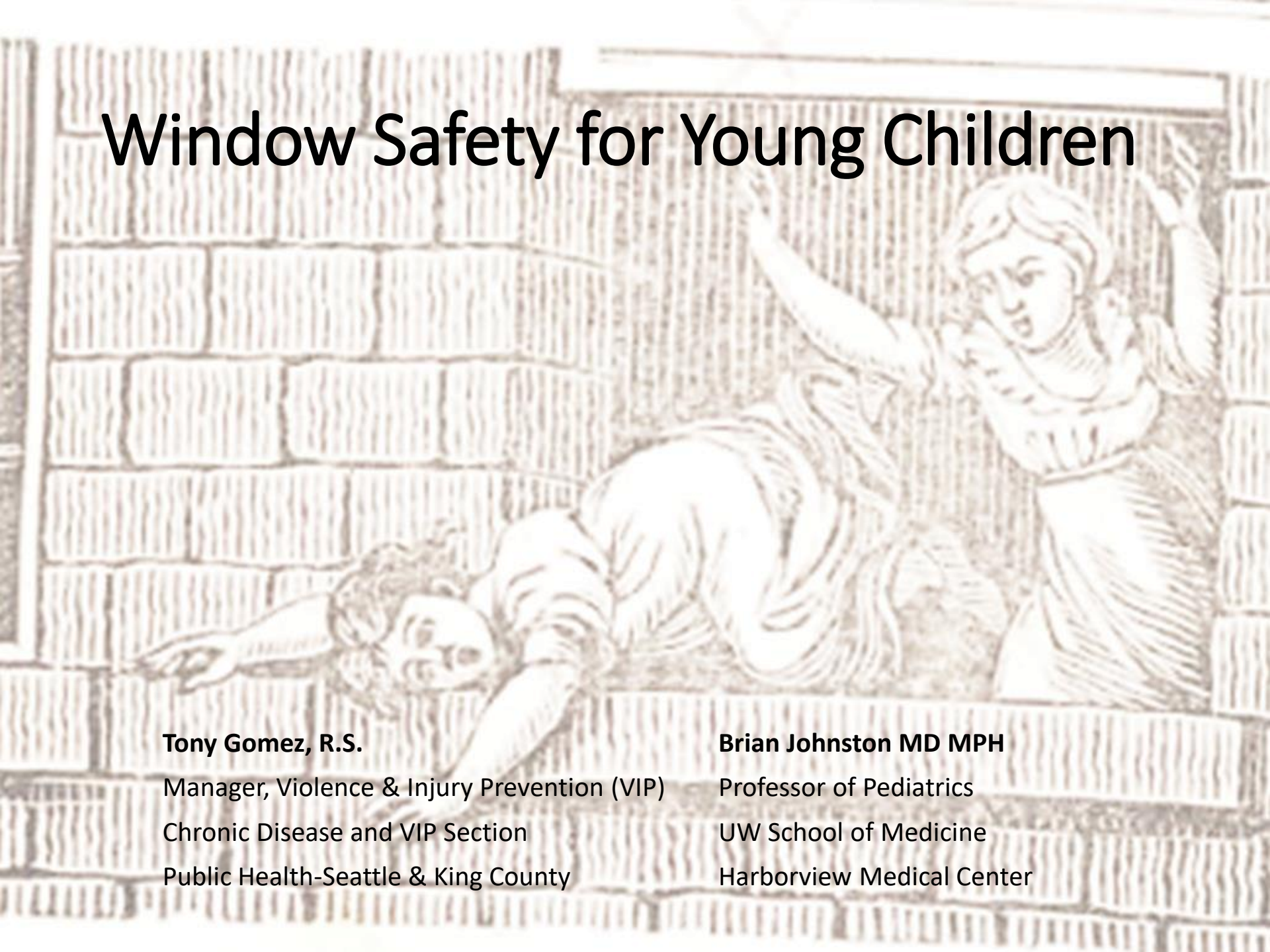


Window Safety for Young Children

A sepia-toned illustration of a young child lying on a brick ledge, looking distressed, with an adult woman standing behind them, looking down in concern.

