

Window Safety for Young Children

A woodcut-style illustration in a sepia tone. It depicts a young child lying face down on a tiled floor in front of a window. The child's arms are outstretched, and their expression is one of distress or pain. To the right, a woman with long hair, wearing a dress and an apron, stands with her hands raised in a gesture of alarm or grief, looking towards the child. The background consists of a window with a grid pattern, suggesting a domestic interior.

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Today's Agenda

- Pediatric Window Falls: the medical perspective
- Local Injury Data
- Risk Factors
- Prevention Strategies
 - Safety devices
 - Legislation
 - Education & Awareness
- Resources and Ideas for Action

A Typical Case

- 3 year old male
- With parents in apartment; looking out a window to see a passing aircraft.
- Child leans against the screen which pops out. He falls about 20 ft on the concrete patio below.
- 911 activated.

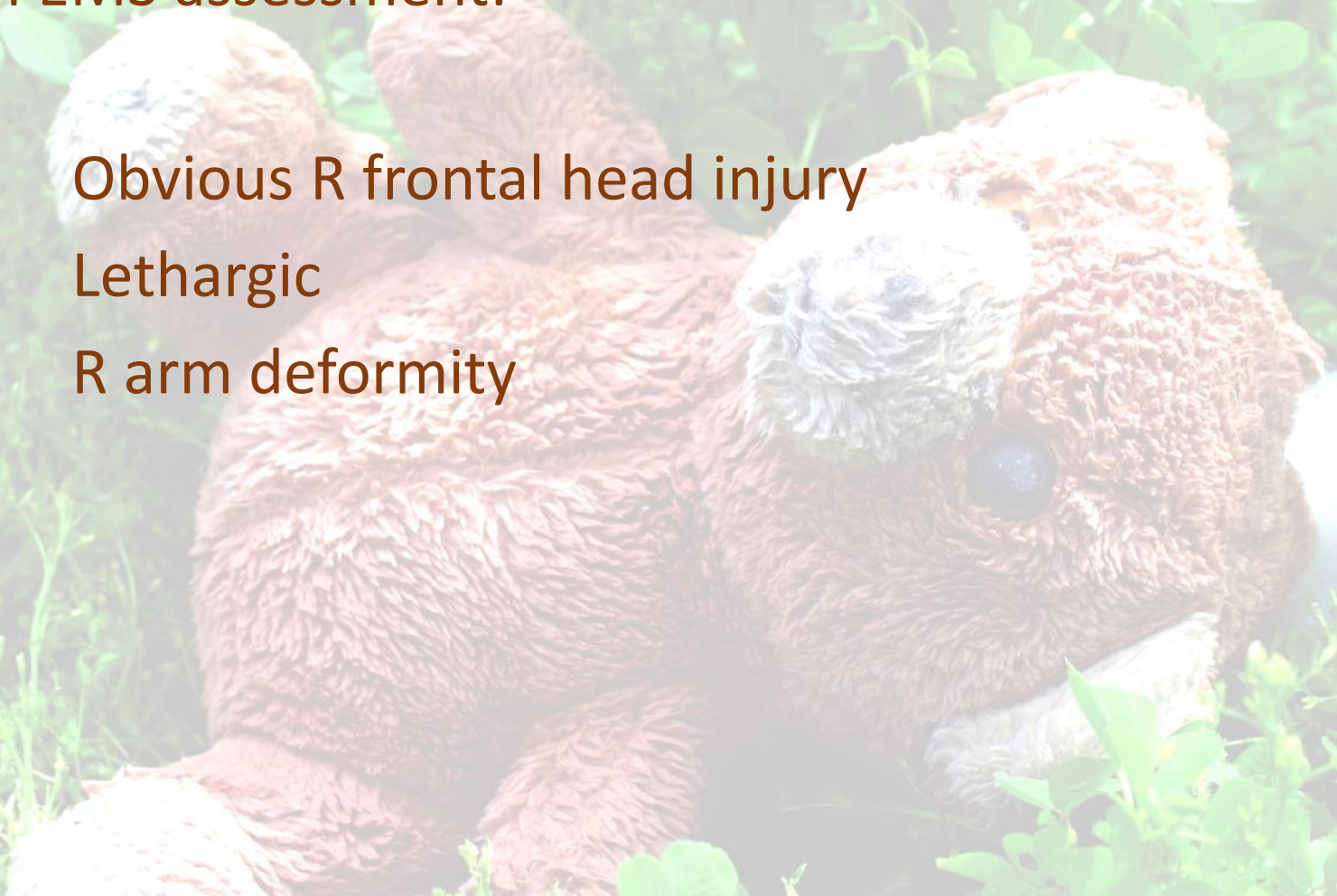
A Typical Case

- On EMS assessment:

Obvious R frontal head injury

Lethargic

R arm deformity

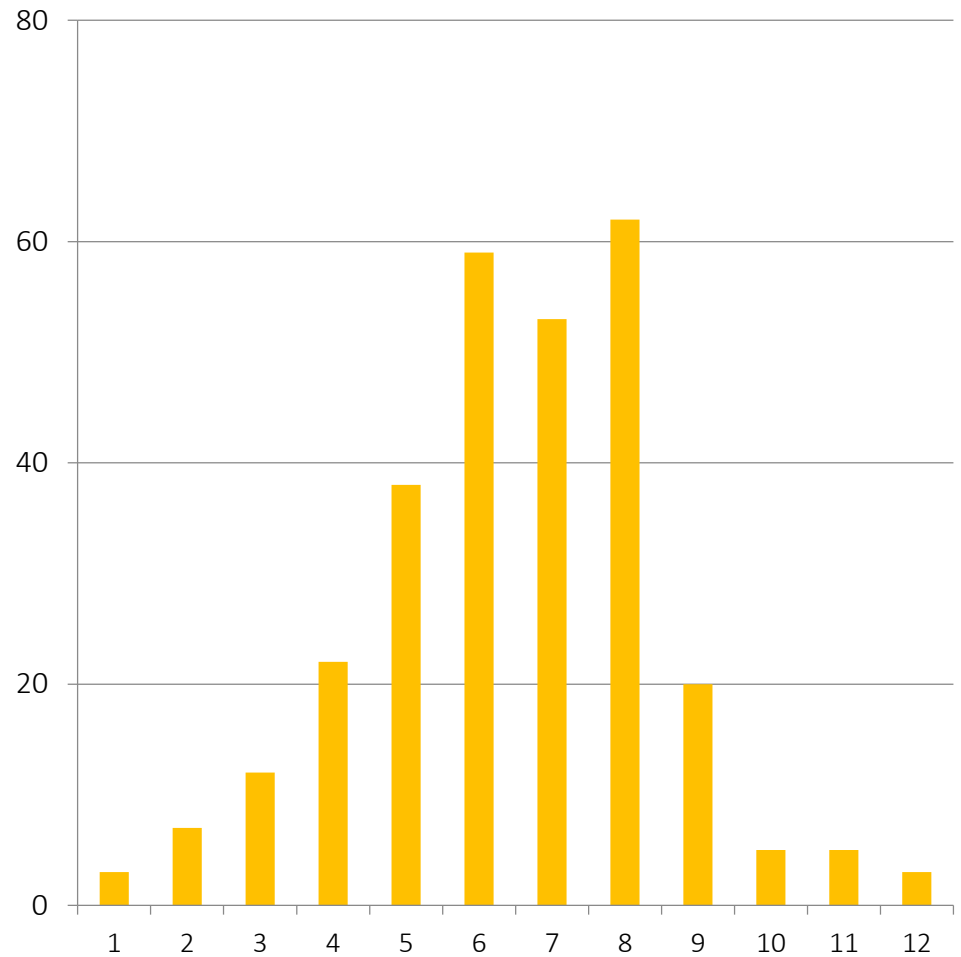


Local Injury Data

- 30 – 50 children (under age 5) treated at Harborview every year
- Up to 5,000 nationally

