

THE CASE FOR COLLABORATION

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Where does trauma care begin?

One patient. One continuum.



Prevention → Injury → EMS → ED → OR/ICU → Rehab → Home

Nobody wins alone.



Systems don't happen naturally.

They are built through public policy.



Policy creates structure.

Relationships create function.



NATIONAL

standards • evidence • federal influence

STATE

designation • regulation • registry

REGIONAL

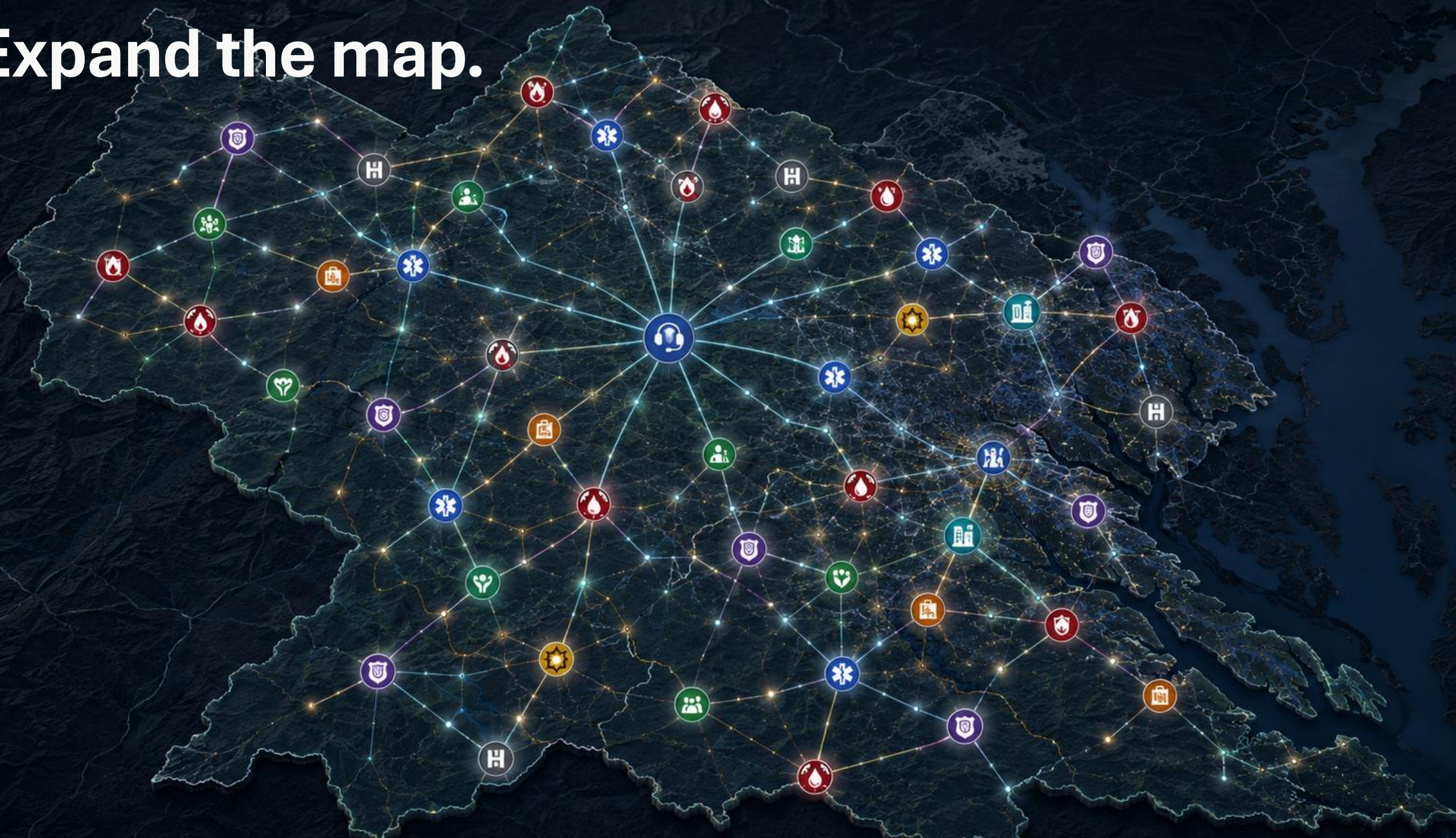
destination • transfer • coordination

LOCAL

relationships • trust • problem solving

**THE DMV
IS A NETWORK.**
THE TRAUMA CENTER IS ONE NODE.

Expand the map.



The real system is larger than the hospital.

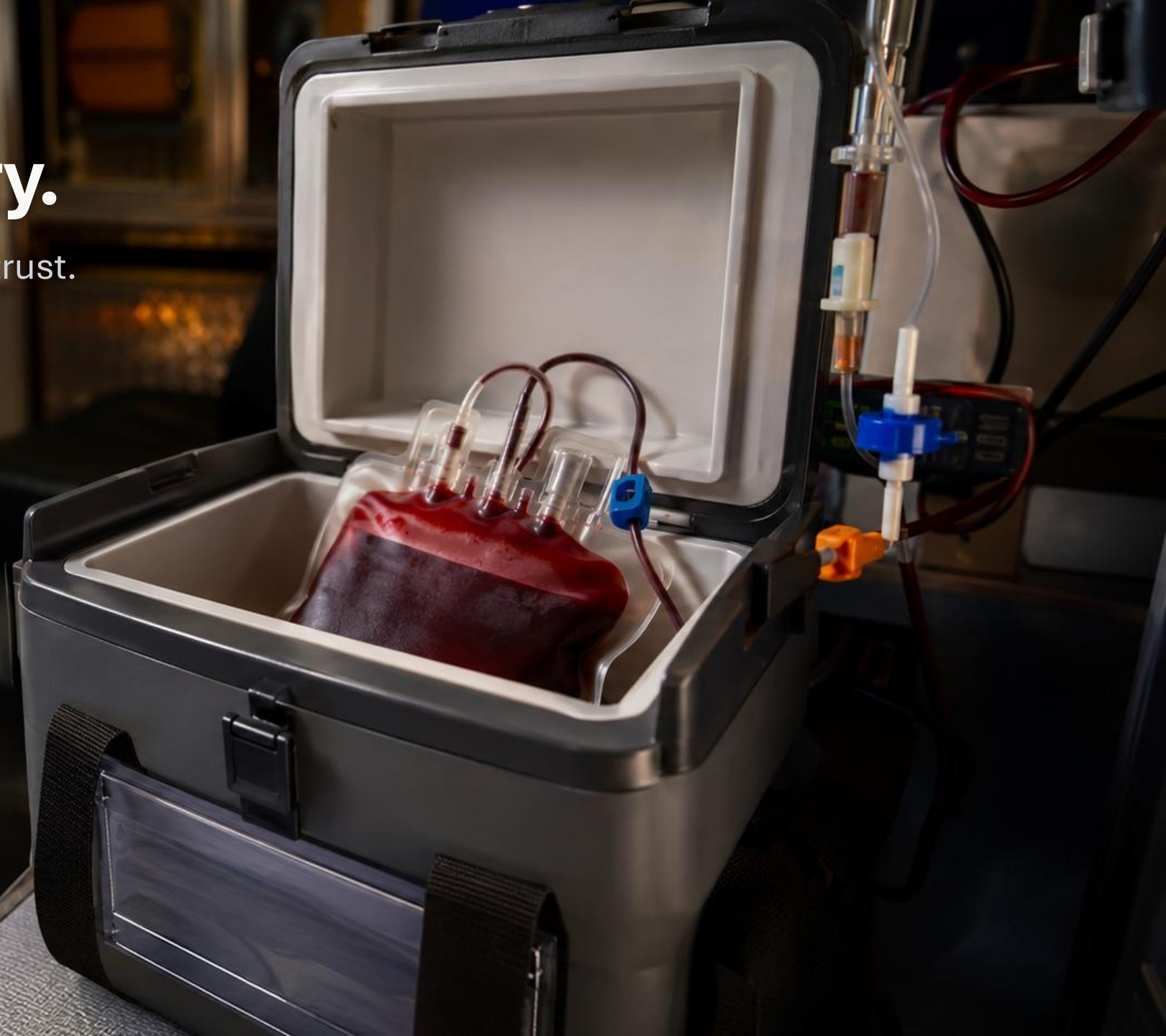


**This is the
trauma system.**

People connected to people.

Whole blood is a relationship story.

Clinical value depends on operational trust.





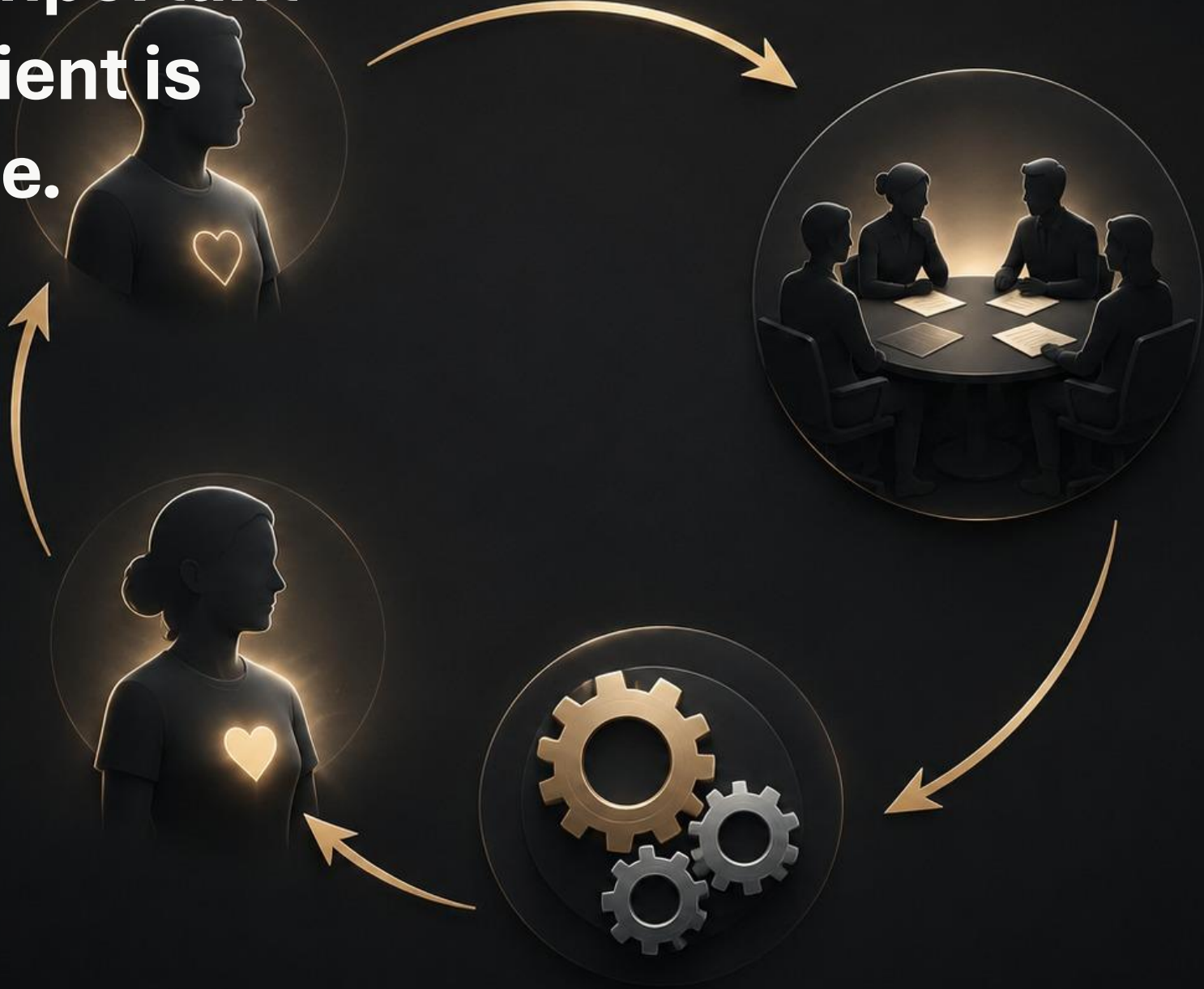
**Shared education
creates shared mental models.**

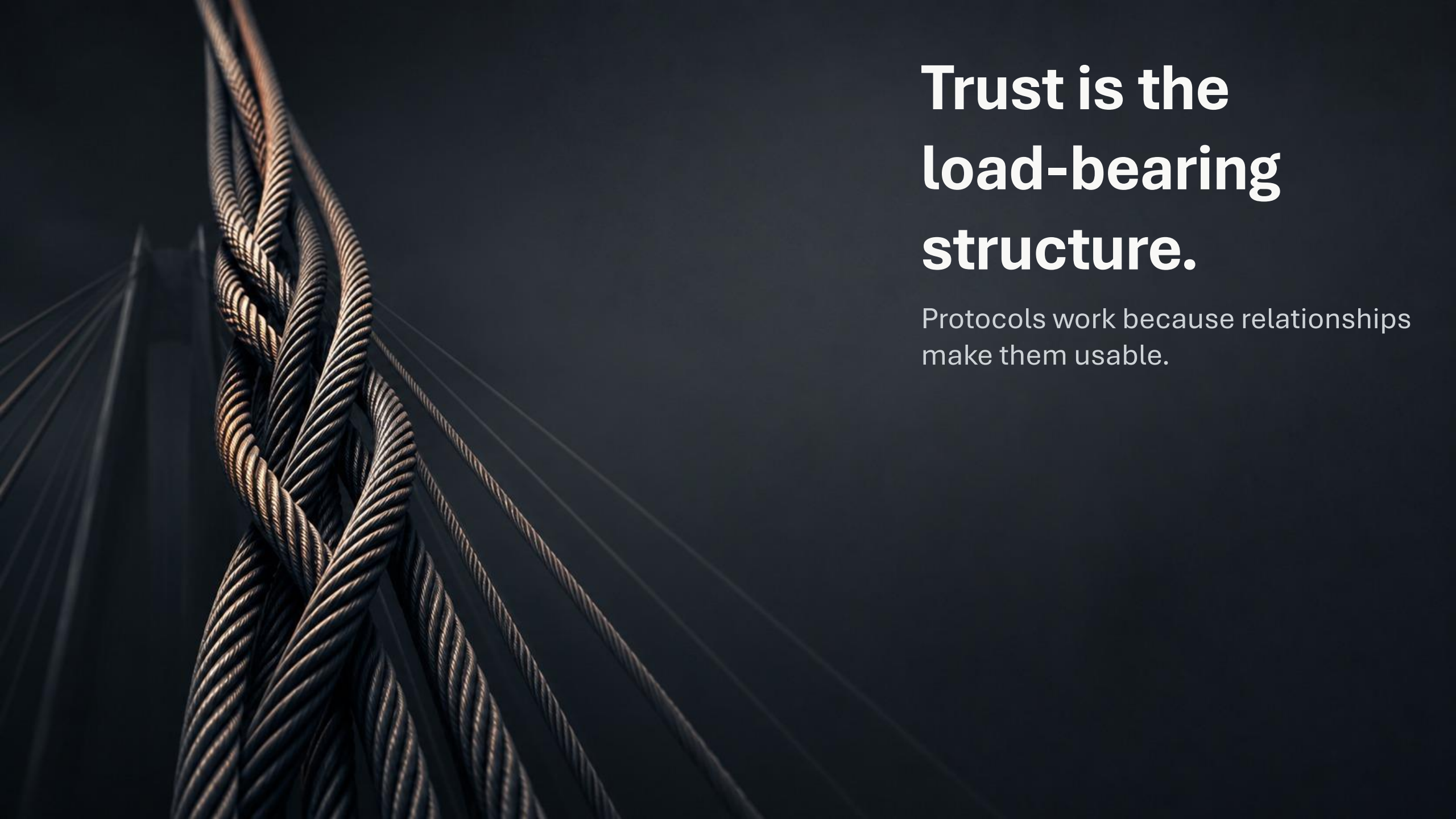
Practice before the system is tested.

Simulation exposes seams before
patients do.



**The most important
trauma patient is
the next one.**





Trust is the load-bearing structure.

Protocols work because relationships
make them usable.

THE TRAUMA SYSTEM IS NOT A PLACE.

IT IS A RELATIONSHIP.



Pediatric
Submersion Injury

Evidence-Based Management in the ED and Prehospital Setting

Adam Kochman, MD

Director of Pediatric Emergency Medicine, Inova Fairfax Hospital

*I have nothing to disclose but would gladly entertain
sponsorship opportunities*

Using Appropriate Terminology

~~**DRY DROWNING**~~

~~**WET DROWNING**~~

~~**SECONDARY DROWNING**~~

~~**NEAR-DROWNING**~~

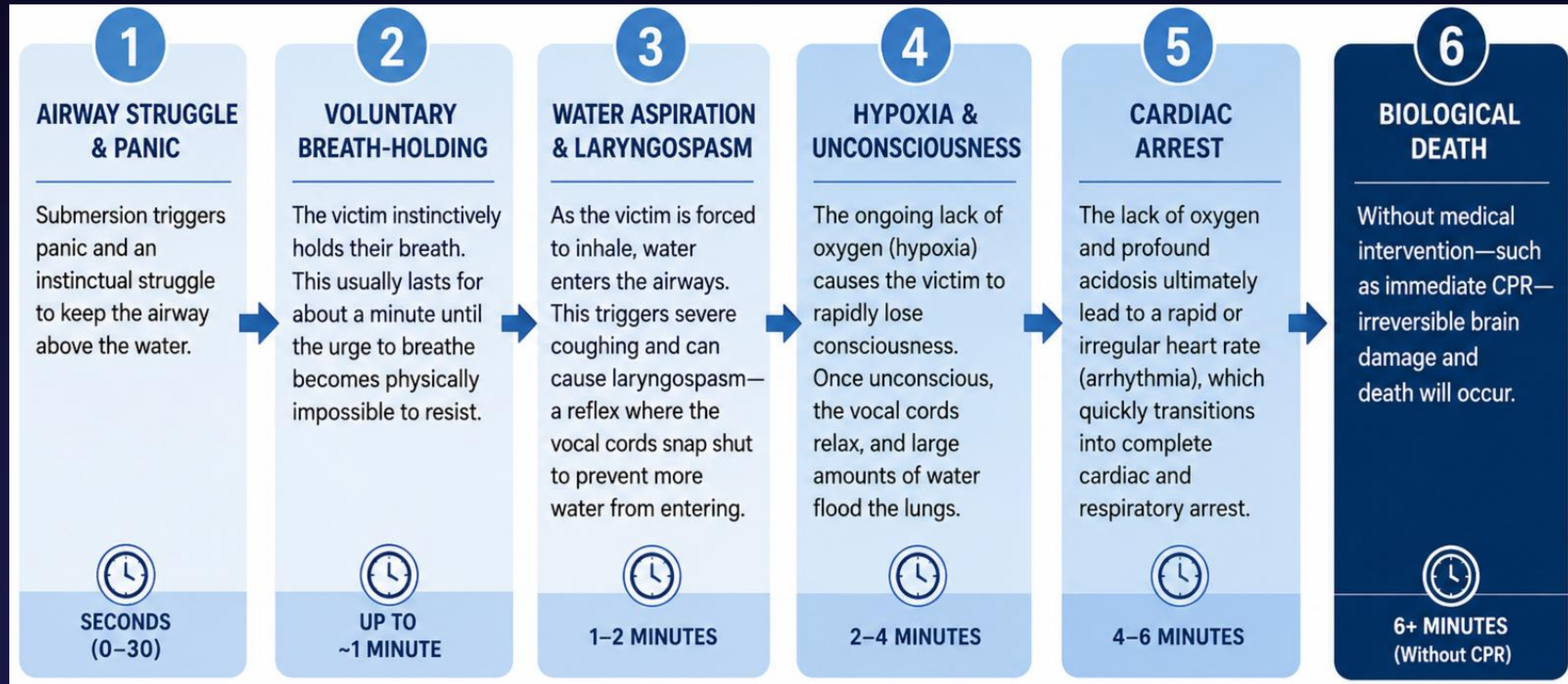
DROWNING: A process resulting in primary respiratory impairment from submersion/immersion in a liquid medium.

FATAL vs. NON-FATAL: The only recognized classifications. Patients either survive the initial event or do not.



'SECONDARY DROWNING' IS A MYTH. PATIENTS WITH MILD SYMPTOMS DECLARE THEIR CLINICAL TRAJECTORY WITHIN 8 HOURS. THERE HAS NEVER BEEN A DOCUMENTED CASE OF AN ASYMPTOMATIC PATIENT DETERIORATING AND DYING AFTER 8 HOURS.

Pathophysiology of Submersion



Prehospital Priorities

1 AIRWAY & BREATHING FIRST

Hypoxia causes the arrest.

- Initiate rescue breaths as soon as practical, even while still in shallow water.
- Early **oxygenation** is the highest priority.
- Give **effective ventilations** (visible chest rise).

✓ **PRIORITY: OXYGENATION & VENTILATION**

2 VENTILATION OVER COMPRESSIONS

Ventilate first and effectively.

- Chest compressions without ventilation are completely ineffective in drowning.
- Supply **100% O₂** via bag-valve-mask immediately.
- Continue rescue breaths and ventilations as the highest priority.

✓ **PRIORITY: EFFECTIVE VENTILATION**

3 THERMAL MANAGEMENT

Prevent further heat loss.

- Remove wet clothing.
- Dry the victim.
- Apply warm blankets immediately on the scene to arrest further heat loss.

✓ **PRIORITY: PREVENT HEAT LOSS**

Avoiding Prehospital Pitfalls



PITFALL 1: C-SPINE IMMOBILIZATION



MYTH

Routine c-spine immobilization is indicated for all submersion injury patients.



FACT

- Cervical spine injuries occur in less than 0.5% of pediatric drownings.
- Unnecessary immobilization may interfere with critical airway management.



GUIDANCE

Only immobilize if there is a history or suspicion for a high-impact trauma such as diving into shallow water or a motor vehicle collision.



PITFALL 2: AIRWAY CLEARANCE (HEIMLICH MANEUVER)



MYTH

The Heimlich maneuver or abdominal thrusts is useful to “pump water out of the lungs”.



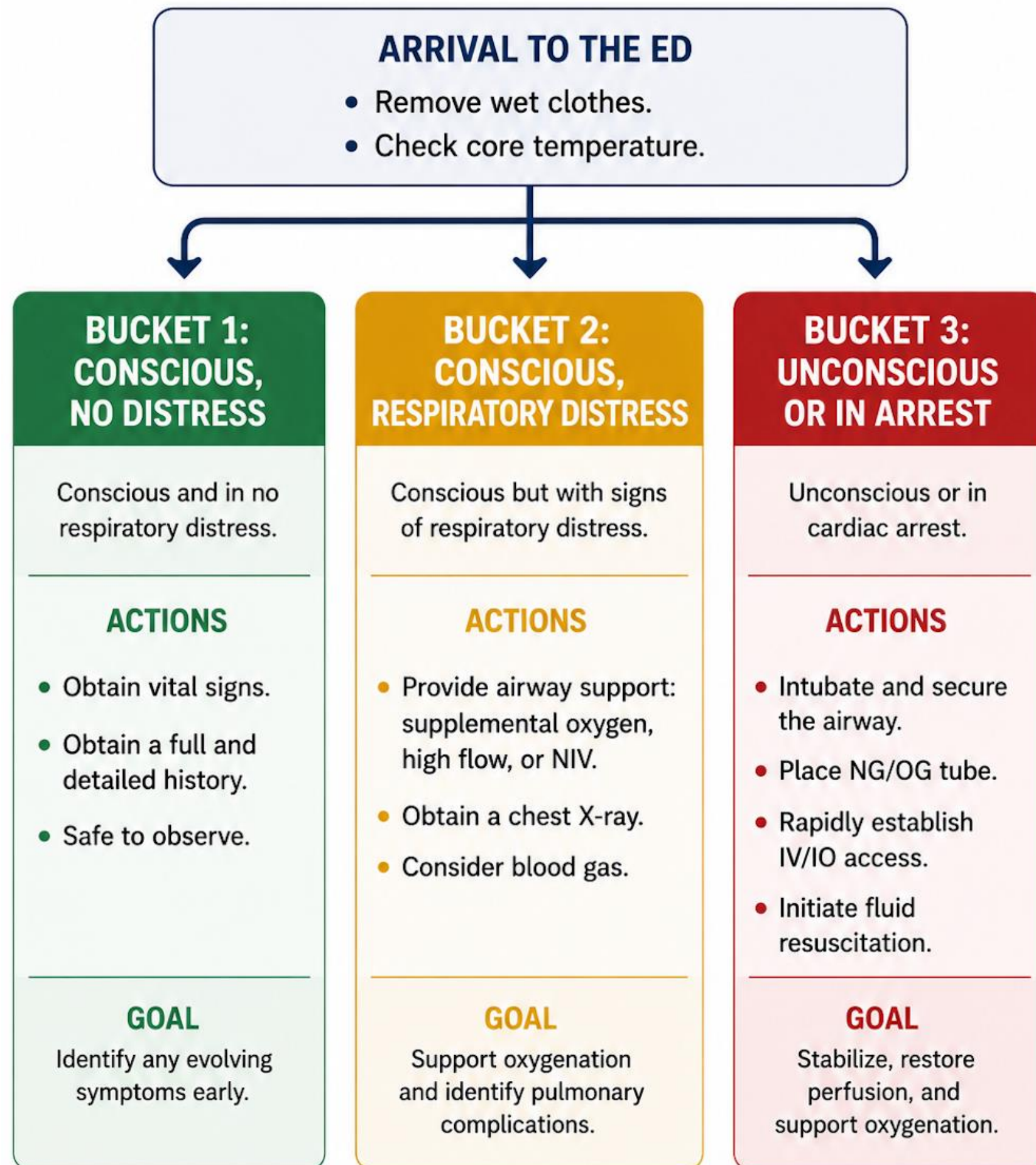
FACT

- There is no evidence to show that they actually clear water from the lungs.
- They cause vomiting in greater than 65% of drowning victims which creates high potential for secondary aspiration.