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Harborview Medical Center



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.

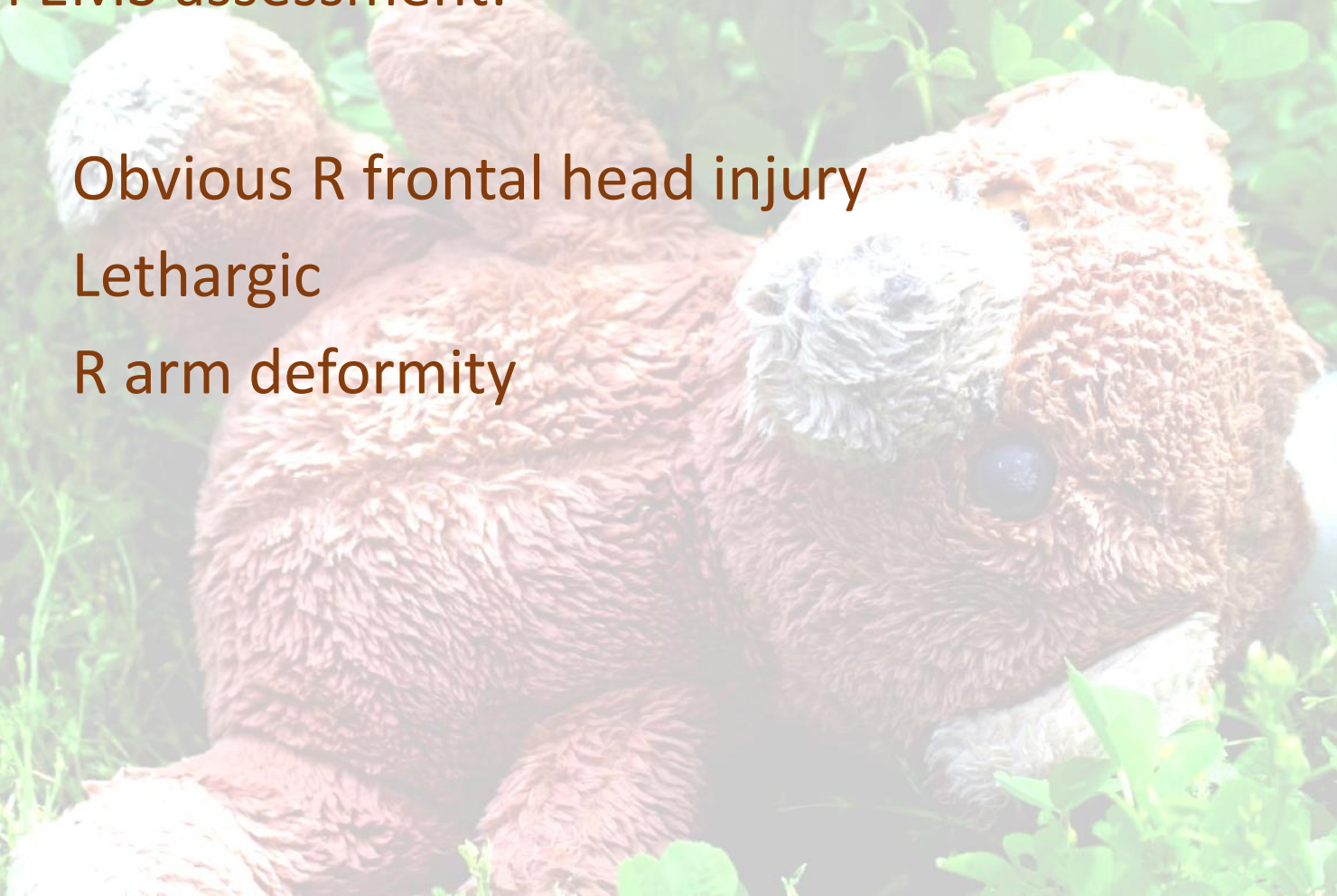
A Typical Case

- On EMS assessment:

