Migrated ETT on Transfer:

Set-up:	
Lines/access:	RIJ CVC & right radial arterial line
Infusions:	Propofol, remifentanil, noradrenaline 0.3mcgs/kg/min, 1L crystalloid at 100ml/hr
Airway:	ETT 24cm at lips, loosely secured (documented at ETT 21cm at lips on chart/computer)
Ventilator:	P-SIMV 14/8 FiO_2 0.3 Rate 16 breaths/min. Transfer ventilator off but still at bedspace.
Other:	Lung simulator with capability of reducing compliance (see videos)

Clinical Setting

I: You are the ICU doctor receiving the patient back from the CT scanner. The doctor performing the transfer has handed over to the bedside nurse and left.
S: Bedside nurse is transferring patient back onto ICU ventilator from transfer ventilator and notes tidal volume less than when they left
B: 65 year old patient admitted to ICU with hypoxaemic respiratory failure due to a presumed CAP. CTPA to exclude pulmonary embolism.
A: Low tidal volumes on portable ventilator with high airway pressures.
R: Called for help

Potential Clinical Course:

- Initially **A** ETT 24cm at lips, **B** SpO_2 99% on FiO_2 1.0 PSIMV at 16bpm, low tidal volumes, $ETCO_2$ 5 kPa, no breath sounds left side, **C** HR95bpm SR, BP 118/62, **D** Deeply sedated (not paralysed)
- Low VTs, climbing $ETCO_2$, slow desaturation
- No change on ICU ventilator. Nurse reports settings same as before transfer
- Examination- patent ETT 24cm at lips, tube loosely secured, silent left lung, unilateral chest expansion on right side
- Saturations continue to fall despite 100% FiO2
- ETT patent- can pass suction catheter
- If ETT withdrawn- ventilation improves and saturations climb

This Simulation Scenario has been written by Dr James Matthews, the document has been produced by Dr Melia and approved by the FICM Education Sub-Committee. If you have any queries, please contact FICM via contact@ficm.ac.uk.

The Faculty of Intensive Care Medicine

Info Sheet For Faculty

- Initial settings:
  - SpO_2 95% on FiO_2 1
  - $ETCO_2$ 5.1kPa
  - RR 16/min
  - Quiet breath sounds left lung
  - HR 95bpm
  - BP 118/62

- Progress to: SpO_2 92% on FiO_2 1.0
  - $ETCO_2$ 6.0kPa
  - No breath sounds left lung/ not expanding
  - HR 100bpm
  - BP 105/60

- Progress to: SpO_2 85% on FiO_2 1.0
  - $ETCO_2$ 6.9kPa
  - No breath sounds left lung/ not expanding
  - HR 118bpm
  - BP 95/60

- On withdrawal of ETT (remove restriction on lung simulator)
  - SpO_2 climb to 94% on FiO_2 1.0
  - $ETCO_2$ 5.6kPa
  - Breath sounds bilaterally but reduced left base. Bilateral expansion
  - HR 108bpm
  - BP 108/68

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The Faculty of Intensive Care Medicine

Faculty Roles

Bedside Nurse 1:

- You are an ICU nurse who has recently completed your transfer training
- You have returned from transferring a 65M with presumed CAP back to ICU with one of the registrars
- You have no concerns except that the tidal volumes are a little less than before transfer
- If asked why you think the tidal volumes are low volunteer that the patient may have "de recruited" on switching ventilators
- If the candidate asks guide the participant to where the ETT depth is documented as "21cm at the teeth" within the bedspace

Bedside Nurse 2:

- You are a student nurse on critical care placement
- You are responsible for manipulating the lung simulator if using simple test lung as per videos

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