Month of Fall

HMC Data

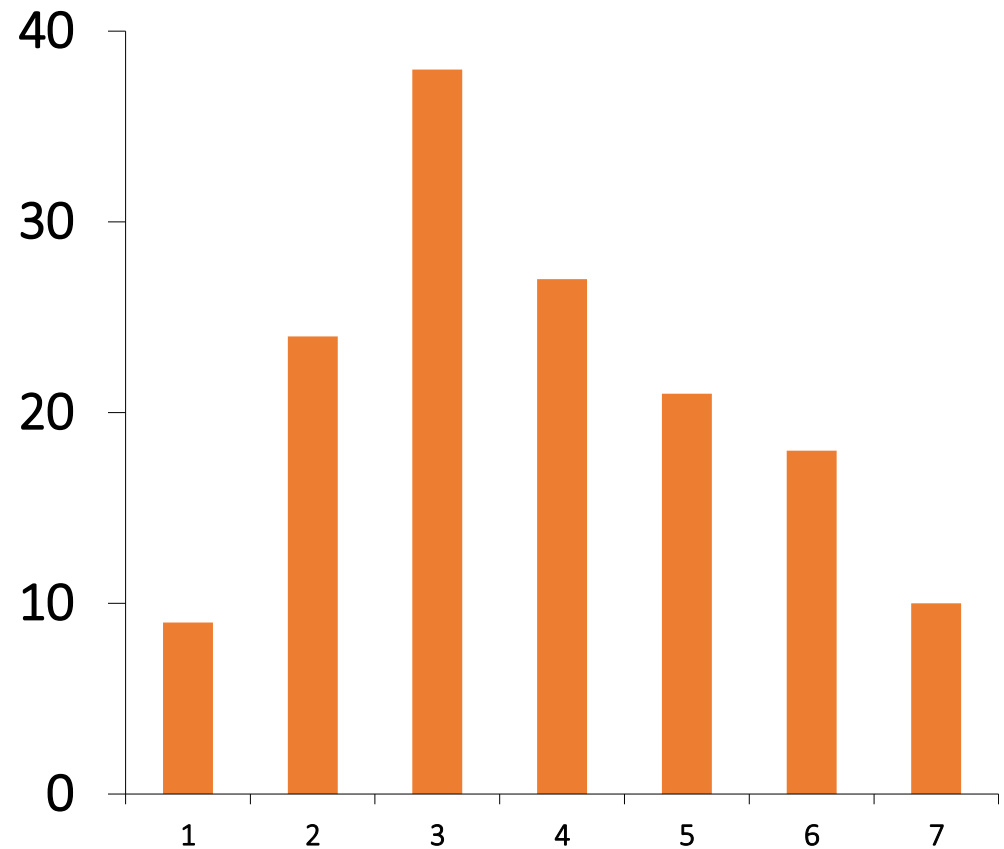


Local Injury Data

- Mean age: 3.2 years
- Mean height: 15.2 feet (range 6 - 35 feet)
- 68% male

Age of Child

HMC Data





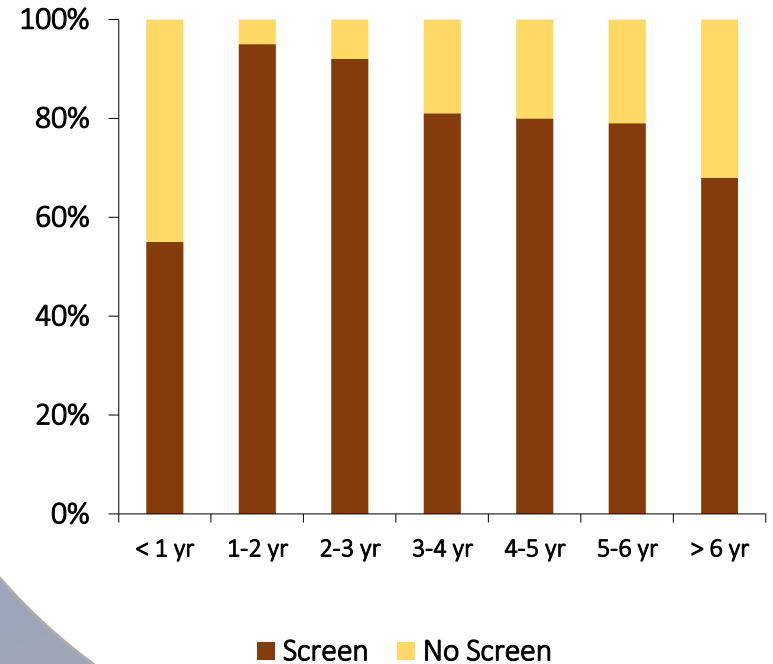
Window Falls

- More falls in zip codes with more children.
- Equally likely to be renters or owners.
- No increased risk seen in public housing or section 8 units.

