RSI

A three phase approach
Airway Assessment Module
Purpose of this Module

- Review Airway Anatomy
- Learn Advanced Airway Assessment Techniques
  - 3-3-2
  - Laryngoscope View Grading
  - BURP
Upper Airway

- Nasal Turbinates
- Nasopharynx
- Eustachian Tube
- Soft Palate
- Oropharynx
- Aryepiglottic Folds
- Vallecula
- Cricoid Cartilage
- Esophagus
- Hyoid Bone
- Thyroid Cartilage
- Cricothyroid Membrane
- Tracheal Cartilages
- Trachea
Upper Airway

The Oral Cavity

- Palate
- Alveolar Arch
- Uvula
- Palatopharyngeal Arch
- Palatoglossal Arch
- Tonsil
The Lower Airway

- Thyroid cartilage
- Cricoid cartilage
- Tracheal cartilage
- Main bronchi
Alveoli

- Gas Exchange
Function of the Respiratory System

• Removes carbon dioxide from the blood
• Transfers oxygen to the blood
Physiology of Respiration

• Define Respiration
  – The exchange of gases between a living organism and the environment

• Define Ventilation
  – Mechanical Process that moves air in and out of the lungs
Regulation of Respiration

Where is the Respiratory Center Controlled?

• Brainstem
  – Medulla
  – Apeustic Center (pons)
  – Pneumotaxic center (pons)

• Stretch receptors
  – Hering-Breuer reflex

• Chemoreceptors
  – CSF
  – Blood
Respiratory Cycle

• **Inspiration**
  – Active phase
  – Lasts 1-2 seconds

• **Expiration**
  – Passive phase
  – Lasts 5 seconds
Factors Affecting Respiratory Rate

• Fever
• Depressant Drugs
• Anxiety
• Insufficient Oxygen
• Stimulant Drugs
• Sleep
Respiratory Assessment

- Confusion, Agitation, Orientation
- Cyanosis (late sign)
- Diaphoresis
- Retractions
- Accessory Muscle Use
- Jugular Venous Distention
- Nasal Flaring / Pursed Lip Breathing
Airway Management – The Basics

Mechanical Airways
• NPA’s
• OPA’s

• Description
• Advantages
• Disadvantages
• Indications
• Contraindications
• Methods of Insertion
Airway Management – The Basics

Ventilation

• BVM

• Description
• Advantages
• Disadvantages
• Indications
• Contraindications
• Methods of Use
Evaluation of Effectiveness

• How do I know I am ventilating?
  – Chest movement
  – Lung Sounds
  – Epigastric sounds/Abdominal distention
  – Patient Response
Suction Catheters

Rigid
- Advantages
- Disadvantages
- Indications
- Contraindications
- Methods of Use

Flexible
- Advantages
- Disadvantages
- Indications
- Contraindications
- Methods of Use
Difficult Airways
Assess the Risks

“The difficult airway is something one anticipates; the failed airway is something one experiences.”

-Walls 2002
How do you know if your patient is going to be difficult to intubate...
Some Predictors of a Difficult Airway

- C-spine immobilized trauma patient
- Protruding tongue
- Short, thick neck
- Prominent upper incisors (“buckteeth”)
- Receding mandible
- High, arched palate
- Beard or facial hair
- Dentures
- Limited jaw opening
- Limited cervical mobility
- Upper airway conditions
- Face, neck, or oral trauma
- Laryngeal trauma
- Airway edema or obstruction
- Morbidly obese
Additional Predictors: Medical History

- Joint disease
- Acromegaly
- Thyroid or major neck surgeries
- Tumors, known abnormal structures
- Genetic anomalies
- Epiglottitis
- Previous problems in surgery
- Diabetes
- Pregnancy
- Obesity
- Pain issues
Assess the Risk

- Identifying a potentially difficult airway is essential to preparing and developing a strategy for successful ETI and also preparing an alternate plan in the event of a failed ETI.
Objectives

• Identify 4 areas of airway difficulty
• Predict a difficult airway using the following mnemonics:
  – MOANS
  – LEMONS
Airway Difficulties

- Difficult to ventilate with a BVM
- Difficult laryngoscopy
- Difficult to intubate
- Difficult to Cric
Difficult to Bag (MOANS)