GUIDANCE

Avoid abdominal thrusts as it delays critical ventilation and increases the risk of vomiting and pulmonary aspiration.



Management in the ED

 Routine corticosteroids

 Prophylactic antibiotics

 Sodium bicarbonate

Safe Disposition

The "Secondary Drowning" Myth



A perfectly well-appearing child can suddenly deteriorate and die days after a mild submersion due to "dry" or "secondary" drowning.



Fact

There has **never been a documented case** in medical literature of a patient **dying** who was **completely asymptomatic 8 hours post-submersion**. These terms generate unwarranted panic, are clinically inaccurate, and should be permanently abandoned.


Safe Discharge Criteria

Protocol: Observe for 4 to 8 hours in the Emergency Department.

Discharge Home if:

✓ The patient remains fully asymptomatic, maintains normal mentation (GCS 15), has strictly normal age-adjusted vital signs, and requires zero supplemental oxygen at the end of the observation period.

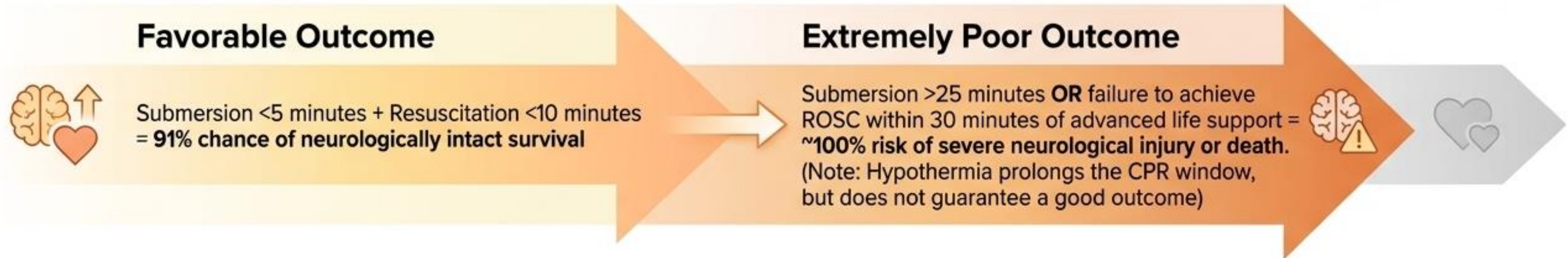
Admit to Hospital if:

 Any respiratory distress, abnormal mentation, or abnormal vital signs manifest or persist beyond the observation window.



Neurologic Prognosis and Public Health Prevention

Prognostic Endpoints



The Prevention Pillars




Barriers
4-sided isolation pool fencing



Supervision
Constant, undistracted "touch supervision" for infants and toddlers



Education
Formal swimming lessons for all children by age 4



Medical
Strict "buddy system" for children with epilepsy or channelopathies



Community
Widespread bystander basic life support and CPR training

References

- Sheno RP, et al. Factors Associated with Pediatric Drowning-Associated Lung Injury. *The Journal of Pediatrics*. 2025;279:114459.
- Evans J, et al. Fifteen-minute consultation: Drowning in children. *Archives of Disease in Childhood – Education and Practice Edition*. 2021;106(2):88–93.
- Semple-Hess J, Campwala R. Pediatric Submersion Injuries: Emergency Care And Resuscitation. *Pediatric Emergency Medicine Practice*. 2014;11(6).
- Szpilman D, et al. Drowning. *New England Journal of Medicine*. 2012;366(22):2102–2110.
- Idris AH, et al. 2015 Revised Utstein-style recommended guidelines for uniform reporting of data from drowning. *Circulation*. 2017;10(7).



Thank
You

Pediatric Blunt Abdominal Trauma

Lena Saleh, MD MPH
Pediatric Critical Care Medicine



Objectives

- Case Presentation
- Blunt Force Trauma Basics
- Solid Organ Injuries
 - Liver and Spleen
 - Kidneys
 - Pancreas

Case Presentation

9yo female who was horse riding, when the horse reared up, she was thrown off, and then the horse landed on her. Complaining of diffuse chest and abdominal pain with some shortness of breath. Denies loss of consciousness.

- Vitals: Temp 38.3C, HR 150s, BP 75/42 (MAP 53), RR 14, Sats 98%
- Primary and secondary survey: bruising in epigastric region, abdomen soft but moderately distended and tender
- FAST: +free fluid around liver
- Treatment: 500ml NS, 1unit pRBCs, 1unit FFP, TXA
- Labs: CBC, CMP, coags
- Imaging: CT scan completed

Standardized Age Based Vital Signs

Age	Pulse (bpm)	Respirations (per minute)	SBP (MAP)*
Newborn to < 6 months	100–160	30–60	<60 mmHg
6 months to < 1 year	110–160	24–38	<70 mmHg (<40 mmHg)
1 to < 3 years	90–150	22–30	<70 mmHg (<44 mmHg)
3 to < 5 years	80–125	22–30	<75 mmHg (<49 mmHg)
5 to < 10 years	70–115	20–24	<80 mmHg (<55 mmHg)
10 to < 14 years	60–100	16–22	<90 mmHg (<60 mmHg)
≥ 14 years	60–100	14–20	<95 mmHg (<65 mmHg)

Labs

COMPLETE BLOOD COUNT

9.5 WBC	13.5 HGB
38.8 HCT	372 PLT

ELECTROLYTES / BMP

140 NA	106 CL	13 BUN
2.9 K	22 CO ₂	0.61 CR
141 GLUCOSE	9.1 CA	14.9 ANION GAP

LIVER FUNCTION TESTS

980 ALT	918 AST
337 ALK PHOS	0.3 BILI
4.4 ALBUMIN	7.1 TOTAL PROT

LACTATE

3.6 MMOL/L

Imaging

CT Abdomen Pelvis W IV/ WO PO Contrast

Impression

1. Large hepatic contusions/intraparenchymal injury in the right greater than left hepatic lobes with involvement of 40 to 60% of the lobes, compatible with grade 4 AAST hepatic injury. No definite evidence of active extravasation, though assessment limited on venous phase. There is blood products tracking along the right inferior hepatic margin towards the pelvis, with mild blood in the bilateral upper quadrants.
2. Mild groundglass at the left lung base which may reflect atelectasis or contusion.

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- Treatment: 500ml NS, 1unit pRBCs, 1unit FFP, TXA
- Labs: CBC, CMP, coags
- Imaging: CT scan w/ grade IV hepatic injury, no active extravasation
- Dispo: transferred to Inova PICU for admission

Introduction

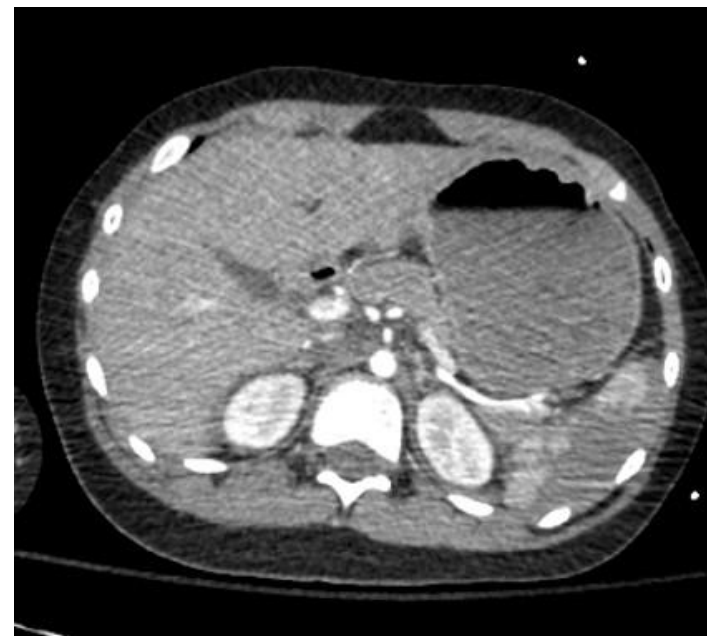
- Abdominal trauma is present in approximately 25% of pediatric patients with major trauma and is the most common cause of unrecognized fatal injury in children¹
- Pediatric trauma differs from adult²
 - Less mineralization of bone = less skeletal protection to the abdomen
 - Decreased muscle strength per unit volume = diminished protection of the abdomen
 - Physiologic responses to hemorrhage and resuscitative interventions differ substantially
- Failure to consider these differences can lead to incorrect treatment

Blunt Force Trauma

- Common injuries
 - Spleen: 40-49%
 - Liver: 35-40%
 - Kidney: 15-20%
 - Pancreas: 3-4%
- Mechanism
 - Compression: direct blow to liver or blowout of the bowel
 - Crushing: direct blow to the epigastrium with crushing of the pancreas over the spine
 - Shearing: inappropriate location of the lap belt contributing to bowel injury

Diagnostic Tools

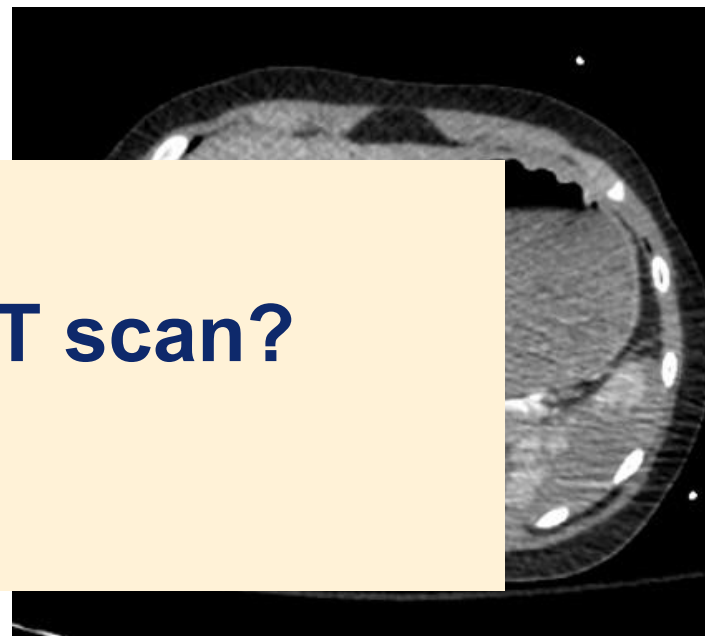
- Serial physical examinations
- X-rays (chest and pelvis)
- Focused Abdominal Sonogram for Trauma (FAST)
- Computed tomography (CT scan)
- Diagnostic Peritoneal Lavage (DPL)
- Serial hemoglobin / hematocrit assessments
- Urinalysis (for renal system injury)



Diagnostic Tools

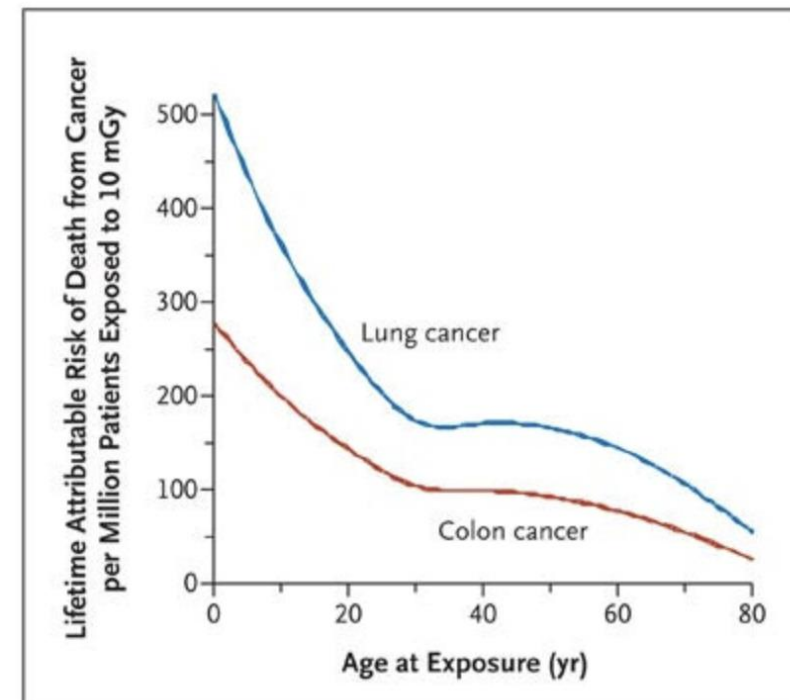
- Serial physical examinations
- X-rays (chest and pelvis)
- Focused Abc
- Computed to
- Diagnostic P
- Serial hemog
- Urinalysis (for renal system injury)

Do we always need a CT scan?



Diagnostic Tools

- Radiation risk
 - Potential risk of malignancy secondary to exposure to ionizing radiation from CT is cumulative
 - Children have increased life expectancy, with more time to express cancer
 - Children are inherently more radiosensitive than adults
 - Radiation induced cancers tend to appear at the same time as spontaneous cancers of the same type
 - It may take half a century to judge the impact of radiation



Diagnostic Tools

- 6 prediction rules
 1. Hypotension for age
 2. Abnormal abdominal exam (distension, tenderness, peritonitis, or contusion)
 3. AST >200 U/L
 4. Hematuria (>5rbc/hpf)
 5. Hematocrit <30%
 6. Amylase >100 U/L

Diagnostic Tools

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 5. Hematocrit <30%
 6. Amylase >100 U/L
- Single center retrospective study
- 125 “trauma alert” patients with blunt trauma
 - 97 underwent abdominal CT scan
 - 15 were identified as IAI (15%)
- Prediction rule would have identified 16/17 patients with IAI
 - Sensitivity 94%
 - Missed 1 patient with grade I splenic laceration
 - Negative predictive value 99%

Diagnostic Tools

Recommended clinical guidelines to avoid unnecessary abdominal CT utilization in the evaluation for intra-abdominal injury following blunt torso trauma.

Abdominal CT scan is not necessary in the initial evaluation of children with a reliable physical exam (age >2, GCS>8) following blunt torso trauma in the presence of the following clinical findings:

Normal systolic blood pressure for age

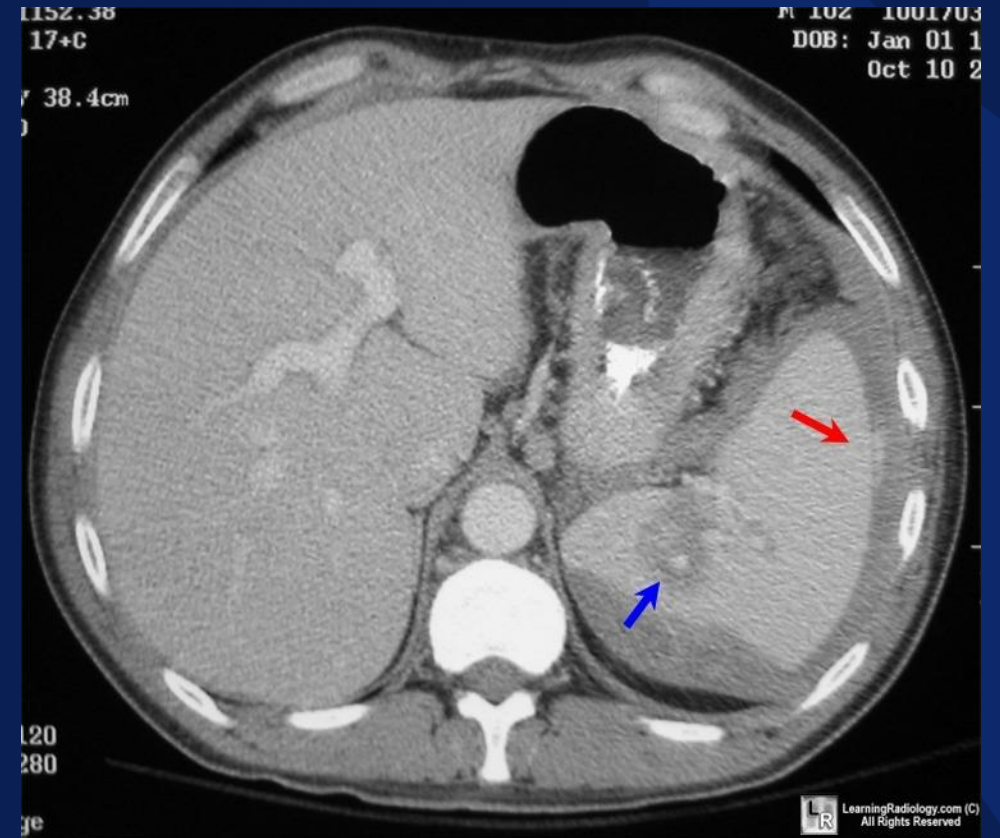
Normal abdominal exam

AST < 200 U/L

Hematocrit > 30%

Normal Chest x-ray

Liver and Spleen



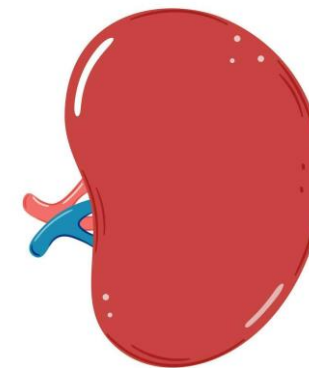
Blunt Liver and Splenic Injury

- Spleen
 - Most commonly injured and intra-abdominal organ
 - Presentation:
 - Blunt trauma to the lower chest or upper abdomen
 - Pain and tenderness in the left upper quadrant, abdominal distension, tachycardia, and pain referred to the left shoulder
 - Lower rib fractures should raise suspicion for underlying injury
- Liver
 - Second most common abdominal injury, more likely intra-abdominal injury to result in death
 - Presentation
 - Pain and tenderness in the right upper quadrant, referred pain from the right shoulder, and signs of hemorrhagic shock

Grading Scales - Spleen

Spleen injury scale (1994 revision)

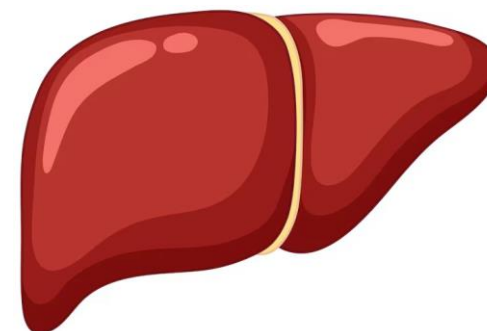
Grade*	Injury type	Description of injury
I	Hematoma	Subcapsular, <10% surface area
	Laceration	Capsular tear, <1cm parenchymal depth
II	Hematoma	Subcapsular, 10%-50% surface area; intraparenchymal, <5 cm in diameter
	Laceration	Capsular tear, 1-3cm parenchymal depth that does not involve a trabecular vessel
III	Hematoma	Subcapsular, >50% surface area or expanding; ruptured subcapsular or parenchymal hematoma; intraparenchymal hematoma \geq 5 cm or expanding
	Laceration	>3 cm parenchymal depth or involving trabecular vessels
IV	Laceration	Laceration involving segmental or hilar vessels producing major devascularization (>25% of spleen)
V	Laceration	Completely shattered spleen
	Vascular	Hilar vascular injury with devascularizes spleen



Grading Scales - Liver

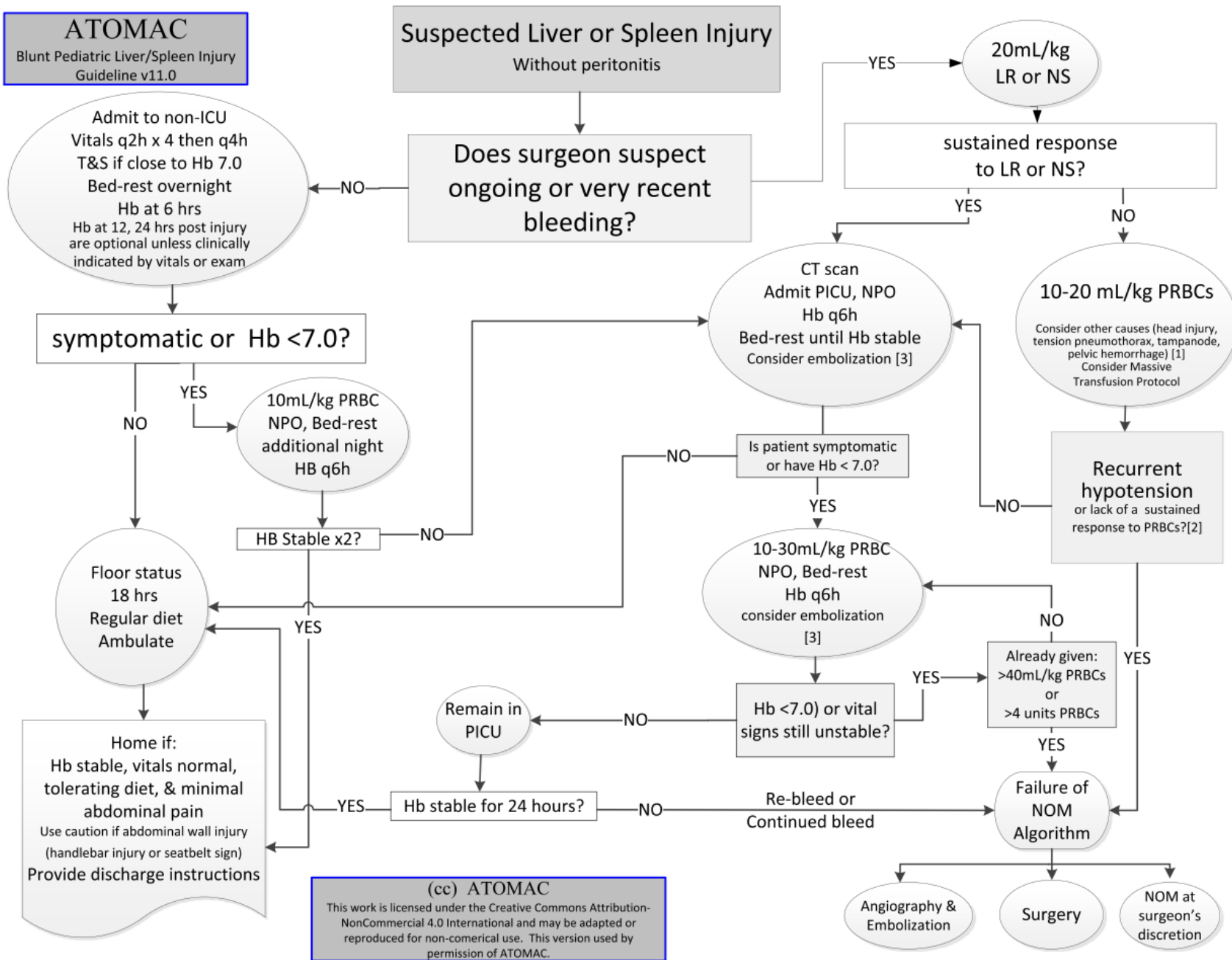
Liver injury scale (1994 revision)

