(Basically) getting Nosey about Narcotic Overdose: Use of Nasal Naloxone by BLS Providers

Eagles X

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Opiate Overdose: Big Problem& getting Bigger

After dip in 80's opiate abuse has increased since 90's

Massachusetts: fatal opiate OD's/yr
1990 :94
2003 :573

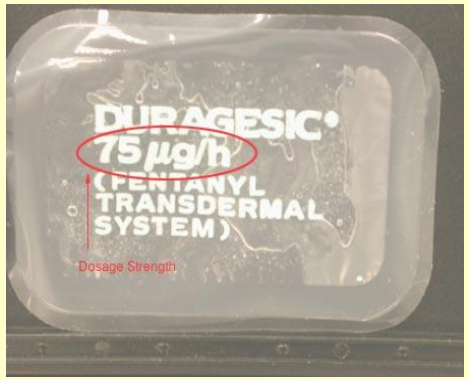
*Heroin cheaper and more pure
*Increased use of prescription narcotics

Heroin

- Derived from the poppy plant
- IV heroin peaks in serum in 1 minute

Other opiates of abuse

- Many opiate products available as legal pharmaceuticals can be abused
- Oxycontin
- Fentanyl
- Percocet



Heroin and Boston EMS

For 2003

- 716 Heroin “patient encounters”
- 296 received naloxone
  (Narcan ®)
- Higher among men
- Commonest age:
  35-45

Heroin OD Clinical picture

- Classic triad
  - miosis
  - respiratory depression
  - CNS depression

<1 % complicated by non cardiogenic pulmonary edema –95 % of cases occur at onset of OD

When do heroin OD's typically occur

- High potency heroin
- Polysubstance OD- typically alcohol and benzo's on top of heroin
- Decreased tolerance after period of abstinence –release from jail, relapse after detox /recovery

Naloxone (Narcan)

- Pure opiate antagonist –reverses respiratory & CNS depression
- High lipid solubility so rapidly enters CNS
- IV :Half life 30 min ,lasts 45-90 min
- Can be given IV,IM,SC,IN
- Inexpensive: $10 per 2 mg
- Long shelf life: 18-24 months

Naloxone complicatioins

rare: ~1%

- severe agitation
- seizures
- pulmonary edema
- arrhythmias

Intranasal(IN) Naloxone

- No needles –

  -needles pose major risks: HIV, Hep B and C

  -hassles of HIV prophylaxis to provider and family after needle stick

  -IV access difficult and time consuming in IVDU's

Response % using IN Naloxone

- Response :

  Denver ALS: 2 mg naloxone/2cc in prefilled syringe IN via atomizer; if no response to IN,IV naloxone:

  -43/52(83%) naloxone responders awoke with IN naloxone ;5/9 who responded only to IV naloxone had nasal pathology

  Barton. J of Emerg Med Jan ,'05

Response %

- Australian study comparing IN to IM naloxone :

  62/84 (74%) of OD's responded to IN naloxone alone

  *used 2mg in 5 cc

  *fewer withdrawals effects with IN

A-M Kelly. MJA,Jan 2005

Response times using IN Naloxone

~ Equal for IV and IN

-from drug administration to clinical response : IN 4.2(+/- 2.7) &IV 3.7(+/- 2.3 min)

- from patient side to clinical response: shorter for IN (8.0 min) than for IV (10.0 min)

Barton J of Emerg Med Jan ,'05

Boston EMS & Naloxone(Narcan)

