Altered States: Managing Pain When Resources are Scarce

Chris McEachin, BSN, MBA, Paramedic/IC
Trauma Program Manager
Henry Ford Macomb Hospitals
Region 2 North Education Committee-Chair

Primary Objective

- Describe pain management modalities during resource scarce incidents.

How are we gonna get there?

- Background Information
- Pain Assessment Review
  (with physiologic considerations)
- Pain Scales
- Pharmacological v. Non-Pharmacological
- Depletion of Narcotic Supply
- Psychosocial Impact
- Personal/Legal & Documentation Considerations

But First…….

A QUIZ!

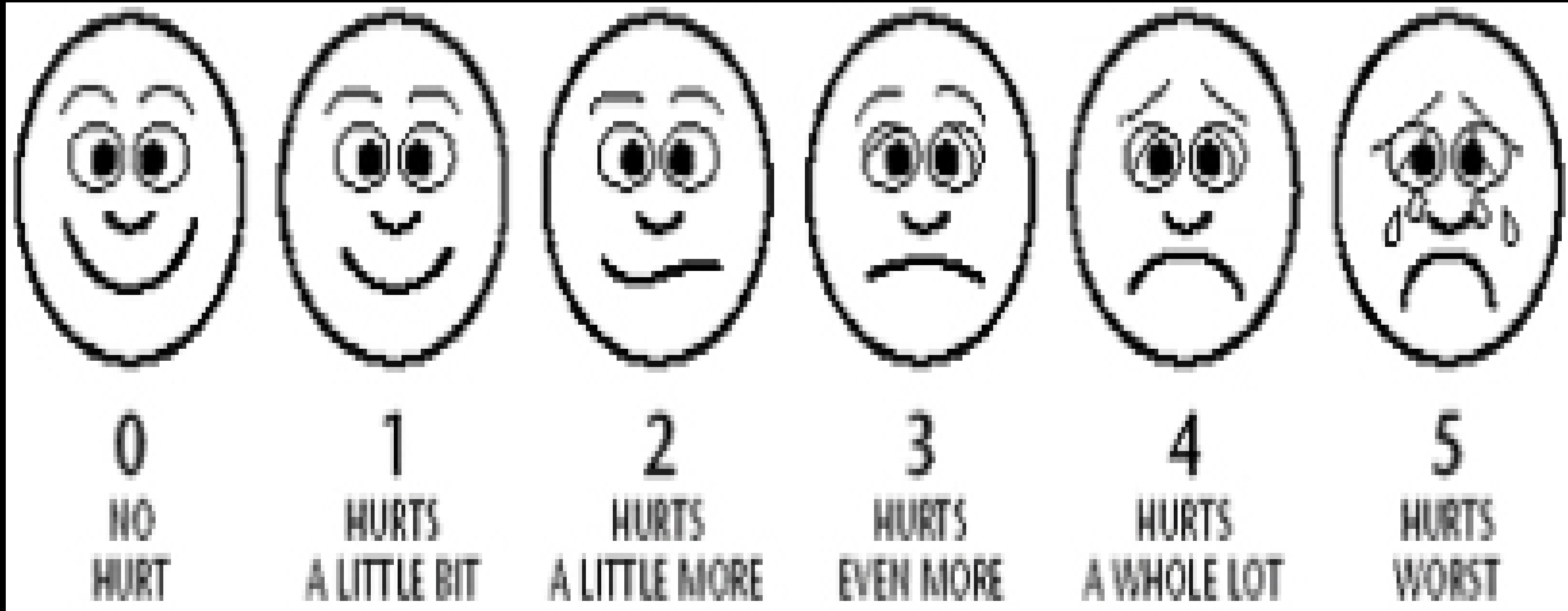
What does the CBRNE mnemonic stand for?

- C=Chemical
- B=Biological
- R=Radiological
- N=Nuclear
- E=Explosive

Pain is considered the __ vital sign?

A) Fourth
B) Sixth
C) Third
D) Fifth

This Pain Scale is called?



- Wong-Baker “Faces Pain Rating Scale”

Which of the following is NOT a sign/symptom of Pain?

- Increased Heart Rate
- Increased Respiratory Rate
- Patient Report of Pain
- Nausea
- Facial Grimacing

What is...

- They are all signs or symptoms of pain!!!

Last Question….

- During a large scale-incident ALL patients should receive a pain assessment?

True or False

Background Information

- *Pain:* One of the primary reasons people seek medical care!
- High Priority "Management" item: 5th Vital Sign (P, R, BP, T & Pain)
- ALL patients should have a pain assessment.

Background Information

- *Landscape has changed:* Acts of terrorism, natural disaster, pandemics and war may result in casualties that exceed our medical systems resource management capabilities.

