
Unintentional Injury in Children

Data and Prevention Strategies

Mary Bridge School Nurse Education Series
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Today's learning objectives

Participants will learn:

- 1 The leading mechanisms for serious/fatal injury in school children
- 2 Prevention strategies to protect against serious/fatal injuries in children
- 3 Additional resources to support childhood injury prevention

Accidents happen!

Bumps and bruises are part of childhood – it's not about eliminating all risk

Kids are creative at finding ways to hurt themselves – and thankfully bounce back from most injuries

But unintentional injury is also the leading cause of death for children

Serious/fatal injuries follow predictable patterns and are often preventable



But first, have you heard of “Survivor Bias”?

BIZARRO By Dan Piraro



The **logic error** of focusing on successful outcomes but ignoring failures – *as if the successes tell the whole story*

We live in an echo chamber of survivors

Advancements in child safety come at a heavy price – ***learned from kids who did not survive***

Leading Causes of Death, United States

Pierce Co (2018-2022): 196 injury deaths under age 20 (35% of all deaths)

	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Congenital Anomalies 30.0%	<u>Unintentional Injury</u> 48.5%	<u>Unintentional Injury</u> 45.8%	<u>Unintentional Injury</u> 32.8%	<u>Unintentional Injury</u> 46.7%	<u>Unintentional Injury</u> 49.7%	<u>Unintentional Injury</u> 36.0%	Covid-19 21.2%	Malignant Neoplasms 27.9%	Heart Disease 29.4%	Heart Disease 26.9%
2	Short Gestation 22.3%	Congenital Anomalies 15.4%	Malignant Neoplasms 19.2%	<u>Suicide</u> 21.5%	<u>Homicide</u> 19.6%	<u>Suicide</u> 12.8%	Covid-19 15.8%	Heart Disease 19.9%	Heart Disease 23.1%	Malignant Neoplasms 23.7%	Malignant Neoplasms 23.4%
3	Sids 11.1%	<u>Homicide</u> 11.5%	<u>Homicide</u> 10.4%	Malignant Neoplasms 16.1%	<u>Suicide</u> 19.3%	<u>Homicide</u> 10.9%	Heart Disease 12.6%	Malignant Neoplasms 19.3%	Covid-19 19.1%	Covid-19 15.0%	Covid-19 16.1%
4	<u>Unintentional Injury</u> 9.9%	Malignant Neoplasms 10.5%	Congenital Anomalies 9.5%	<u>Homicide</u> 10.7%	Covid-19 4.1%	Covid-19 8.8%	Malignant Neoplasms 11.1%	<u>Unintentional Injury</u> 18.1%	<u>Unintentional Injury</u> 8.7%	Cerebrovascular 7.4%	<u>Unintentional Injury</u> 8.7%
5	Maternal Pregnancy Comp. 8.4%	Heart Disease 4.3%	Heart Disease 3.7%	Congenital Anomalies 6.4%	Malignant Neoplasms 3.9%	Heart Disease 6.0%	<u>Suicide</u> 7.8%	Liver Disease 6.0%	Diabetes Mellitus 4.8%	Chronic Low. Respiratory Disease 6.4%	Cerebrovascular 6.3%