Window Falls

- Most children fall from second floor window
- Most seem to fall through a screen
- Most are supervised at time of fall

Reported Presence of Screen
HMC Data



A young child with dark hair, wearing a green and blue striped sweater and blue jeans, stands on a windowsill. The child is looking out a window that has insect screens. The child's hands are raised towards the screen. To the right of the window is a white door with a silver handle. The background outside the window shows green foliage and trees.

Supervision

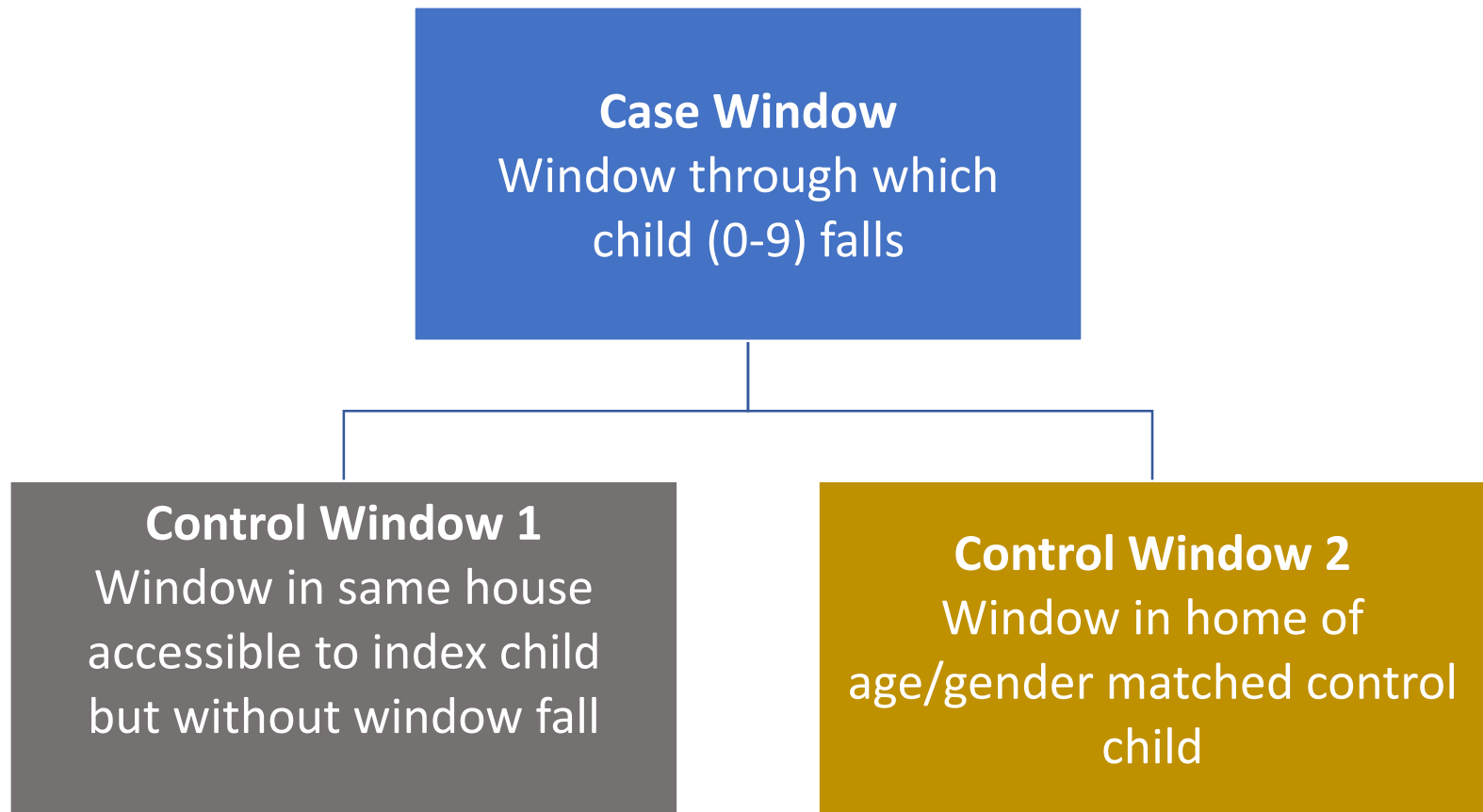
- Almost always: supervision is adequate.
- Parents are often in the same room.
- Caregivers do not realize that open windows are a safety hazard.
- False sense of security from insect screens.



