSC to account for sampling-frame changes during the study period.[18] Computation of injury proportion ratios (IPRs) with 95% confidence intervals (CIs) was performed.[20] The method for calculation of IPRs for population subgroups is identical to that for calculation of relative risks. Unweighted samples of <20 cases were not included in the analyses because of the potential instability of estimates based on such small numbers of cases. Population data from the US Census Bureau were used to calculate national injury rates per 100 000 people.[21] This study was approved by the institutional review board at the Research Institute at Nationwide Children's Hospital.

RESULTS

Injury Numbers and Rates

From 1990 through 2008, an estimated 98 415 children (95% CI: 82 416–114 414 children) were treated in US hospital EDs for injuries attributable to a fall from a window, with an average of 5180 patients (95% CI: 4828–5531 patients) per year. Male patients accounted for 57 134 of the cases (58.1%). The mean age of the children was 5.1 years (SD: 4.8 years; median: 3 years). Children 0 to 4 years of age accounted for 64.8% of the injuries (63 730 cases [95% CI: 52 151–75 308 cases]), with a peak at 1 year (18.2% [17 940 injuries]) and 2 years (21.5% [21 193 injuries]) of age. Three-year-old children represented 14.4% of injuries (14 220 injuries) (Fig 1).

Annual injury rates for children 0 to 17 years of age in 1990 through 2008 ranged from 5.8 to 11.4 injuries per 100 000 children, with an average annual rate of 7.3 injuries per 100 000 children (95% CI: 7.3–7.4 injuries per 100 000 children). Boys had an average annual injury rate of 8.3 injuries per 100 000 children (95% CI: 8.2–8.4 injuries per 100 000 children), and girls had a rate of 6.3 injuries per 100 000 children (95% CI: 6.2–6.4 injuries per 100 000 children). There was a statistically significant linear decrease in the annual injury rate during the 19-year study period (−0.155 cases per 100 000 children per year; $P = .003$). In

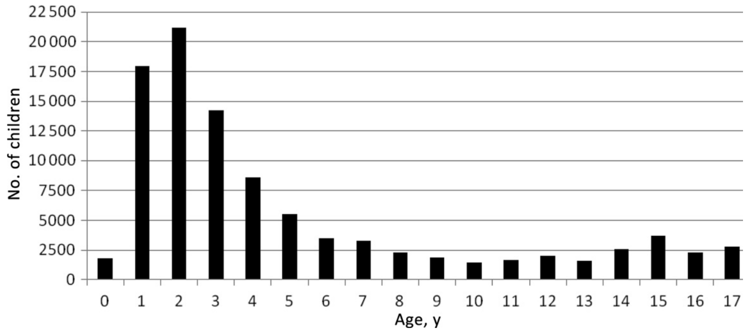

FIGURE 1
Numbers of children treated in US hospital EDs for injuries attributable to falls from windows in 1990–2008, according to year of age.

stratified regression analyses, the annual injury rates for children 0 to 4 years of age decreased at −0.426 cases per 100 000 children per year ($P = .001$), but annual injury rates for children 5 to 17 years of age did not demonstrate a statistically significant trend (Fig 2). There was seasonal variation in the number of injuries per month (Fig 3), with quadratic regression analysis showing a statistically significant, curvilinear relationship with a peak during the summer months ($b_1 = 4874.8$, $b_2 = -375.7$; $P < .001$).

Characteristics of Window Falls

Among cases in which the height of the fall was documented (71 533 [72.7%] of 98 415 cases), 1-story falls accounted for 30.8% (22 017 cases), 2-story falls accounted for 62.7% (44 850 cases), and ≥3-story falls accounted for 6.5% (4665 cases) (Table 1). The status of the window before the fall was not documented in 83.5% of cases. Of the 16 235 cases with known information, however, 82.8% (13 441 cases) indicated that the window had a screen in place before the fall. In 3.7% of all cases (3673 of 98 415 cases), the narrative indicated that the patient was raised closer to the window by a piece of furniture; involvement of furniture was not documented for 94.7% of cases. The landing surfaces were not documented in 75.7% of the narratives. Among the 23 879 injuries for which the landing surface was known, 40.1% of patients landed on hard surfaces, 42.6% landed on firm surfaces, and 15.7% landed on soft surfaces. Among children 5 to 17 years of age, 13 828 children (38.3%) displayed risky behaviors, such as climbing out of a window or jumping from a window.

