

# Avera *e*CARE™

Transforming Rural Healthcare



# Rapid Sequence Intubation Emergency Medicine

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*Avera eCare Emergency*

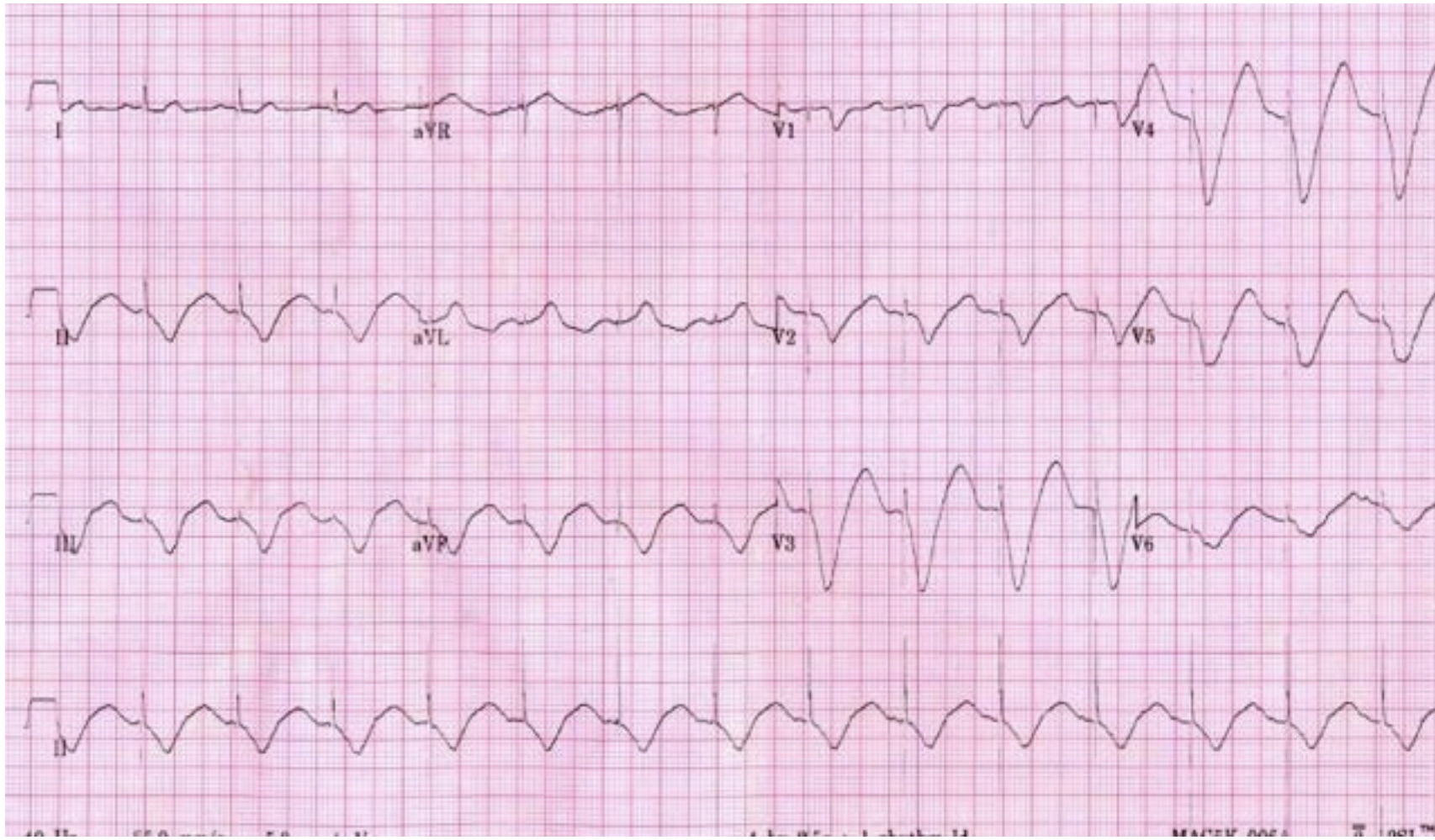


▶ Why is this topic  
so important?



# Dangers of RSI

- ▶ Prolonged intubation.
- ▶ Medication adverse effects.
- ▶ Are you ready to perform a crash airway?