Leading causes of *unintentional* fatal injury

Preschool = **Drowning** / **Car Crashes**

Elementary = **Car Crashes** / **Drowning**

Middle School = **Car Crashes** / **Drowning** / **Poisoning**

High School = **Car Crashes** / **Poisoning**



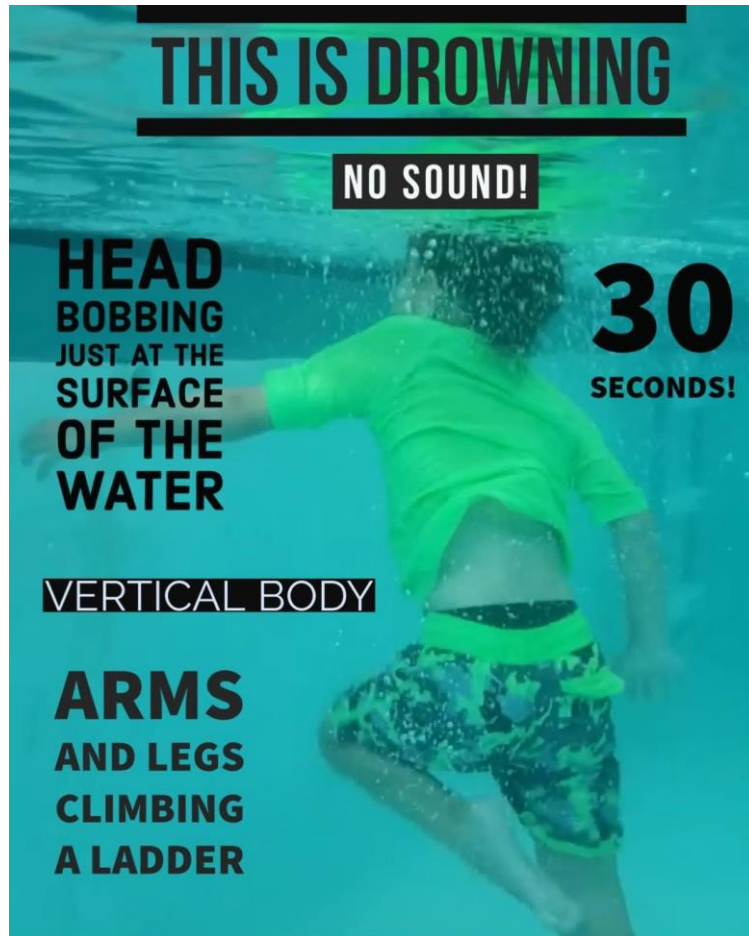
For non-fatal (but serious) injuries:

< 10 yrs = **Falls**

> 10 yrs = **Poisoning**

*When we add *intentional* injury fatalities – **firearms** rise to the top, esp. for teens*

Drowning doesn't look like in the movies



Drowning happens
silently

Drowning happens
quickly

Wear **life jacket**
in/on/near open water

Learn CPR

Drowning prevention basics

Know the water. Know your limits. Wear a life jacket.

- ✓ **Young kids** – adult “touch supervision” is key
- ✓ **Older kids/teens** – overestimate swimming skills
- ✓ Swim lessons are important, but do not “drown-proof” any child
- ✓ Consider brightly colored swimwear (not ~~blue~~)
- ✓ Know the water dangers around your home & block access
- ✓ Never leave children alone near water
- ✓ When a child goes missing – *always check the water first*



Prevention strategy: LIFE JACKETS

Most drowning victims are not wearing a life jacket

- ✓ PFDs are designed for *open water, not pools*
- ✓ Arm floaties / puddle jumpers are *not recommended anywhere*
- ✓ Re-check PFD fit regularly – *for right size, right fit, right activity*

What size?

- Infant: under 30 lbs
- Child: 30-50 lbs
- Youth: 50-90 lbs
- Adult: > 90 lbs **sizing is by chest circumference*

Attach all zippers / clips / ties – pull them SNUG

Pull up at shoulders – neck & chin should not slip through



Prevention strategies: **OPEN WATER**

Most drowning deaths in WA occur in open water

Hypothermia

- When body temp < 95°
- Occurs in water < 70°
- WA waters average 50-55°

*You don't drown because you can't swim
you drown because you can't BREATHE*



Boating Laws

- **WA Boater Education Card** REQUIRED *to operate any powered vessel (15 hp+)*
- All vessels: Must have enough PFDs for all *including canoes / kayaks / paddleboards*
- Vessels < 19': < age 13 must wear PFD
- Personal watercraft (jet ski, etc): All must wear PFD

for more info: boat.wa.gov

Motor vehicle safety



Car crashes are a **leading cause of fatal injury for kids/teens**

PREVENTION STRATEGY: A *properly used* car seat / restraint system reduces the risk of fatal injury by up to **80%**

- ✓ Up to **95%** of car seats are used incorrectly
- ✓ Families who work with a car seat tech (CPST) are **10X** more likely to use their seat correctly
- ✓ Refer families to marybridge.org/carseatchecks

WHAT ABOUT TEEN DRIVERS?