Obvious R frontal head injury

Lethargic

R arm deformity

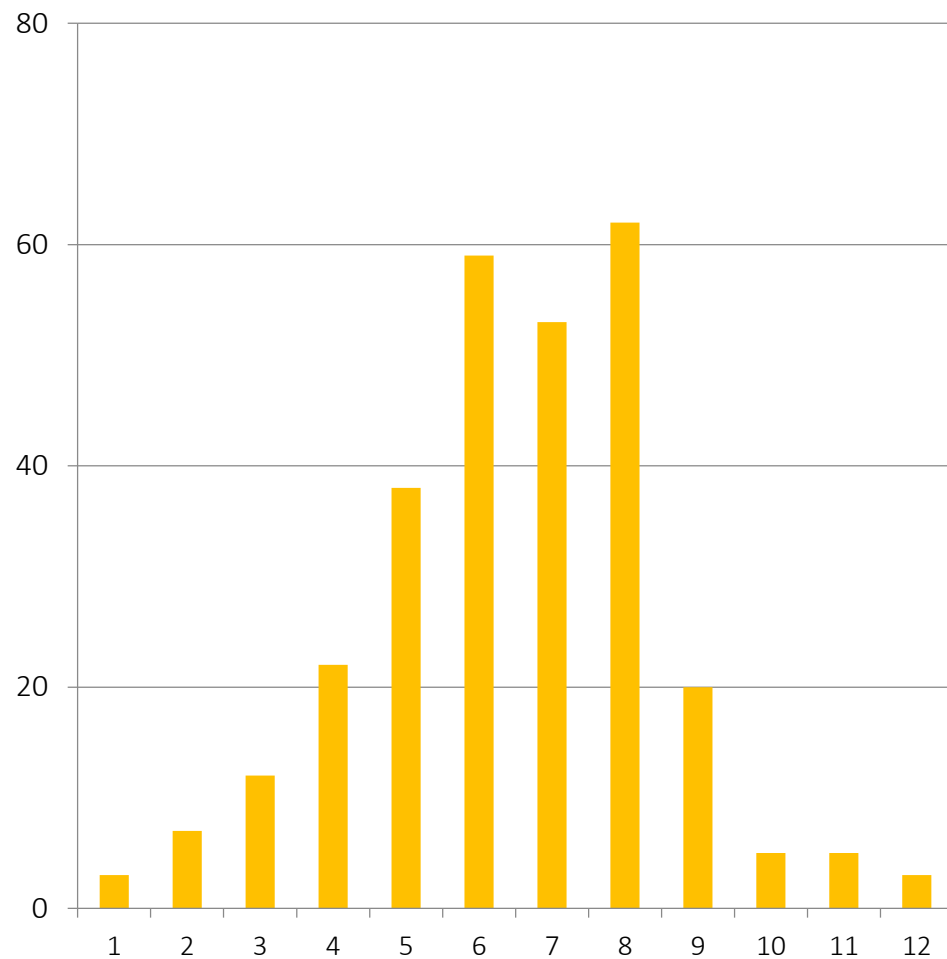


Local Injury Data

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

Month of Fall

HMC Data

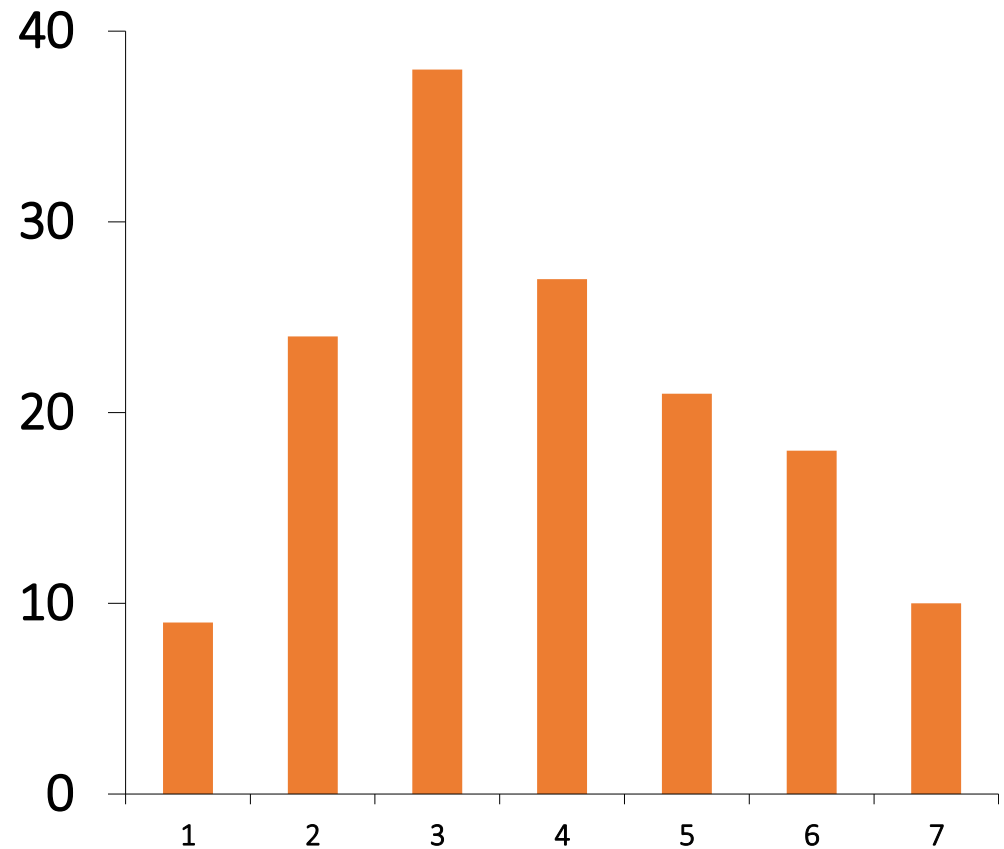


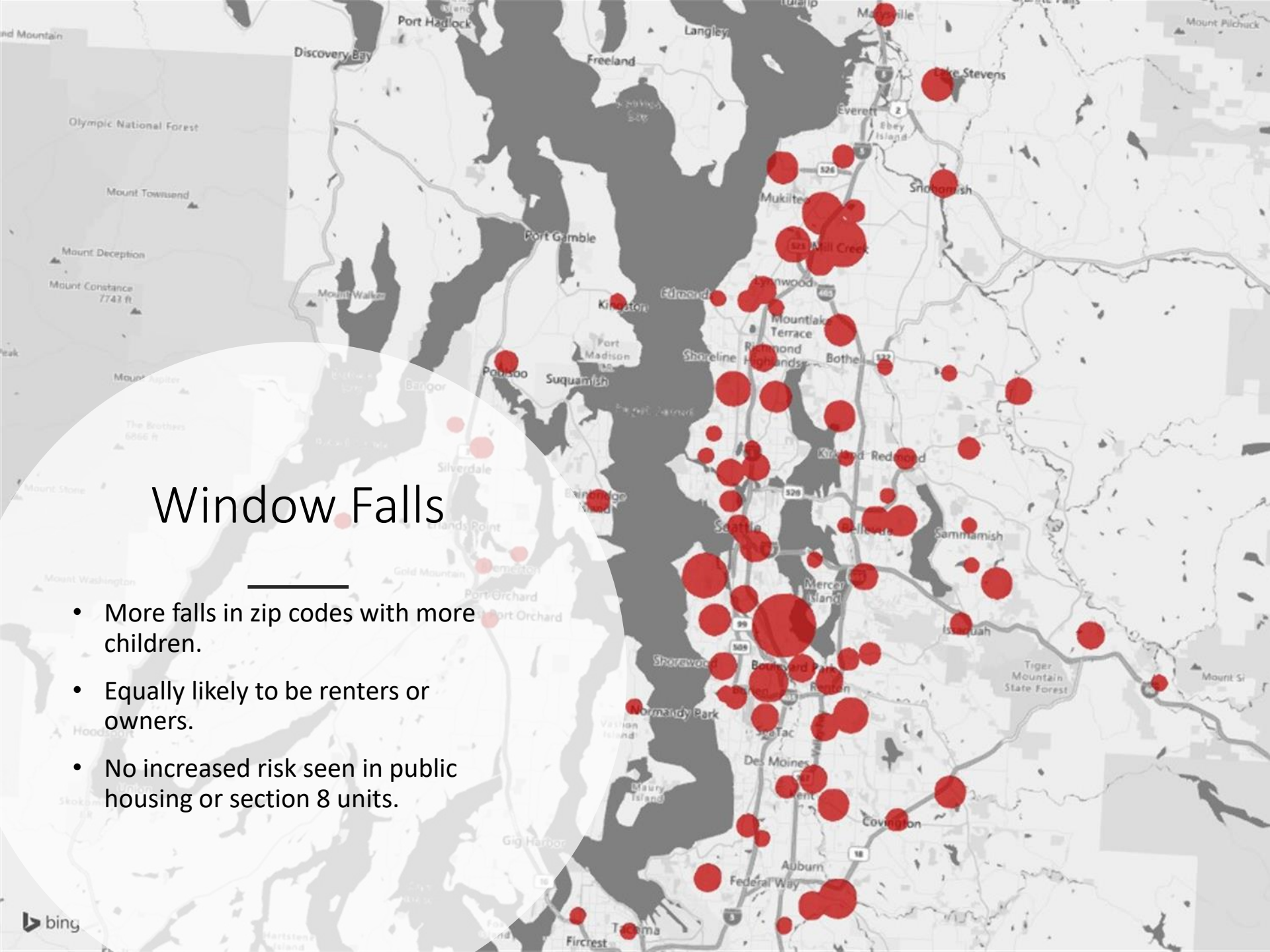
Local Injury Data