- Mask Seal
- Obesity or Obstruction
- Age > 55
- No Teeth
- Stiff
Mask Seal

- Small Hands
- Wrong Mask Size
- Oddly Shaped Face
- Bushy Beard
- Blood/Vomit
- Facial Trauma
Obesity or Obstruction

• Obesity
  – Heavy chest
  – Abdominal contents inhibit movement of the diaphragm
  – Increased supraglottic airway resistance
  – Billowing cheeks
  – Difficult mask seal
  – Quicker desaturation
Obesity or Obstruction

• 3rd Trimester Pregnancy
  – Increased body mass
  – Quick desaturation
  – Increased Mallampati Score
  – Gravid uterus inhibits movement of the diaphragm
Obesity or Obstruction

• Obstructions
  – Foreign Body
  – Angioedema
  – Abscesses
  – Epiglottitis
  – Cancer
  – Traumatic Disruption/Hematoma/Burns
Age > 55

- Associated with BVM difficulty, possibly due to loss of tone in the upper airway
No Teeth

• Face tends to “cave in”
• Consider leaving dentures in for BVM and remove for intubation
Stiff

- Refers to Poor Compliance
- Reactive Airway Disease
- COPD
- Pulmonary Edema/Advance Pneumonia
- History of Snoring/Sleep Apnea
  - Also predicts a higher Mallampati score
Difficult Laryngoscopy & Intubation

• LEMONS
  – Look Externally
  – Evaluate 3-3-2
  – Mallampati Score
  – Obstruction
  – Neck Mobility
  – Scene and Situation
LOOK Externally

- Beards or facial hair
- Short, fat neck
- Morbidly obese patients
- Facial or neck trauma
- Broken teeth (can lacerate balloons)
- Dentures (should be removed)
- Large teeth
- Protruding tongue
- A narrow or abnormally shaped face
EVALUATE 3-3-2

- Bottom of Jaw/Chin to Neck > 3 fingers
- Jaw/Palate > 3 fingers wide
- Mouth opens > 2 fingers wide
EVALUATE 3-3-2

• Mouth Opens at least 3 finger widths.

• Three finger widths thyromental distance.

• Two finger widths mandibulohyoid distance.
EVALUATE 3-3-2

- Will patients’ mouth open wide enough to accommodate 3 fingers?
- Will 3 fingers fit between the mentum and hyoid bone?
- Will 2 fingers fit between the hyoid and thyroid notch?
  - If not, expect a difficult intubation
Video on 3-2-2
**Mallampati Scoring**

**Class 1**
Visualization of the soft palate, fauces, uvula, anterior and posterior pillars.

**Class 2**
Visualization of the soft palate, fauces and uvula.

**Class 3**
Visualization of the soft palate and the base of the uvula.

**Class 4**
Soft palate is not visible at all.
Laryngoscopy or intubation may be more difficult in the presence of an obstruction

- Anatomy
- Trauma
- Foreign body obstruction
- Edema (burns)
Obstructions

Laryngoscopic View Grades

Grade 1: Full aperture visible
Grade 2: Lower part of cords visible
Grade 3: Only epiglottis visible
Grade 4: Epiglottis not visible
Cormack & Lehane Grading

Fig 1 Classification of Laryngoscopy Views
Neck Mobility

- Ideally the neck should be able to extend back approximately 35°
- Problems:
  - Cervical Spine Immobilization
  - Ankylosing Spondylitis
  - Rheumatoid Arthritis
  - Halo fixation
Scene and Situation (SEE)

- Scene safety
- Environment
  - Do you have a reasonable chance to get the tube?
  - Space, positioning, access
- Egress
  - Will you be able to ventilate during egress?
  - A respiratory rate of 4 is better than a rate of 0!
  - Enough meds for a long extrication?
“BURP” – a.k.a. “External Laryngeal Manipulation”

- Backward, Upward, Rightward Pressure: manipulation of the trachea
- 90% of the time the best view will be obtained by pressing over the thyroid cartilage

Differs from the Sellick Maneuver
Thyroid versus Cricothyroid Cartilage

- Thyroid cartilage used in “BURP” maneuver. Does not form a complete ring around the trachea.
- Cricothyroid Cartilage used in CricoidPressure, does form a full ring around the trachea allowing for the compression of the esophagus.
To Summarize

• Airway assessment is a critical part of the RSI process
• The difficult airway assessment must be performed prior to ALL RSI attempts.
• While this criteria helps identify difficult airways, it does not guarantee an easy intubation—*Be Prepared!*
RSI Module
RSI: 3 Phases

- **Pre**: Before the airway intervention
- **Peri**: Everything around the airway intervention
- **Post**: Managing the secured airway
First step: “PRE” Phase
“PRE” Phase

• Assessment
• Preoxygenation
• Preparation
• Positioning
“PRE” Assessment

• Primary & secondary survey

• Indications for airway intervention

• Difficult airway assessment
“PRE” Assessment

Primary & secondary survey

• Like you do everyday!