Grade*	Type of Injury	Description of injury
I	Hematoma	Subcapsular, <10% surface area
	Laceration	Capsular tear, <1cm parenchymal depth
II	Hematoma	Subcapsular, 10% to 50% surface area: intraparenchymal <10 cm in diameter
	Laceration	Capsular tear 1-3 parenchymal depth, <10 cm in length
III	Hematoma	Subcapsular, >50% surface area of ruptured subcapsular or parenchymal hematoma; intraparenchymal hematoma > 10 cm or expanding
	Laceration	>3 cm parenchymal depth
IV	Laceration	Parenchymal disruption involving 25% to 75% hepatic lobe or 1-3 Couinaud's segments
V	Laceration	Parenchymal disruption involving >75% of hepatic lobe or >3 Couinaud's segments within a single lobe
	Vascular	Juxtahepatic venous injuries; ie, retrohepatic vena cava/central major hepatic veins
VI	Vascular	Hepatic avulsion



Management

- Historically:
 - The APSA Trauma Committee guideline recommended:
 - LOS: injury grade + 1 day
 - ICU admission: \geq Grade IV injuries
 - Return to activity: injury grade + 2 (in weeks)
 - By the next decade, guidelines deemed too conservative with excessive hospitalization
- Landmark article *Throwing out the 'Grade' Book* pivoted the field to prioritizing patient's physiologic and hemodynamic status over rigid CT scan
- Prompted the ATOMAC guideline



National Guidelines

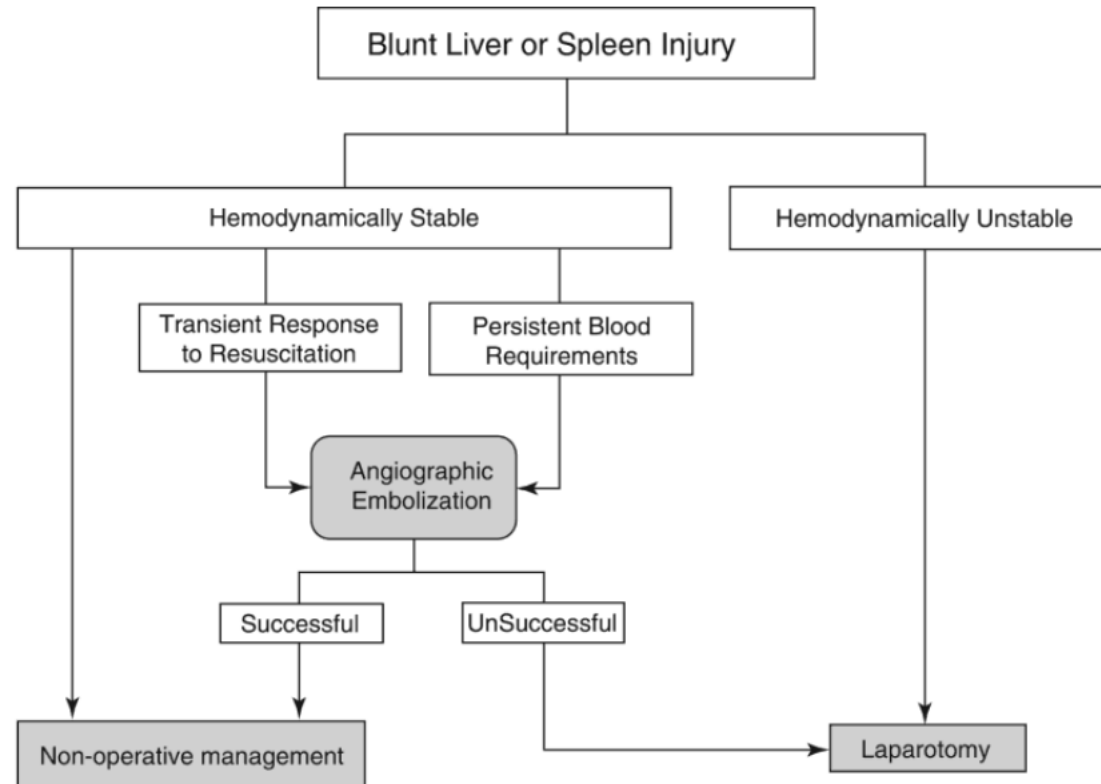
1. Eastern Association for Surgery of Trauma-EAST: non-operative management of blunt liver and spleen injuries is the treatment modality of choice in hemodynamically stable adult and pediatric patients, irrespective of injury grade
2. American Pediatric Surgical Association (APSA): only grade IV injuries mandate ICU admission in experienced centers

Table 3. Proposed Guidelines for Resource Utilization in Children With Isolated Spleen or Liver Injury

	CT Grade			
	I	II	III	IV
ICU stay (d)	none	none	none	1
Hospital stay (d)	2	3	4	5
Predischarge imaging	none	none	none	none
Postdischarge imaging	none	none	none	none
Activity restriction (wk)*	3	4	5	6

Stylianos S. Evidence-based Guidelines for Resource Utilization in Children With Isolated Spleen or Liver Injury. The APSA Trauma Committee. J Pediatr Surg. 2000 Feb;35(2):164-7; discussion 167-9. doi: 10.1016/s0022-3468(00)90003-4. PMID: 10693659.

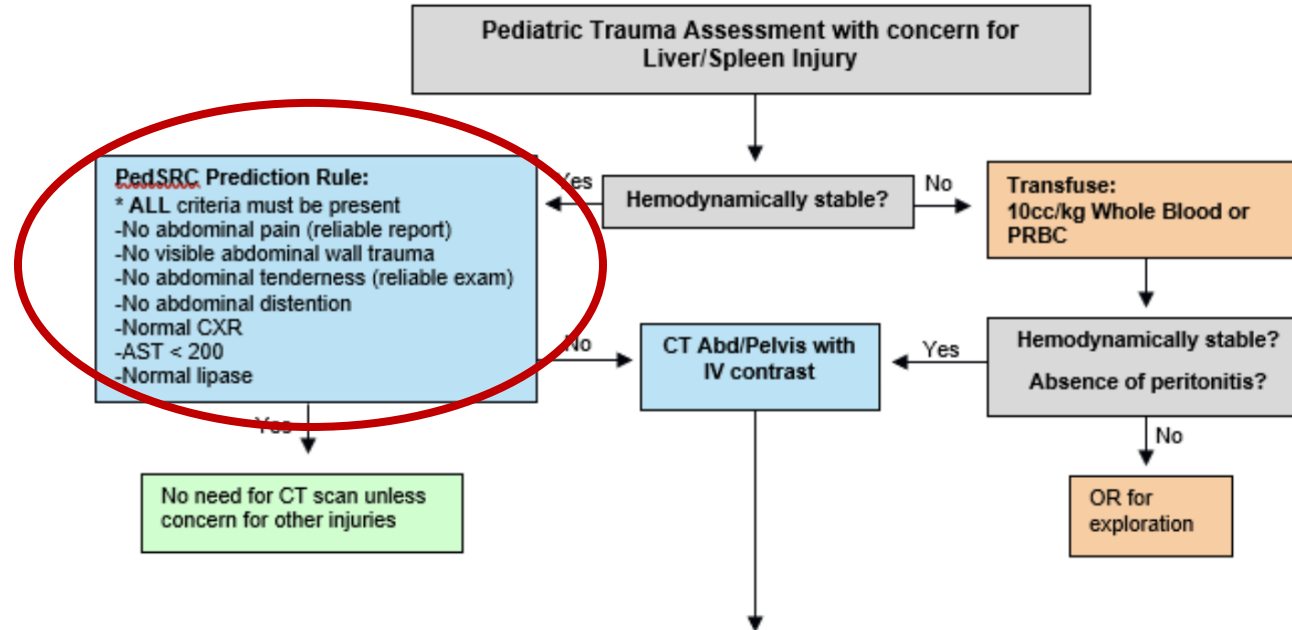
Management



Complications

- Splenic injury
 - If splenectomy is necessary, patients should be vaccinated against encapsulated organisms
 - Reduce the risk of overwhelming post splenectomy infection (OPSI)
 - Rare, but lethal
 - Complications of non operative management include:
 - Abscess
 - Delayed hemorrhage
 - Chronic pain
- Liver injury
 - Complications of non-operative management include:
 - Delayed hemorrhage
 - Biloma
 - Hemobilia

Pathways



Management by Injury Grade:

	1	2	3	4/5	Any grade with contrast blush
Observation location	Ward	Ward	PIMC	PICU	PICU
Serial CBC	Q12h until Hgb stable then Q24hr	Q12h until Hgb stable then Q24hr	Q6h until Hgb stable then Q24hr	Q6h until Hgb stable then Q24hr	Q6h until Hgb stable then Q24
Serial abdominal exam	Yes	Yes	Yes	Yes	Yes
NPO	No	No	Until Hgb stable	Until Hgb stable	Until Hgb stable

ALL patients after splenectomy should receive 3 vaccines prior to discharge:

- Pneumococcal
- H. Flu
- Meningococcal A&B

Note: Vaccines are NOT required after splenic embolization

Kidneys



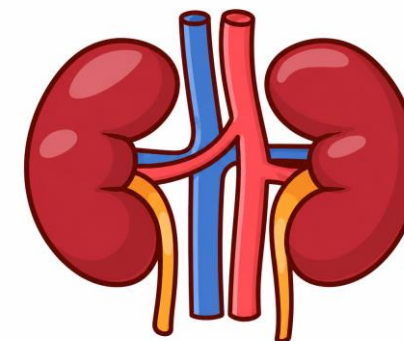
Blunt Kidney Injury

- Third most commonly injured solid organ in blunt trauma
- Causes
 - Motor vehicle accidents
 - Falls
 - Sports injuries
 - Pedestrian struck injuries
- Presentation: gross hematuria and flank pain
- Because of the potential for injury in the collecting system, renal injuries pose unique challenges

Grading Scales - Kidneys

Kidney injury scale

Grade*	Type of injury	Description of injury
I	Contusion	Microscopic or gross hematuria, urologic studies normal
	Hematoma	Subcapsular, nonexpanding without parenchymal laceration
II	Hematoma	Nonexpanding perirenal hematoma confirmed to renal retroperitoneum
	Laceration	<1.0 cm parenchymal depth of renal cortex without urinary extravagation
III	Laceration	<1.0 cm parenchymal depth of renal cortex without collecting system rupture or urinary extravagation
IV	Laceration	Parenchymal laceration extending through renal cortex, medulla, and collecting system
	Vascular	Main renal artery or vein injury with contained hemorrhage
V	Laceration	Completely shattered kidney
	Vascular	Avulsion of renal hilum which devascularizes kidney



Management

- Collaboration between the Eastern Association for the Surgery of Trauma and the Pediatric Trauma Society a systematic review and meta-analysis was done to evaluate pediatric blunt renal trauma management
 1. Nonoperative management in hemodynamically stable patients with blunt trauma of all grades
 - Reduced rate of renal loss
 - Decreased need for blood transfusion
 2. Angioembolization versus surgical intervention for ongoing or delayed bleeding in high grade (AAST grade III-V) renal injuries
 3. Routine blood pressure checks to diagnose post-traumatic renal hypertension

Pancreas



Blunt Pancreas Injury

- Comparatively rare
- Caused by focused blow to the mid-abdomen
- Presentation: immediately after, often deceptively asymptomatic until local tissue injury occurs due to destructive effects of pancreatic enzymes
- Complications
 - Pseudocyst formation
 - Pancreatic necrosis
 - Abscess

Grading Scales - Pancreas

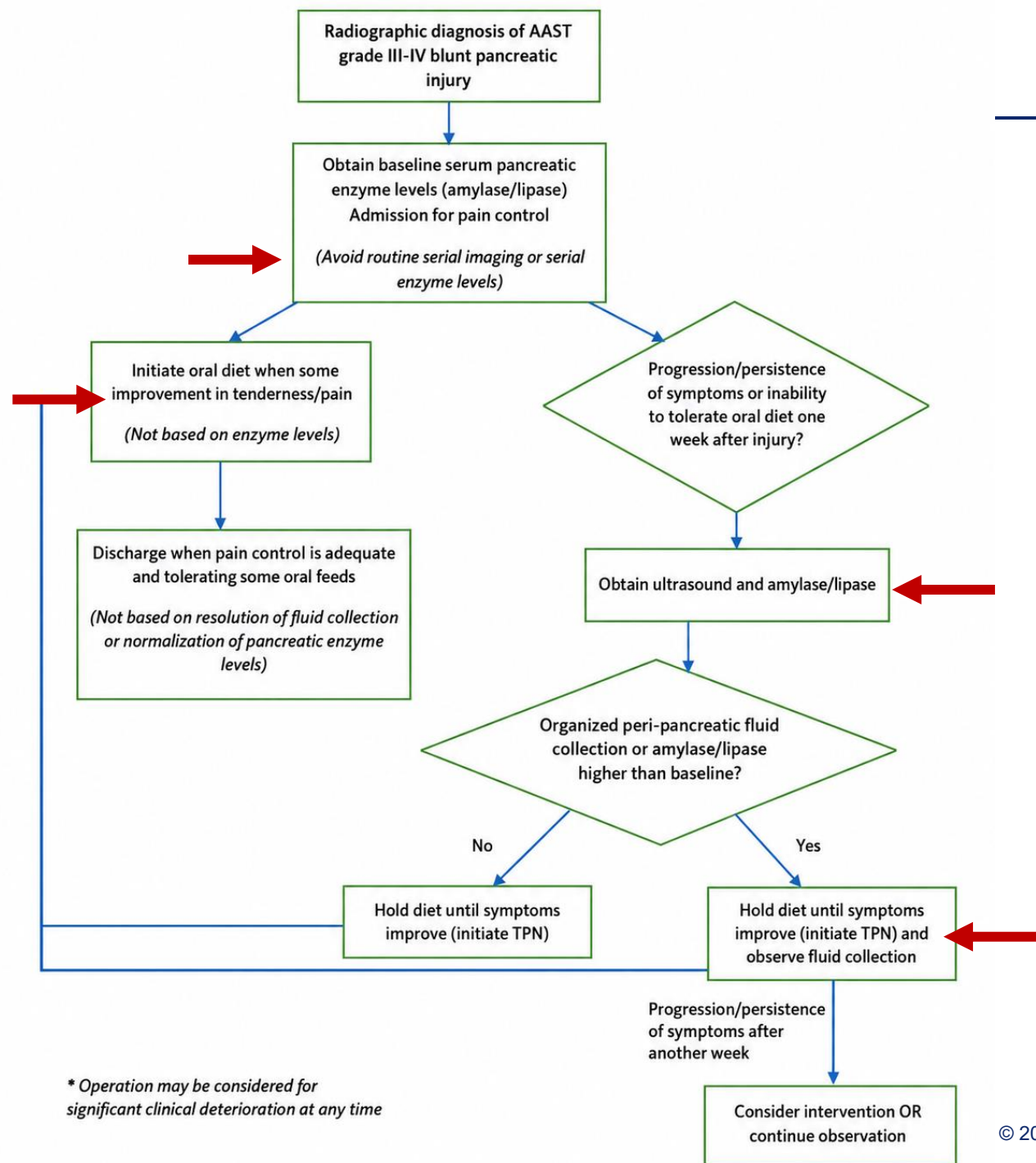
Pancreas Injury Scale

Grade*	Type of Injury	Description of Injury
I	Hematoma Laceration	Minor contusion without duct injury Superficial laceration without duct injury
II	Hematoma Laceration	Major contusion without duct injury or tissue loss Major laceration without duct injury or tissue loss
III	Laceration	Distal transection or parenchymal injury with duct injury
IV	Laceration	Proximal ^a transection or parenchymal injury involving ampulla
V	Laceration	Massive disruption of pancreatic head



Management

- If there is questionable integrity of the main pancreatic duct, ERCP is recommended to anatomy delineation
- Minor injuries (AAST grade I-II) = non-operative management
 - Bowel rest
 - Gradual liberalized diet
 - Trend pancreatic enzymes
- High-grade injuries (AAST grade III-V) = observation vs complex operative management
 - Multi center retrospective review conducted of children with high grade pancreatic injuries showed significant variability in non-operative management strategies
 - Pancreatic enzyme levels did not correlate with injury grade or pseudocysts development
 - ERCP obtained in 25%
 - Management: observation 64%, percutaneous drainage 24%, endoscopic drainage 10%, and needle aspiration 2%
 - Feeds: TPN was used in 68%, enteral feeds in 31%



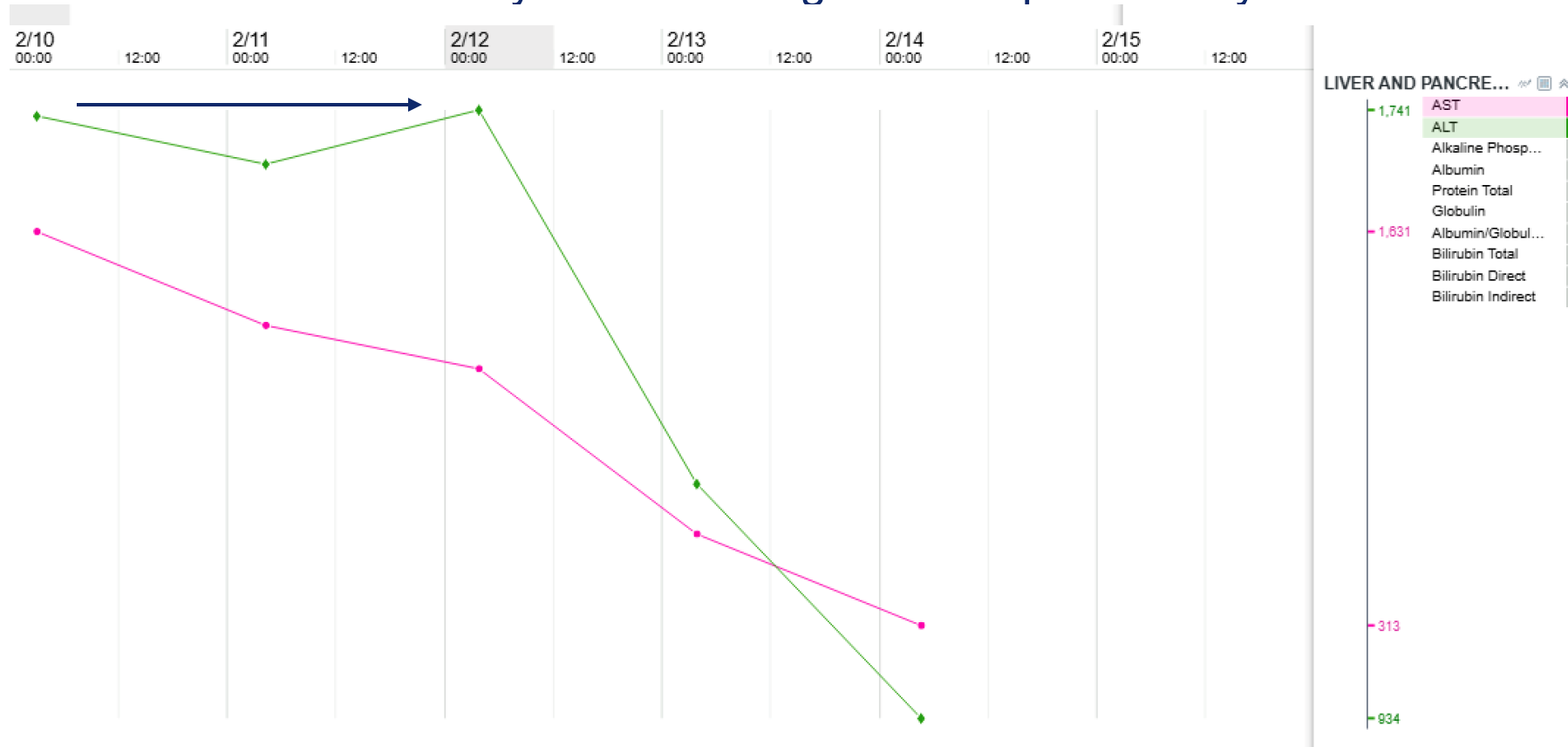
* Operation may be considered for significant clinical deterioration at any time

Summary

- Non-operative management (NOM) failure in pediatric post-traumatic abdominal solid organ injuries is relatively infrequent, with high organ salvage rates achievable even in high-grade and multisystem trauma
- Documented benefits of NOM include:
 - fewer blood product transfusions
 - shorter length of hospital stay
 - reduced hospital costs
 - preserved host defense (spleen)
- Operative management is necessary for persistent blood loss, hemodynamic instability, multiple other life-threatening injuries
- Common operative strategies:
 - liver: packing, suturing, sometimes resection
 - spleen: splenectomy
 - renal: angioembolization
 - pancreas: distal pancreatectomy

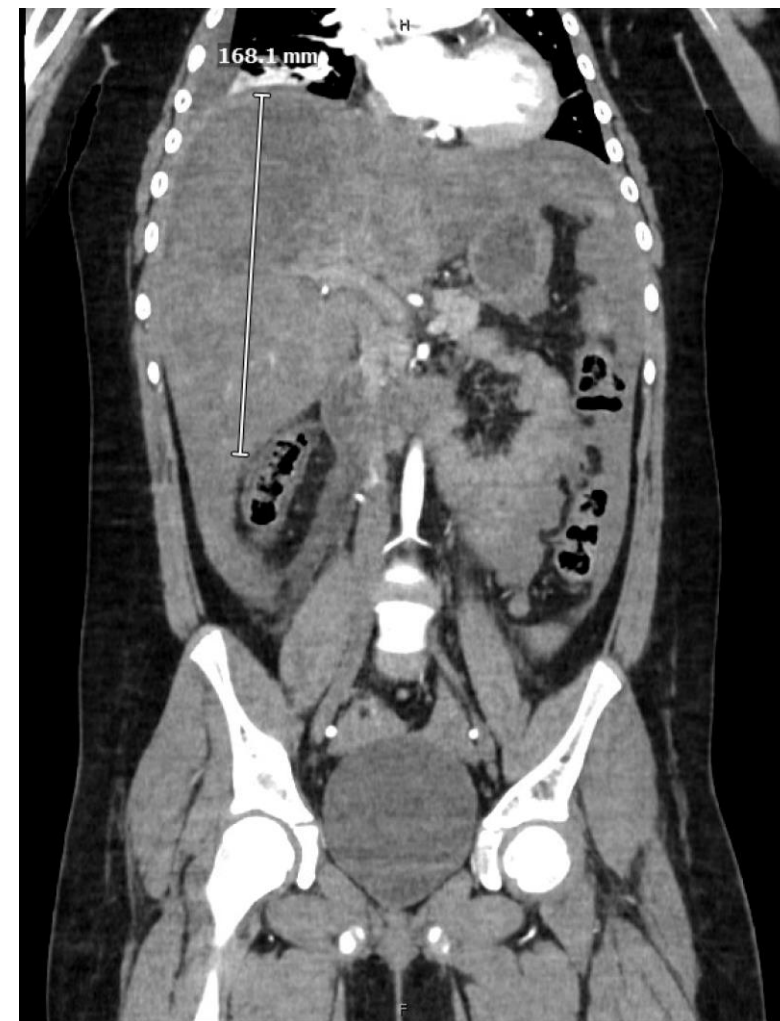
Case Presentation

- Patient had persistent severe pain despite multimodal pain control
- Serial labs showed mildly downtrending H/H and persistently elevated LFTs on HD3



Case Presentation

- Repeat CT Abdomen showed
 - Redemonstration of hepatic laceration. No active extravasation or pseudoaneurysm is seen.
 - Moderate volume of hemoperitoneum has increased.
 - Increased bibasilar atelectasis. Small to moderate right and trace left pleural effusions.
 - Moderate stenosis involving the proximal portion of the celiac artery
- Patient was taken to the OR for exploratory laparoscopy and evacuation of hematoma on HD5.
- Patient slowly progressed with APS involvement for pain management and discharged home on HD12.



