

Taking Flight

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Objectives

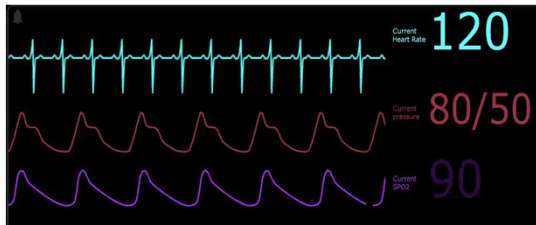
- Discuss case studies
 - Discuss aspects of flight physiology
 - Discuss requirements of a flight crew
 - Identify value of a RT on a flight crew
- Not necessarily in that order.

Case #1 0230hrs

- A 58yom, multiple trauma (MC vs. deer) is brought to your ER. No helmet.
 - Compound, bi-lateral femur fractures (splinted)
 - Head lx and contusions (bandaged)
 - Chest contusions & road rash
 - Right clavicle fracture
 - Right flail chest
 - EMS (BLS service) is bagging the patient
 - You, 2 nurses and the provider is on the way

Vitals

- Respiratory rate-12 bpm with BVM
- BP- 80/50
- HR- 120
- Temp- 96.6°F
- SaO2- 90% w/BVM (and difficulty)



What are you going to do!!?

- The provider has arrived.
 - A: Suggest and assist or perform intubation
 - B: Chest decompression followed by chest tube
 - C: Say "Thank goodness!" and leave
 - D: Say nothing and pretend to be busy

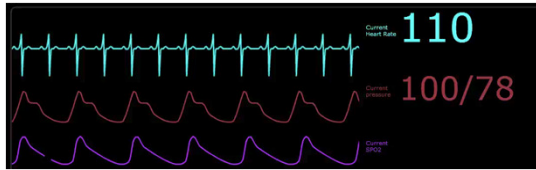


A

- Patient gags and vomits when the laryngoscope is introduced. Oropharynx is also full of frothy blood....and now vomit.
 - Double cheeseburger w/bacon, fries, onion rings, chili, carbonated beverage and
 - CORN.

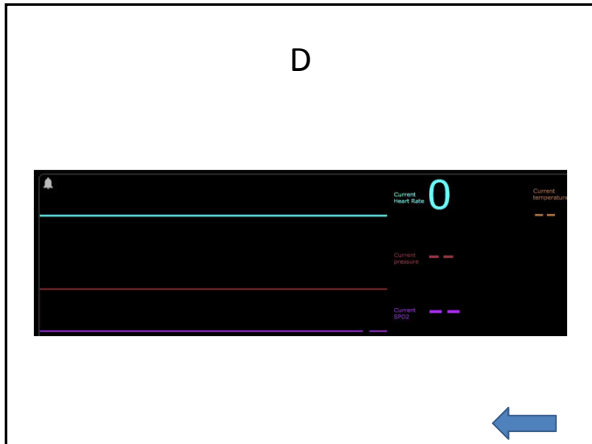


B



C





Needle Decompression

- Needle
 - 14g or bigger
- Location
 - 2nd or 3rd intercostal space, mid-clavicular line
- Over or under the rib?
 - Over the rib
- Uh Oh! Tension pnuemo again
 - Nice orange hub sticking out, stick 1 next to it

Now what?

- A: Airway
- B: Breathing
- C: Circulation
- D: Defibrillation/Differential DX

- Due to road rash, the nurse can't find a suitable IV site.

Now what?

- IO access to administer RSI medications.
- Rule #1 Optimize all airway attempts
- Rule #2, refer to rule #1

So...what part if any of this case has to do with RT?

- All of it. There was not a single intervention a RT can't do.

- Now imagine that same case. (Close your eyes) In the space half the size of a mini-van, smaller on a rotor, with only you and a partner. All of your gear is in a bag or a drawer. You are seat-belted in and hitting turbulence when your patient crumps.



What do we bring to the table?

- Ok, here are some example questions:
 - Can we access the vascular system? (IV/IO)
 - Can we intubate?
 - Can we chest decompress?
 - Can we push drugs?

- Respiratory Therapy:
- "A health care profession whose therapists practice under the supervision of a qualified medical director and with the prescription of a licensed physician providing therapy, management, rehabilitation, respiratory assessment and care of patients with deficiencies and abnormalities which affect the pulmonary system AND associated other systems functions".

- The duties which may be performed by a respiratory therapist include:
- Direct and **indirect** respiratory therapy services that are safe, aseptic, preventative and restorative to the patient.
- Direct and **indirect** respiratory therapy services, including but not limited to, the administration of pharmacological and diagnostic and therapeutic agents related to respiratory therapy procedures to implement a treatment, disease prevention or pulmonary rehabilitative regimen prescribed by a physician.
- Administration of medical gases, exclusive of general anesthesia, aerosols, humidification and environmental control systems.
- Transcription and implementation of written or verbal orders of a physician pertaining to the practice of respiratory therapy.
- Implementation of respiratory therapy protocols as defined by the medical staff of an institution or a qualified medical director or **other** written protocol, changes in treatment pursuant to the written or verbal orders of a physician or the initiation of emergency procedures as authorized by written protocols." [K.S.A. 65-5502\(b\)](#)

So...any of the previous case fall into scope of practice in KS?

- This is where you participate again.....

Gas Laws


- Remember those?
- $P_1 \times V_1 = P_2 \times V_2$
- Name?
- Importance?



- $P_1 + P_2 + P_3 + \text{etc....}$
- Name?
- Importance?

Not just from the waste up anymore

- Selfie



- In case you missed it on FB



- On an aircraft, “no one” gives a fecal matter what your title is.
- If the patient needs a foley and your partner is busy doing something else...guess what?
- How about an OB vag check? Yup, same thing.
- Should said fecal matter hit the fan and the floor, no longer can you call for the nurse or house-keeping to clean it up.

2014. 2 is 1, 1 is none

- If your partner can't do it, you better be able to, and vice versa.
- Cross-training is crucial.
- The more knowledge and skill you bring to the table, the better off your patient is.
- The largest text for flight nurses commends RT's on their skill levels.
- Skill is only as good as your knowledge and practice.

Training

- There is no difference in training regardless of credentials.
- Quarter and annual skill competencies
- Monthly self-studies
- Advanced Certs
 - ACLS
 - PALS
 - NRP
 - ATLS or ACCT (Trauma)

The not so fun

- Flight suits!!!
 - Hot when it is warm
 - Cold when it is cold
 - Heavy when loaded
 - They make me look fat

The not so fun

- The aircraft
 - Extremely tight working quarters
 - Boyles Law
 - Turbulents
 - The effects of flying multiple missions
 - Inventory
 - Cleaning it
 - Downtime (boredom)

Summary

- Critical thinking skills
- Skills outside the “typical” RT practice
- Willing to learn new things
- No safety net
- Autonomy
- Satisfaction of a job well done

Questions?