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

Age of Child

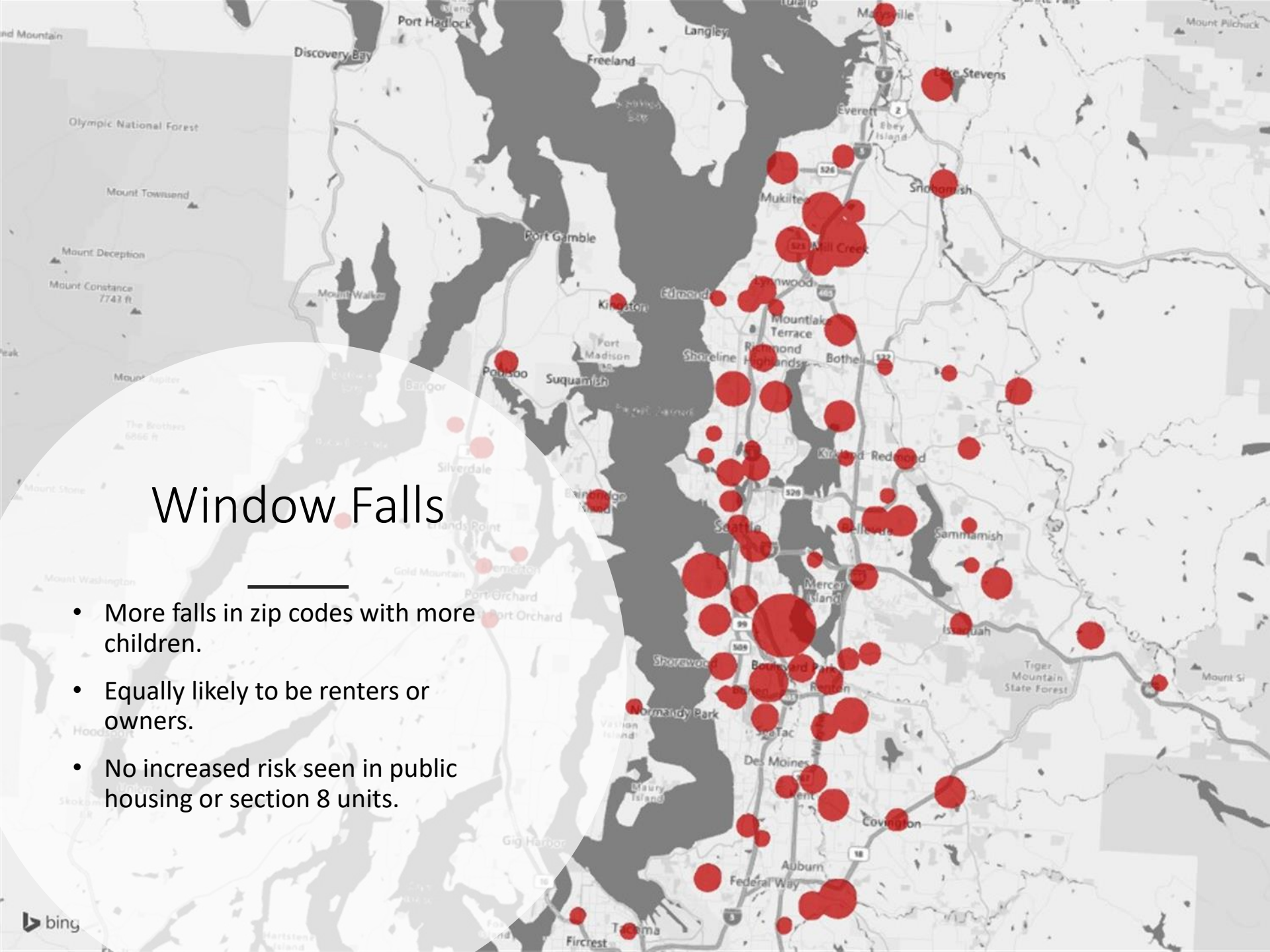
HMC Data




A map of the Puget Sound region in Washington state, showing the density of window falls. Red circles of varying sizes are overlaid on the map, indicating the concentration of falls in different areas. The