• *Minimum* vital signs: HR, RR, ECG, SpO2, BP, mental status, blood glucose level
“PRE” Assessment

Indications for airway intervention

• Failure to maintain and/or protect airway
• Respiratory failure
• Expected clinical course (anticipated deterioration)
“PRE” Assessment

Difficult airway assessment

• Don’t worry about death by acronyms!

• Fat things, small things, tall things, wrong things... all = bad (maybe)
“PRE” Assessment
Difficult Airway Assessment

“Fat” things

- Enlarged / edematous tongue
- Masses
- Large body habitus
“PRE” Assessment
Difficult Airway Assessment

Small things (3-3-2)

• Short neck
• Small mandible
• Limited mouth opening
“PRE” Assessment
Difficult Airway Assessment

Tall things

• Long neck

• Elongated facial features
“PRE” Assessment
Difficult Airway Assessment

“Wrong” things

• No teeth
• Scarring / surgery
• Facial hair
• Neck mobility
“PRE” Assessment
Difficult Airway Assessment

Other considerations

• Age

• Underlying comorbid factors
“PRE” Assessment
Difficult Airway Assessment

Discussion

• Is a predicted difficult airway a contraindication for RSI?

• It depends on the patient, conditions, provider experience, and distance to definitive care.
“PRE” Preoxygenation

What is our goal?

• Establishment of an oxygen reservoir to permit several minutes of apnea without desaturation.

• “No bagging” technique
“PRE” Preoxygenation

- NRB @ 15 LPM for 3+ minutes
- CPAP if indicated
- BVM ventilation @ 15 LPM with nasal airway(s) for bradypnea
“PRE” Preoxygenation

Nasal EtCO2, if possible, why?

• Provides real-time physiological monitoring

• CANNOT be used for nasal cannula oxygenation during paralysis
What does this mean to you?

Benumof, JL, et al. Critical hemoglobin desaturation will occur before return to an unparalyzed state following 1 mg/kg intravenous succinylcholine. Anesthesiology, 1997;87(4):979-982.
“PRE” Preoxygenation

Discussion

• Is the inability to increase SpO2 >90% a contraindication for RSI?

• It depends on the patient, conditions, provider experience, and distance to definitive care.
“PRE” Preparation

What do we need to perform airway management?

• Plan
• Patient
• Equipment
• Medical command
• Medication

Communication!
“PRE” Preparation

Plan

• What are we going to do?
• How are we going to do it?
• What are we going to do when things don’t go as expected?
“PRE” Preparation

Plan

• You don’t have a plan unless you talk about it!

• Poor planning = Poor patient & provider outcome 😞
“PRE” Preparation

Patient

• Monitoring equipment on the pt
• Vascular access (at least 1 IV or IO line) with saline bag hung
• Prepare patient and family – explain procedure
“PRE” Preparation

Equipment – BLS:

• Oral and nasal airways
• BVM and oxygen
• Suction
• Suction
• Suction
• Suction
“PRE” Preparation

Equipment – ALS:

- ETT & accessories
- King Tube
- EtCO2 15/22 mm adapter
- Bougie
- Tube holder & cervical collar
“PRE” Preparation

Medical command:

- Provide a picture of your impression and plan
- Use tools to plan and prepare

### RSI Quick Reference Guide

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5. **POSITION & PROTECT:**
   - Sniffing position with occipital padding if no trauma & use ELM / SURF to assist view
   - Intubate: maximum of 5 attempts total unless King Tube insertion
   - Use the BOUNCE if Grade III view

6. **POST-INTUBATION SEDATION: REQUIRED BY DON-OEMS**
   - Midazolam: 4, 5, 6, 7, 8, 9, 10, 11, 12
   - Lorazepam: 2, 2, 2, 2, 2, 2, 2

