WHEN COWS ATTACK!

BLUNT MECHANISM PEDIATRIC TRAUMA CASE STUDY
MONTFORT RESCUE SQUAD

• ESTABLISHED 1958
• COVERAGE AREA: Approximately 80 square miles, servicing rural agricultural area with a population of approximately 3000.
• VILLAGES INCLUDE: Montfort, Livingston and Rewey
• TOWNSHIPS INCLUDE: Wingville, Castle Rock, Clifton, Mifflin and Eden
• 1ST RESPONDER GROUPS: Cobb, Livingston and Rewey
• COMMUNICATION: Radio repeater system with talk around capability - this allows EMTs to give notice if responding directly to scene or to station/ambulance.
MONTFORT SERVICE AREA
MED FLIGHT SERVICE AREA
**KEY POINTS**

- Cattle temperament can range from docile to aggressive depending on factors such as: environmental, genetic and social.

- Children have greater physiologic reserve than adults and can stay in a state of compensated shock longer. When children decompensate – it occurs rapidly.
  - Lethal Triad

- Avoid tunnel vision

- Working side by side with Med Flight and providing continuum of care.
AS DOCILE ANIMALS...

4-H Dairy & Beef Projects – Show Animals
AS TREASURED PETS...
TO AGGRESSIVE BEHAVIOR...

- https://youtu.be/L9WQaxr3IrA
- https://youtu.be/U99j7WzMAYA
• **Date:** April 12, 2018

• **Weather**
  - **Temperature:** Mid 50’s, sunny, ground was muddy and wet.

• **Events Of The Day:** State Wide Tornado Awareness & Mock Drill at 13:45
• **Dispatch:** Montfort EMS, Cobb 1<sup>st</sup> Responders paged to farm location of 9-year trampled by cattle.

• **1<sup>st</sup> Response:** 13:56 by EMT 1.4 miles from location

• **1<sup>ST</sup> EMT Arrival:** 13:58

• **Montfort EMS Leaves Station:** 13:58
Mechanism Of Injury: Tarentaise - Angus cows
Average Weight Of Cow: 900 LBS – 1200 LBS
Known Behavior Trait: Protective Mothers
9 year old patient found inside house, supine on kitchen floor with knees bent.

Mother kneeling at patient’s head trying to keep child awake. Father standing bent over at patient’s feet.

Patient unclothed except for a pair of boxers.
INITIAL ASSESSMENT

• 1st Responding EMT kneels by patient’s right side
  • Observes small abrasion on his left temple & on lower limb.
  • No visible blood or bruising to front of body.
  • Skin condition = Very cool.
  • Skin color = Pale, dusty blue around lips.
• Patient appears restless, agitated and in pain.
• EMT requests Mother (EMT) to take c-spine.
TELL ME WHAT HAPPENED...

• Mom, reports son had been attempting to assist calf back into a pen when he was attacked and trampled by the cows (new moms).
  • EMT asks patient how many cows trampled him, he replies “All of them!”
• Mom called at work by daughter, arrives home & her and oldest daughter assist patient (ambulatory) into the house.
• Mom showered mud & manure off to assess injuries.
  • Mom says, “He went down on me” and calls 911.
• Suspected internal injuries due to mechanism of injury.
• EMT asks ambulance to request Med Flight @ 13:59
GETTING AS MUCH INFO AS POSSIBLE...

• Orientated to Person, Place and Events.
  • EMT asked Patient to identify her by name, he replies, “You’re Taz!”

• Level of Consciousness: Altered

• CMS: No deficits.

• Allergies: Gluten

• Medications: None

• Past Medical: Celiac disease
MEANWHILE IN THE AMBULANCE...

  - Decision made to set up landing zone at Iowa-Grant Schools (1 mile).
- IG Schools had an early release day creating a clear landing zone.
- Cobb Fire & 1st Responders requested to set up landing zone.
Iowa-Grant Schools

LZ: Parking Lot between football field and Iowa Grant Rd.
BACK AT THE SCENE...

- Patient is becoming more restless and complains of a lot of pain in his abdomen. Attempts to curl over into a fetal position on his left side.
- EMT able to clear his back of any visible injury when he does this.
- Montfort EMS arrives on scene at 14:03 (4 miles)
  - EMT 1st responding from home enters.
  - AEMT, EMT, and Driver enter immediately after.
TEAMWORK

• AEMT takes over c-spine.