largest circles are concentrated in the central urban areas, particularly around Seattle and Tacoma. Smaller circles are scattered throughout the surrounding regions, including Everett, Bellingham, and Olympia. The map includes labels for various cities, towns, and geographical features like mountains and forests. A semi-transparent white circle highlights the central urban area where the highest density of falls is located.

Window Falls

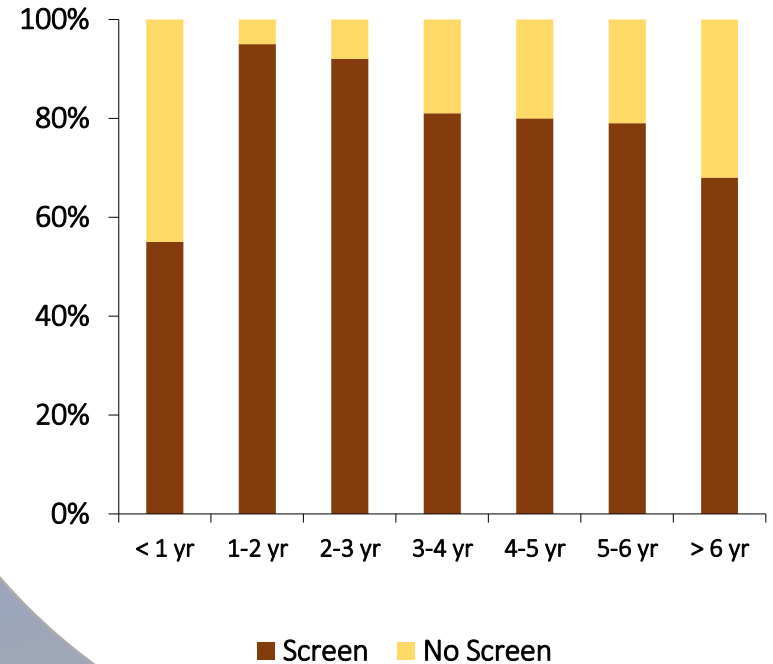
- More falls in zip codes with more children.
- Equally likely to be renters or owners.
- No increased risk seen in public housing or section 8 units.