Thank
You



Pediatric Orthopaedic Sport-Related Injuries

Courtney Quinn, MD

Orthopaedic Surgery, Sports Medicine

Inova Medical System

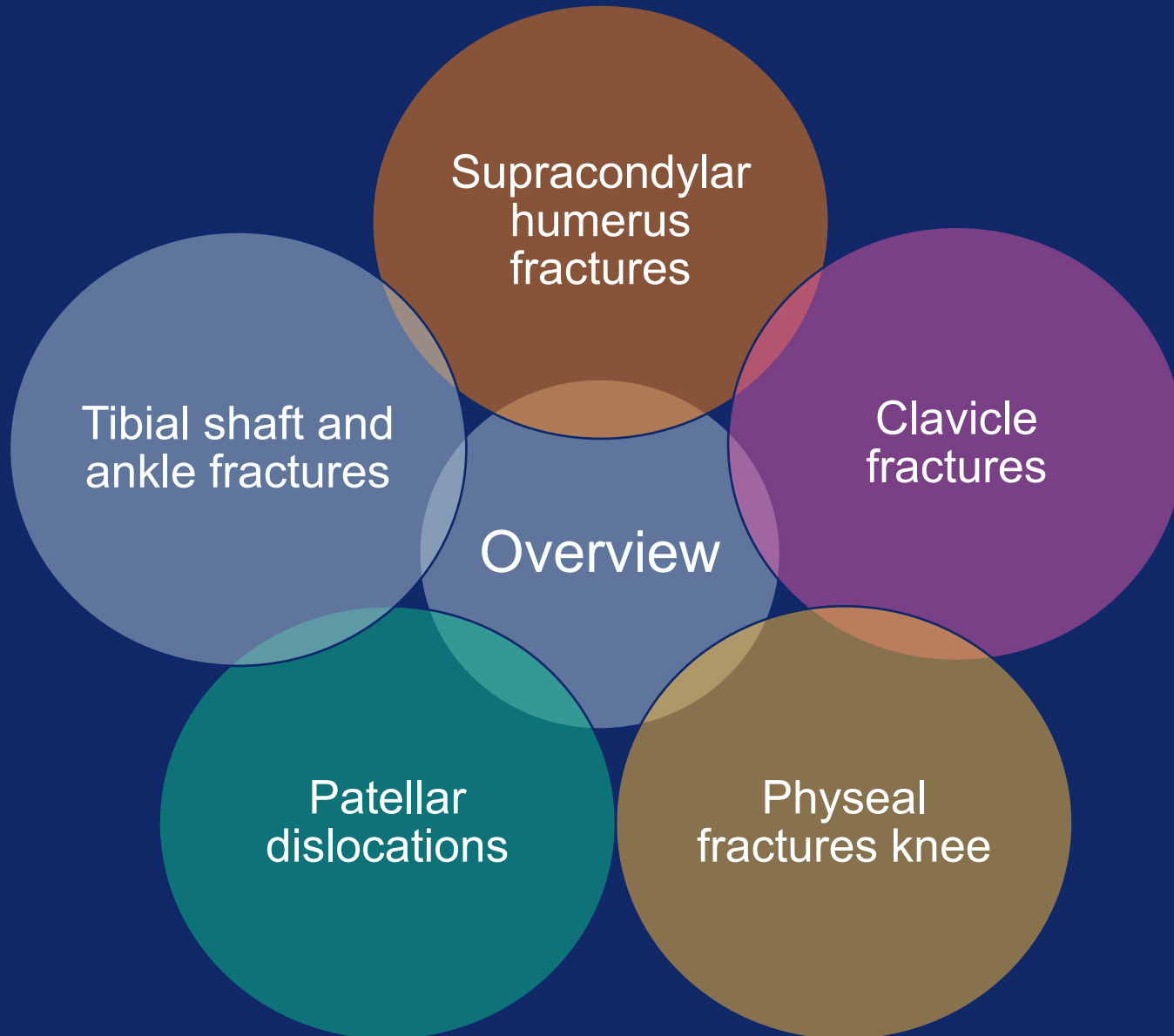
May 29, 2026



For starters

- Unique MSK features
 - Body composition
 - bony considerations
- Skeletal immaturity
 - Males: ages 15-17
 - Females: ages 14-16
- Importance of *accurate injury diagnosis* in field and *prompt transfer* if limb compromised or open wounds





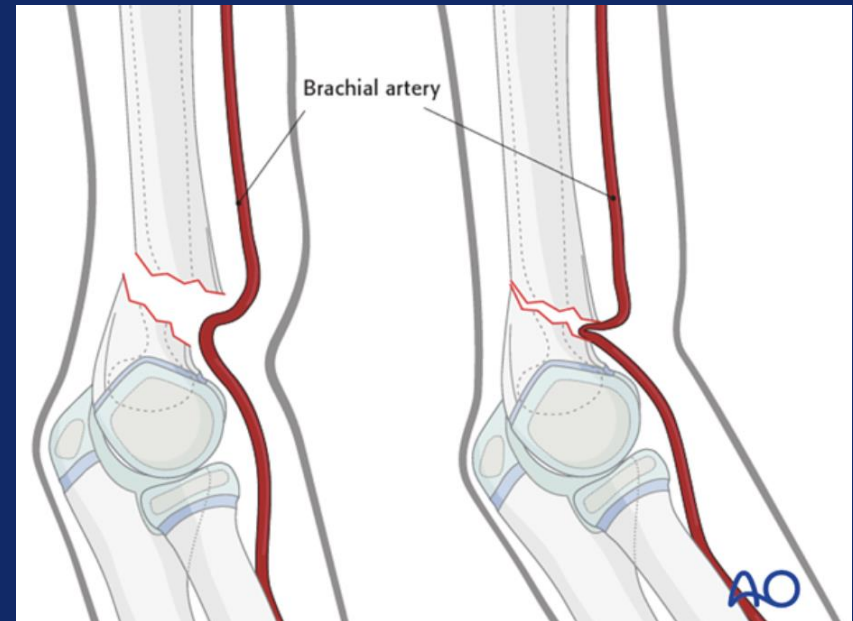
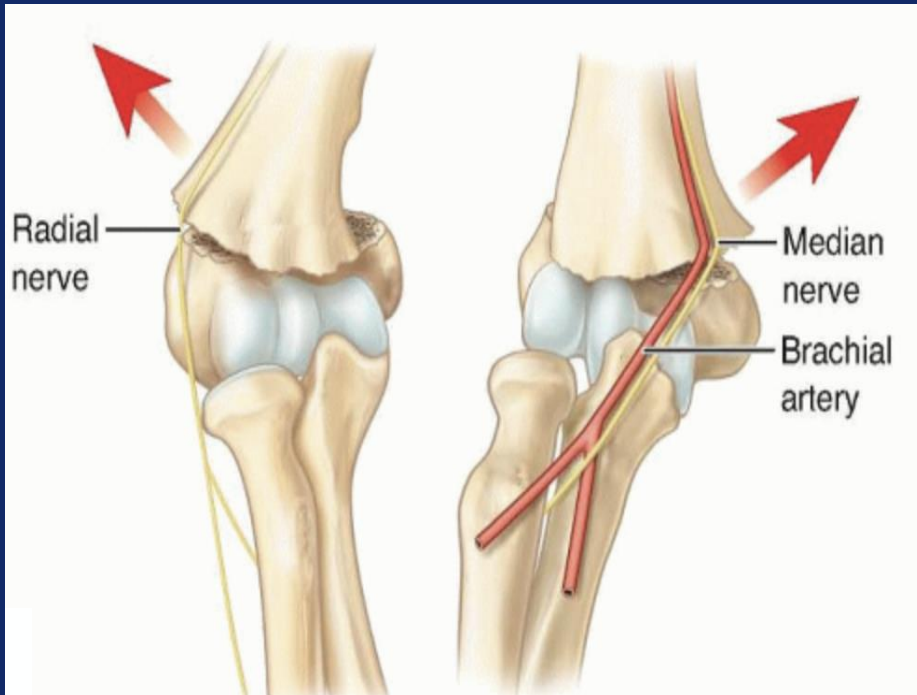
Supracondylar Humerus Fractures

- **Prevalence:** 2nd most common fracture pattern in kid
- **Age group:** Typically 5–8 years old
- **Mechanism:** Fall on outstretched arm
- **Common in:** Playground falls, gymnastics, trampoline injuries



Supracondylar Humerus Fractures

- Relevant anatomy: brachial artery, median nerve, radial nerve
- risk of **compartment syndrome**



Supracondylar Humerus Fractures



EMS Management:

Immobilize in position found

Monitor pulses and sensation

- Radial pulse absent ~10%

Assess for open wounds



ED Treatment:

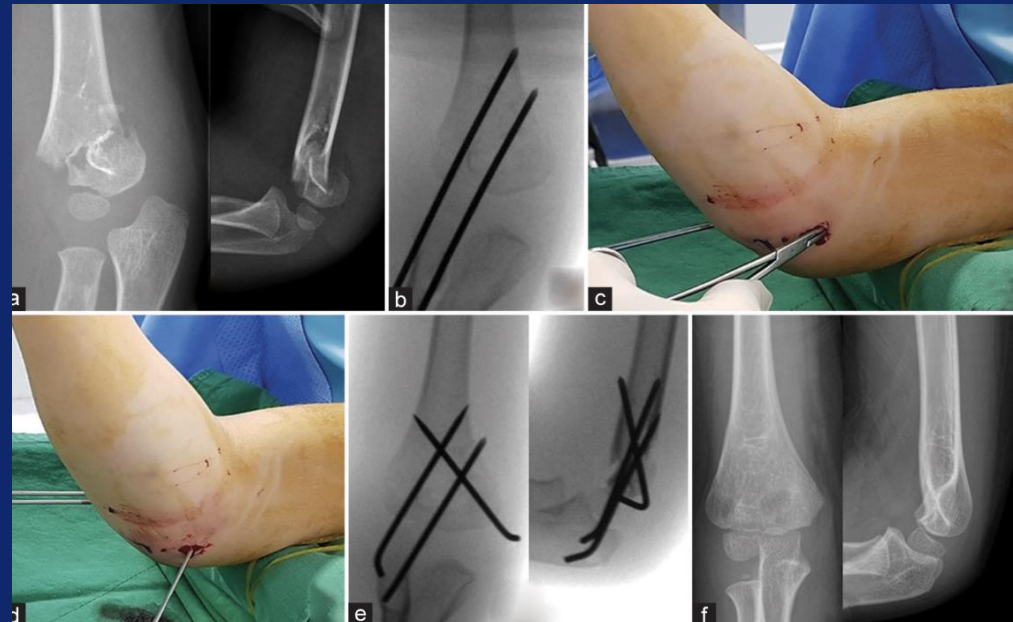
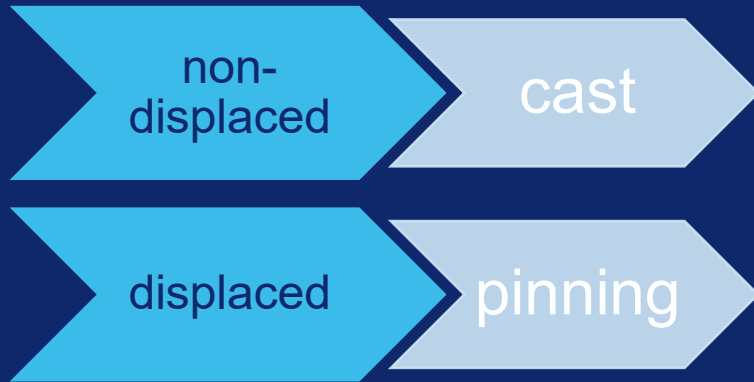
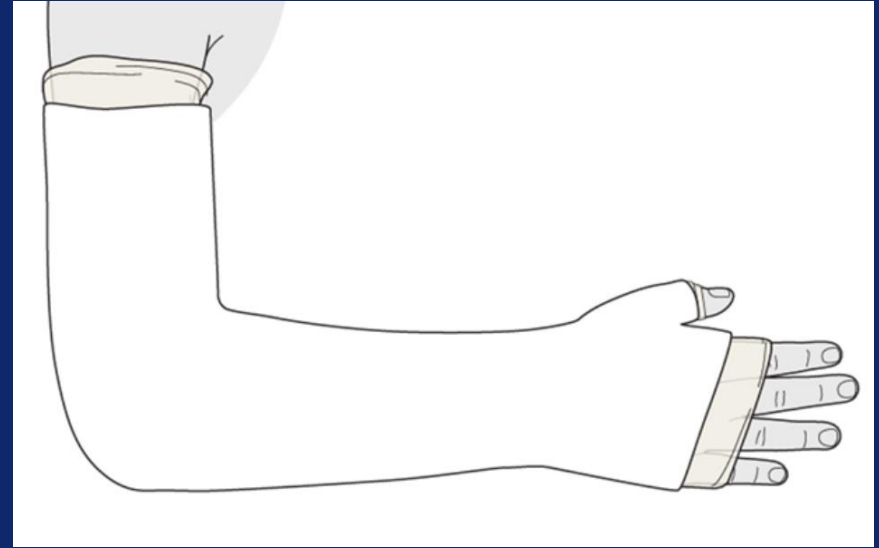
Neurovascular check

X-ray

Ortho consult if displaced (urgent if no pulses)

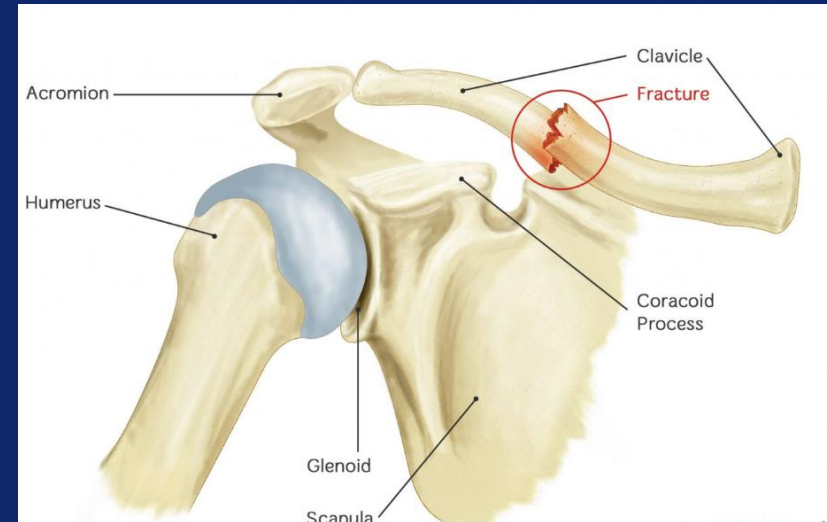
Monitor for compartment syndrome

Definitive Treatment



Clavicle Fractures

- **Prevalence:** Among the most common pediatric fractures (~8–15% of all pediatric fractures)
- **Mechanism:** Fall onto shoulder or FOOSH
- **Age group:** Broad age range, more frequent in younger children
- **Common in:** Cycling accidents, football, soccer, wrestling



Clavicle Fractures



EMS Management:

watch for tenting, skin compromise
Sling, pain management



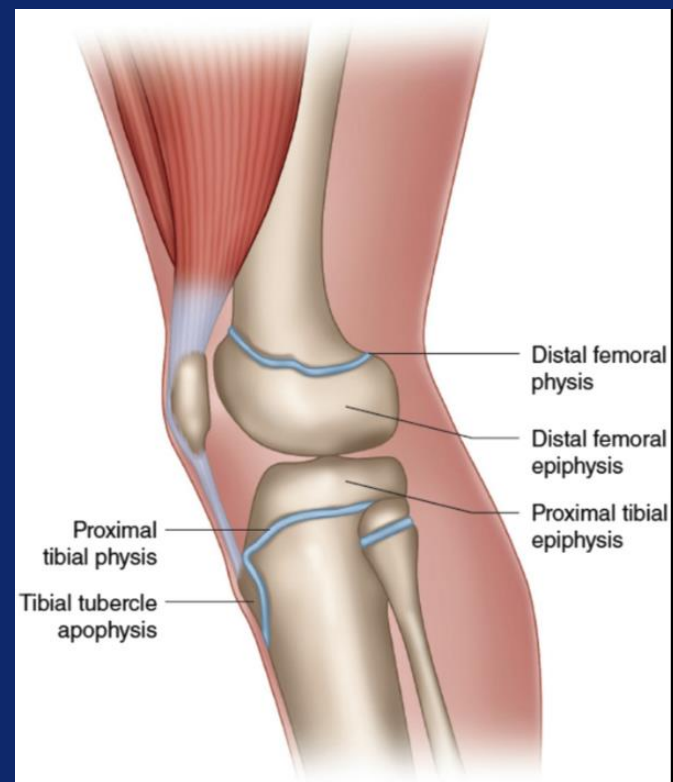
ED Treatment:

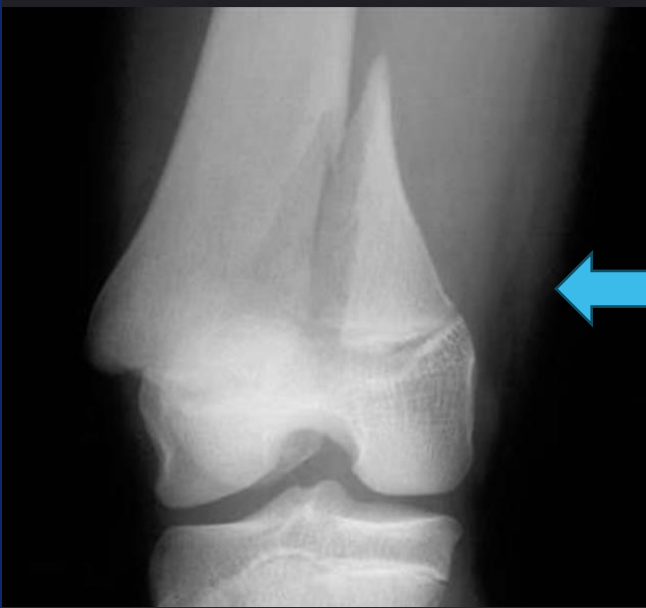
X-ray, sling or figure-of-eight brace,
ortho follow-up



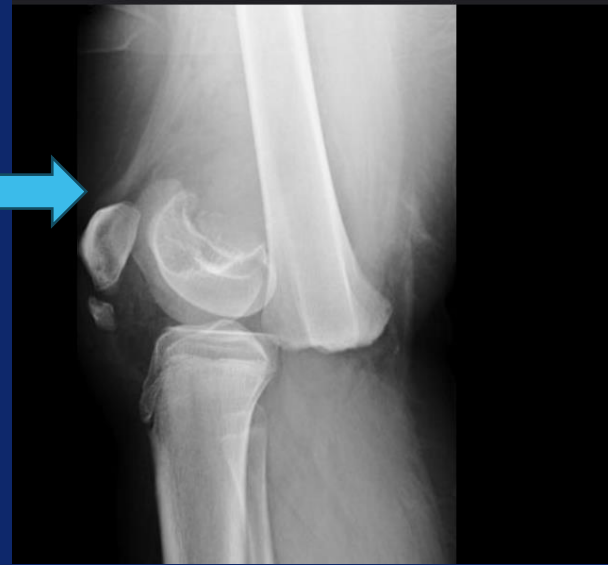
Physeal Fractures of the Knee

- **Prevalence:** rare, but can cause vascular injury
- **Age group:** Adolescents during growth spurts
- **Mechanism:** Direct trauma or twisting; high-energy sports
- **Common in:** Football, basketball, skateboarding





Distal femoral physis



Proximal tibial physis

tibial apophyseal avulsions



Physical Fractures of the Knee



EMS Management:

Immobilize in position

Avoid manipulation

Neurovascular assessment



ED Treatment:

Imaging, NV check, ortho consult

Operative if displaced

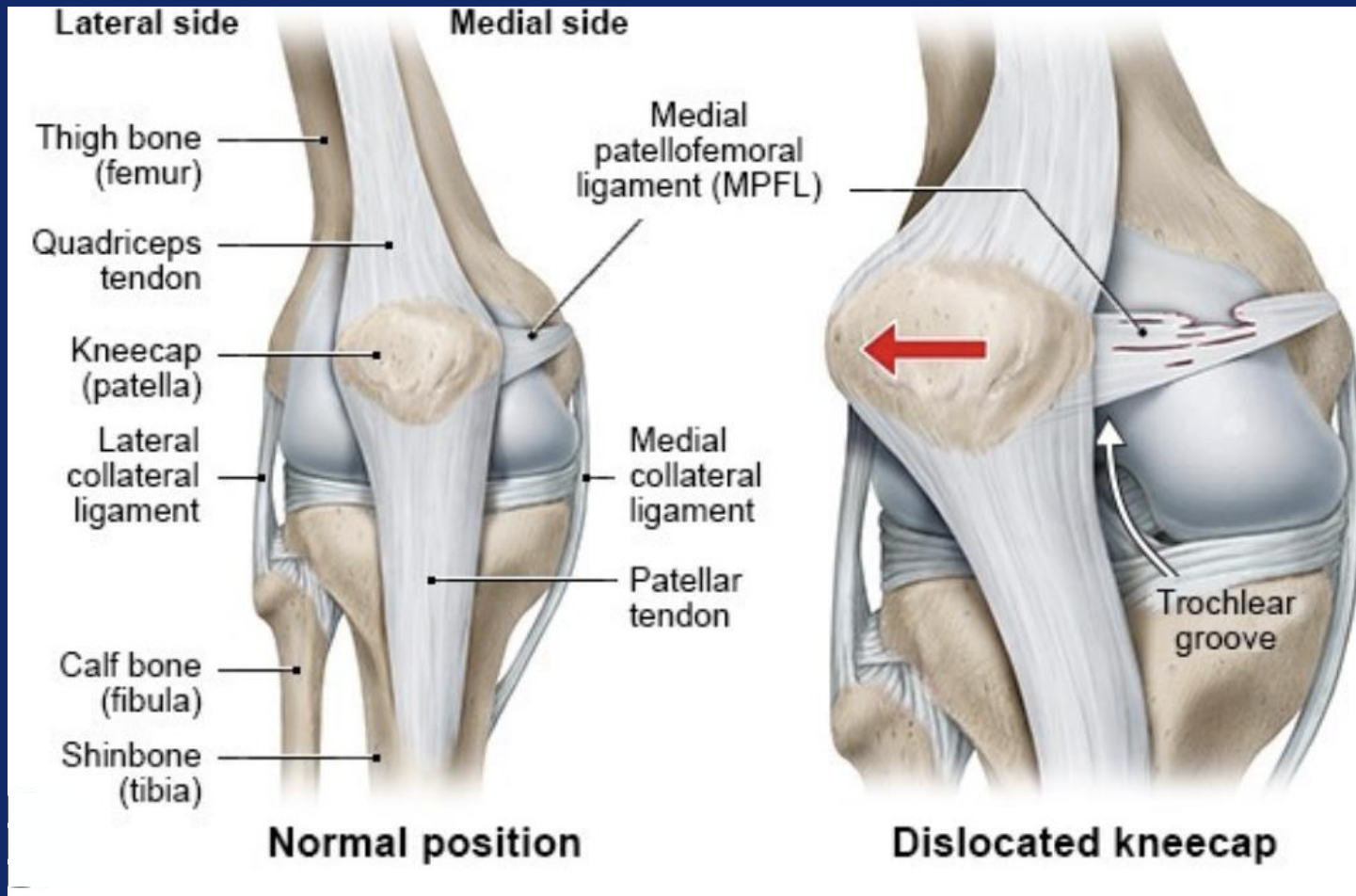
Monitor for compartment syndrome

Patellar Dislocations



- **Prevalence:** Less common, but increasing in active adolescents (especially females)
- **Age group:** Adolescents, especially ages 10–17
- **Mechanism:** Twisting on a planted foot with knee in valgus/flexion
- **Common in:** Dance, soccer, basketball, gymnastics

Patellar Dislocations



Patellar Dislocations



EMS Management:

Knee flexed - stuck
Patella visualized laterally
Support in position



ED Treatment:

Reduces with knee extension

- sedated reduction if needed

Knee immobilizer, WBAT
Ortho follow-up



Tibial Shaft and Ankle Fractures

- **Tibial shaft fractures:** 3rd most common long bone fracture in children
- **Ankle fractures:** ~5–10% of pediatric fractures
- **Age group:**
 - tibial shaft: all ages, esp 4-10
 - ankle: school age and adolescents
- **Mechanism:** Twisting injuries, especially with cutting or jumping, direct blow
- **Common in:**
 - tibial shaft: Skiing, football, trampoline falls, motor vehicle collisions
 - ankle: Soccer, basketball, skateboarding



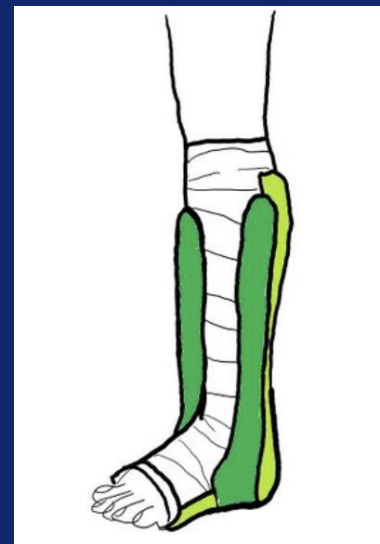
Tibial Shaft and Ankle Fractures

- **EMS Management:**

- Assess NV status, deformity, open wounds
- Immobilization
 - tibia fracture: long leg splint
 - ankle: short leg splint
- Transport for imaging



Tibia Shaft and Ankle Fractures



• ER Management:

- X-rays, ortho consult: splinting vs surgery
- Tibia fractures:
 - High risk **compartment syndrome**
 - Open fractures, administer antibiotics ASAP



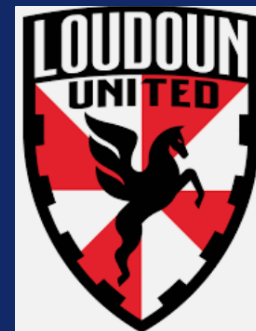
Summary

Recognize and stabilize common injuries

Pediatric anatomy affects treatment

Early recognition of NV complications = better outcomes

Thank you!