• Oxygen via Non-Rebreather and C-Collar applied. Backboard/Back Raft/Blankets placed next to Patient’s left side.

• Patient lifted up by EMTs and backboard slid under him. Back raft is inflated, Patient is secured to the board covered with a wool blanket.

• Patient is lifted and carried outside to the stretcher, secured and loaded in ambulance.
AMBULANCE LEAVES SCENE @ 14:14

• Family advised to head for UW Madison.
• 10-33 to IG Schools (1 MILE) to await Med Flight.
VITALS

• **NR Mask Removed:** Due to patient complaint. O2 by blow-by method.
• **Blood Pressure:** 136/76
• **Pulse:** 80
• **Respirations:** 18
• **Blood Sugar:** 151
• **Weight:** 65
• **Tympanic Temperature:** 92.5 (Hypothermia – Lethal Triad)
• **Eyes:** Small and reactive
• **Heating Blanket Applied**
ARRIVAL @ IG SCHOOLS: 14:16

- Informed by driver that Med Flight is responding from Madison, not Mineral Point.

- SECONDARY ASSESSMENT
  - Injuries:
    - Bruising on right flank and right thigh.
    - Bruising is on left great toe.
  - Patient very restless with periods of unresponsiveness, attempts to turn into fetal position.
  - Opens eyes when spoken to.
  - EMTs look out ambulance window and see Med Flight approaching landing zone.
  - AT 14:30, Patient goes unresponsive. No pulses felt, no chest rise seen.
LETHAL TRIAD OF TRAUMA

- A combination of acidosis, coagulopathy and hypothermia that usually leads to death in a patient experiencing trauma.
When You Are Scared to Death...Fight Harder

- AEMT begins compressions.
- BVM Used to ventilate.
- Defib pads applied.
- Analyzed. No shock advised. Continued CPR.
- Eyes dilated.
MED FLIGHT LANDS @ 14:37

• Driver opens side ambulance door and is shocked to observe CPR in progress, he questions “You’re doing CPR!?!?”

• Driver asked to inform Med Flight of CPR in progress.

• Doctor & Flight Nurse jump in ambulance.

• Care is transferred to Med Flight staff with EMT assist:
  • Andrew Cathers, MD
  • Trevor Johnson, RN, MSN, CFRN
MED FLIGHT VIA AMBULANCE...

- Med Flight requests ambulance transport due to CPR in progress
- Upland Hills Hospital, Dodgeville (18 miles)
- **10-33 Transport @ 14:50**
- EMTs continue CPR
ONGOING...

- Requests notification to Upland Hills of trauma patient being transported to their facility
  - Blood ready
  - Ultra sound ready.
  - Advise CPR in progress, IO & IV in place, administration of medications.
- Advised Med Flight Helicopter to fly and land at Upland Hills.
MEANWHILE...

• During transport 1st EMT receives phone call from father while CPR is ongoing.

• EMT answers and tells father, “We are transporting to Upland Hills – Please drive carefully and we will meet you there.”

• Father asks how son is doing, EMT responds “We are working with him and we will update you when you arrive at the hospital.”
RESUSCITATION...

- EMTs note patient movement
- Doctor requests pulse check.
- AEMT feels carotid pulse.
- Flight Nurse feels weak femoral pulse.
- Patient working at breathing on own.
- CPR discontinued.
ARRIVE @ HOSPITAL 15:06

• AEMT meets family in hospital waiting room to advise them of patient status.
• Family is allowed to enter ER to see son.
• Avoid tunnel vision – crew is informed sister was transported by private vehicle to receive assessment as she had entered the cattle pen to rescue brother & sustained minor injuries.
• Sister is checked & cleared by Upland Hills staff.
EMS STRONG: AFTER THE CALL

- Critical Incident Stress Debriefing
  - Southwest Wisconsin Critical Incident Stress Debriefing Team
  - Debriefing held for those directly involved.
UW AMERICAN FAMILY CHILDREN’S HOSPITAL
RECOVERY...
EMS...STRONGER TOGETHER

2018 EMS Appreciation Day

Responding Crew & Patient
Iowa County Airport, Mineral Point, WI