Historically naloxone (Narcan) given IV or IM by ALS only

2003 Intranasal (IN) naloxone approved as alternative route for ALS

2005 IN naloxone also approved for BLS

Boston EMS BLS or ALS IN Naloxone Administration

- 2 mg in 2cc in prefilled syringe
- 1mg in 1 cc via atomizer in each nostril

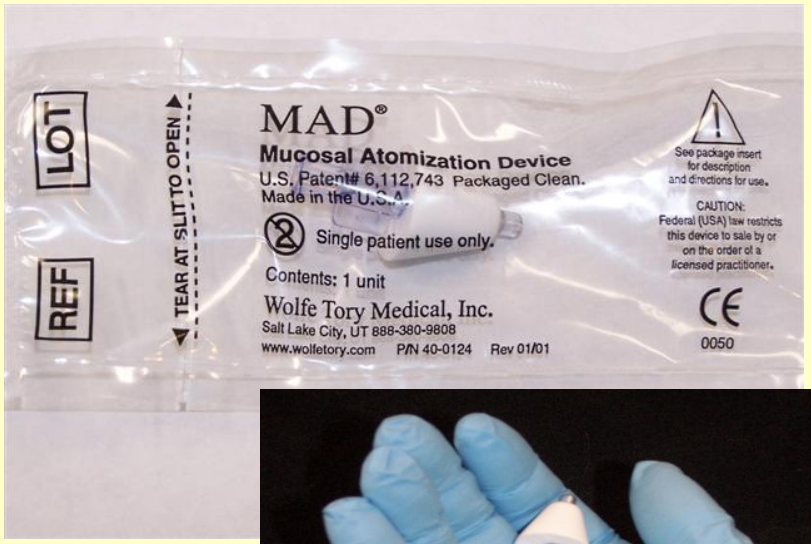
Administering Nasal Narcan

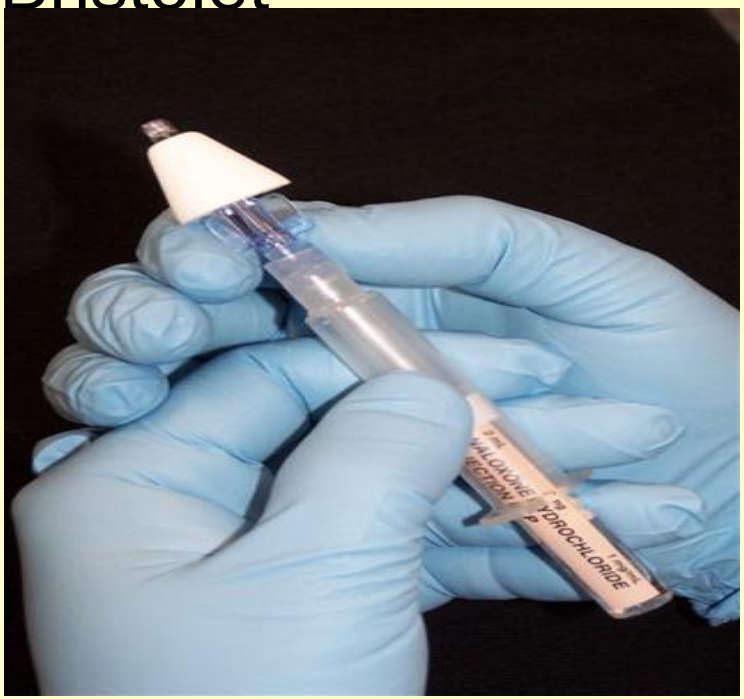
- Confirm indications
- Confirm patient has no exclusion criteria (nasal trauma/obstruction, etc.)
- Continue BLS airway support

Assemble Mucosal Atomizer

- Mucosal Atomizer Device attaches to

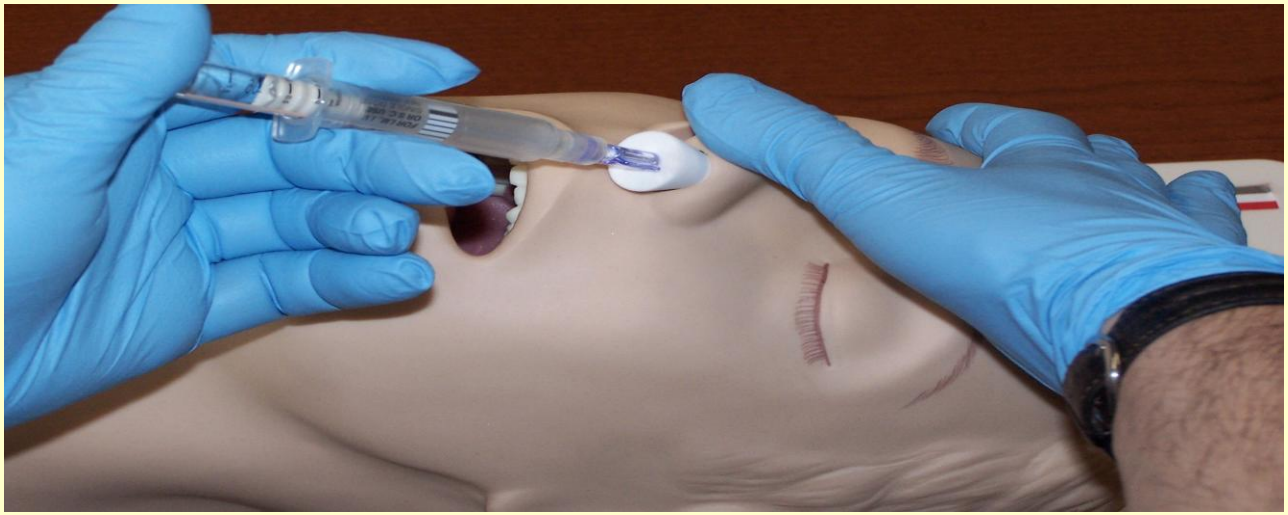
  2 mg Naloxone Bristoject





Administer 1 mg each nostril

- 1 mg/ 1cc each nostril



Boston Experience

2006

BLS: 86 uses of IN Naloxone
pilot of 1st 26 patients-
75% OD reversals

Heroin User Partners Administering Naloxone

- Form of Harm Reduction
- Most heroin use done in company of others
- Heroin Users recognize OD's
- Use of IN naloxone is easy and safe
- Boston has such a program

  76 reported reversals first year ('07)