Background Information

- *Problem:* Many assumptions are made that in such an event, much of the management of patients will take place in a fixed facility (i.e.. Hospitals)
- Much planning focus has been spent on "rescue, stabilization and transport"

Background Information

- There is a blurry line between what "we *think* will happen" versus "what *will* happen"
- Uncertain, if anyone really knows

Background Information

- Much of the current discussion and considerations are based upon battlefield medicine....(happened before, EMS is predicated on this model)

Background Information

- Pain management necessity not a luxury even in these incidents
- Some evidence to support that initial pain management can impact long term outcome
- May attenuate chronic pain syndromes

Background Information

- *Bottom Line*: Preplanning is key, with an emphasis logistical details, (i.e., “disaster pain protocols”, documentation, legal concerns)

Assessment Review

- ABCD-reasonable
- History (of event & Medical)
- Chronic versus Acute Pain
- Medications (are they on any, did they get any?)
- Allergies

Assessment Review

- Physical Findings:
  - "Source of Pain"
  - Vital Signs
  - Aggravating/Alleviating Factors
  - Score the pain

Considerations

- Think about the CBRNE mnemonic!
- This may impact assessment:

Chemical: Maybe they can't see you?

Biological: Mask? You may have a hard time hearing

Radiological: Are they "hot"?

Nuclear: Need I say more?

Explosive: Maybe they can't hear you?

Considerations

- *Remember:* Autonomic signs of pain (tachycardia, hypertension, diaphoresis)

  Can be difficult to distinguish from:
- Hypovolemia, ischemia or other physiological disturbances

Considerations

- Or the “Flight or Fight” Response??
- May have a delayed “realization” that they have pain
- Or pain disparate from physical findings

Considerations

- Aggravating/Alleviating Factors:
  - -Family/Friends/Co-workers
  - -Positioning (i.e.. Splinting, knee to knee to chest)
  - -Associated co-morbid conditions
  - -Assume sub-clinical TBI (Explosions)
  - -DO NOT underestimate pt. report

Pain Scales

- Variety of Scales:
  - -Verbal Analogue (1-10)
  - -FACES
  - -FLACC
  - -NIPS
  - -Visual Analogue

Considerations

- *Verbal Analogue :* (0-10)

  -Recommended for these instances

  -Works great in verbal patients, usually > 8 years

  -Can establish "threshold" for meds (≥4 of 10) usual

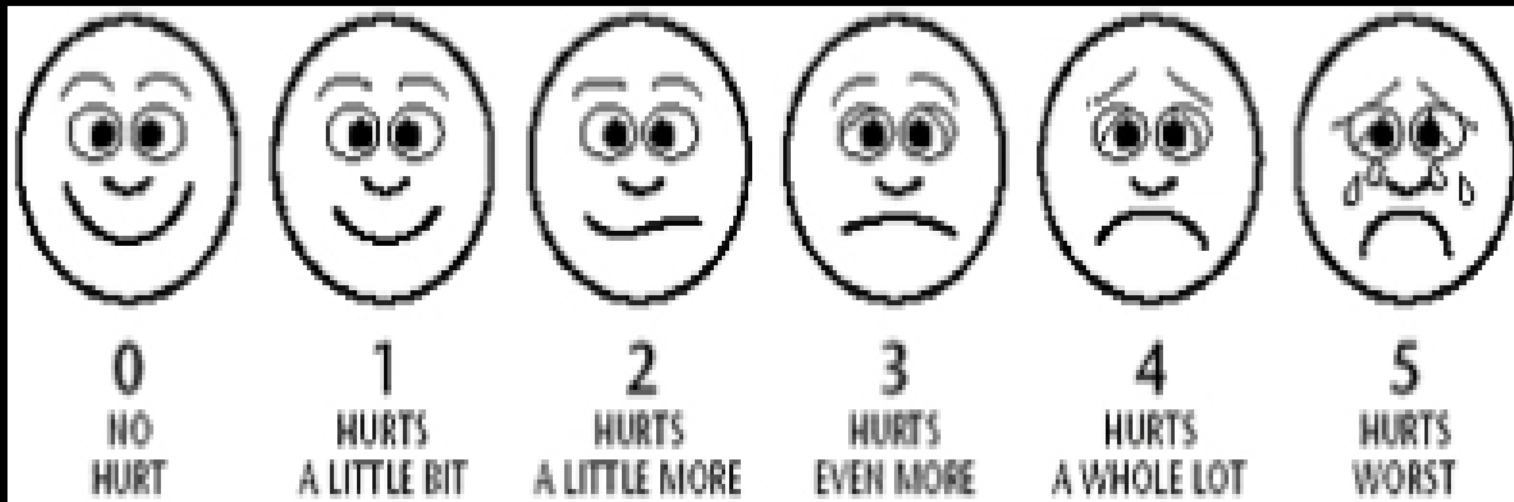
  -What if pain scored >10, it happens!