- Spivey MA & Mencio GA. Pediatric orthopedic trauma. In Rosen's Emergency Medicine (9th ed.), 2021.
- Cheng JCY & Shen WY. Limb fracture pattern in different pediatric age groups: A study of 3,350 children. *Journal of Orthopaedic Trauma*. 1993;7(1):15–22.
- Rennie L, Court-Brown CM, Mok JYQ, Beattie TF. The epidemiology of fractures in children. *Injury*. 2007;38(8):913–922.
- Peterson HA. Epiphyseal Growth Plate Fractures. Springer; 2007.
- Leininger B et al. Pediatric ankle fractures: a review. *J Am Acad Orthop Surg*. 2010;18(12):703–713.
- Rewers A et al. Childhood femur fractures, associated injuries, and sociodemographic risk factors: a population-based study. *Pediatrics*. 2005;115(5):e543–e552.
- Nietosvaara Y, Aalto K, Kallio PE. Acute patellar dislocation in children: Incidence and associated osteochondral fractures. *J Pediatr Orthop*. 1994;14(4):513–515.

Critical Ingestions

Bharath Nath, MD
Pediatric Surgery



Goals

- History of kids doing the darndest things
- Initial approach to the patient with suspected ingestion
- Management of Button Battery Ingestions

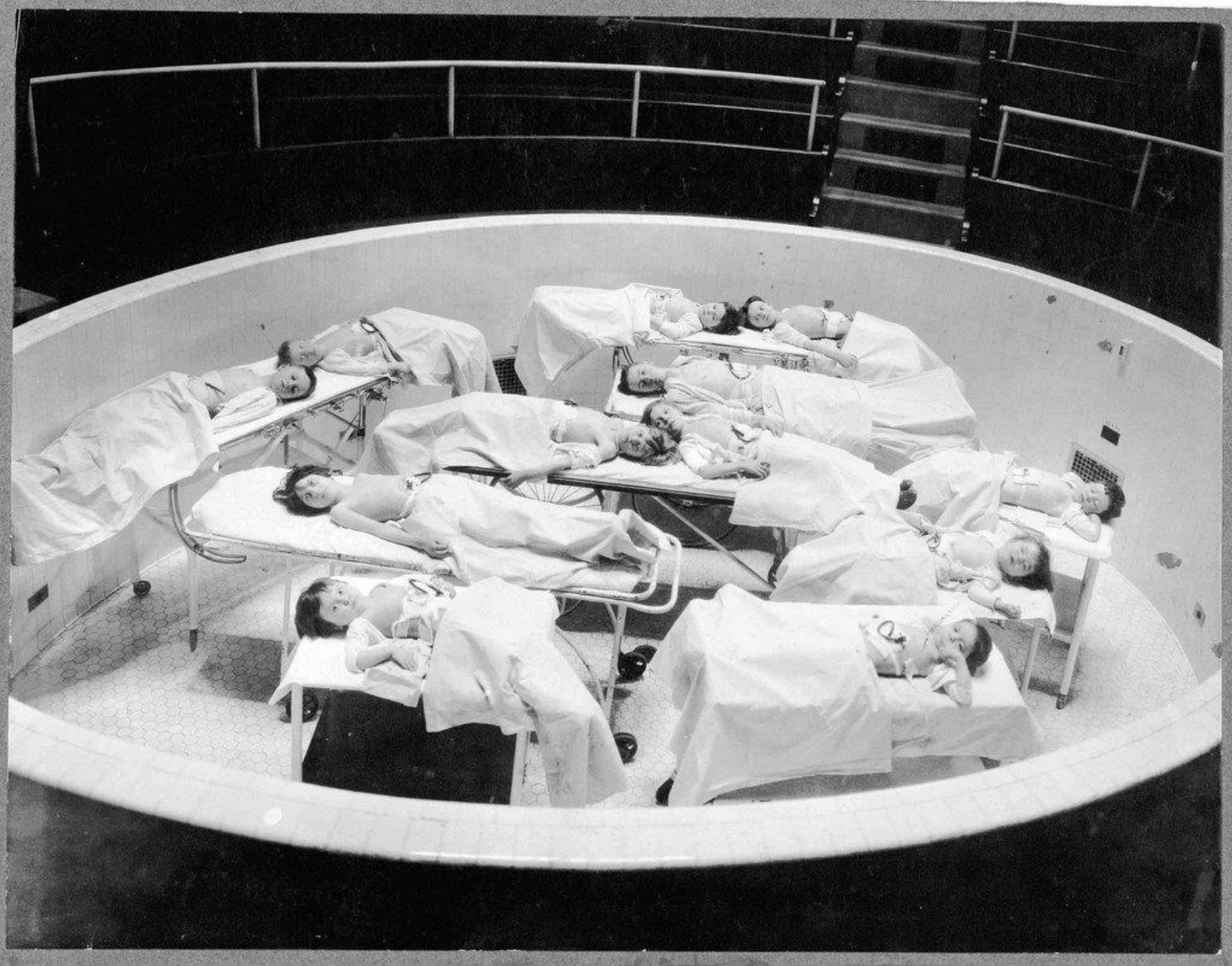




Chevalier Jackson, 1865-1958

- Pennsylvania surgeon, innovator in flexible bronchoscopy/laryngoscopy
- President of Women's Medical College of Pennsylvania
- Founding member of American College of Surgeons
- Removed at least 2374 foreign bodies from airway and esophagus in children, pretty much kept all of them (Mutter museum)
- Improved safety of tracheostomy
- Lobbied for passage of Federal Caustic Poison Act of 1927, which mandated labeling of poisonous substances









Initial approach to the patient with suspected ingestion

- airway stabilization, assessment of breathing and circulation
- dyspnea, odynophagia, sialorrhea, hoarseness, and stridor portends airway obstruction
- nausea or emesis, chest/abdominal pain → ?perforation
- early imaging should include chest film and KUB
- ABG is critical as may reflect evolving metabolic component
- pH <7.22, base excess <-12, WBC>20, CRP predict mortality and emergency operation in adults
- Detailed history with container of ingested agent if possible
- Early involvement of consultants including surgery, gastroenterology, otolaryngology, and toxicology

Caustic Ingestions

American Association of Poison Control:

- 60,000 cases of exposure to corrosive agents
 - 48,000 bleach
 - 7500 acidic ingestions
 - 4000 alkali ingestions
- Children (2-6yrs) account for up to 80% of caustic ingestion cases

Clinical Presentation: dysphagia, retrosternal pain, drooling, +/- airway symptoms or oral burns

Clinical history details:

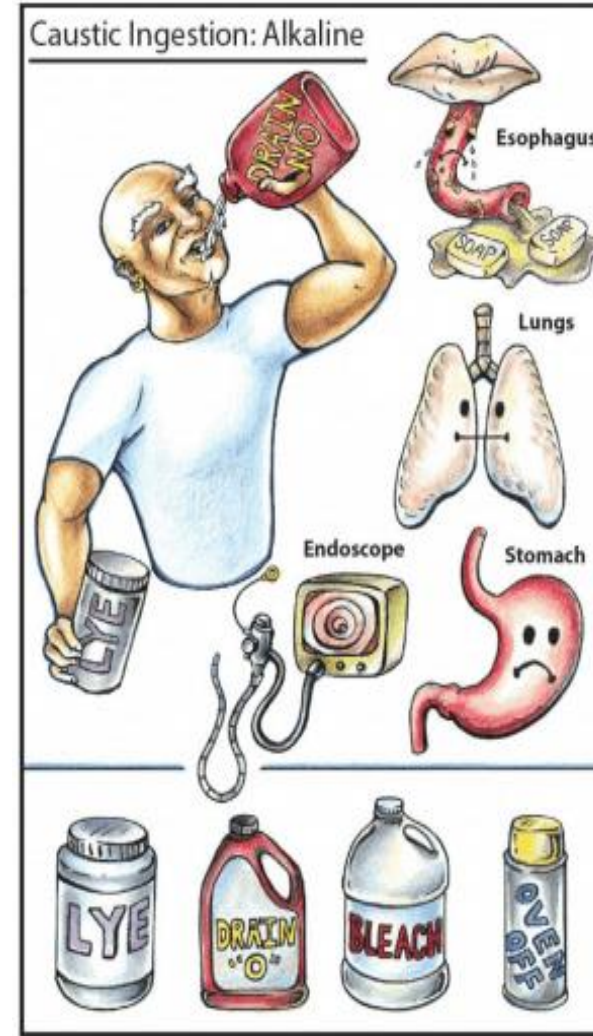
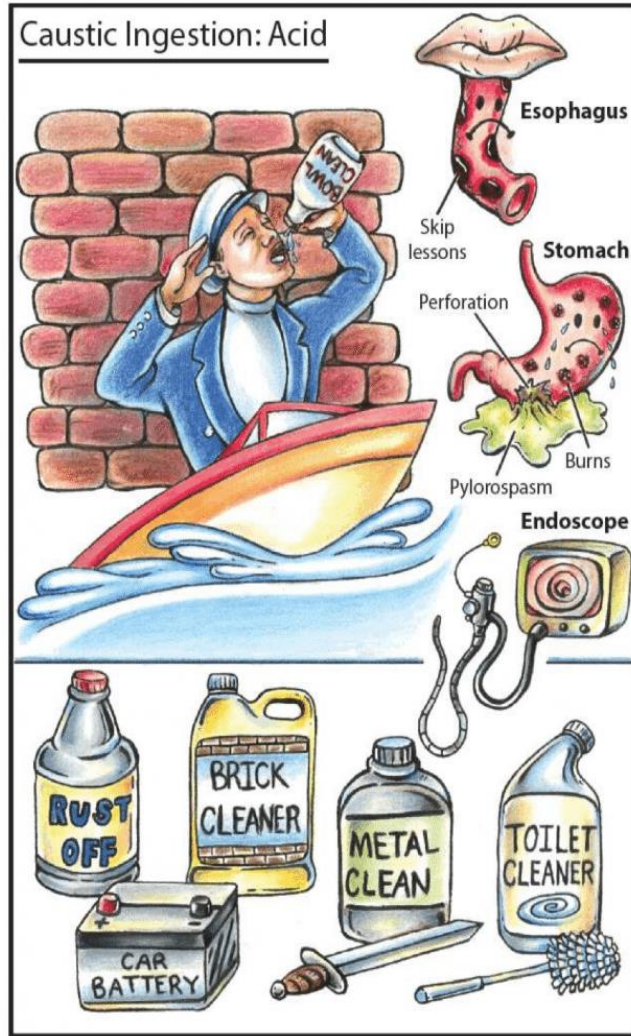
- Type of chemical ingestion (Acidic or Alkali)
- Physical form of substance (liquid, gel, powder or solid)
- Substance concentration (diluted substance)
- Volume (systemic effects)
- Time of Ingestion

Bitter taste

**Coagulation
Necrosis**

**Eschar
formation**

**Esophagus
Spared in
most
cases**

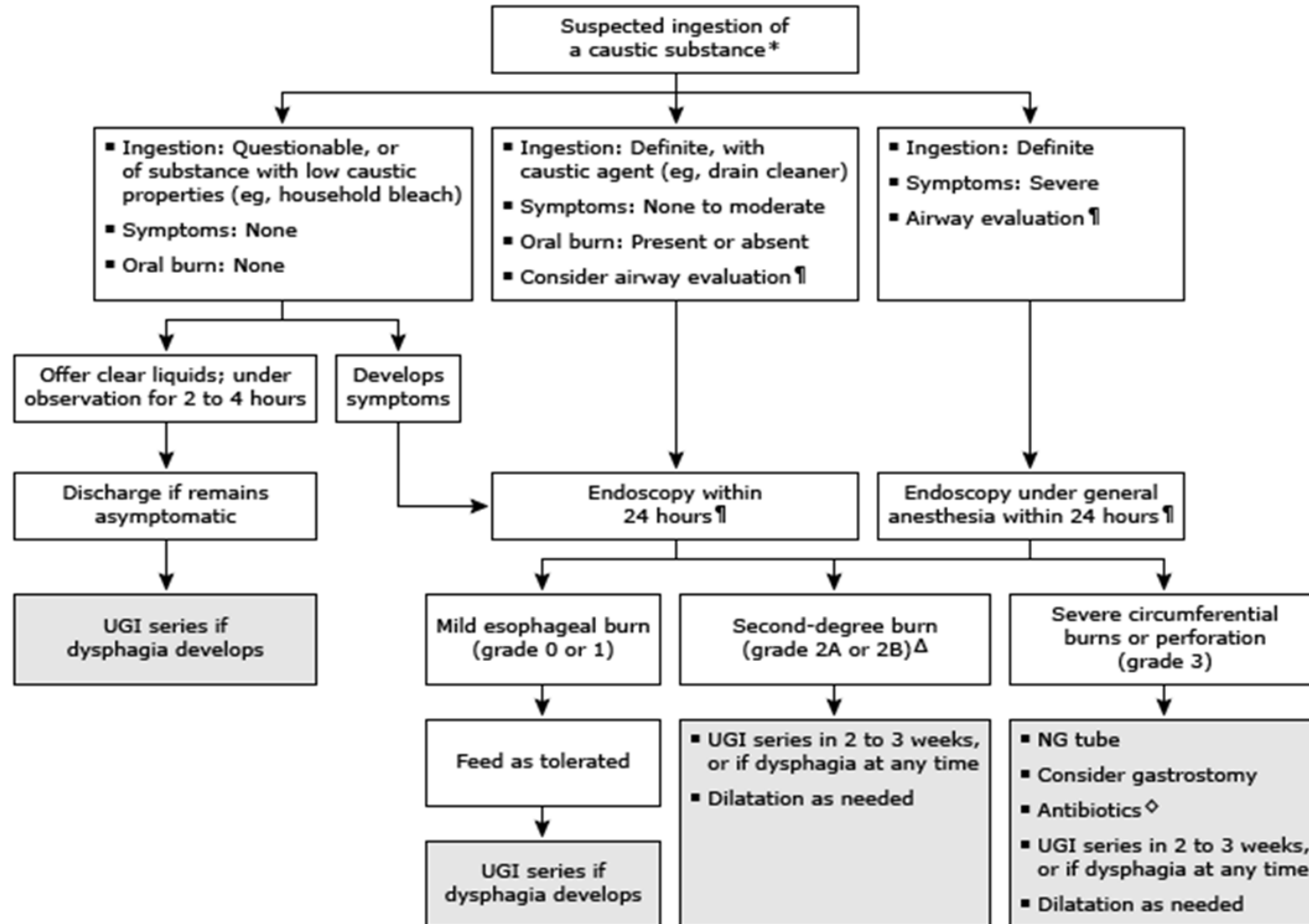


**Odorless
Tasteless**

**Liquefactive
Necrosis**

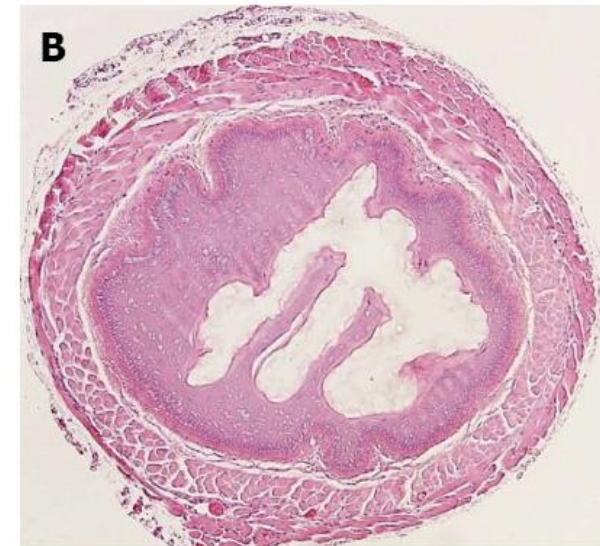
**Esophagus
damaged**

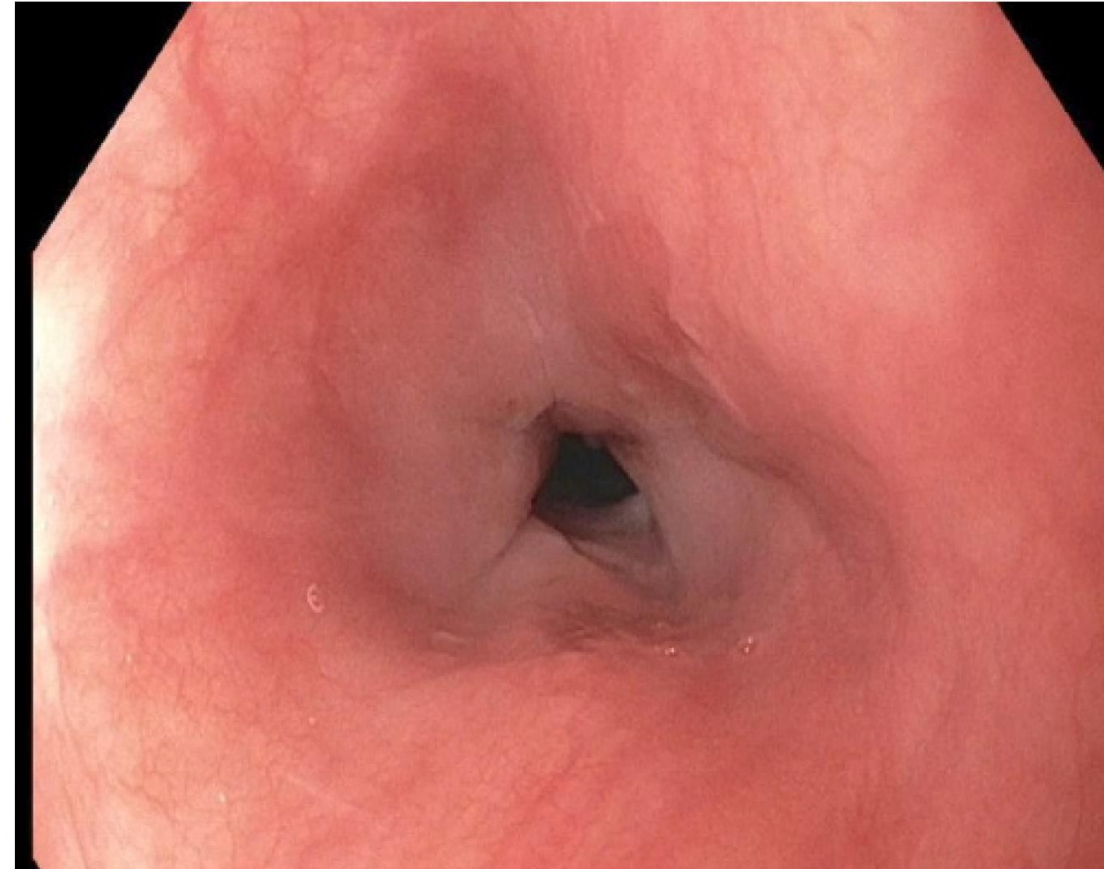
Evaluation of a patient with suspected ingestion of caustic substances



Damage from caustic ingestions occurs in stages

- Necrotic changes observed within 10 minutes after exposure to 10% NaOH
- 4-7day, mucosal sloughing and bacterial entry with creation of fibrin and granulation
- Fibroblast remodeling, low tensile strength as collagen deposition begins in second week
- Scar retraction and stricture formation begins at 3rd week
- Liquid ingestions tend to cause more distal damage

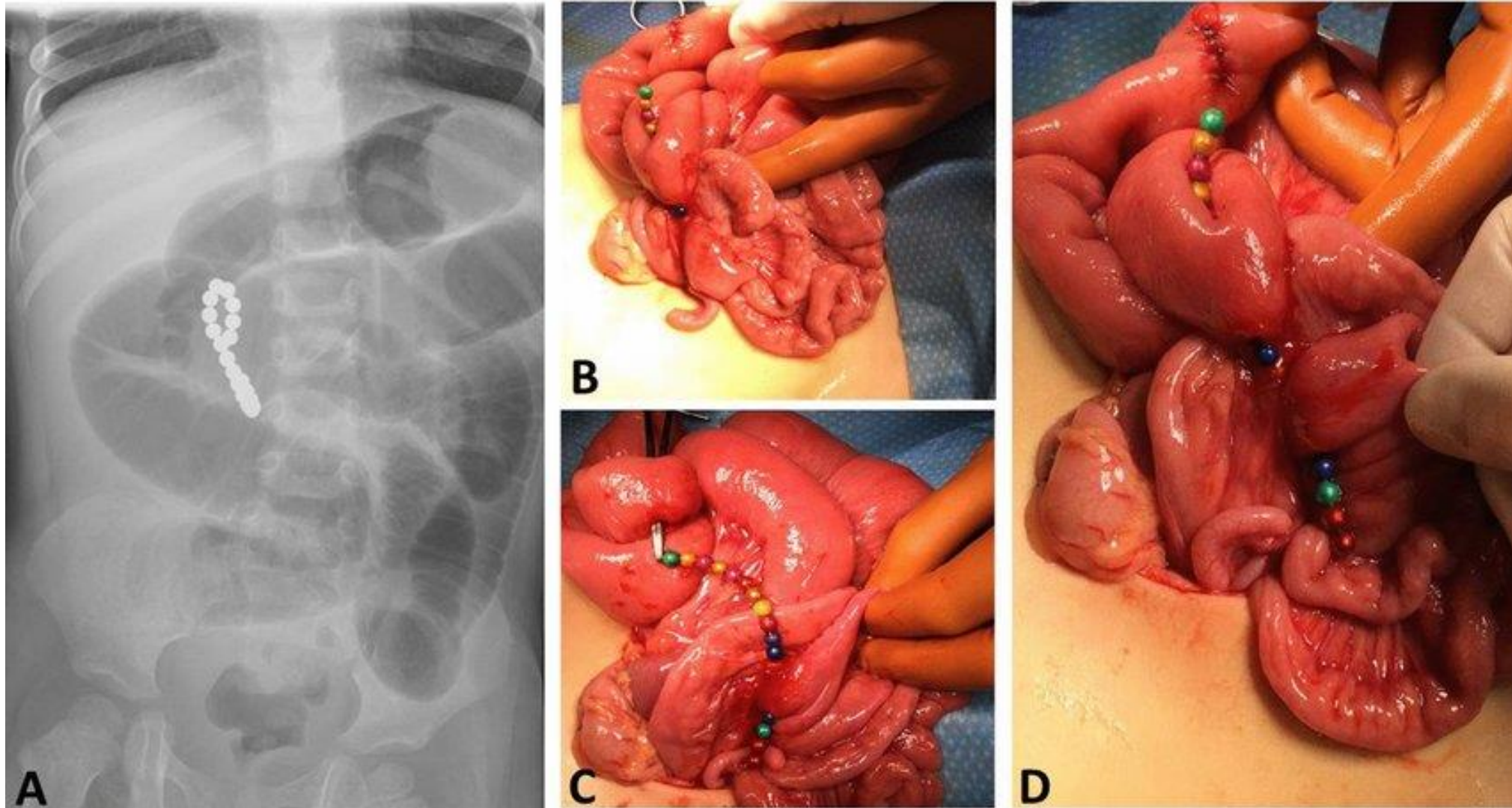




Late Complications of Critical Ingestions

- Late complication of ingestion
 - Esophageal cancer
 - Squamous cell carcinoma & adenocarcinoma
 - Reported 1000-3000 times higher than the normal population
 - Time to presentation 10-30 years from ingestion
 - Most common location is area of stenosis
- Role for long-term EGD monitoring
 - Surveillance 20 years post ingestion?