Description of Injuries

Three-fourths (74.4%) of patients were examined and/or treated and released, 25.4% of patients were hospitalized, and 0.2% of cases were fatal. Of the 94 597 cases (96.1% of all cases) in which the injured body part was known, 48.6% involved injuries of the head or face, 18.5% injuries of the lower extremities, 17.6% injuries of the trunk, 10.5% injuries of the upper extremities, and 4.8% other injuries. The injury diagnosis was soft-tissue injury in 40.9% of cases, followed by head injury in 26.2% of cases (Fig 4).

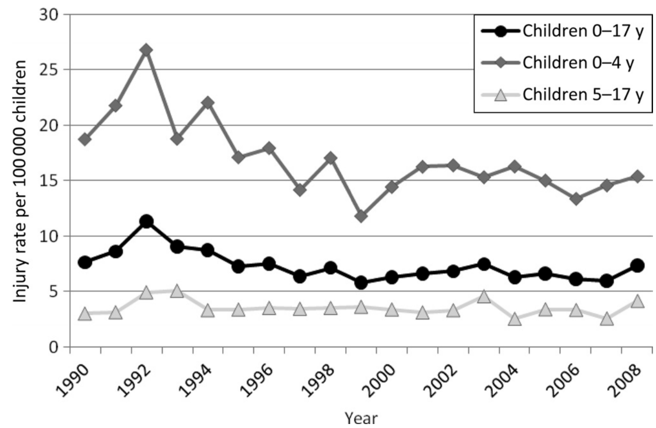

FIGURE 2
Rates of injuries attributable to falls from windows among children 0 to 17 years of age treated in US hospital EDs in 1990–2008, according to age group and year.

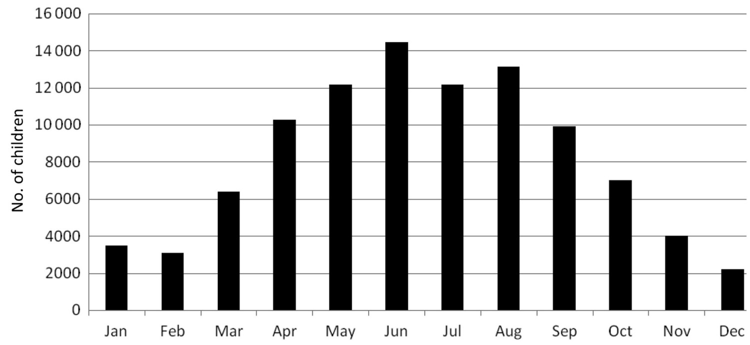

FIGURE 3
Numbers of children 0 to 17 years of age treated in US hospital EDs for injuries attributable to falls from windows in 1990–2008, according to month of injury.

TABLE 1 Characteristics of Injuries Attributable to Falls From Windows Among Children 0 to 17 Years of Age Treated in US EDs in 1990–2008

Characteristic	No., Estimate (95% CI)	%
Gender		
Male	57 134 (47 551–66 718)	58.1
Female	41 232 (34 311–48 153)	41.9
Age		
0–4 y	63 730 (52 151–75 308)	64.8
5–17 y	34 685 (29 209–40 162)	35.2
Window height		
First story	22 017 (17 440–26 594)	30.8
Second story	44 850 (35 726–53 974)	62.7
Third story or higher	4665 (2979–6352)	6.5
ED disposition		
Treated/examined and released	73 131 (61 059–85 204)	74.4
Hospitalized	24 968 (17 833–32 103)	25.4
Fatal injury	[a]	0.2
Body region injured		
Head and face	45 975 (37 571–54 379)	48.6
Trunk	16 688 (13 631–19 745)	17.6
Upper extremity	9914 (7868–11 960)	10.5
Lower extremity	17 510 (14 202–20 817)	18.5
Other	4511 (3156–5865)	4.8
Diagnosis		
Head injury	25 484 (19 263–31 704)	26.2
Fracture	15 290 (12 206–18 373)	15.7
Laceration	7391 (5960–8822)	7.6
Soft-tissue injury	39 777 (33 182–46 371)	40.9
Other	9273 (7124–11 422)	9.6
Risky behavior		
No	84 587 (70 316–98 858)	85.9
Yes	13 828 (10 897–16 760)	14.1

[a] National estimates of frequencies were not possible because of the sample size of <20 cases.

