

**TOWARD
ZERO
DEATHS**



TOWARD ZERO DEATHS
Because your life counts

Right Seat in the Right Place

Minnesota State Patrol
Essentia Health
Minnesota Office of Traffic Safety
Driving 4 Safe Communities









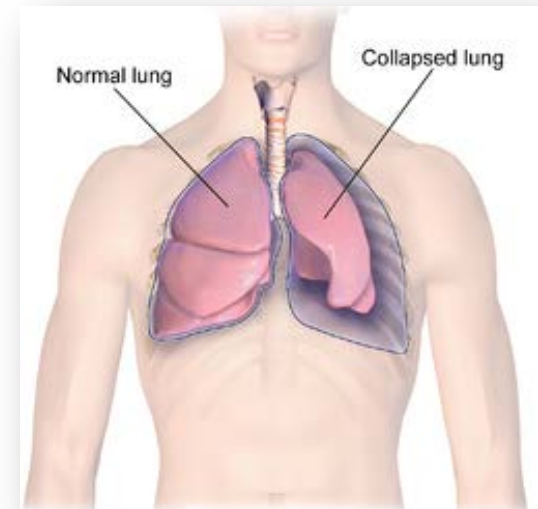


Initial Presentation

- 4 year old intubated male brought to Saint Mary's Medical Center Emergency department by EMS following motor vehicle collision
- 4 year old 46#, 3 Feet 6"
- EMS report:
 - At the scene, he was moving his arms but not his legs
 - Initially was moaning but progressed to labored breathing and was intubated
 - En route, he was reported to have an unobtainable blood pressure

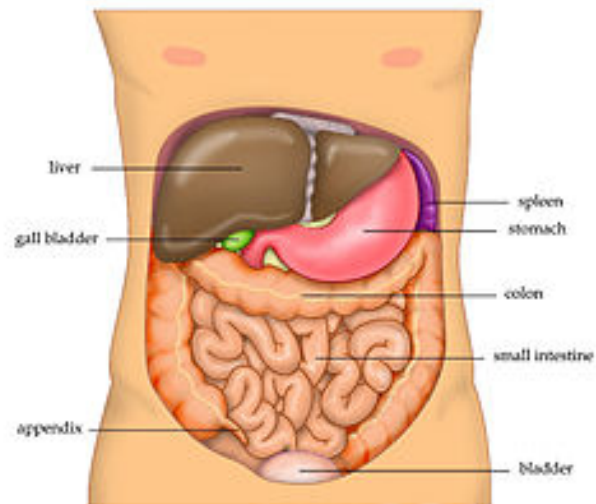
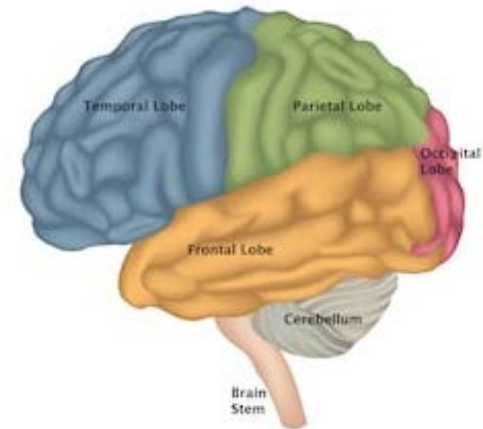
Emergency Department Course

- Oxygen saturation was low (60-70s)
- Chest x-ray revealed collapsed left lung
- Packed red blood cells were given due to concern for traumatic hemorrhagic shock
 - Significant blood loss from ear and chest
- Persistent irregular heart rate and low pressure
- Neurologic exam - Severe TBI
 - Does not open eyes
 - Does not follow commands
 - Intubated



Injuries

- Traumatic cerebral contusion, subarachnoid hemorrhage, and subdural hematoma
- Fracture of the occipital and temporal bones
- Liver laceration and laceration along the diaphragm, adjacent to the heart
- Multiple rib fractures
- L ear partial avulsion
- L pulmonary contusion



Hospital Course

- Taken to OR by neurosurgery for emergent external ventricular drain (EVD) and intracranial pressure (ICP) monitor placement
- Plastic surgery repaired complex ear laceration
- ICP monitor and EVD were removed on hospital day #6
- Extubated on hospital day #9
- Neurology and physical medicine and rehab consulted to assist with traumatic encephalopathy, right spastic hemiparesis
- Discharged to inpatient rehab on hospital day #25

Rehab Course

- On admission to inpatient rehab, he was noted to have
 - limited speech
 - able to spontaneously move his left arm and leg
 - right sided movement was limited
- Underwent several hours of therapy each day
 - PT, OT, Speech, Psychology and Recreation Therapy
- Discharged after 2 months

1.5 years on...

- Remains in the custody of his Aunt
- Attends kindergarten
- Ongoing issues
 - Spasticity (R>L)
 - Treated with medications and weekly therapy
 - Working on walking unassisted, balance, grasp/writing
 - Uses wheelchair at school to go to lunch room
 - Receptive and expressive language disorder
 - Working with speech therapy every week
 - Speech is much more understandable

Captain Car Seat



- Who's job it is to educate on car seats?
- Is it a police officers job?
- How is it not?