Risk Factors

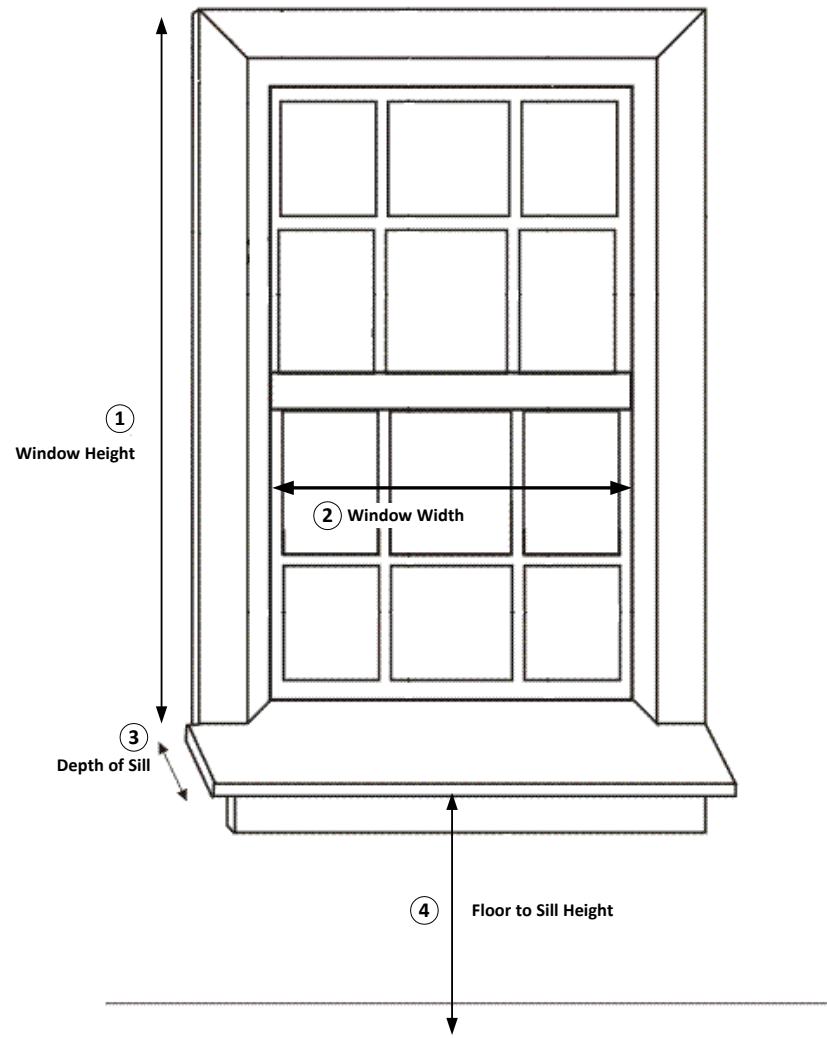
- Age & Gender
- Window factors
 - What design features of windows, screens or interior environments contribute to pediatric window fall risk?
 - Which of these might be modifiable through aftermarket additions or stipulations in design standards and building codes?