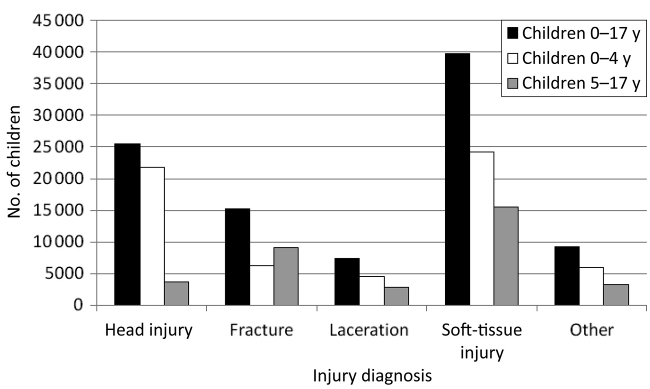

FIGURE 4
Numbers of children treated in US hospital EDs for injuries attributable to falls from windows in 1990–2008, according to age group and injury diagnosis.

Assessment of Risk

Children 0 to 4 years of age were more likely to injure the head or face (IPR: 3.18 [95% CI: 2.72–3.70]) or to have a diagnosis of head injury (IPR: 3.22 [95% CI: 2.65–3.91]) than were children 5 to 17 years of age. Head injuries were more strongly associated with hospitalization or death than were other types of injuries (IPR: 2.71 [95% CI: 2.33–3.15]). Therefore, children 0 to 4 years of age were 1.65 times (95% CI: 1.38–1.97 times) more likely to be hospitalized or to die than were children 5 to 17 years of age. Children 5 to 17 years of age were more likely to sustain injuries to the upper extremities (IPR: 2.53 [95% CI: 1.93–3.32]) or lower extremities (IPR: 4.59 [95% CI: 3.76–5.59]) than were children 0 to 4 years of age. The older children were more likely to sustain fractures than were children 0 to 4 years of age (IPR: 2.64 [95% CI: 2.19–3.18]).

Compared with lower heights, patients who fell from ≥3 stories were more likely to sustain fractures (IPR: 1.81 [95% CI: 1.32–2.47]) and to be hospitalized or to die (IPR: 2.54 [95% CI: 2.13–3.02]). Patients who fell from 1 story had greater proportions of lacerations (IPR: 2.28 [95% CI: 1.50–3.46]) and soft-tissue injuries (IPR: 1.20 [95% CI: 1.05–1.39]) and were more likely to be examined and/or treated and released from the ED (IPR: 1.34 [95% CI: 1.23–1.45]) than were patients who fell from greater heights. Patients who landed on hard surfaces were more likely to sustain head injuries (IPR: 2.05 [95% CI: 1.53–2.74]) and to be hospitalized or to die (IPR: 2.23 [95% CI: 1.57–3.17]) than were patients who landed on more-cushioning surfaces. Patients who landed on soft surfaces (bushes, mulch, or flowerbeds) were protected against head injuries (IPR: 0.47 [95% CI: 0.29–0.77]) and were more likely to be examined and/or treated and released from the ED (IPR: 1.29 [95% CI: 1.18–1.42]) than were patients who landed on other surfaces.

Among children 5 to 17 years of age, patients who engaged in risky behavior were more likely to sustain injuries to the lower extremities (IPR: 2.50 [95% CI: 2.04–3.07]) than were patients who did not engage in such behavior. In contrast, patients who did not exhibit risky behavior were more likely to sustain injuries to the head or face (IPR: 3.69 [95% CI: 2.42–5.62]) than were those who exhibited such behavior. Consequently, patients who did not exhibit risky behavior were more likely to be hospitalized or to die than were those who exhibited such behavior (IPR: 2.09 [95% CI: 1.41–3.10]).