- 
- ## Window Falls
- 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





Supervision

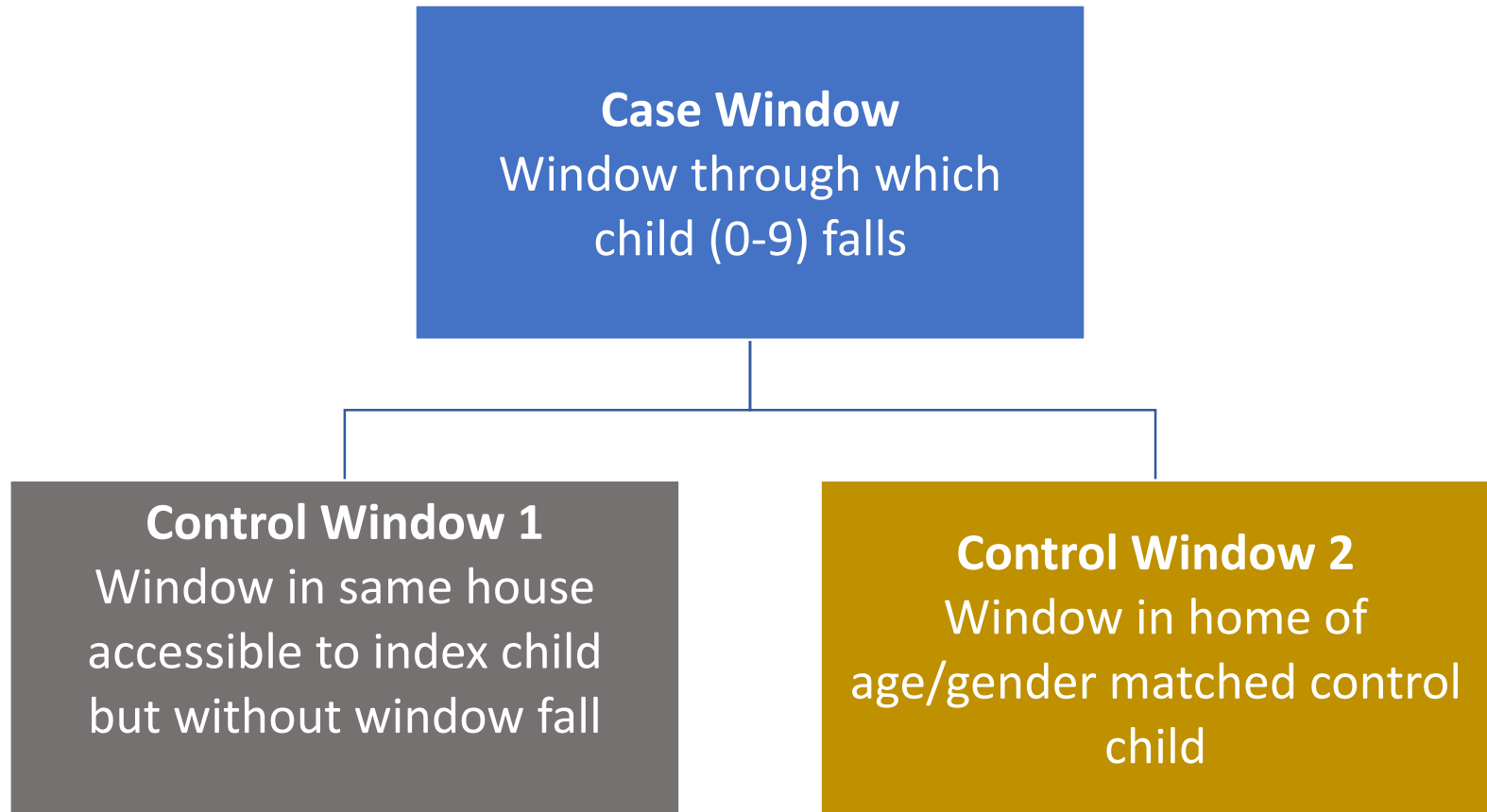
- Almost always: supervision is adequate.
- Parents are often in the same room.
- Caregivers do not realize that open windows are a safety hazard.
- False sense of security from insect screens.