- ✓ **2,116** young drivers (age 15-20, US) died in car crashes in 2022 – *an 11% increase over 2021*
- ✓ **Wear seat belt. Obey speed limit. Eliminate distractions. Never drive impaired. Follow GDL rules.**

5 Steps to Safety



5 Steps to Safety



WA State Law (2020):
reflects the soonest to transition from one seat type to the next (not best practice)

**required to at least age 2*

**required to at least age 4*

**required to at least 4'9" tall*

**allowed at 4'9" tall IF seat belt fits properly (back seat)*

**allowed at age 13 / all passengers (adults too) must be properly restrained*

The law also requires that all car seat instructions be followed

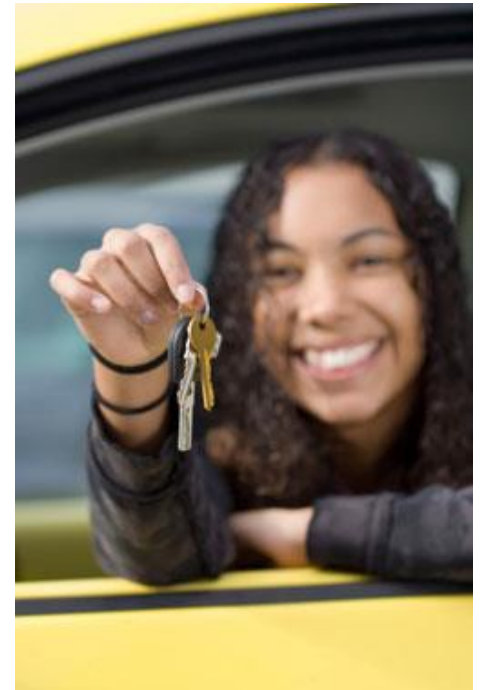
Teen Drivers

Graduated Driver Licensing (GDL) = reduces risk & exposure

3-phase system, allows beginning drivers to gain experience in less-risky situations

- 1. Learner's Permit:** age 15.5+ (or 15 with proof of course enrollment)
2. Complete driver training course
3. Pass knowledge and drive tests
- 4. Intermediate license:** age 16/17 (restrictions on passengers, night driving, no cell phones – even hands free)
- 5. Regular driver's license:** automatically converts at age 18

*GDL only works when it is enforced –
help kids/parents understand it's importance*