7. **POST-INTUBATION ANALGESIA**
   - Fentanyl: 40, 50, 60, 70, 80, 90, 100, 110, 120

8. **POST-INTUBATION MANAGEMENT:**
   - ETCO2 waveforms after ET/T catheter placement, patient movement, transfer of care
   - Full vital signs at 1, 3, 5 min. then every 5 minutes or less
   - Watch for signs of weakness, re-contact medical command physician if necessary

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“PRE” Preparation

Medical command:

• Situation – what we have
• Background – what led to it
• Assessment – what we found
• Recommendation – what we want
• Repeat – what orders we got
“PRE” Preparation

Medication

• Draw and label induction and post-airway sedation

• Both providers verify dose and volume!

• Have resuscitation meds ready
“PRE” Preparation

Medications – Sedation/induction

- Etomidate
- Ketamine
“PRE” Preparation

Medications – Paralysis

• Succinylcholine
• Rocuronium

Medical command ONLY, no communication failure orders
Etomidate

Class: general anesthetic

Indication: induction of anesthesia

Contraindication: hypersensitivity

Dosage: 0.3 mg/kg IV/IO
“PRE” Preparation

Etomidate
Onset: 30-60 seconds
Duration: 5 minutes
“PRE” Preparation

Ketamine

Class: anesthetic adjunct & analgesic

Indication: general anesthesia adjunct & sedation
“PRE” Preparation

Ketamine

Contraindications:

1. conditions where significant elevations in blood pressure would be a serious hazard

2. hypersensitivity
“PRE” Preparation

Ketamine – Dosing:

Airway adjunct with IV/IO established: 1.5 mg/kg IV/IO

Airway adjunct **without** IV/IO or excited delirium: 5 mg IM
“PRE” Preparation
Ketamine – Adverse effects:
Emergence reaction
• 12-50% of all cases – benzodiazepine admin. helps
Skeletal muscular hyperactivity
“PRE” Preparation

Paralysis – options:

1. Succinylcholine
2. Rocuronium

What’s the difference?
“PRE” Preparation

Paralysis – options:
Succinylcholine – depolarizing neuromuscular paralytic
  • combines with the cholinergic receptors of the motor end plate to produce depolarization
“PRE” Preparation

Paralysis – options:
Rocuronium – non-depolarizing neuromuscular paralytic
• competes for cholinergic receptors at the motor end-plate
“PRE” Preparation

Succinylcholine:
Classes:
1. Musculoskeletal Agent
2. Skeletal Muscle Relaxant
“PRE” Preparation

Succinylcholine:

Indications:

1. Induction of neuromuscular blockade endotracheal intubation
2. Rapid sequence intubation
“PRE” Preparation

Succinylcholine:

Contraindications:

1. major burns, extensive denervation of skeletal muscle, or upper motor neuron injury

2. hypersensitivity
“PRE” Preparation

Succinylcholine:

Contraindications:

3. malignant hyperthermia, personal or familial history of

4. skeletal muscle myopathies
“PRE” Preparation

Succinylcholine – Dosing:
1.5 mg/kg IV/IO

Onset: 30-60 seconds
Duration: 6-10 minutes
“PRE” Preparation

Succinylcholine – Adverse Reactions:

• Malignant hyperthermia
• Hyperkalemia
• Bradyarrhythmias
“PRE” Preparation

Rocuronium:
Class: musculoskeletal agent

Indication:
• Facilitate tracheal intubation or mechanical ventilation
“PRE” Preparation

Rocuronium:

Contraindication: hypersensitivity

Dosing for intubation or prolonged paralysis: 1 mg/kg IV/IO

• Onset: 60-90 seconds
• Duration: 45-60 minutes
“PRE” Positioning

KEEP CALM AND PAD THE OCCIPUT


FACE PARALLEL TO CEILING

EAR LEVEL WITH STERNAL NOTCH
“PRE” Positioning

• At least 20° of head elevation as patient condition permits
• Provider needs to manipulate conditions to provide optimal intubating position to achieve success
Next step: “PERI” Phase
“PERI” Phase

• Pretreatment (if any)
• Timeout
• Induction
• Position
• Protect airway
"PERI" Pretreatment (if any)

Common medical command orders:

• Fentanyl at 2-3 mcg/kg
• Lidocaine (head injured/stroke) at 1-1.5 mg/kg

3+ minutes prior to induction
“PERI” Timeout

What is the point of a timeout?