DISCUSSION

The seasonal and age distributions of injuries attributable to falls from windows in our study are similar to those in other studies.[1,3–6,8,9,11–13,16] There was seasonal variation, with more window falls during the spring and summer months. The rate of injury among younger children (0–4 years of age) was greater than that among older children (5–17 years of age), and younger children were more likely to sustain serious injuries, as demonstrated by their increased risk of hospitalization or death. This is likely to be attributable, in part, to their large proportion of head injuries, compared with older children. Other studies reported higher mortality rates[2,3,5,7,10,12,13] than that found in our study. This is consistent with the fact that this study underestimates deaths resulting from window falls, because the NEISS does not capture prehospital deaths among patients who are not transported to the ED or deaths that occur after admission to the hospital from the ED.

There was a statistically significant decrease in the rate of window fall–related injuries among 0- to 4-year-old children during the 19-year study period. As shown in Fig 1, the observed decrease seems to be driven by a rapid decrease in injury rates during the first decade of the study, followed by a plateau beginning in 2000. The overall decrease may be attributable to increased awareness among child caregivers, improved window construction, and/or use of window guards. However, this study did not demonstrate nationally the dramatic decreases that were seen in New York, New York, and Boston, Massachusetts (up to a 96% decrease in incidence over 10 years), after implementation of the "Children Can't Fly" and "Kids Can't Fly" programs, respectively. These programs provided parent and community education, made window guards available, and, in New York, mandated installation of window guards in multifamily dwellings with children <11 years of age.[2,11,22] The slower decrease followed by a plateau in injury rates found in this study underscores the fact that prevention efforts of the magnitude undertaken in New York and Boston have not occurred nationwide.

An estimated 4% of cases in this study described children rolling off beds or climbing on furniture before falling out a window. Although this proportion is small, furniture involvement may be underreported, given that this information was not documented for 94.7% of cases. Despite this limitation, this study clearly illustrates that furniture placed near a window can facilitate access for a young child, and this environmental risk factor is modifiable.

Similarly, this study may underestimate the frequency of cases in which a window screen was in place before the fall, with the child pushing out the screen and falling from the window. Only 16.5% of cases reported the status of the window before the fall but, of those, 82.8% reported that a screen was in place. Findings from other studies demonstrate that screens often are in place (up to 76% of the time) but do not provide adequate protection against window falls involving children.[4,13,23] Our study supports the findings from other studies. Parents and other child caregivers should be counseled not to depend on screens to prevent children from falling out of windows. To prevent these falls, window guards or window locks that prevent the window from opening >4 inches should be used.[1]

Despite the success of the "Children Can't Fly" program,[2,11] other prevention efforts have not yielded such positive results. A meta-analysis of home-safety interventions against falls lacked evidence to show that window fall prevention initiatives have been successful in promoting the use of window guards and locks.[24] Voluntary ordinances recommending window guards generally have had disappointing results, and building codes requiring them are not easily enforced.[3,8,12] In 2006, the International Building Code recommended that windows >6 ft from the ground on the building exterior have a window sill at least 24 inches from the floor in the building interior.[25] As this is implemented in newer homes, this may affect future rates of window falls among young children. However, older children who engage in risky behaviors, such as climbing out of or jumping from windows, likely will not be deterred by removable window guards, window stops, or raised window sills. In addition, the contribution of suicidal intent in some of the intentional window exits is not known. Additional research is needed for better understanding of the contributing factors for window falls among older children who intentionally climb out of or jump from windows.

In a fall, the 2 factors that determine the amount of energy transferred to a child's body on impact with the landing surface are the height of the fall and the energy-absorbing capacity of the surface. Therefore, window fall prevention efforts also should consider the properties of the surfaces below windows. Findings from this study support the important role that the landing surface plays in determining the occurrence of head injuries and the outcome (hospital admission or death) of fall-related injuries. Therefore, home and property owners should be encouraged to provide bushes or plant beds under windows, instead of concrete, to soften the landing surface.[14,26] Falls onto such more-cushioning surfaces resulted in fewer head injuries and more favorable disposition from the ED in this study.