# Rapid Sequence Intubation

- ▶ Reasonable to assume that there is an increase rate of success of intubation with drugs.
- ▶ Decrease aspiration.
- ▶ Better cervical spine control.

# Seven Ps

- ▶ Preparation
- ▶ Preoxygenation
- ▶ Pretreatment
- ▶ Paralysis with induction
- ▶ Protection
- ▶ Placement
- ▶ Post-intubation management



# Preparation

- ▶ Check your equipment at the start of every shift.
  - ▶ This includes your plan B equipment.
  - ▶ Monitor, pulse oximetry, blood pressure, cardiac rhythm, 2 lvs
  - ▶ BVM, Yankauer suction, end tidal CO2 capnography
  - ▶ Functioning laryngoscope with blade of choice
  - ▶ ET tube (8.0mm for men and 7.0 for women)
- ▶ When you are not completely ready, you are putting your patients at risk.
- ▶ Can I bag this patient?
- ▶ Can I tube this patient?
- ▶ What is my plan B?

# Preoxygenate

- ▶ This is where it is at!
- ▶ 15L Nonrebreather for 5-8 minutes
- ▶ Don't bag the patient unless you have to.

# Pretreatment

- ▶ **Controversial** in literature.
  - ▶ Lidocaine
  - ▶ Atropine (standard of care in children less than 8 years old)

# Paralysis with induction

- ▶ Induction agents
  - ▶ Etomidate 0.3mg/kg IV
  - ▶ Midazolam 0.3/kg IV
- ▶ Paralytic agents - give immediately after induction agent
  - ▶ Succinylcholine 1mg/kg IV
  - ▶ Rocuronium 1mg/kg IV if succinylcholine is contraindicated

# Protection

- ▶ Sellick maneuver
  - ▶ Firm pressure on cricoid cartilage to prevent gastric regurgitation



# Placement

- ▶ Place ET tube
- ▶ Inflate the cuff
- ▶ Confirm using end tidal CO<sub>2</sub> capnography
- ▶ Auscultate lungs bilaterally
- ▶ Secure ET tube

# Post-intubation management

- ▶ Chest x-ray to assess placement of endotracheal tube
- ▶ Long acting sedative and, if necessary, paralytic
  - ▶ Versed for sedation

# What can we do to prepare ourselves to be successful with RSI?

- ▶ Knowledge. Preparation.
  - ▶ Education
    - ▶ Avera eCare Difficult Airway Intubation Course
  - ▶ Equipment
  - ▶ Preparation
    - ▶ SOAPME
      - ▶ Suction
      - ▶ Oxygen
      - ▶ Airway
      - ▶ Position
      - ▶ Medications
      - ▶ End tidal



# S is for SUCTION

- ▶ No matter how long it takes, make sure you get suction set up.

# O is for OXYGEN

- ▶ O includes pre-oxygenation and re-oxygenation
  - ▶ Facemask nonrebreather with or without nasal cannula
  - ▶ BVM

# A is for AIRWAY

- ▶ Airway
  - ▶ ET Tube loaded with stylet
  - ▶ Bougie
  - ▶ Rescue device -- supraglottic device

# P is for POSITIONING

- ▶ Do not ignore positioning.
  - ▶ Do this every single time.
  - ▶ Quick.

# M is for MEDICATION

- ▶ Medication
  - ▶ RSI
  - ▶ Postintubation

# Closer Look: RSI Medications

## *Sedate and Paralyze*

- ▶ **Etomidate - 0.3mg/kg IV adult dosing**
  - ▶ Onset of action is 20-30 seconds and it lasts ~15 minutes.
  - ▶ Is etomidate ok in the septic patient?
    - ▶ Etomidate transiently inhibits the enzyme involved in the production of cortisol.
    - ▶ No clear evidence that use of etomidate for RSI in septic patients causes any adverse effects.
- ▶ **Ketamine - 1-4.5mg/kg IV adult dosing**
  - ▶ Associated with increased intracranial pressure and myocardial depression
  - ▶ Has bronchodilator properties so consider in asthmatics
- ▶ **Rocuronium - 0.6mg/kg IV adult dosing - nondepolarizing agent**
  - ▶ Takes longer to work (about 45 seconds) and lasts much longer.
- ▶ **Succinylcholine - 1-1.5mg/kg IV adult dosing**
  - ▶ Quick on and off, but causes muscle fasciculations and can increase K, and carries some contraindications (known suspected elevated K, burns > 24 hours, muscular dystrophy).