Verify, as a team:

• Equipment is ready

• Medications drawn & confirmed by both providers

• Plan for primary, secondary, & even tertiary considerations
“PERI” Timeout

Communication – All providers (ALS & BLS) know:

• The plan
• Their roles
• Their limitations
“PERI” Induction

Step 1
Take a deep breath (or ten)

Step 2
Nasal cannula oxygen at 6-15 LPM (a.k.a. “No-Desat”)
“PERI” Induction

Step 3
Administer induction agent

Step 4
Administer paralytic immediately after induction agent
“PERI” Induction

Step 5

If using succinylcholine, watch for fasiculations (~45 seconds)

Check for signs of flaccid paralysis

Consider cricoid pressure
“PERI” Position

Step 6

Position the patient, remember:

KEEP CALM AND PAD THE OCCIPUT

FACE PARALLEL TO CEILING

EAR LEVEL WITH STERNAL NOTCH


Unless spinal immobilization is indicated

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“PERI” Position

Step 7

Bimanual laryngeal manipulation:

• Insert laryngoscope blade

• Take an assistant’s hand (if available)

• Manipulate assistant’s hand with your right hand to optimal laryngeal view
“PERI” Protect

Step 8
Intubate!

What’s your view:

Good
Okay
Uh-oh
No good
"PERI" Protect

Step 8a
First attempt unsuccessful... Do something different:

• Change position
• Change method
• Change person
“PERI” Protect

Step 8a continued:
Change position
• Provider position
• Patient position
• Laryngeal position
“PERI” Protect

Step 8a continued:
Change method
• Different blade
• Bougie
“PERI” Protect

Step 8a continued:
Change providers
• Don’t be too proud
• Maximum of 3 attempts between all ALS providers
“PERI” Protect

Step 8a continued:
King Tube insertion when:

- 3 intubation attempts
- Desaturation
- Unable to achieve Class 3 view or better with bimanual laryngeal manipulation
“PERI” Protect

Step 9

Confirm!

• Direct visualization, if possible
• 5-point auscultation
• EtCO$_2$ – capture waveform
“PERI” Protect

Step 9

Secure

• Thomas Tube holder

• Cervical collar to minimize flexion/extension during movement
Next step: “POST” Phase
“POST” Phase

• Reassess
• Sedate
• Repeat
• Transfer
“POST” Reassess

• **Minimum** requirements: HR, RR, ECG, SpO2, BP, mental status (GCS), EtCO2

• Immediately after securing airway
“POST” Sedate

- Goal: within 6 minutes of etomidate administration
- Don’t let a gap occur between induction and post-sedation
“POST” Sedate

• Administer slowly
• Consider incremental administration
“POST” Sedate

• Ideally, use only ketamine or a combination of midazolam and fentanyl

• Patients may respond well to lower dosages when used in combination
“POST” Sedate

• Sedation is required under all circumstances unless the patient degrades into cardiac arrest
“POST” Repeat

Reassessment

• Every 5 minutes or less, complete vital signs

• Must be documented on PCR
“POST” Repeat

Reassessment continued:

• EtCO2 waveforms captured with each patient movement

• To the stretcher, to the ambulance
“POST” Repeat

Sedation / analgesia

• Repeat as needed
• Repeat as needed
• Repeat as needed
“POST” Transfer

- Patient remains on all monitoring
- EtCO2 waveforms captured after movement to the ED bed or to care of another MICU/AMU
“POST” Transfer

Transfer of care report:

• Situation – what we have
• Background – what led to it
• Assessment – what we found
• Recommendation – what we did and what we suspect
“POST” Transfer

Debrief:

• What happened
• What we can improve
• What went well
Questions?
Difficult Airway Considerations Module
Difficult Airway Considerations

- Is intubation always the best options?
- What other airway options are there?
  - King Tube
  - Oral airway and BVM
  - Needle Cricothyrotomy
  - Nothing at all?
King LTS-D

- Sized based on height
- Lubricate the distal tip
- Position head like preparing for ETT
- Insert in the corner of the mouth at 45° angle
- Bring in to midline
King LTS-D

- Insert till the hub is at the teeth
- Inflate pilot balloons
- Ventilate and withdraw till equal lung sounds and easy bagging
Gum Elastic Bougie