Risk Factors

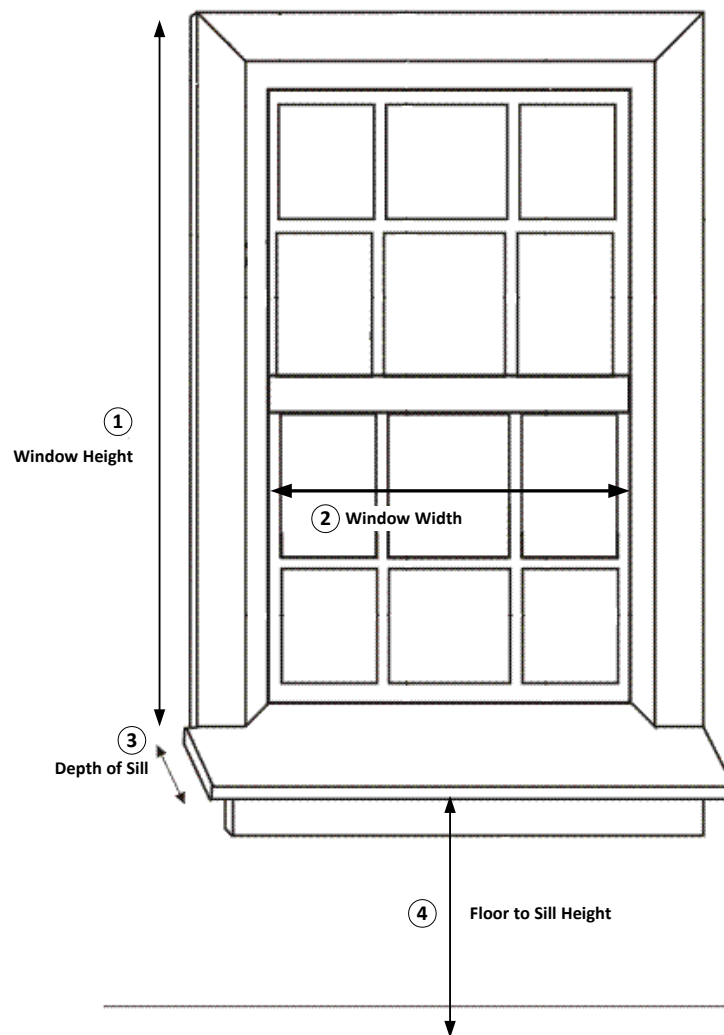
- Age & Gender
- Window factors
 - What design features of windows, screens or interior environments contribute to pediatric window fall risk?
 - Which of these might be modifiable through aftermarket additions or stipulations in design standards and building codes?

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 %

A close-up photograph of a person's hand reaching out to touch a window. The window is covered in numerous water droplets, suggesting it has recently rained. The background outside the window is a soft, out-of-focus green, likely foliage. The lighting is natural and soft, coming from the window.

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



Legislation / Regulation

Require use of window 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

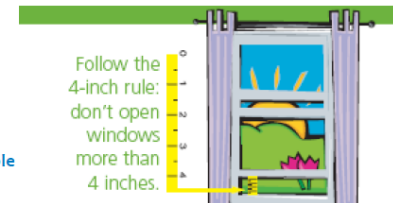


Did you know?

- 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!



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