# E is for END TIDAL CO<sub>2</sub>





- ▶ Temporize

- ▶ BVM

- ▶ Noninvasive pressure ventilation

- ▶ Supraglottic airway (laryngeal mask airway)

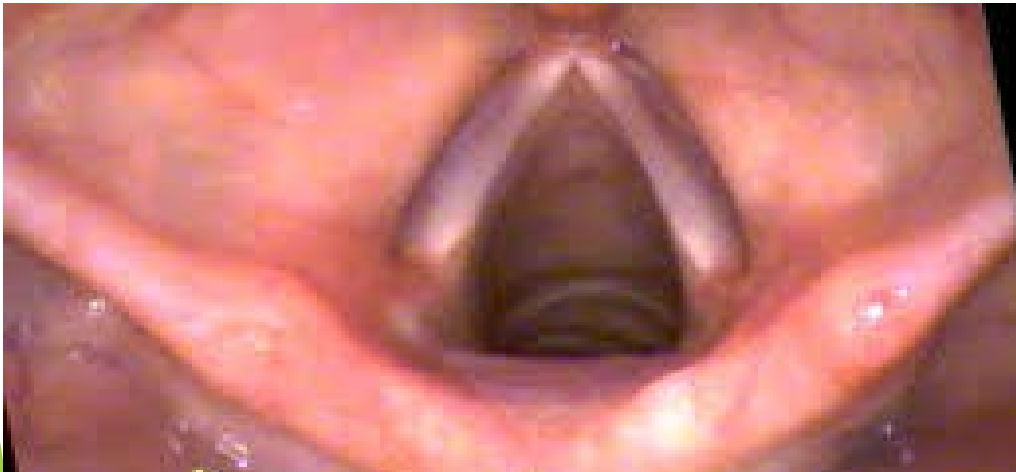
- ▶ LMA

- ▶ When does an LMA not work?

- ▶ Foreign body

- ▶ Patient is too awake





- ▶ Equipment

- ▶ Videoscope with cables to connect to Avera eCare

- ▶ Avera eCare Difficult Airway Course

- ▶ National educators from the Difficult Airway Course along with Avera eCare physicians

# Questions



# Thank You



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# Avera *e*Emergency Airway Management Program

Powered by **the .difficult  
airway**course™

**Thursday, May 2, 2019 ~ 5 p.m. – 8 p.m.**

*Avera eHelm, 4500 N. Lewis Ave., Sioux Falls, S.D.*

- Social (you are welcome to bring a guest)
- Avera eHelm Tour
- CME training **6 p.m.** and repeated at **7 p.m.** at Avera eHelm

**Friday, May 3, 2019 ~ 7:30 a.m. – 5:45 p.m.**

*Holiday Inn Downtown, 100 W. Eighth St., Sioux Falls, S.D.*

**Target Audience:** Physician, Advanced Practice Provider,  
Nurse Practitioner, Physician's Assistant

A block of rooms has been reserved at the Holiday Inn Downtown, 100 W. Eighth St., Sioux Falls, S.D. Call 605-339-2000 for reservations. ***This block will be released by April 3, 2019. Ask for the Avera Difficult Airways rate.***

[Click Here to Register](#)

For registration assistance call 605-322-8950

For questions about the program contact [cindy.pirrung@avera.org](mailto:cindy.pirrung@avera.org) or 605-322-2082



**Avera** 

# **Avera** *e*Emergency **Airway Management Program** Powered by **the difficult airway**course™

**Thursday, May 2, 2019 ~ 7:30 a.m. – 4:30 p.m.**

*Avera eHelm, 4500 N. Lewis Ave., Sioux Falls, S.D.*

- Registration at 7:00 a.m.
- Program start time 7:30 a.m.
- Program end time 4:30 p.m.
- Social and Avera eHelm Tours at 4:30 p.m.
- CME training **6 p.m.** and repeated at **7 p.m.**

**Target Audience:** RN, RT, Paramedic, EMS

A block of rooms has been reserved at the Holiday Inn Downtown, 100 W. Eighth St., Sioux Falls, S.D. Call 605-339-2000 for reservations. ***This block will be released by April 3, 2019. Ask for the Avera Difficult Airways rate.***

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