Mostafa, Mohamed, Darwish, Ahmed

Magnet ingestion in children and its implications: tertiary centre experience. PY - 2021/07/01 10.1007/s00383-021-04889-z, Pediatric Surgery International

What Are Water Beads?

Superabsorbent Polymers (SAPs)

Composition: Cross-linked polyacrylate / polyacrylamide hydrogels

Dry size:

2–4 mm (smaller than a pea)

Expanded size:

Up to 150–1,500× original volume; can reach 10–40 mm or larger

Time course:

Most rapid expansion in first few hours; continues up to 12+ hours in fluid

Environment:

Expand fastest in water; gastric acid slows (but does NOT prevent) expansion

Common Products & Uses

- Sensory toys
 - Orbeez™, Chuckle & Roar kits
- Educational/therapy tools
- Floral vase fillers / décor
- Plant hydration beads
- Diaper/incontinence products

⚠ Candy-like appearance, bright colors — very attractive to toddlers. Often missed after clean-up; ingested days later.

Epidemiology & Notable Cases

>12,000

ED visits
2017–2023
(CPSC)

~14 mo

Median age
at presentation

≥1

Deaths
confirmed
2023

52,000

Units recalled
Sept 2023
(Buffalo Games)

Esther Bethard • North Prairie, WI (July 2023)

10-month-old died after ingesting water beads from older sibling's toy kit (Chuckle & Roar, sold at Target). Death triggered major CPSC recall of ~52,000 units in Sept 2023 and fueled national legislative debate.

Kennedy Mitchell • Maine (Nov 2022)

9-month-old developed intestinal obstruction from water beads; required surgery and prolonged hospitalization. Case reported to Buffalo Games alongside Esther's death.

Kipley Haugen • San Antonio, TX (2017)

10-month-old ingested water bead from older sister. Underwent emergency surgery; later diagnosed with toxic brain encephalopathy from acrylamide poisoning. Parent advocacy led to 2025 CPSC safety standard.

Expansion Mechanics

Dry bead: 2–4 mm → Fully expanded: 10–40+ mm

Expansion volume: 150× to 1,500× original

Critical threshold: ≥8 mm dry = high obstruction risk

Timeline

- Most rapid growth: first 3–4 hours
- Continues expanding: up to 12–24+ hours
- Beads swallowed dry, then expand in GI tract

Sites of obstruction

- Lower esophageal sphincter • Pylorus
- Ileocecal valve (most common SBO site)

PEG / GoLYTELY: High-conc. PEG 3350 reduces expanded bead size ~35% in 24 h (in vitro)

Toxicity: Acrylamide

Polymer: largely non-toxic, BUT monomer — acrylamide — is

Acrylamide: Known neurotoxin & carcinogen

- Peripheral neuropathy, ataxia, muscle weakness
- CNS: encephalopathy, seizures (high dose)
- Dermatitis, excessive sweating
- Reproductive and developmental toxicity

Clinical relevance

- Single ingestion: mechanical obstruction = dominant threat
- Chinese brands: HIGH acrylamide — CPSC violations documented
- Symptoms may be delayed hours to days

Consider neurology if: Lethargy, ataxia, behavioral change, or dermatitis with ingestion history

Clinical Presentation & Imaging Pearls

Symptoms

Early

- Vomiting (may vomit beads)
- Abdominal pain / distension
- Drooling / dysphagia (esophageal)

Delayed (days–weeks)

- Constipation / obstipation
- Bilious vomiting → SBO
- Lethargy, weight loss, dehydration

Red flags

- Peritonitis signs → perforation
- CNS signs → acrylamide toxicity
- Bilious emesis → urgent surgery

Imaging

Plain X-Ray

SAP beads are **RADIOLUCENT** — not visible on XR. May show dilated loops of bowel if obstruction present. Do **NOT** use to rule out ingestion.

Ultrasound (POCUS)

MODALITY OF CHOICE. Beads appear as well-demarcated, round, hypoechoic masses (10–20 mm expanded). Sensitivity ~86%. Can guide endoscopy. Avoids radiation.

CT Abdomen

Useful if US inconclusive or surgical planning. May identify mass, dilation, pneumoperitoneum. Beads may mimic duplication cysts.

★ **Key Pearl: A normal abdominal X-ray does NOT rule out water bead ingestion.**

Emergency Management Algorithm

1 Initial Assessment

- Stabilize ABC; IV access
- Full hx: bead type, qty, dry/wet, time elapsed
- Exam: abdominal tenderness, distension, peritonism
- Call Poison Control: 1-800-222-1222

2 Imaging

- POCUS abdomen — first line
- CXR if aspiration suspected
- CT abdomen if POCUS inconclusive
- X-ray alone is INSUFFICIENT

3a Esophagus / Stomach

- Recent ingestion (<4–6 h): urgent endoscopy
- EGD: retrieval or piece-meal fragmentation
- Do NOT attempt blind manual removal
- Monitor airway closely

3b Small Bowel — No Obstruction

- Admit; serial exams q4–6 h
- High-concentration PEG 3350 (GoLYTELY) — may reduce bead size
- NPO; IV fluids; surgical standby
- Daily POCUS to track progression

4a Established SBO

- NPO; NG decompression; IV fluids
- Urgent surgical consult
- Laparotomy/laparoscopy: enterotomy
- Thorough inspection: missed beads → reoperation

4b Perforation / Peritonitis

- Emergent laparotomy
- Broad-spectrum antibiotics
- ICU post-op
- High rate of re-operation (16%) — counsel family

⚠ **Critical Pitfall:** Beads that are not fully expanded continue to grow after initial surgery. Systematic inspection and removal of ALL beads is essential — incomplete removal is a leading cause of reoperation.

Clinical Pearls & Disposition

Imaging trap

X-rays are almost always NORMAL. Do not use a negative X-ray to reassure parents. POCUS is the preferred first-line modality — beads appear hypoechoic and round.

Delayed presentation

Children may present days to weeks after ingestion. Beads swallowed dry (2–4 mm) pass unnoticed then obstruct when expanded. Always ask about water bead access in unexplained vomiting/constipation.

Missed beads

Incomplete retrieval is the #1 cause of reoperation (16%). Both surgical and endoscopic approaches must include systematic inspection for all beads. Smaller beads continue expanding post-op.

Hyperosmolar strategy

PEG 3350 (GoLYTELY), Gastrografin, prune juice, and acetylcysteine may reduce bead size via osmotic effect. Best for non-obstructed cases; not a substitute for surgery in SBO.

Acrylamide neurotoxicity

Consider if: lethargy, ataxia, behavioral change, peripheral neuropathy, or dermatitis post-ingestion. Especially with Chinese-branded products. Refer to neurology and toxicology.

Sibling beads

Ingestions often involve younger sibling (<18 mo) accessing older sibling's toy. CPSC: beads 'missed during clean-up and swallowed days or weeks later.' New CPSC 2025 standard limits max expansion to 5 mm.



Button batteries-a perfect danger

- Ubiquitous in every home
- Easily removed from devices
- Sized perfectly to be trapped in the esophagus
- Injury is enabled by electrolyte-rich fluid in saliva
- Injury is rapid
- Symptoms may be nonspecific, high index of suspicion particularly if unwitnessed
- In children <6y, 13% had severe complication after button battery ingestion

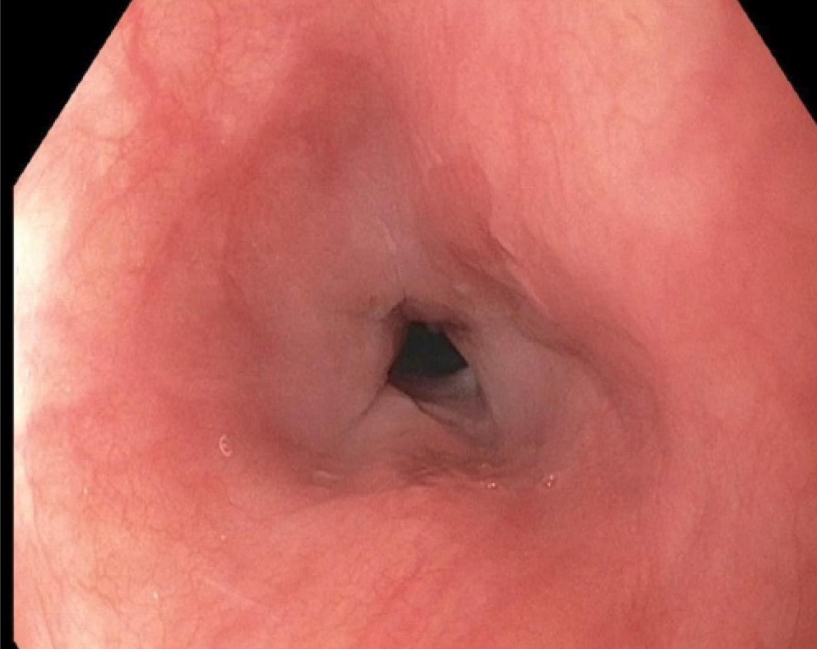
Jatana, K.R., Rhoades, K., Milkovich, S. and Jacobs, I.N. (2017), Basic mechanism of button battery ingestion injuries and novel mitigation strategies after diagnosis and removal. *The Laryngoscope*, 127: 1276-1282. <https://doi.org/10.1002/lary.26362>

National Battery Ingestion Hotline

- Created in 1982
- Consumer safety product commission issued warning in 1983
- Seven fold increase in injury severity between 2010 and 2017
- 20mm lithium batteries account for majority of severe injuries
- Smaller 1.5v non lithium batteries also have caused severe injuries, particularly in infants
- Major complications include perforation, tracheoesophageal fistula, vascular fistula, strictures, vocal cord paralysis



Jatana, K.R., Rhoades, K., Milkovich, S. and Jacobs, I.N. (2017), Basic mechanism of button battery ingestion injuries and novel mitigation strategies after diagnosis and removal. *The Laryngoscope*, 127: 1276-1282. <https://doi.org/10.1002/lary.26362>





POWER SAFELY

HELP KEEP YOUR CHILDREN SAFE

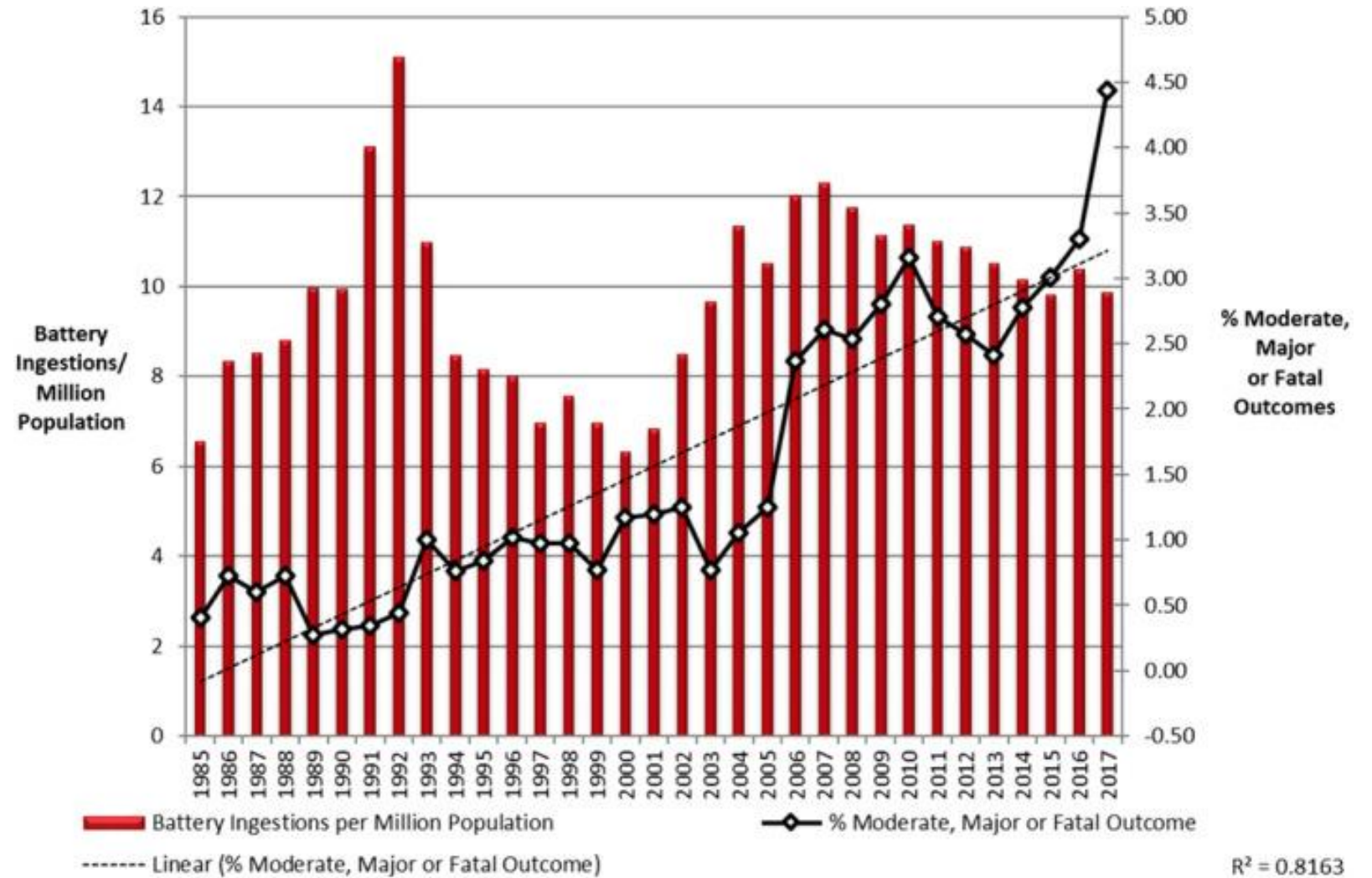
BITTER TASTE DISCOURAGES SWALLOWING

APPLICABLE ON 2032, 2025 AND 2016 SIZES

The image shows a Duracell battery with a silver top. The top features a white plus sign, the word "DURACELL" in black, and a circular icon of an adult and a child. The battery is set against a background split into orange and black. The black background contains the text "POWER SAFELY", "HELP KEEP YOUR CHILDREN SAFE", and "BITTER TASTE DISCOURAGES SWALLOWING" in orange and white. A small icon of a baby's face with its tongue sticking out is next to the last line of text. At the bottom left, it says "APPLICABLE ON 2032, 2025 AND 2016 SIZES".

Incidence of ingestion and severe outcomes of battery ingestion is increasing

- www.poison.org/battery



Prehospital Management

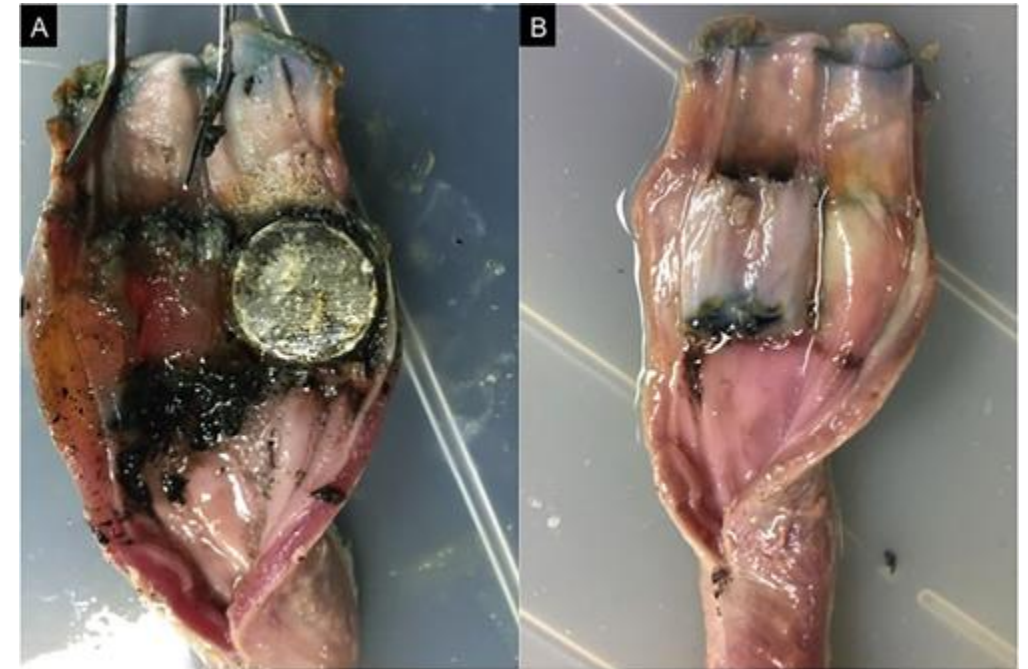
- Honey administration (10ml every 10 minutes, maximum of 6 times) if battery ingestion is suspected less than 12 hours
- Coats battery and decreases current discharge
- Carafate (sucralfate) is an anti-ulcer medication which forms a barrier over the mucosa, and can mitigate injury when administered prior to endoscopy
- In porcine and in vitro trials, honey had significant protective effects



Schmidt YM, Muensterer O, Wendling-Keim D. The use of honey in button battery ingestions: a systematic review. *Front Pediatr.* 2023 Sep 28;11:1259780. doi: 10.3389/fped.2023.1259780. PMID: 37842023; PMCID: PMC10569471.

Acetic acid washing mitigates tissue injury

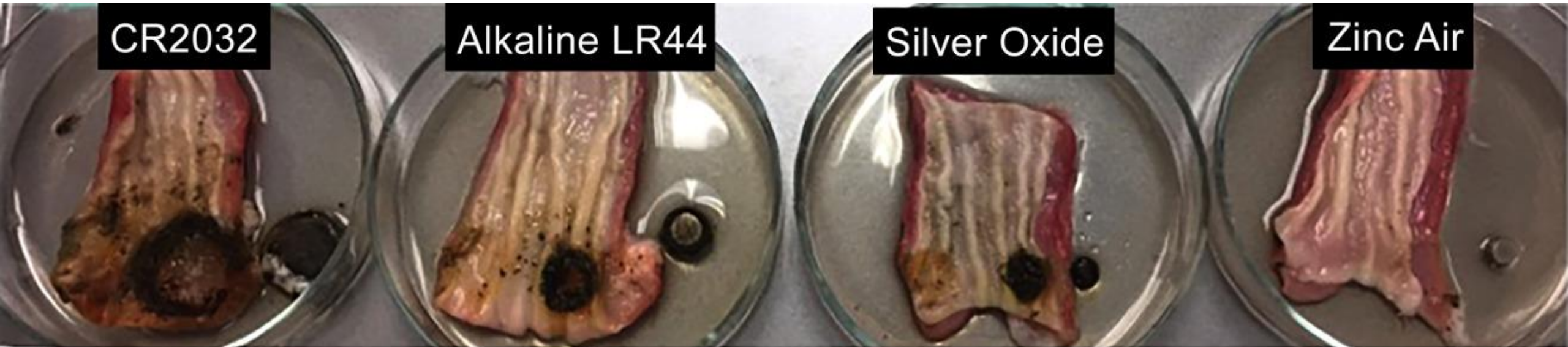
- Mechanism of injury: water is hydrolyzed into hydrogen gas and hydroxide (OH⁻) ions, creating an alkaline environment
- Additional mechanisms include pressure necrosis, leakage of battery fluids, and metal toxicity
- Injury after 24 hours from CR2032 battery, versus after irrigation with dilute acidic solution
- Has led to practice of immediate acetic acid washing in operating room after endoscopic removal



Jatana, K.R., Rhoades, K., Milkovich, S. and Jacobs, I.N. (2017), Basic mechanism of button battery ingestion injuries and novel mitigation strategies after diagnosis and removal. *The Laryngoscope*, 127: 1276-1282. <https://doi.org/10.1002/lary.26362>

Every Second Counts

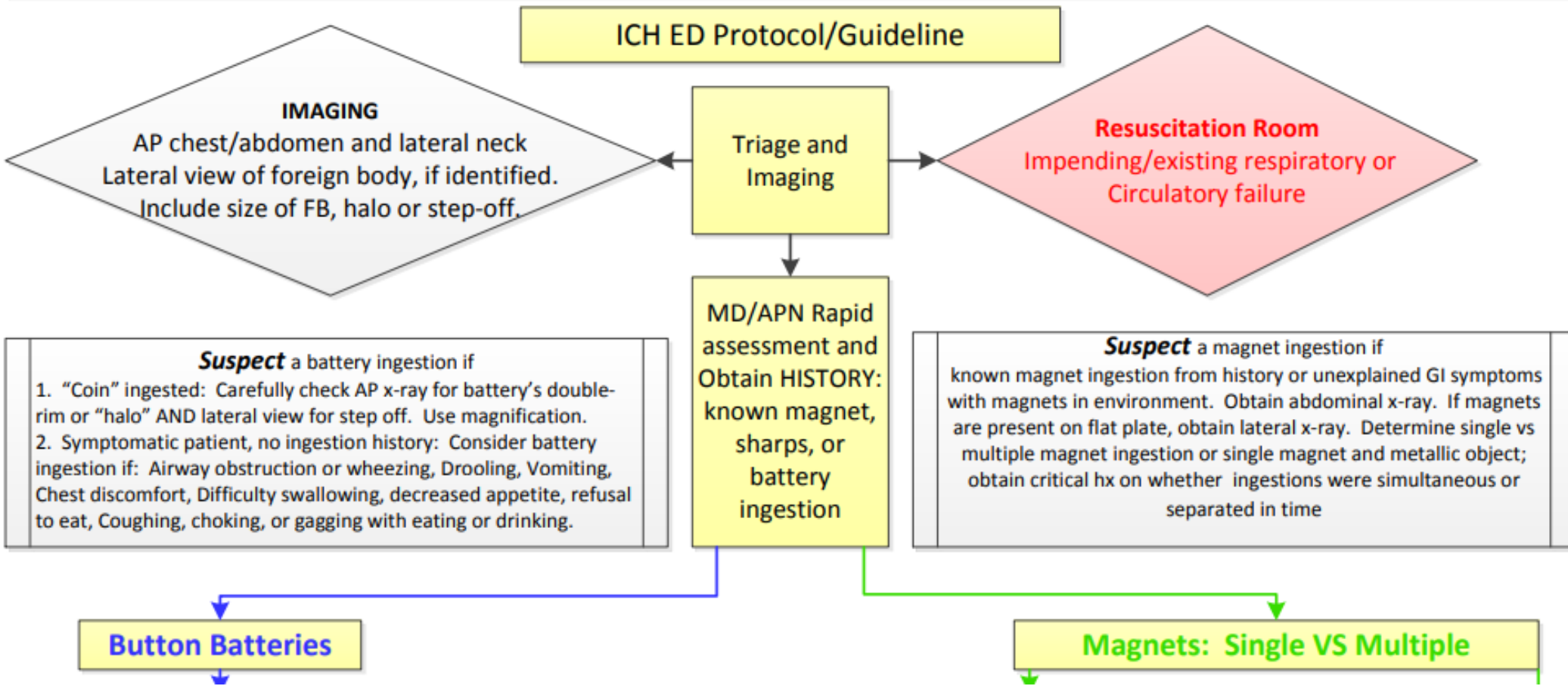
- Children diagnosed at non-pediatric facilities have delay in removal
- Injury progresses rapidly over hours
- Further tissue injury can occur over days to weeks even after removal