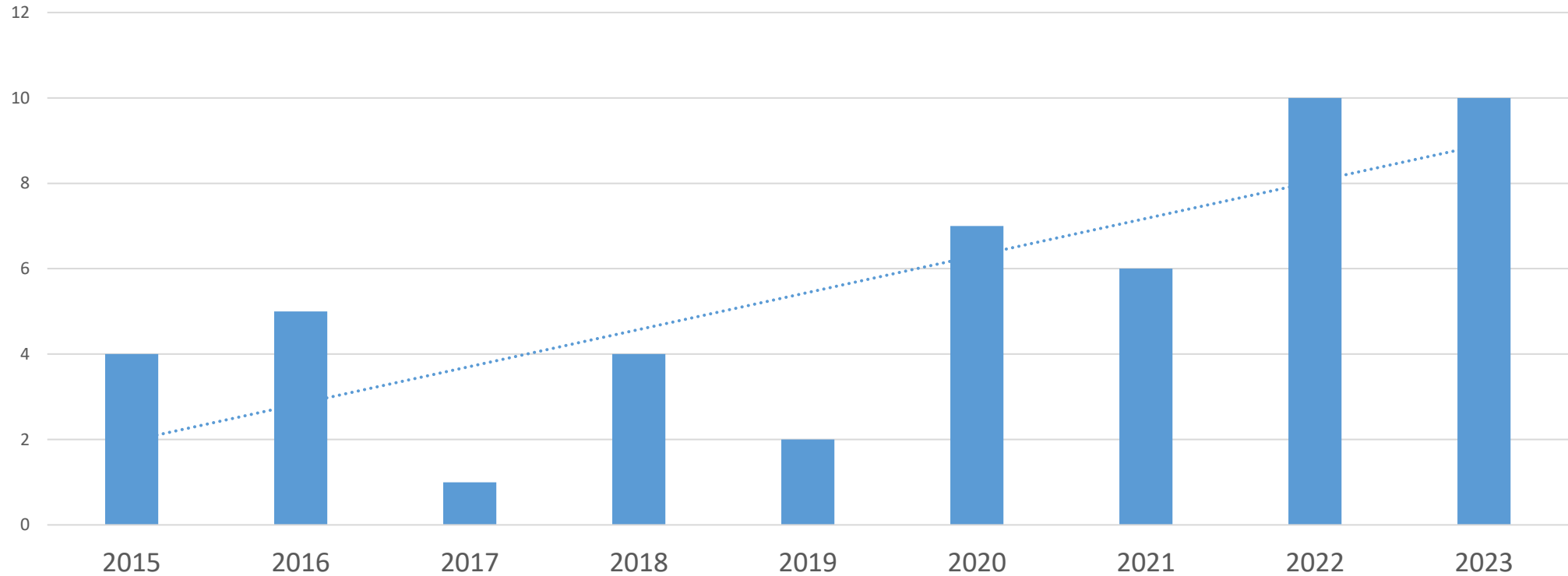
2020: Firearm-related injuries = leading cause of death for ages 1-19

- Firearms in the home increase odds of a firearm injury
 - ✓ *4x higher risk of accidental firearm death*
 - ✓ *4x higher risk of suicide by firearm*
 - ✓ *76% of school shooters used a gun from their home*
- About 1/3 of US children live in a home with firearms
- An estimated 4.6 million kids live with guns kept unlocked & loaded
- Children as young as 2 have the strength to pull a trigger
- Accidental firearm deaths in children typically occur:
 - ✓ *in their home, while playing with or showing it to someone*
 - ✓ *firearm was stored unlocked and loaded*
 - ✓ *accessed from nightstands or sleeping areas*