BUT…what about?

- Non-Verbal
- Non-English Speaking
- Pre-Verbal

Pain Scales: Non-Verbal/Non-English

- Wong-Baker: "FACES Pain Rating Scale"



Considerations

- Recommended > 3 years
- Can point
- Don't need to speak
- Or be able to hear
- Can be useful for Non-English Speaking
- Harder to document

Pain Scales: Pre-Verbal

- Face=**F**, Legs=**L**, Activity=**A**, **C**=Cry, **C**=Consolability

  FLACC

- < 3 years old
- Useful for this age group
- Harder to score & document

Pain Scales: Other

- NIPS
- Visual Analog

- Not particularly helpful in large scale incidents.

Pain Scales

- Order of preference:
  - -Numerical Analog (0-10)
  - -FACES
  - -FLACC

Pharmacological Interventions: Review

Narcotic Focus:

- Morphine
- Dilaudid
- Fentanyl

Morphine

Pros:

- Interacts with opiod receptors
- No "TOP" end
- Used for severe pain
- Can give IM/SQ
- Every 4 hours

Dosage: 2-10 mg (initial)

Cons:

- Histamine response (nausea)
- Hypotension
- Hypoventilation
- Allergy

Dilaudid (Hydromorphone)

Pros:

- ^Pain threshold, alters pain perception
- IV=7x more potent than morphine
- Can give IM/SQ
- Initial Dose: 1-2 mg

Cons:

- Lesser histamine response that Morphine
- Nausea
- Hypotension
- Hypoventilation
- Allergies

Fentanyl

Pros:

- ^Pain threshold, binds to opiate receptors
- IV-100x more potent that Morphine
- Can be given IM
- Little histamine response
- Transmucosal successes in the battlefield
- IV: 25-100 mcg

Cons:

- Hypotension
- Nausea
- "Chest wall rigidity" (hypoventivation)

Remember

- May not be able to start/maintain IV's
- Need something that can be given easily (Transmucosal Fentanyl)
- Need a standard "pain management" protocol-docs may be scarce
- Limited availability of reversals
- Depending on narcotic/problem may need large quantities (i.e. morphine)

Pharmacological Interventions: Review

We won't forget:

- *Ketamine:* dissociative, can be useful, emergence phenomena
- *Phenergan:* antiemetic, management of nausea, may help pain, inexpensive

Pharmacological Interventions: Review

- *Zofran:* antiemetic, popular, expensive
- *Compazine:* antiemetic, however, do you want to manage dysmorphic/dystonic effects

DON'T

- Count on having an adequate supply of pharmaceutical supplies
- Expect to get pain to "0"
- Underestimate how frustrated you will be
- Underestimate how frustrated your patients will be

DO

- Establish a pain threshold or “tolerable” pain level EARLY
- Expect people to be at their worst behaviorally
- Have an awareness of “back-up” supplies: “Black Boxes”, MEDDRUN, SNS

Non-Pharmacological Interventions

- Remember this from nursing school?
- Some common interventions:

 -Deep Breathing Exercises

 -Distraction

 -Guided Imagery

 -Massage

 -Laughter

 -Touch Therapy

Non-Pharmacological Interventions

- These interventions may be all you have
- Have family/friends help
- Involve the patient(s)
- Empathy goes a long way
- Use them even if drugs are available

Psychosocial Implications

- These incidents will be hard on you and those you are caring for-***accept that!***
- Expect to do a lot of talking
- Monitor behavioral cues from patients/caregivers
- Make sure you debrief

Personal Concerns

- First: Protect thyself
- Make sure your family is safe
- Check your emotions and perceptions regularly
- Keep hydrated & fed

Legal Concerns

- Is there an adequate legal framework for providing health and medical care in a mass casualty incident?
- Who has the authority to designate/implement altered care standards
- Try to keep care "normal" as possible

Documentation

- Essential regardless of number of patients
- Do you have a “disaster” documentation form?
- Be realistic at how often it can be done
- Has your institution &/or agency established “minimum” requirements for incidents

What can you do now?

- Believe it could happen here
- GET INVOLVED!
- Know your disaster “responsibilities” as established by your employer
- Think about learning some specific non-pharmacological management techniques
- Talk to your Emergency Preparedness guru
- Learn about the “black boxes”, MEDDRUN, SNS

The Take Home

- Use a pain scale-no how many patients
- Use non-pharmacological interventions early
- Expect acting out and emotional behavior
- Know that there is more to come on this topic

Resources

"Altered Standards of Care in Mass Casualty Events" AHRQ Publication No. 05-0043

http://www.ahrq.gov/research/altstand/

"American Society for Pain Management Nursing"

http://www.aspmn.org/Conference/documents/Buckenmaier.pdf

Questions??

- Thanks!!

Email: MCEACHIC@hfhs.org