This study has several limitations. This study underestimated the number of window fall–related injuries among children, because it included only children treated in hospital EDs. It did not capture injured children who were treated in other health care settings or who were not brought for medical attention. As mentioned previously, the NEISS also underestimates fatalities. Therefore, the injuries reported in this study may not be representative of the entire spectrum of pediatric injuries associated with falls from windows. Perhaps the greatest limitation is that the NEISS case narratives often lacked complete details about the circumstances of the injury event, such as the involvement of furniture, the height of the window sill, the presence of screens in the window, and the contribution of suicidal intent to intentional jumps among older children. These missing details would have been helpful for the development of intervention strategies. Also, the quality of case narratives might have changed over time (although the maximal length for the narrative did not change), which might have affected the rate of case inclusion and thereby the yearly rate of falls reported in this study. Although data regarding exposure of children to windows are lacking, the use of US Census Bureau population data is an acceptable alternative for the calculation of injury rates in this study. In addition, NEISS data do not allow comparisons of window fall–related injuries according to geographic region or urban, suburban, or rural location. Consequently, locations with well-established window fall prevention programs, such as New York and Boston, cannot be compared with locations without such programs.

CONCLUSIONS

To our knowledge, this is the first study to investigate pediatric window fall–related injuries treated in hospital EDs by using a nationally representative sample. Risk factors for serious injuries among children, as indicated by hospitalization or death, include young age, a fall height of ≥3 stories, and hard landing surfaces. Because of their risky behavior, older children may require different prevention strategies than younger children. Prevention measures for young children should aim to prevent falls by reducing the child's opportunity to exit the window, through the use of devices such as window guards or window locks and through placement of furniture away from windows, to decrease access to windows by young children. Prevention measures for all children should address softening the landing surfaces below windows, to help reduce the severity of injury when a fall does occur. We recommend that future research evaluate the fall height, landing surface, presence of furniture, and window status before the fall in association with child age, injury type and severity, and intentional versus unintentional window falls.

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SUN PROTECTION: *The sun had finally come up in rainy Burlington and I was at the store purchasing sunscreen when I ran across a label that claimed sunscreen was "sun-proven" and "High UVA". I had a vague idea what high UVA meant and no idea whatsoever what "sun-proven" meant. According to an article in* The New York Times *(Science: June 20, 2011), I am not alone. The Food and Drug Administration (FDA) recently released new rules meant to clarify sun screen claims. Although the rules do not go into effect for at least a year, many of us plan to spend as much time in the sun as possible this summer. As reported in the article, solar radiation consists both of UVA and UVB rays. Both can cause skin cancer, although only UVB is associated with skin burning. Currently, sun screens carry a sun protection factor rating, or SPF, that indicates how long an individual using the product is protected against UVB rays. The larger the SPF rating, the longer one can stay in the sun without burning. However, most consumers do not use the product as intended. I know that when my kids apply lotion, they firmly believe that a little dab will do. I, on the other hand, am teased mercilessly as I look more like a snowman at the beach. Most consumers apply far too little sunscreen and too infrequently. While it is tempting to buy the sunscreen with the highest SPF rating, little benefit is derived by purchasing sunscreens with SPF labels over 30 when the product is used appropriately. Although I did not see a single sunscreen labeled "broad spectrum," when the new rules go into effect sunscreens labeled "broad spectrum" will have to provide equivalent protection against UVB and UVA rays. Only products with an SPF rating of 15 or more will be able to claim protection against skin cancer. Why melanoma rates have not fallen despite widespread use of sunscreen is a bit perplexing and may be due to a variety of factors such as more time in the sun, better screening and detection, or sun induced injury before sunscreen use became commonplace. As for me, while I still was not sure what high UVA meant, it seemed a good idea to protect against both UVA and UVB, and I bought a good supply, even for me.*

Noted by WVR, MD

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PEDIATRICS
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

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