

Liberation: Team Driven Strategies Optimizing ICU Resource Utilization and Patient Safety

Cammy Christie, APRN

University of Florida Division of Critical Care Medicine

Liberation

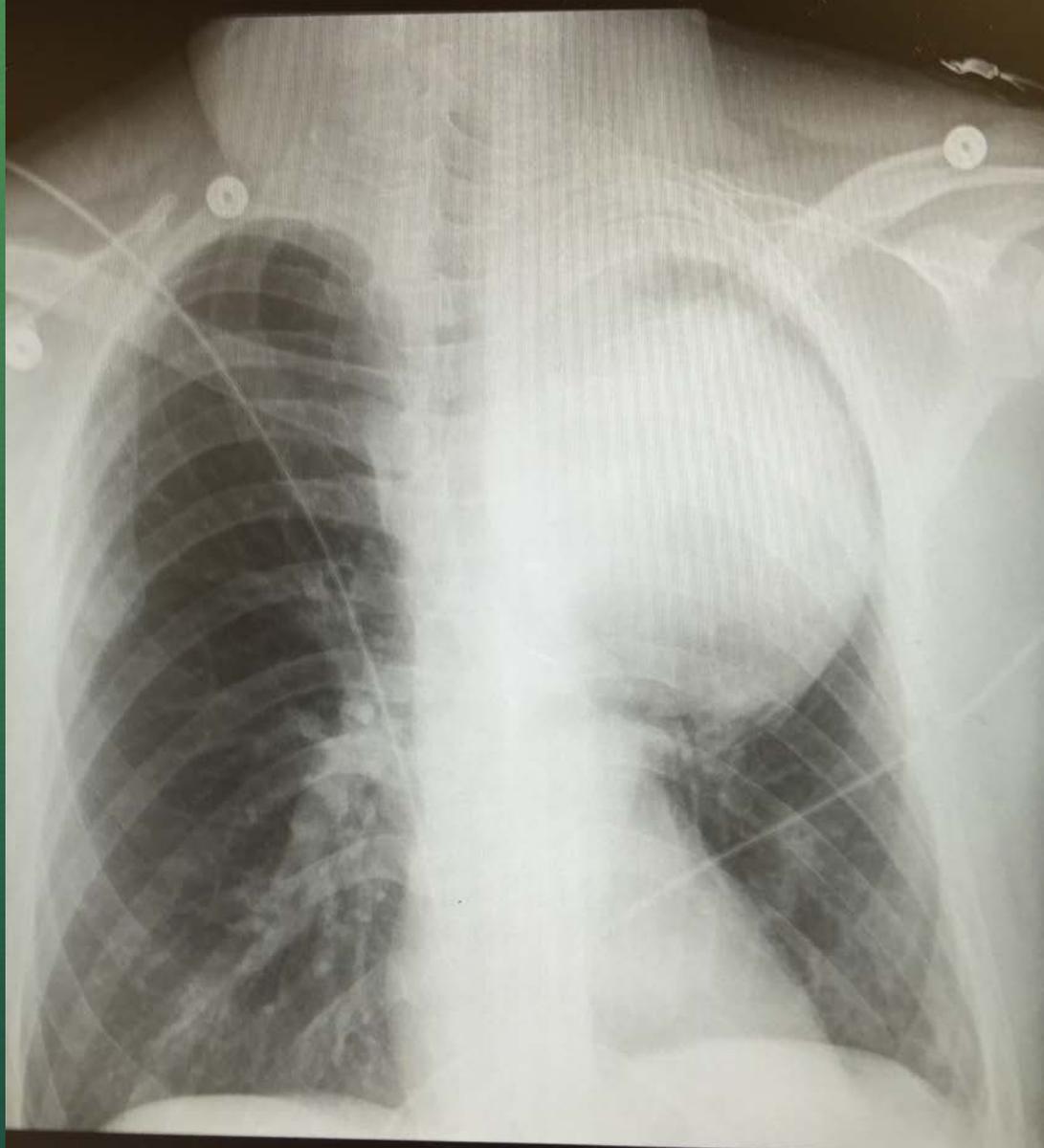
- “The act of setting someone free of imprisonment, slavery, or oppression, to release...”
- “The freedom from limits on thought or behavior.”
- Liberation Bundle: SCCM/AACN