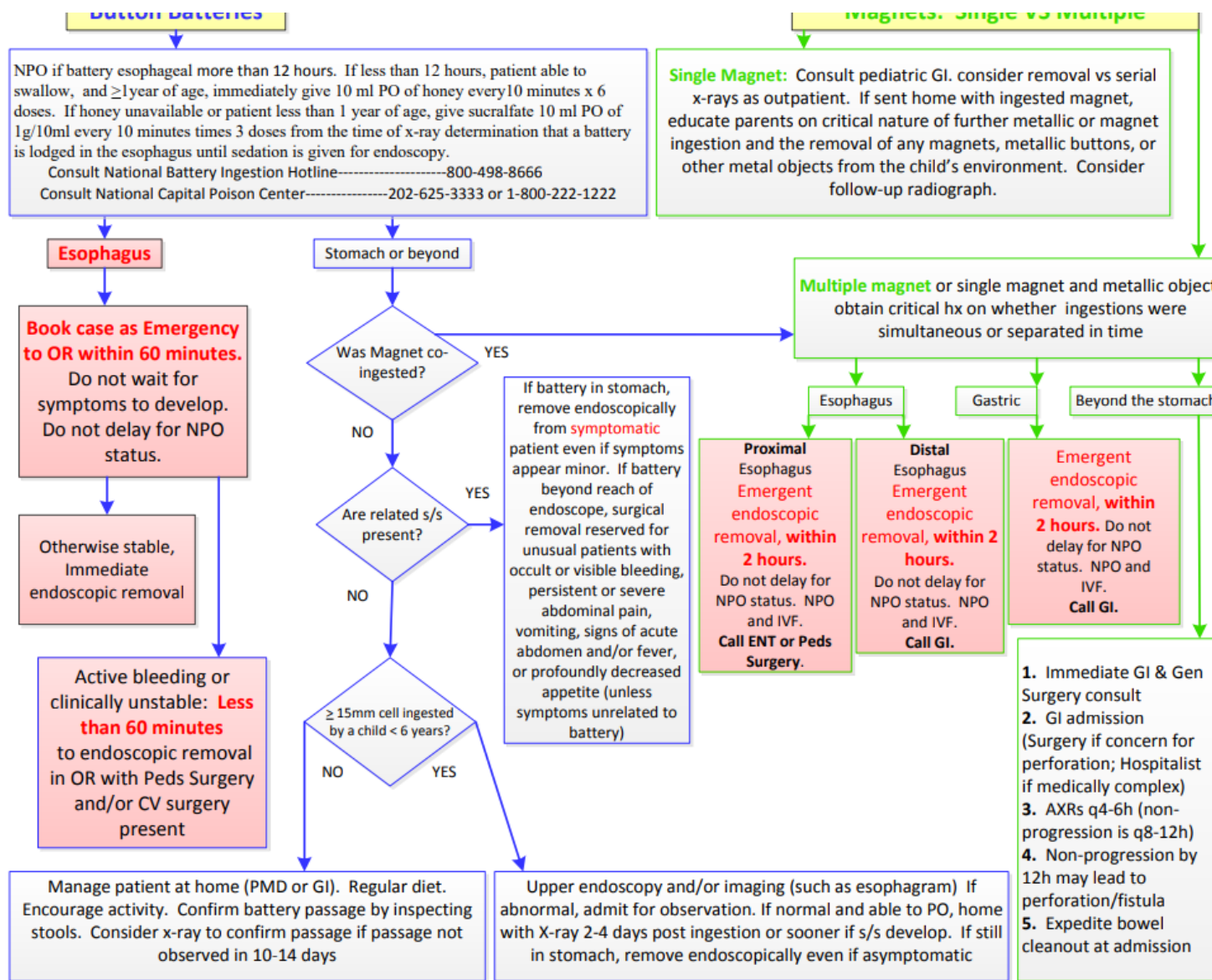


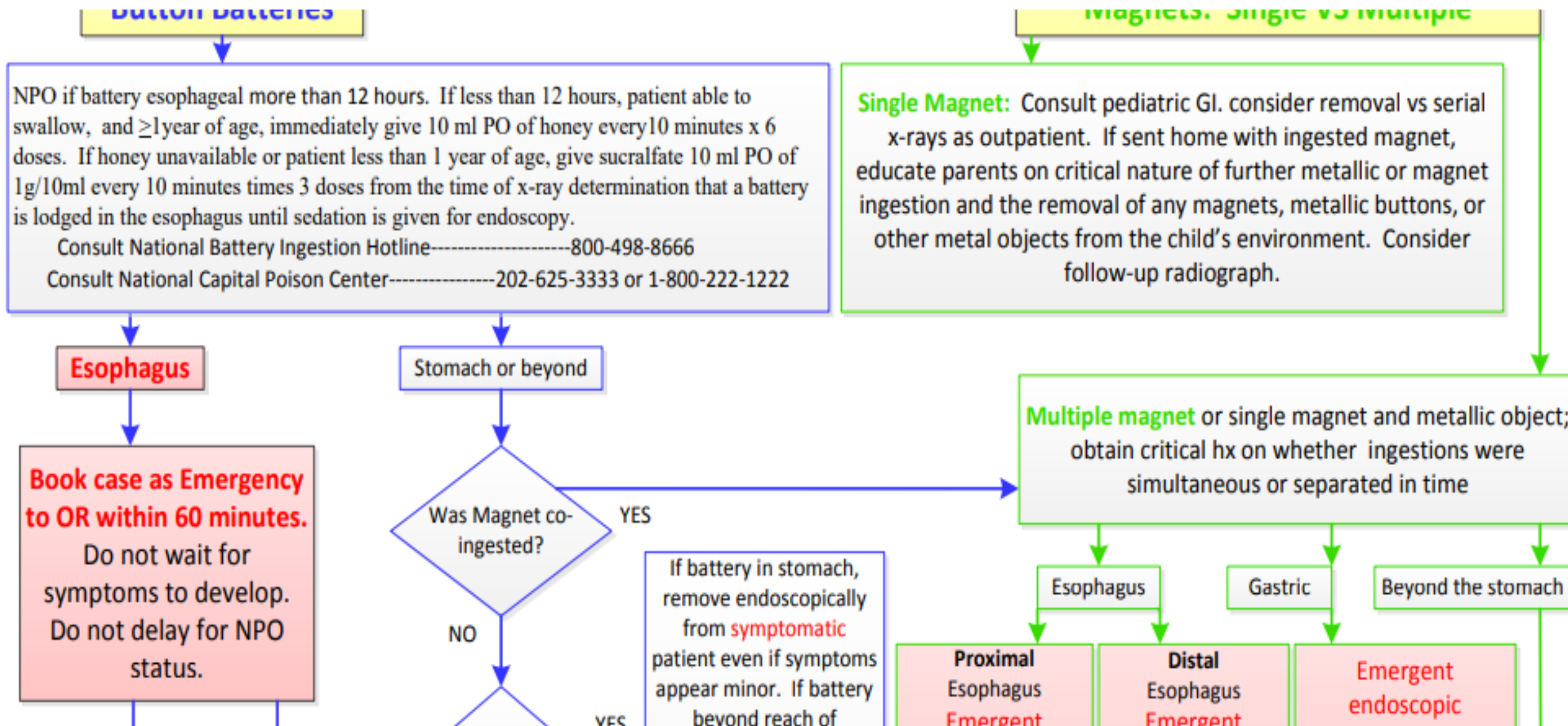
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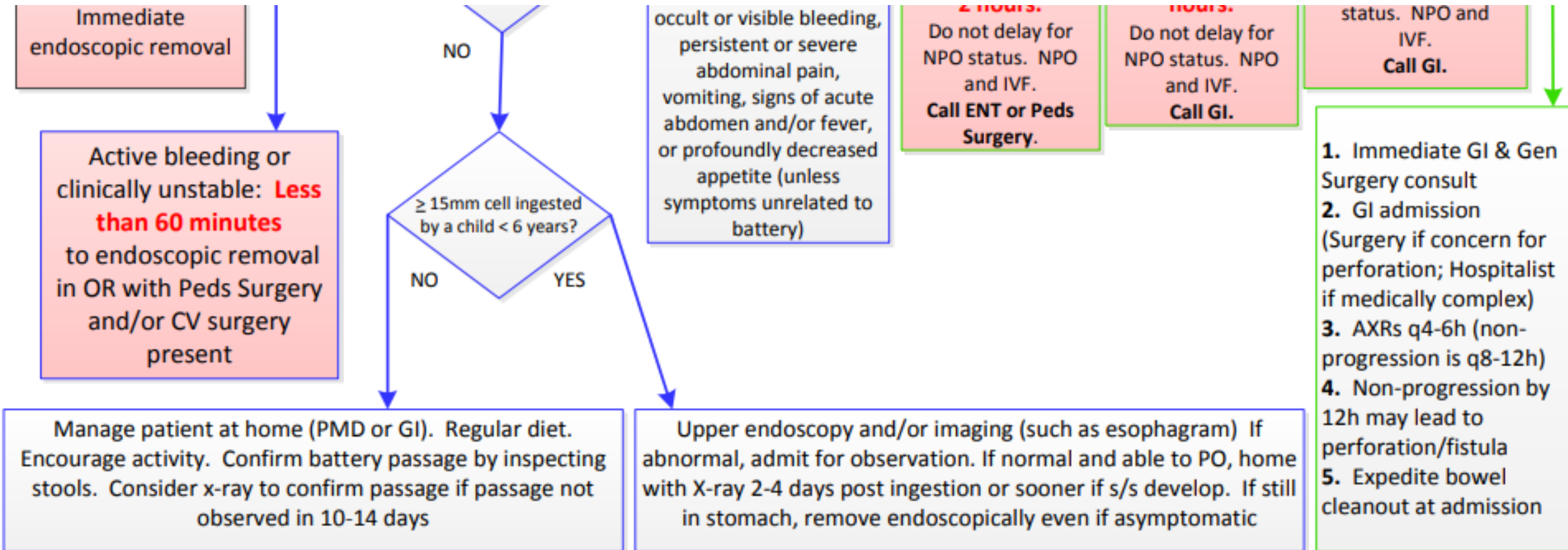
Inova System Pediatric Critical Foreign Body Ingestion Triage and Treatment Pathway

Outside Hospital/Location (OSH): For **suspected/confirmed battery or magnet ingestion** arrange for transfer to ICH-ED for Level 1 emergency by calling One-Call **1-877-900-9543** or 911 to arrange for OSH to ICH-ED transfer. **Goal arrival to ICH ED < 90 min.** Consider air transport to meet time goal.









Critical Ingestions Pathway: Addendum

- Care of the patient with a critical ingestion is improved by excellent, highly reliable communication between all members of the health care team
- Care of the patient with a critical ingestion is anticipated to require multidisciplinary participation
- In cases where interventions from multiple specialties represent best practice, efforts should be made to accommodate those interventions under a single anesthetic where possible and where doing so does not result in any meaningful delay in care
- For esophageal button battery ingestions, removal of the battery by pediatric surgery or ENT with a rigid scope should be followed by flexible endoscopy by GI, with acetic acid wash and feeding tube placement. Wash with 50 to 150 ml of 0.25% sterile acetic acid. Acetic acid wash should not be used if evidence of perforation is present. The expeditious availability of acetic acid has been confirmed with hospital pharmacy

Critical Ingestions Pathway: Post-Procedural observation

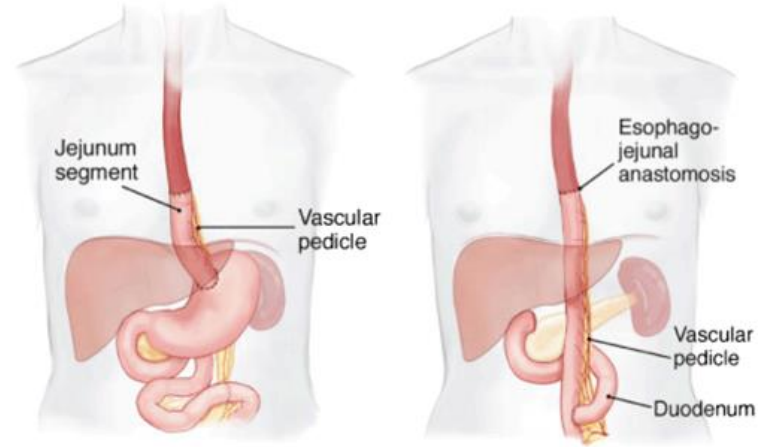
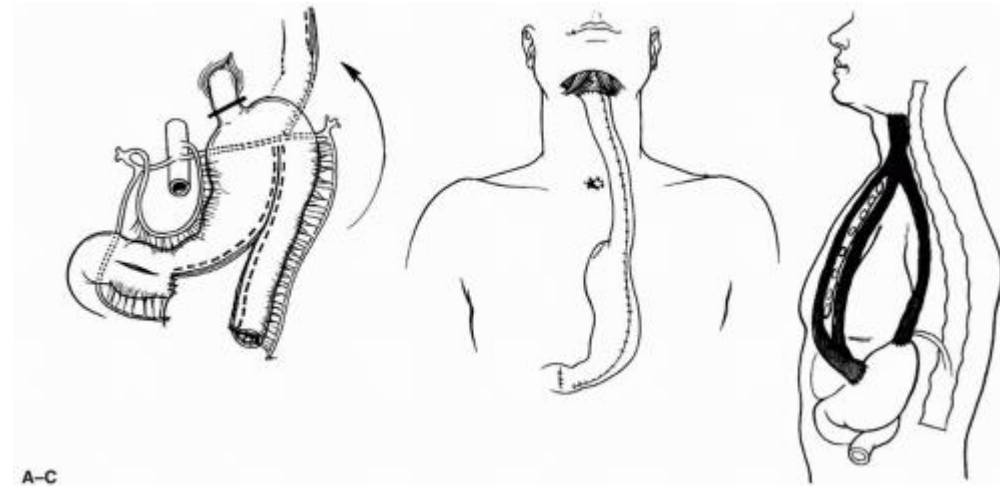
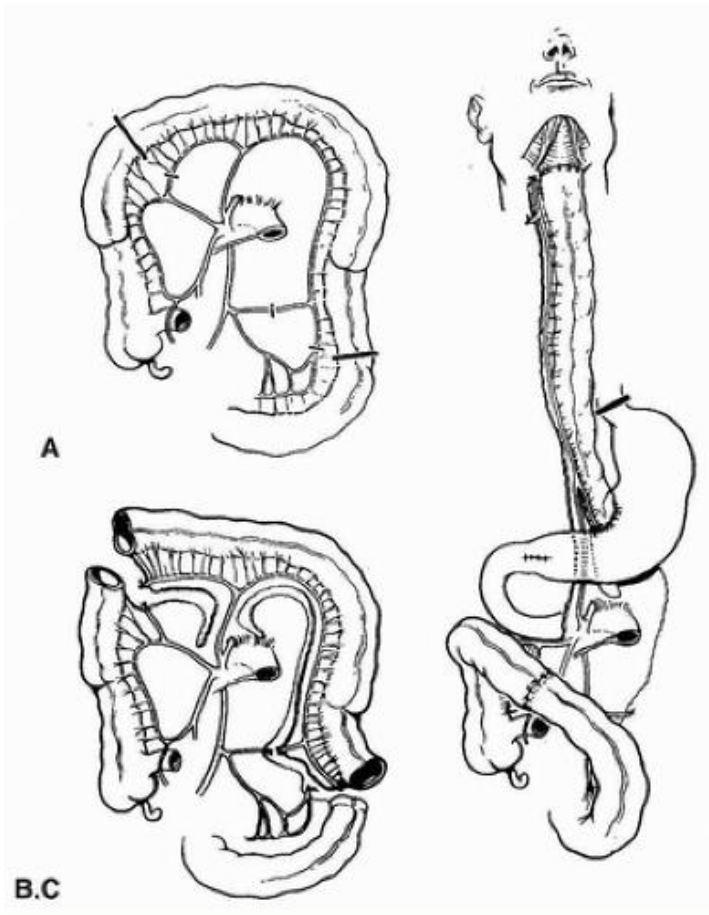
- Chest film in PACU
- All patients should be admitted for observation.
- ICU admission should be considered on a case by case basis.
- Antibiotics should be considered post procedurally for all cases, but are required in cases of full thickness injury or concern for perforation. Mucosal injury is known to progress.
- Esophagram is recommended prior to feeding
- In cases where the foreign body has passed beyond the stomach and can no longer be retrieved by standard means:
 - Push enteroscopy may be available on a case-by-case basis and should be considered
 - Aggressive bowel cleanout with magnesium citrate or similar agent is preferred in the patient with a benign abdominal examination

Surgical Management

- These ingestions require overall management, and risk physiologic instability owing to anatomic cause
- Surgical management essentially falls into three stages:
 - (1) Early surgical management may be involved in setting of acute perforation, mediastinitis, or need for gastric access
 - (2) Surgery for delayed complications including tracheoesophageal fistula, aortoenteric fistula, esophageal stricture
 - (3) Ultimately esophageal replacement required depending on degree of injury

Jatana, K.R., Rhoades, K., Milkovich, S. and Jacobs, I.N. (2017), Basic mechanism of button battery ingestion injuries and novel mitigation strategies after diagnosis and removal. *The Laryngoscope*, 127: 1276-1282. <https://doi.org/10.1002/lary.26362>

Esophageal Replacement



Method	Advantages	Disadvantages
Gastric transposition	Adequate length, easy to obtain Excellent blood supply Single anastomosis Ease of procedure	Loss of reservoir Reflux common early on Poor gastric emptying Can affect pulmonary function
Gastric tube	Adequate length Good blood supply Size of conduit appropriate	Long suture line High incidence of leaks High incidence of strictures Significant reflux and risk of Barrett's
Colon interposition	Rapid transit Adequate length	Precarious blood supply Graft necrosis High incidence of leaks High incidence of strictures
	Reflux seldom occurs	Involves three anastomoses Redundancy over long term Slow transit of food
Jejunal interposition	Appropriate size	Precarious blood supply Length can be a problem Involves three anastomoses Graft necrosis
	Retention of peristaltic activity	Microvascular anastomosis Prolonged operating room time

Gastric Transposition

- Gastric transposition is the most widely performed procedure
- Intrathoracic stomach most often functions as conduit rather than reservoir
- High incidence of restricted pulmonary function (99%) with 68% predicted FCV
- Leak rate can be 40% though often resolve without further procedure
- In setting of caustic injury, stricture rate can be as high as 50%
- Posterior mediastinal dissection can be performed without requiring thoracotomy



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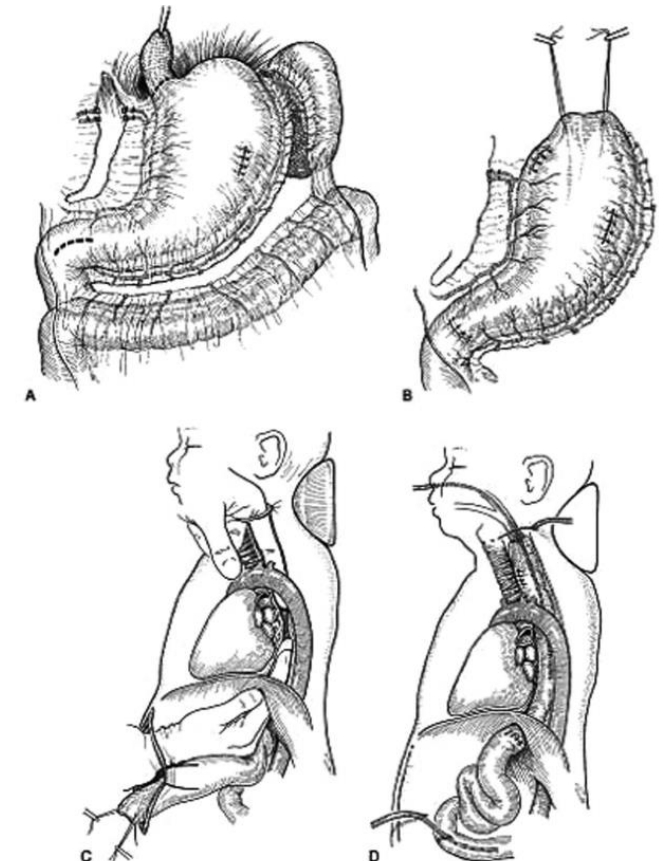
journal homepage: www.elsevier.com/locate/sempedsurg



Esophageal replacement

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Gastric Tube

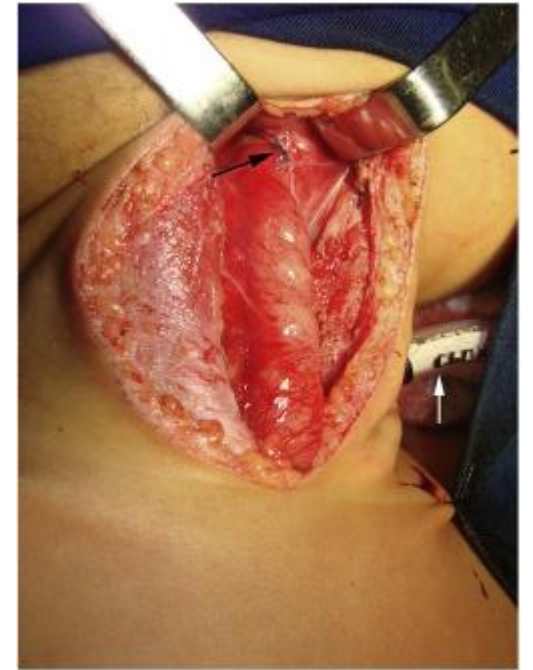
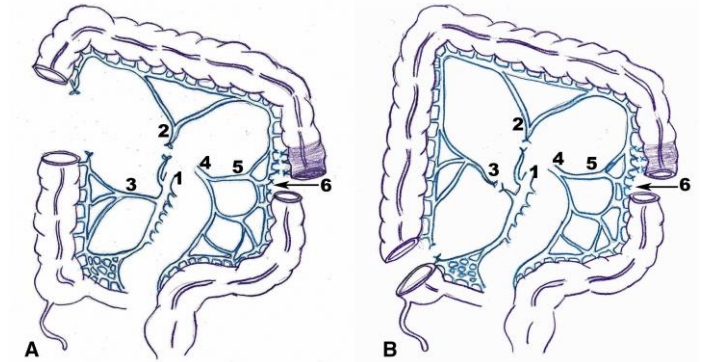
- Tubularized segment of stomach dependent on gastroepiploic pedicle
- Recent series of 50 patients with 10% mortality, 44% leak rate, and 36% stricture
- Strictures and leaks are common, in recent series no leaks at suture line
- Tube does not generally retain peristalsis and empties by gravity
- Section of antrum is brought close to pharynx, and hence acid reflux/nighttime cough can be quite high



Operative Technique
Gastric tube esophagoplasty for pediatric esophageal replacement
Mahmoud M.A. Elfiky *, Gamal El Tagy, Wissam Mohamed, Osama Abdel Azim, Mohamed A. Elfiky