Mary Bridge: **Firearm Injuries** more than tripled over last decade

Pediatric Firearm Injuries, MB Trauma 2015-2023



2015-2019 = averaged **3/year**

2020 = surge in gun ownership, limited access to safety training

2022-2023 = **10/year**

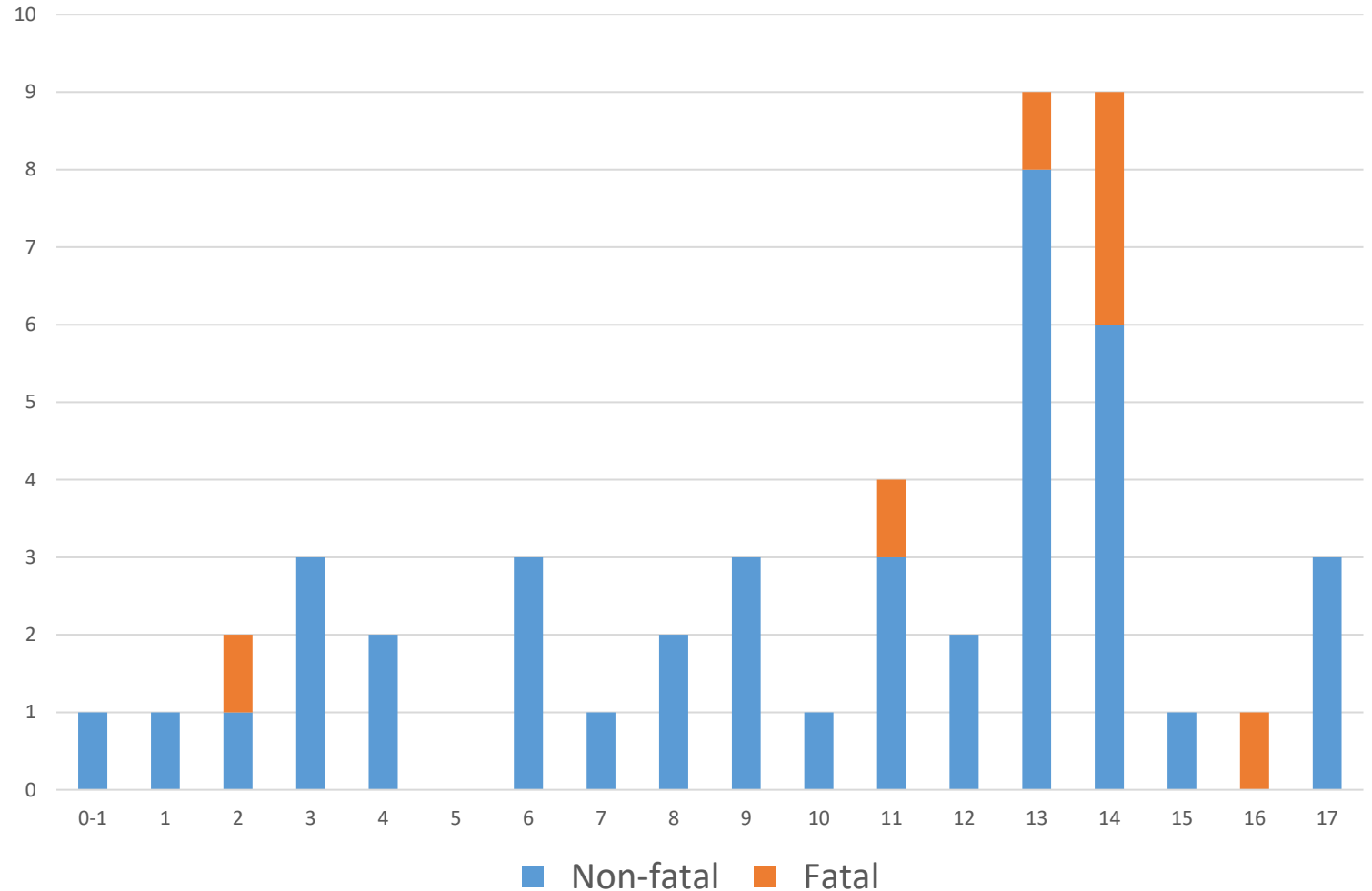
MB Data: All Firearm Injuries, by age (2015-2023)

Youngest at MB =
2 days old

Surge at **2-4 years**
(more accidental, fewer fatalities)

Bigger surge at **13-14 yrs**
(more intentional, more fatalities)

76% male victims



Does intent affect the outcome? Yes.

- The older the child (victim) – the more likely the gun was fired **on purpose**
- Intentional shootings are more likely to be fatal – especially self-inflicted
- **2/3 of youth suicide by firearm had no previous mental health diagnosis**

Pierce Co firearm fatalities < age 20:
(2018-2022)

55% = homicide

40% = suicide

*Nationally, **90%** of those who survive a suicide attempt go on to regret they tried*

*But when a gun is used, **90%** of attempts are fatal*



Prevention strategy: **SAFE GUN STORAGE**

*Responsible gun owners store them safely to prevent access by **curious kids & struggling teens***



- ✓ **Keep guns unloaded, locked up, and out of reach**
– using a gun safe, lock box or trigger lock
- ✓ Lock up ammunition separately
- ✓ Hide keys to lock boxes (or better yet, use a code)
- ✓ If a gun is unlocked, keep it in sight
- ✓ Teach children not to touch guns, but don't rely on them to do that
- ✓ ASK about guns/storage practices before you child visits another home



for more info: [lokitup.org](https://www.lokitup.org)