Liberation Bundle: 2014

- Reduce ICU Complications: Joint Effort of Care
 - A: Assessment, Prevention, Manage Pain
 - B: Both Spontaneous Awakening Trials and Spontaneous Breathing Trials
 - C: Choice of Analgesia and Sedation
 - D: Delirium: Assess, Prevent, Manage
 - E: Early Mobility and Exercise
 - F: Family Engagement and Empowerment
 - (Crit Care Med 2017: 45; e 1111-e 1122)

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2531 CHEST 0740HRS
CHEST 0740HRS

CHEST 1 VIEW
Chest AP

S. 4 (Thin)
AAA Pre-Op Wl

S. 2
88V Sure Start

S. 3
SURE START Su

S. 5
AAA Pre-Op Cor

S. 6
AAA Pre-Op Sec

S. 9000
AAA Pre-Op Su

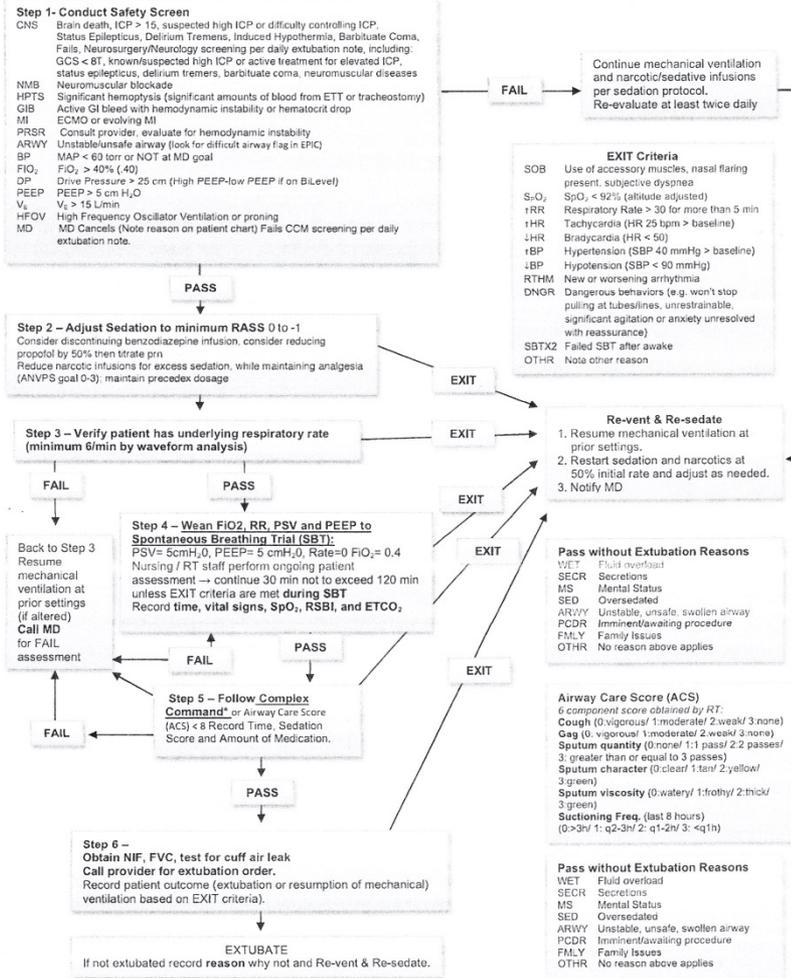
Localizer
CT 2013-09-06



Today's Crisis



Daily Wake Up Plus BEST (Breathing to Extubate Spontaneous Trial)



Do not file in Medical Record after Discharge

Patient Name: Patient Identification #:

STAGE 1

Initial Ventilator Settings:

- SIMV 12-16 Breaths per minute
- Set FIO₂ to keep SpO₂ greater than 94%
- Tidal volume at 6-8 mL/kg of ideal body weight
- Positive End Expiratory Pressure at 5-8 cm H₂O
- Pressure Support at 5 cm H₂O
- Obtain ABG in 30 min



Adjust Ventilator to Maintain:

- pH: 7.35-7.45
- PaCO₂: 35-45 mmHg
- PaO₂: 80-120 mmHg
- SpO₂ greater than or equal to 94%



Adjustment Ranges:

- FIO₂: 0.35-0.60
- Rate: 4-16 breaths per minute
- PEEP: 5-8 cm H₂O
- PS: 5-10 cm H₂O
- VT: 6-8 mL/kg of ideal body weight
- Note: Notify intensivist service if unable to achieve above parameters.