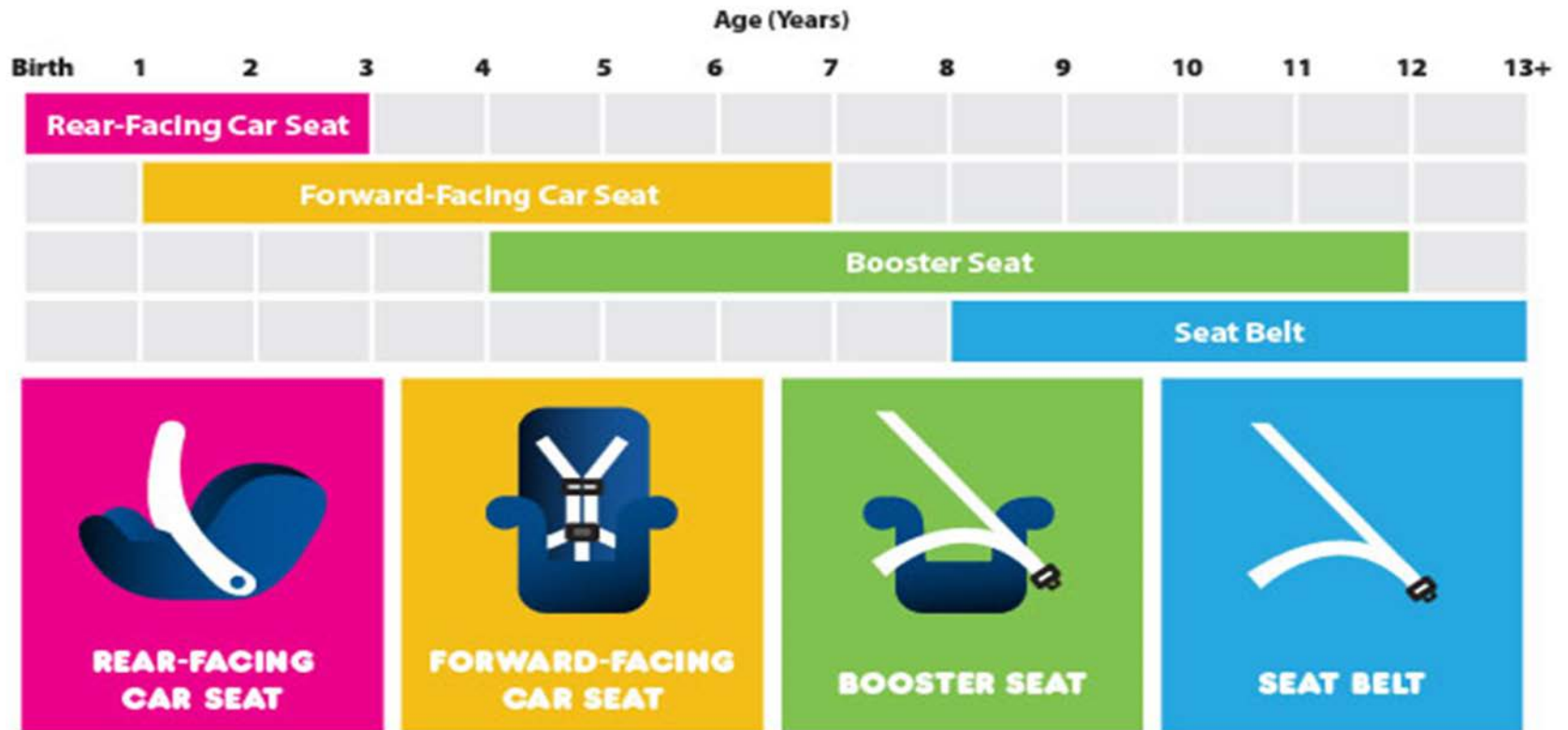


How do car seats work?

- **Prevent ejection**
- Provide contact with the strongest areas of the body
- **Protect head, neck and spinal cord**
- Help children
“ride down”
the crash
- Spreads forces of
the crash over a
wide area of the body



Best Practice vs MN Law



Back seat vs Front seat



- Law doesn't reflect best practice
- For restrained children, those in rear seats had a 38 percent lower death risk than restrained children in front

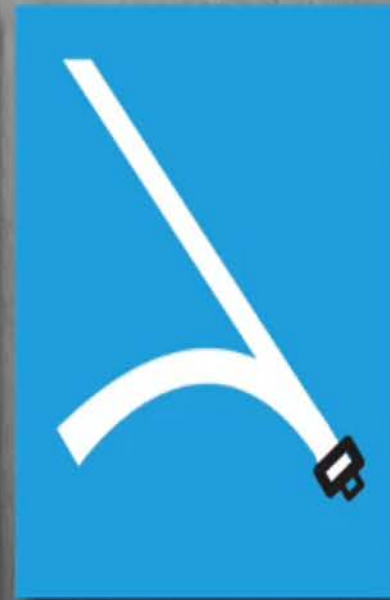
5 Point Restraint

- Car seat use reduces the risk for injury in a crashes by 71–82 percent for children when compared with seat belt use alone
- Booster seat use reduces the risk for serious injury by 45 percent for children ages 4 to 8 years when compared with seat belt use alone



CHILD PASSENGER SAFETY

Protect Your Kids from Air Bag Injuries



buckleupkids.mn.gov

Takeaways

- Best Practice is always the child's best chance of survival in a motor vehicle crash
- Children should always ride in a rear seating position properly restrained until the age of 13
- A 5-point harness is the safest way for a child to be restrained in a motor vehicle