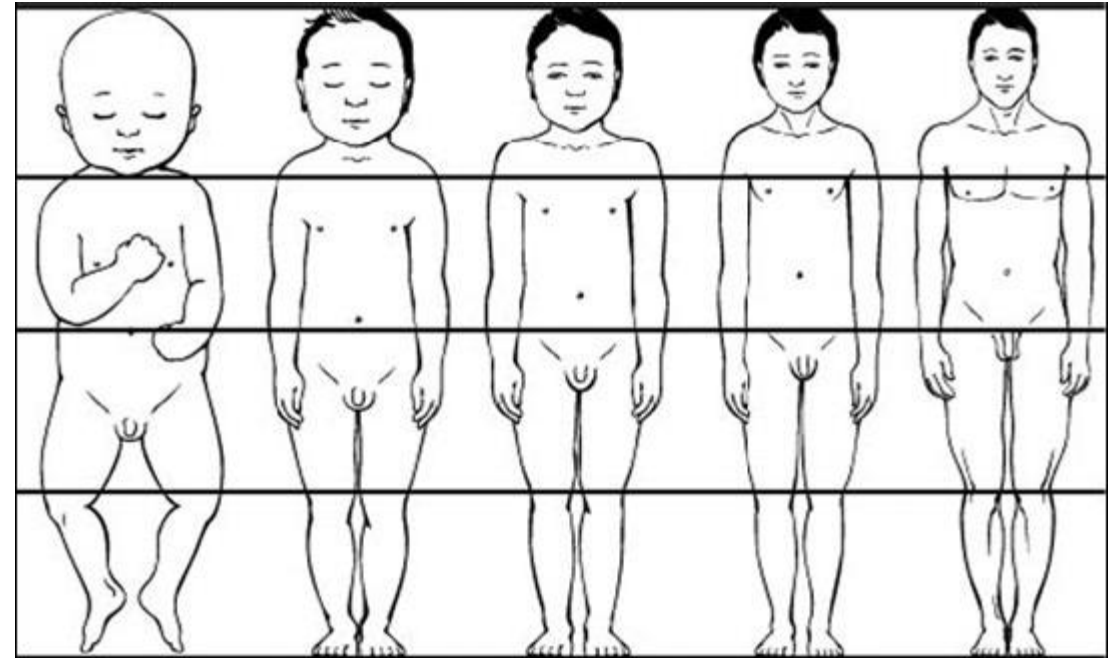
MB averages 33 window fall admissions per year

** we had 44 in 2023, highest in over 10 years

Children are curious by nature and top-heavy by design

Their heads are disproportionately large, which pulls them forward

Many local families don't have AC – rely on open windows to cool their home



Children can fall through an opening over 4"

Prevention strategies

Do not rely on window screens – *they are designed to keep bugs out, not kids in!*

Block access to windows > 6' from the ground

- keep windows closed & locked
- open from the top, when possible
- **add a window stop to keep just 4" open**
- if window must be open > 4" add an operable window guard
- choose window devices that can be opened by an adult in an emergency



Keep furniture away from windows to discourage little climbers

Teach children not to play near windows (stay 2' away, or 1-2 steps)

** but don't rely on them to remember that **



Poisoning prevention

For young kids:

- Keep **Poison Control** number handy
- Block access to household poisons – medicine, cleaning supplies, cannabis products, etc
- Store out of reach and/or locked away
- Do not call medicine “candy”
- Some poisons DO look like candy!



Poisoning – drug overdose

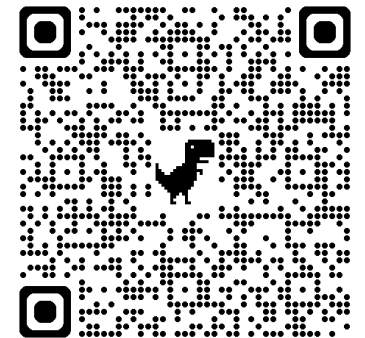
For older kids/teens:

- *Poisonings at this age are often an unintentional **drug overdose***
- **Substance use increases the risk of ALL categories of injury**
- Substance use prevention should have individual, **school** and family interventions (CDC, 2022)



Prevention strategy: quick access to NALOXONE

- Naloxone (brand-name Narcan) can **reverse effects of opioid overdose**
**heroin, fentanyl, methadone, Oxycontin, Vicodin, etc*
- Given as injection or nasal spray
- Statewide standing order to dispense, no Rx needed
- *2024 WA bill requires HS to have 1, recommends in every 1st aid kit*



Mary Bridge-branded child safety materials

Order by emailing childsafety@multicare.org

**BABIES:
SLEEPING SAFE,
SLEEPING SMART**
A Message from Mary Bridge
Center for Childhood Safety

Mary Bridge
Children's
MultiCare

marybridge.org/childsafety

Safe Infant Sleep
#88-1212-4
#88-1212-4SP

**KEEP KIDS SAFE
AROUND WATER**
A Message from Mary Bridge
Center for Childhood Safety

Mary Bridge
Children's
MultiCare

marybridge.org/childsafety

Water Safety
#88-3480-9
#88-3480-9SP

**KEEP KIDS SAFE
IN THE CAR**
A Message from Mary Bridge
Center for Childhood Safety

Mary Bridge
Children's
MultiCare

marybridge.org/childsafety

Car Seat Safety
#87-0509-6
#87-0509-6SP

CAR SEAT INSPECTIONS
in-person or virtual

Mary Bridge certified technician educators (CPST) are available by appointment to check your child's car seat for safety and teach you how to adjust and install it correctly. Inspections are offered in-person in Tacoma or virtually over video chat.

Learn more at marybridge.org/carseatchecks scan the QR code to the right or email childsafety@multicare.org

Car crashes are a leading cause of fatal injury for kids, and 90% of parents use their car seats wrong.
Are your kids riding safely?

Mary Bridge Children's
MultiCare

62-0005-5 (Rev. 9/22)

marybridge.org

Car Seat Checks
#62-0005-5
(no Spanish)

BIKE HELMETS
A Message from Mary Bridge
Center for Childhood Safety

**Fitting a helmet
as easy as 1-2-3
Eyes – Ears – Mouth!**

Eyes: Look up – you should be able to see the edge of your helmet

Ears: The straps should form a "V" just under the earlobe

Mouth: Open your mouth wide – you should feel the chin strap

Final Check: Shake your head – if the helmet moves out of position, readjust the straps and tighten

**No helmet =
No riding
No exceptions!**

Mary Bridge
Children's
MultiCare

Bike Helmets
#87-8982-2
#87-8982-2SP

SAFE GUN STORAGE
A Message from Mary Bridge
Center for Childhood Safety

**If you have a gun
in your home:**

- Keep it unloaded, out of reach, and locked – using a gun safe, lock box, or trigger lock.
- Lock up ammunition in a separate location.
- Hide the keys to lock boxes.
- When a gun is unlocked, keep it in your sight at all times.
- Teach children to stay away from guns, but do not rely on them to be able to do that.

Mary Bridge
Children's
MultiCare

marybridge.org

Safe Gun Storage
#87-8820-3
#87-8820-3SP

WINDOW FALLS
A Message from Mary Bridge Center for Childhood Safety

Screens keep bugs out, not kids in!

- You CAN prevent window falls
- For any window that poses a fall risk:
 - Limit openings to **4 inches or less**, by adding a **window stop** device
 - If a window must be open more than 4 inches – use an operable **window guard** instead
 - Choose window stops / guards that can be removed by an adult in an emergency
- Keep furniture (and other objects) away from windows to discourage little climbers
- Teach children not to play near windows, but do not rely on them to remember that

Mary Bridge
Children's
MultiCare

4 Inches

Window Falls
#87-7552-3
#87-7552-3SP

Questions?

ersumma@multicare.org

childsafety@multicare.org

marybridge.org/childsafety



*“Do the best you can until you know better.
Then when you know better, do better.”*

~ Maya Angelou