Proceed to patient weaning criteria section.



PATIENT WEANING CRITERIA SECTION

Hemodynamic Status:

- Cardiac Index is 2.2 or greater
- Systolic BP is greater than 90 mmHg
- Heart rate is within 30 beats/min of ICU/Post OP admission baseline
- Temperature is greater than 35.5 degrees Celsius and no shivering
- Urine output is greater than or equal to 0.5 mL/kg/hour (using ideal body weight)

Recovery from Anesthesia:

- Strong grasp bilaterally and/or 5 second head lift
- Responds to voice and moves all extremities

Post-Operative Bleeding/Chest tubes:

- Chest tube drainage is less than 100 mL/hour for one hour post arrival per tube
- Hemoglobin is 8 grams/dL or greater

If patient meets all above weaning criteria, proceed to starting point on page 2.

If patient does not meet all weaning criteria, reevaluate at least every hour and PRN until criteria is met.



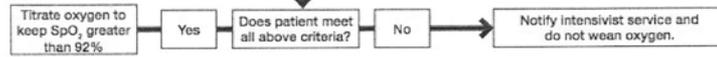
STAGE 2
Ventilator Settings:
 Wean SIMV to 4 breaths per minute
 Wean FiO₂ to 0.4 or lower
 Return to previous ventilator settings if:
 - Total respiratory rate is less than 8 breaths/minute
 - Patient is unable to achieve spontaneous VT greater than 4 mL/kg of ideal body weight
 Obtain ABG within 20 minutes of achieving above vent settings

Extubation Criteria:
 pH between 7.33-7.50
 PaCO₂ between 30-45
 PaO₂ greater than 80 mmHG with FIO₂ 40% or less
 SpO₂ greater than 94%
 Respiratory rate between 8 and 20 breaths per minute
 Spontaneous VT greater than 4 mL/kg ideal body weight
 Effective cough is noted
 Suctioning is not required greater than or equal to every 2 hours
 Patient continues to meet criteria in the Weaning Criteria Section



Place oxygen mask or nasal cannula to keep SpO₂ greater than 94%.
 Order ABG in 20 minutes.

pH between 7.35-7.50
 PaCO₂ between 30-45
 PaO₂ greater than 80 mmHg
 SpO₂ greater than 94%
 Respiratory rate between 8-25 breaths/min
 Patient continues to meet criteria in the Weaning Criteria Section



Weaning Parameters:
 Neurological State,
 Labs, Gag Reflex,
 Secretions, VS, P/F
 ratio, OSA, NGT
 output,
 Airway Evaluation
 (Grade 1 MAC 3)
 NIF, FVC, RSBI, Cuff
 Leak

Goal: Extubation within 4-6
hours??

Beginning data: 12 hours

Ending data: 80% patients extubated
within goal

How to Make Changes

- 1. Fundamental reset of Care Ratios in the ICU
- 2. Establish the accountability, have a definitive plan based on the patient not the clock, give responsibility to the Nurse and Respiratory Therapist, and **authority** ...
- 3. Change in model of care. Instead of a traditional pyramidal/tier structure, every member of the team was genuinely empowered to present and express thoughts on their facet of patient care....

How to Make Changes

- We then became a true Patient-Centric model of care – with a level care team structure.
- Team created the “Fast Track Extubation” protocol
- Refined over time...
- Education is the key to success – as always!
- **The Real Deal: Improved Physician, APP, Nurse and Respiratory Therapy Satisfaction!!**
 - **AND: Patient Outcome Improvement!**



To move outside the normal, to
move toward passionate
creativity to Provide
compassionate care. To
Liberate!!



**Knowing is not enough; we must apply.
Willing is not enough; we must do.**

Johann Wolfgang von Goethe

Thank You...

Cammy:

cam4230@gmail.com