- Used for Grade 3 Airways
- Used in conjunction with Laryngoscope
- Place ETT over Bougie prior to intubation attempt
- Can feel tip “tap” cricoid cartilage
Gum Elastic Bougie
Needle Cricothyrotomy

- Does not require RSI attempt prior to trying needle cricothyrotomy
- Requires Medical Control Order to execute
- Need to consider rapidly if patient can not be ventilated and low SPO2
Nasal Intubation

• Attractive Option when unable to paralyze patient
• Utilize LoPro ET Tube
• Lube the distal tip
• Make use of BAM device to help determine patient inspiration
• Advance until you meet major resistance
  – Switch nares
Nasal Intubation
Needle Cricothyrotomy
Solo Provider RSI

• A difficult airway consideration
• Need confidence you can intubate
  – No skilled backup
• Preparation is critical
• Consider Ketamine for induction
  – Doesn’t suppress respiratory drive
  – Outlasts succinylcholine
Succinylcholine

- Duration of action 5-10 min.
- Drug is degraded in light and in non refrigerated environment
- Needs refrigeration or reconstitution
- Potency maintained for 2 weeks at room temp
Succinylcholine Contraindication

• Succinylcholine effective tool but significant side effects

• Relative contraindications include:
  – Known or suspected hyperkalemia
  – Penetrating globe injury
  – Increased intracranial or intraocular pressure
  – Those with muscular dystrophy or muscle wasting diseases
Succinylcholine Contraindication

- Succinylcholine effective tool but significant side effects
- Absolute contraindication:
  - Inability to ventilate patient with BVM
  - An anticipated difficult airway
  - History of Malignant Hyperthermia

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Succinylcholine issues

- Cardiac Arrest Post Succinylcholine administration
  - Assume Hyperkalemia
  - Seek orders for:
    - 1 gram Calcium Chloride
    - 1 mEq/kg Sodium Bicarb
    - 10 units Insulin
    - 25g D50
Succinylcholine issues

- Drastic Rise in ETCO2
  - Increase respiratory rate
  - If unable to lower ETCO2 despite hyperventilation consider malignant hyperthermia
  - Alert receiving facility of potential need for Dantrolene
Ketamine Only

• Consider Ketamine online intubation
  – If succinylcholine is contraindicated
  – Potential difficulty in ventilating patient
    • Airway reflexes heightened by Ketamine
  – Concerns for potential to manage airway and performing solo intubation
Trauma

• One of the more “difficult” airways we will address

• Added concern of spinal immobilization while managing the airway

• Requires to providers
  – One performs airway intervention
  – One holds stabilization

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Entrained Trauma

- Is intubation the right choice for this patient?
- How long till patient extricated?
- Is it safe for providers to render care?
Entrapped Trauma

- Can you make vascular access?
- Can you access the neck for emergency airway?
- Consider Face to Face Intubation
- Is it safe for providers?
Air Trauma

• Is intubation the right choice?
• How to ventilate this patient?
• What alternates exist?
  – Is the patient mentating and can they sit up to clear airway?
  – Cric?
  – Aim for the bubbles?

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Swelling Issues

Looks easy but now what?
Swelling Issues

- Is there enough room in the mouth to work?
- Blind insertion airway?
Case Study #1

• 24 year old female riding a quad
• Struck a steel support cable at jaw level
• Damage to jaw prevents bag valve ventilation
  – Altered Mental Status
  – HR: 54, Sinus
  – BP: 160/90
  – SPO2: 74%
  – RR: 12, shallow

Treatment Plan?
Case Study #2

- 81 y/o female patient
- Hx of CHF, HTN, Renal Failure
  - RR: 44
  - HR: 160, A-Fib
  - BP: 190/110
  - SPO2: 86%
  - Missed last two dialysis treatments

Treatment plan?
Case Study #3

- 44 y/o male attempted suicide by shotgun
  - Alert and Oriented
  - Following Commands
  - HR: 110, Sinus
  - BP: 104/60
  - RR: 14
  - SPO2: 96%

Treatment plan?
Case Study #4

- Gradual Increase in respiratory distress for several days
  - HX of HTN, A-Fib, CHF, Diabetes, Malignant Hyperthermia
  - RR: 60, shallow, rales to ¾
  - HR: 120, A-Fib
  - BP: 180/120
  - SPO2: 83%

Treatment Plan?