HMC Pediatric Window Fall Study



Home Measures

- Interior Measures
 - *Window Height*
 - *Window Width*
 - *Floor to Sill Height*
 - *Sill Depth*
- Object Under Sill?
 - *Functional Sill Height*



Home Measures

- Exterior Measures
 - *Window Height*
 - *Contact Surface*






Static Testing for Screen Failure

Results

	Case Windows	In-Home Controls	Community Controls
Type of Window: Horizontal Slider	94 %	77 %	50 %
Exterior Height	180 in	186 in	82 in
Average Sill Depth	6.2 in	5.3 in	4.3 in
Screen Present	92 %	83 %	85 %
Screen Failed at < 22 N	60 %	54 %	16 %



Identified Window Risk Factors

- Horizontal slider windows
- Windows on higher floors
- Deep sills
- Screen loosely mounted to window frame

What About Prevention?



- Most windows represent a safety risk to young children.
- A problem with product design.
- Ultimately, prevention achieved by changing the way windows and screens are designed.



A Spectrum of Prevention

Passive

Aftermarket
Product
Modification

Legislation /
Regulation

Education /
Awareness

Active



Product Modification

Make standard windows safer

- Limit access to window
- Keep window closed
- Reduce size of open area



Window Guards

- Bars added to windows to prevent children falling
- Must be operable by adults for fire egress
- Can be costly to treat all windows in a home

Product Modification



Product Modification

Window Stops

- Limit opening to 4 inches or less.
- Difficult for toddlers to defeat but easily overcome by adult if needed.
- Can be inappropriately positioned and need to be reapplied if removed.



Legislation / Regulation

Require use of window guards

- Remarkable success in New York City
- 1972: education & distribution
- 1976: require landlords to install guards



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New York City's Window Guard Policy

- Guards required on all windows where child < 10 resides.
- Annual notice to tenants.
- Window fall a reportable event.
- Falls
 - In 1976: 217
 - In 2016 : 9

Education / Awareness

- Alerting parents to the danger
- Offering actionable safety advice
- Providing lower cost safety supplies



Key Messages

- Always supervise small children
- Never open a window more than 4 inches
- Open windows from the top, if possible
- Move furniture away from windows
- Install window stops or window guards
- Never rely on a screen to prevent falls

Stop the Summer Epidemic Window Safety for Kids



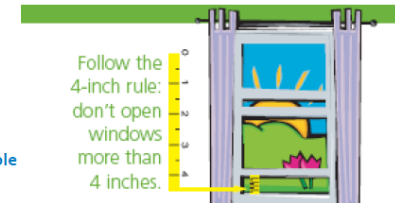
Did you know?

- Falls from windows are an important cause of injury in childhood.
- Every year almost 5,000 children are injured after window falls.
- Most children who fall are between 2 and 5 years old.
- Most falls happen in the spring and summer months, when windows are open.
- **Most of these falls are preventable.**

Small steps can save a child's life:

- Always supervise small children.
- Never open windows more than 4 inches.
- Open windows from the top down, if possible
- Move furniture away from windows
- Install window stops or releasable child-safety window guards.
- Never rely on window screens to prevent children from falling out a window. Screens are designed to pop out for fire safety - the weight of a toddler can easily push through a screen.

Remember:
Screens keep bugs
out, not kids in!



Follow the
4-inch rule:
don't open
windows
more than
4 inches.

Need more information about window safety?

Contact [Safe Kids Seattle](#) at
safekids@uw.edu or 206.744.4967

Safe Kids Seattle is proudly led by
Harborview Medical Center



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Stop the Falls Chicago

- Education and product distribution.
- Public information campaign includes PSAs, bus posters, signs.
- Outreach to building managers.
- Distribution of low cost safety supplies.
- 15 year campaign: 50% reduction in window fall incidence.

Make Windows Safer by Design

- Minnesota (2009): mandates window fall prevention design
- ASTM -2090: specifies requirements and standards for window fall prevention devices
- Includes
 - **integrated window opening control devices** and
 - **window fall prevention screens.**





Safety by Design

- Concerns and loopholes
 - Passive vs active protection
 - Sill height exclusions
- Efforts now to modify building codes through ICC



Resources and Ideas for Action

- Safety messaging
 - Windows represent a hazard to young children
 - Safety devices can reduce the risk
 - Standard screens are not a safety device
 - Remember the need for escape in the event of a fire
- Low cost window stops
- Community advocacy