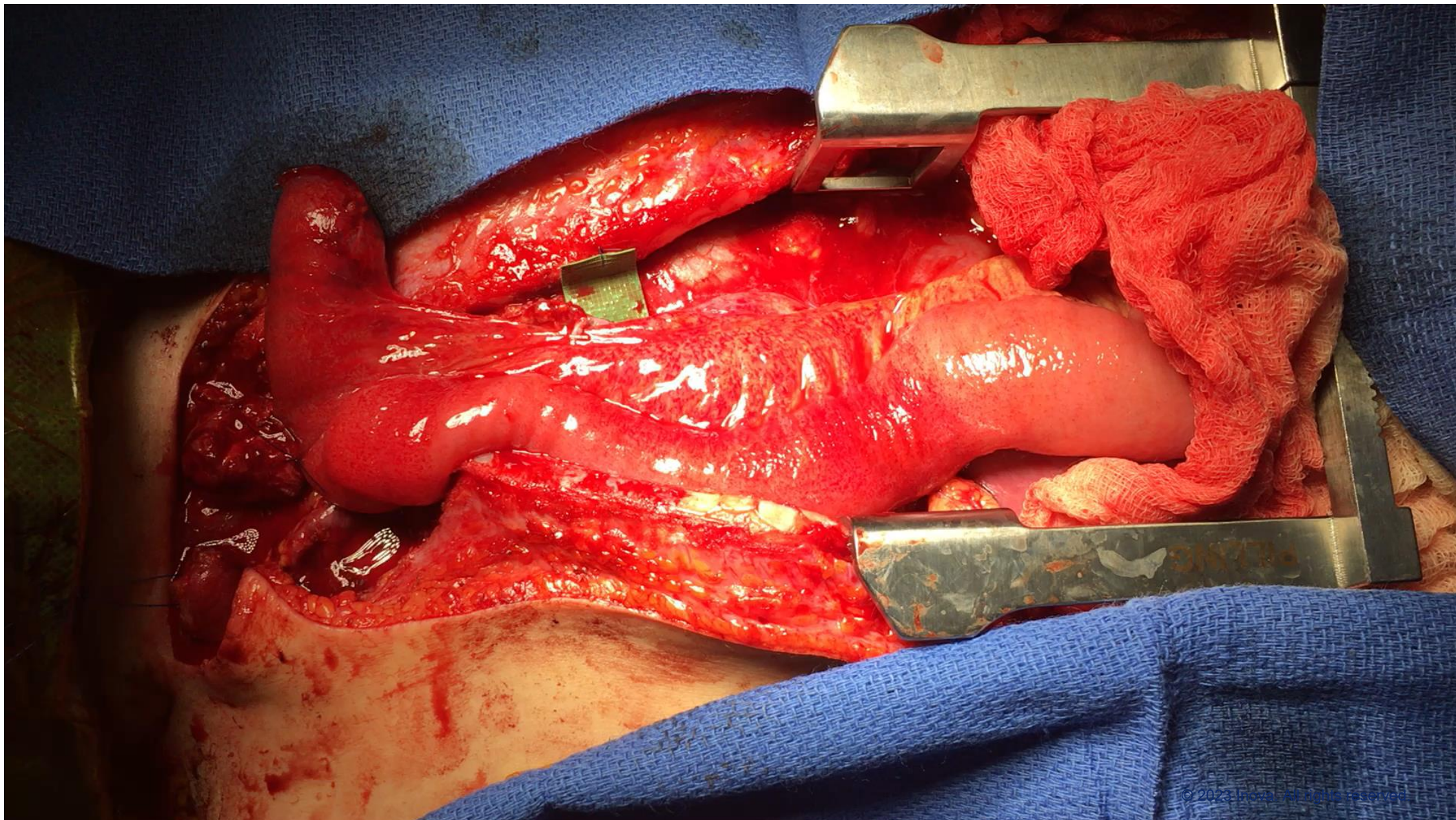
Colonic Interposition

- Technically less arduous than jejunal interposition
- Colon may be mobilized on vascular pedicle to reach high into neck (without free graft)
- Interposed colonic segment is usually aperistaltic
- Strictures common particularly in cervical region, usually respond to dilations
- One series of 32 patients noted abnormal lung function in 58%, feeding difficulties in 50%, nutritional deficiency in 25%
- With time, interposed colon can develop redundancy and worsening stasis

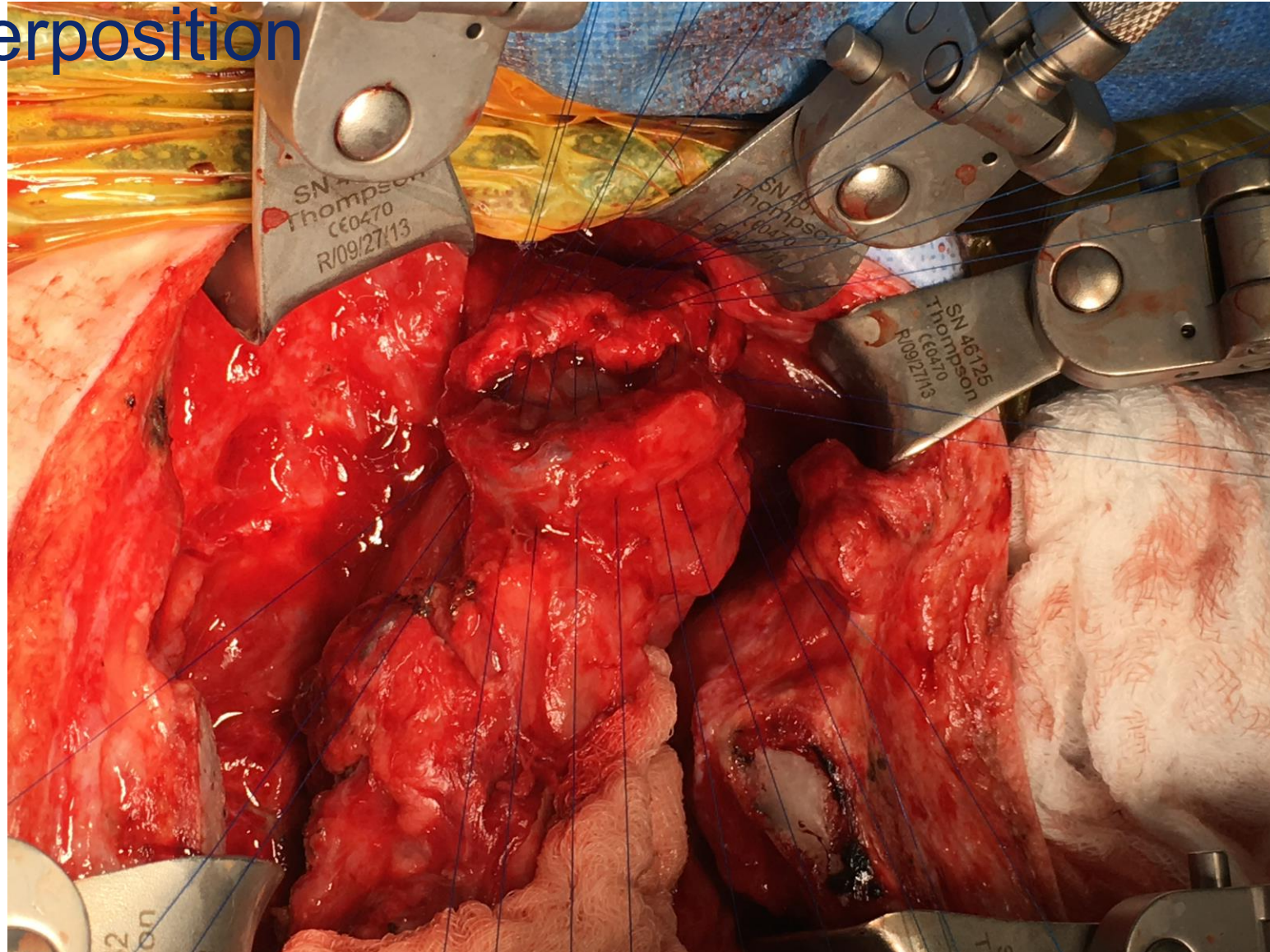


Jejunal Interposition





Jejunal Interposition



Summary

- Kids do the darndest things
- Every second counts
- Prehospital management is critical to mitigate injury
- Consequences of critical ingestions can be fatal or lead to lifelong consequences
- Your role is vital

Simply stated, the great efficacy of the Federal Caustic Poison Law derives from the obvious fact that no mother would put a can of poison in her kitchen now that she can just as easily get from the grocer a package of a harmless powerful grease-cutting solvent that is even more powerful than lye.

In submitting this report upon this piece of public health legislation your Committee wishes to call attention to the fact that its enactment was due to the initial foresight of the Section on Laryngology, Otology and Rhinology and to the powerful prestige of the American Medical Association. Your Committee encountered everywhere, prompt recognition of the fact that the Association's sole interest in this legislation was that of public health.

Though your Committee does not arrogate to itself any of the credit for driving household lye out of the kitchen and replacing it with harmless detergents more powerful grease-cutters than soap, your Committee does believe that there remains nothing for it to do to protect little children from the dangers of lye burns, and therefore it asks to be discharged.

Respectfully submitted,
(Signed) Chevalier Jackson, Chairman.

After the reading of the foregoing Report, the Committee on Lye Legislation was discharged with a vote of thanks.

CHEVALIER JACKSON, M.D.
1901 Walnut St.
Philadelphia 3

Thank you!



Thank you



May 29, 2026

The Impact of Pediatric Emergencies

EMS Pediatric Trauma Conference

Shira Rothberg, MSW, LCSW



Disclosure

I have nothing to disclose

Objectives

- Review secondary trauma and exposure rates
- Identify reasons for stress when providing care to pediatric patients
- Learn the pathology of this stress and how to identify symptoms
- Learn techniques to increase confidence in providing effective communication to patients/families
- Discuss treatment/coping mechanisms to manage stress

What's your why?

What's your personal connection to this profession?





Secondary trauma

- Anyone can experience secondary trauma, especially if they have someone in their life who has directly experienced trauma.



Secondary trauma

- Trauma from indirect exposure to another's trauma
 - Can affect your sense of safety and view of the world
- The brain's stress response to witnessing or hearing about someone's firsthand trauma
- Common causes:
 - History of trauma
 - Hearing others' trauma
 - Generational trauma
 - Seeing others' trauma
 - Family trauma
- Exposure Rates among First Responders
 - 30 – 80% experience secondary trauma
 - Symptoms: intrusive thoughts, nightmares, emotional numbness, difficulty concentrating, paranoia
 - Diagnoses: Anxiety, depression, PTSD

Your turn

Raise your hand if...

- You pass judgement on parents/guardians of pediatric patients
 - Struggle telling a parent the gravity of a situation
 - You have difficulty separating your personal life from a situation with a patient
 - You take a patient loss/negative outcome personally
-
- WHY?

Communicating with patients and families

Most medical providers start their careers hoping to be caring, respectful, and compassionate.



Over time, this can become a challenge, given the realities of a busy day filled with distractions, patient care demands and work administration.



A provider's need to fit a patient's symptoms into a defined diagnostic may clash with a patient/parents' need to feel heard, respected and understood.

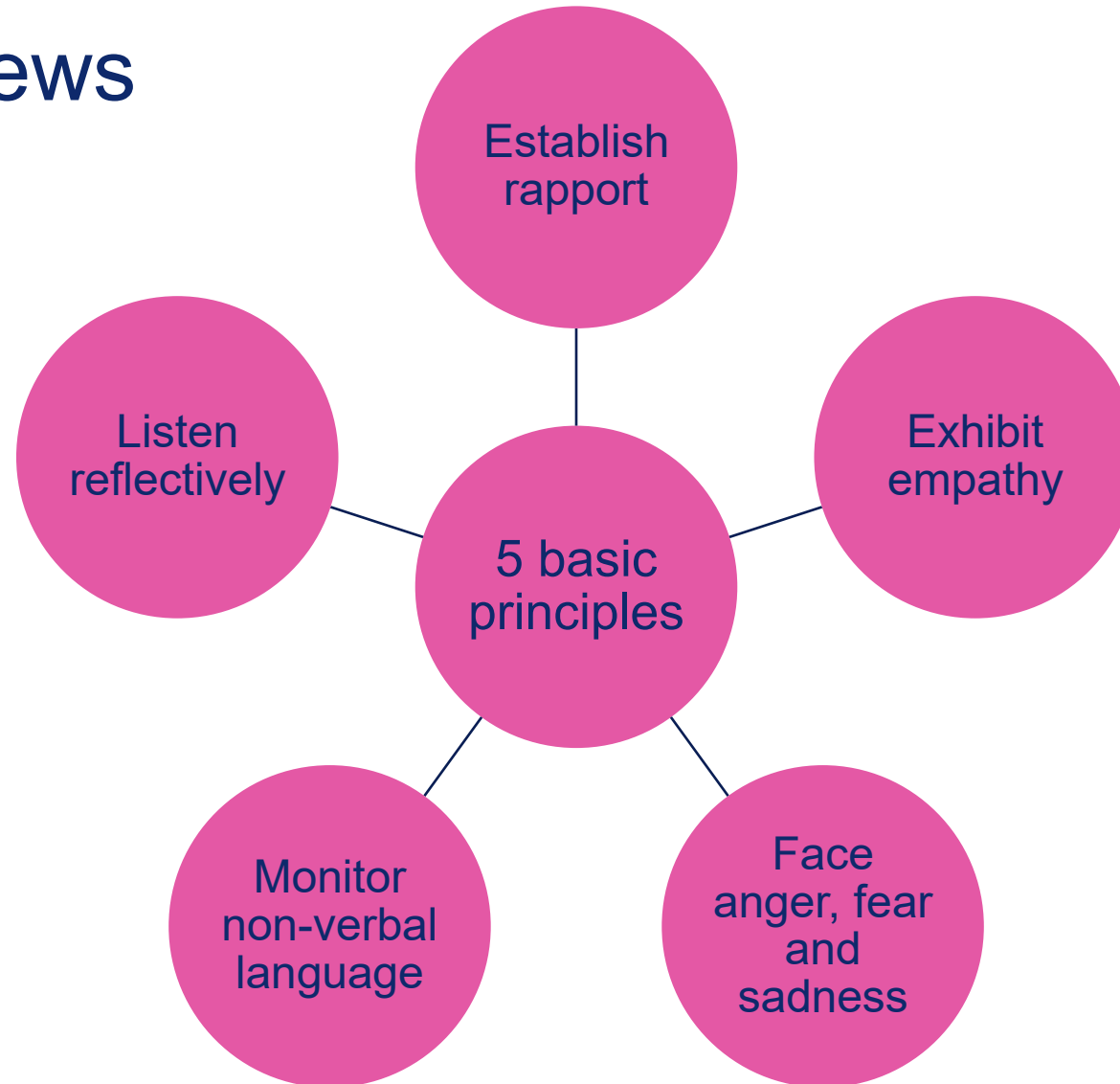


Preparing to deliver bad news to families

Effective communication is not an inherent ability – it can be learned, and it must be practiced.

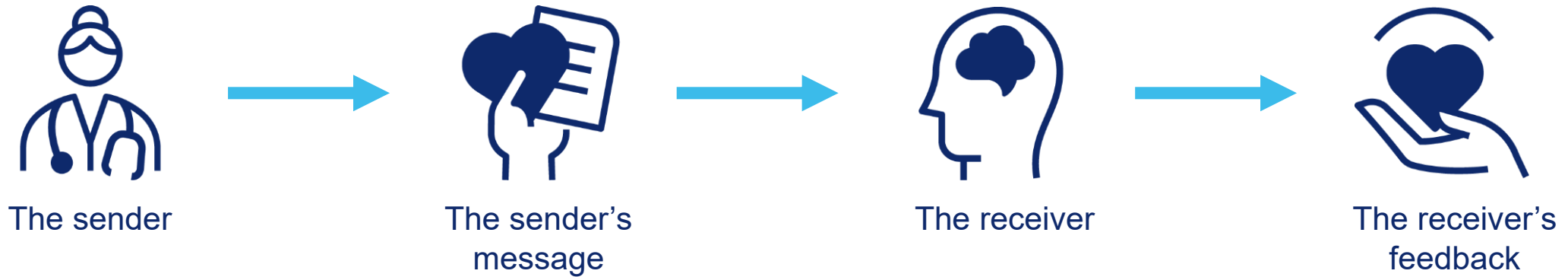
Successful communication requires that providers be prepared, starting with themselves.

Sharing bad news



Communication involves four elements

both verbal and non-verbal



These are all critical components during a crisis

Avoiding common communication pitfalls

Senders cause barriers by...

- **Verbal Communication**

- Lacking a clear goal or plan prior to communication
- Misunderstanding receiver's knowledge level
- Not soliciting feedback
- Making assumptions about receiver
- Using inappropriate tone, pitch, rate of speaking; smiling/giggling; contradicting content of message
- Using statements that judge/contradict receiver's emotions

- **Non-Verbal Communication**

- Appearing disheveled; wearing bloody clothing
- Sitting too far from/close to a receiver
- Not facing receiver
- Standing up; sitting slouched; folding arms; crossing legs
- Maintaining static facial expressions throughout interaction
- Not maintaining eye contact, glancing at distractions



Combating pitfalls

Receivers cause barriers by...

- Exhibiting anxiety, fear, sadness, anger that can disrupt capacity to listen
- Jumping to conclusions
- Listening selectively
- Rejecting message outright
- Suffering cognitive impairment



Try to...

- Model steady, deep breathing
- Speak at a calm pace
- Sit/stand the way you wish the receiver to sit/stand
- Incorporate silence

To avoid the most common communication pitfalls, it is important to anticipate barriers that may interfere with those four elements that are critical especially during a crisis.

Compassionate communication during crisis: P.I.L.L.

Prepare

- Places
- People
- Yourself

Inform

- The right person
- The right message
- Body language
- Tone of voice
- Words
- Attitude

Listen

- Reactions to loss
- Silence

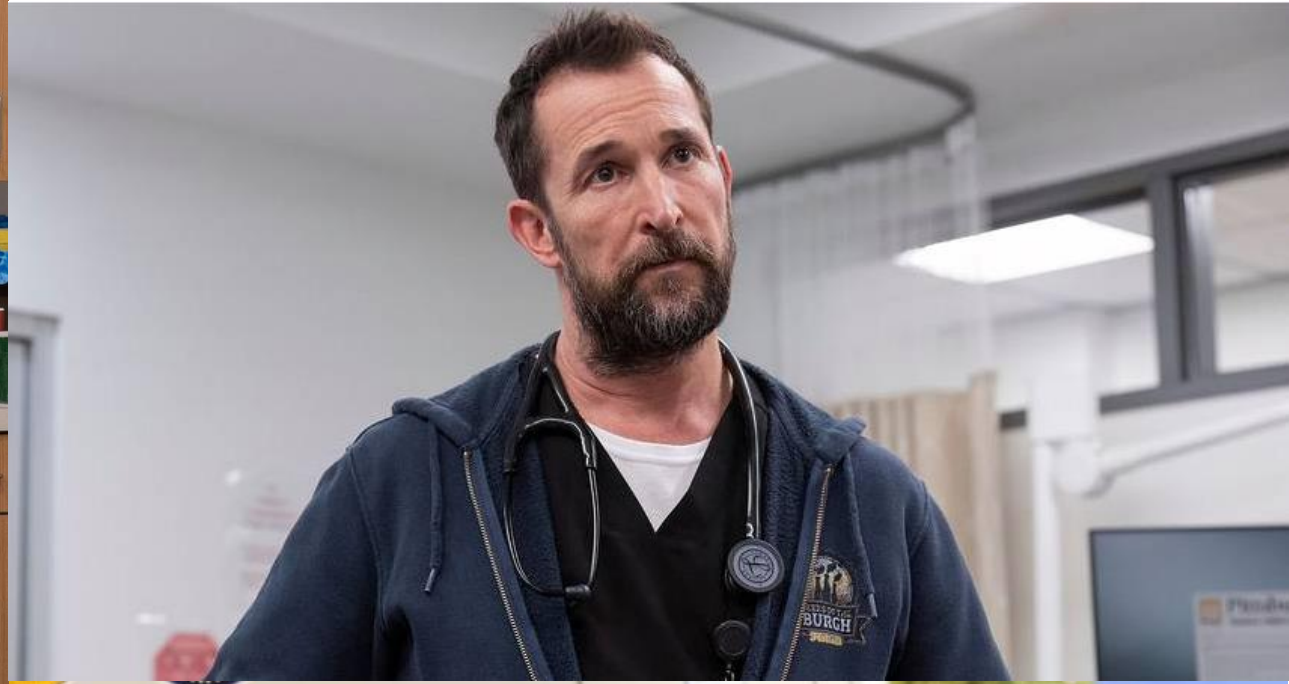
Leave

- Last contact with loved one
- Graceful exit

Effective communication **can** be learned,
must be practiced and **requires** preparation.

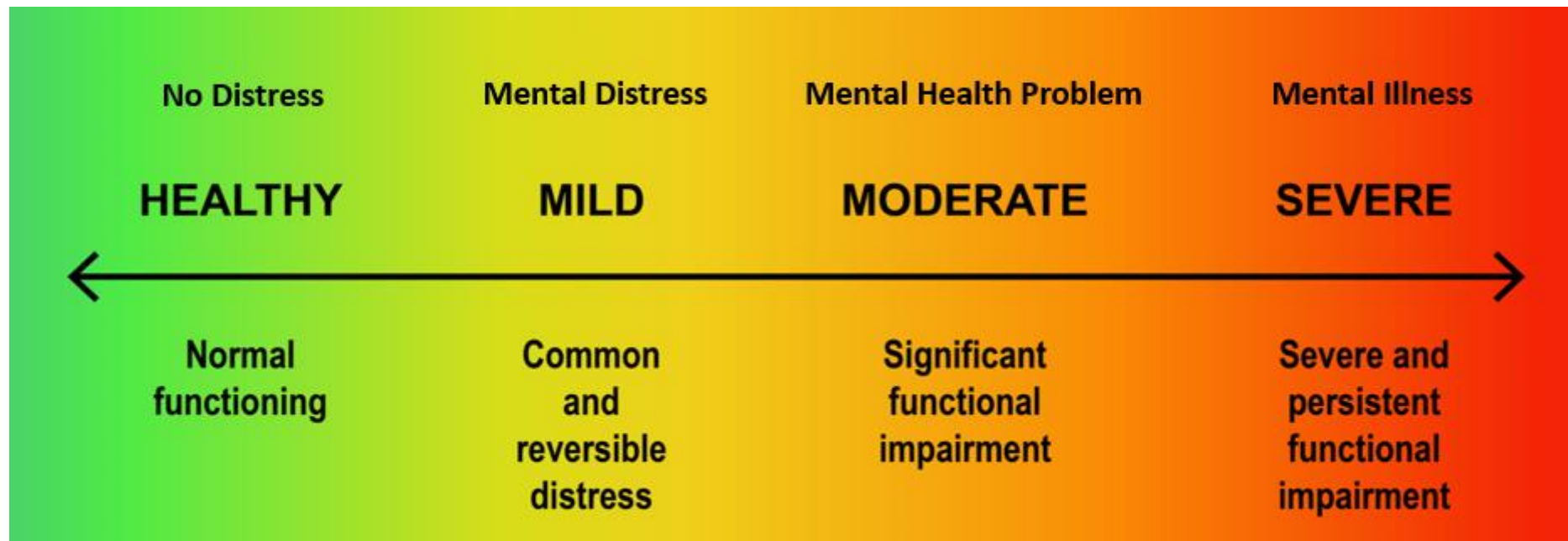
Reflection

- How well do you prepare yourself to have communication with family or friends during a crisis? What do you do well? What could you do better?
- How good of a listener are you? What are some things you could do to better increase your skill of listening?
- What is your exit strategy for appropriately leaving? What are some strategies you have seen others use that allow them to leave appropriately, but also express care and compassion?





Stress Continuum



Stress Continuum





Common ways to cope

- Dark humor
- Alcohol/substance use
- Compartmentalization
- Stuffing away
- Verbal processing
- Implementing boundaries
- Exercise
- Retail therapy
- Vacation

“Self-awareness is an essential ingredient in preventing or combating burnout.”

— Dr. Asa Don Brown

Implement coping mechanisms



Do things you enjoy

Hobbies
 Concerts
 Learn a new skill



Utilize work benefits

Time off
 Peer support
 Discount programs
 Financial planning



Lean on your social support

Friends
 Family
 Pets



Make the appointment

The one you've been putting off



Try something new

Axe throwing
 Acupuncture
 Book club
 Therapy



Talk about it already

Share what's going on with the people closest to you

Thank you

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