Exacerbation of Asthma

Set-up:	
Lines/access:	2 peripheral cannulae
Infusions:	Nil
Airway:	Own
Ventilator:	NIV machine & relevant interface
Other:	Airway trolley

Clinical setting

I: You are the ICU registrar and are called to resus to assess a patient
S: ED registrar reports brittle asthmatic requiring NIV – poorly tolerant
B: 32 year old female with known asthma, hypoxic and wheezy
A: Commencing on BiPAP, ketamine infusion being prepared
R: Please review for HDU admission

Potential Clinical Course:

- Initially A own, B Sp02 92% on FiO2 0.4, RR 32, diffuse wheeze C HR 115, BP 100/60 (falling), CRT >3sec, D GCS14/15 losing one on eyes

- ED reg leaves to attend another patient
- Reg makes own assessment and plans – interventions as requested
- ED reg returns with ABG – normocapneoic. Insists to commence NIV – starts at 14/8
- Leaves to review another patient
- Returns and enquires how the patient is doing – now more drowsy
- Decision to I+V: - ED reg comes up with drugs plan – 25mg suxamethonium, 2mg midazolam, no opiates. Reasons that "we want to be able to wake the patient up, if we can't intubate them"
- Prepares for intubation – on giving the drugs, a nurse enters the room and informs the ED reg that the patient's family have arrived. ED reg leaves.
- End-point of scenario is salvage of the situation, and intubation/ventilation. High airway pressures with slow to pick up EtCO2 – "if in doubt pull it out?". Rationalises ventilation modality and settings.

The Faculty of Intensive Care Medicine

Info Sheet For Faculty:

- Initial settings: SpO2 92% on FiO2 0.4
    - ETCO2 off
    - RR 32
    - Diffuse wheeze
    - HR 115bpm SR
    - BP 100/60
    - Eyes closed but opens when patient spoken to

- Initial deterioration: SpO_2 90% on FiO_2 0.4 – NIV applied
    - ETCO2 off
    - RR 26
    - Silent chest
    - HR 123bpm SR
    - BP 90/55
    - Eyes closed. Still responding but confused verbally

- On induction of anaesthesia:
    - SpO2 drops to 82%
    - ETCO2 3.0kPa if in circuit
    - RR 0 – depends on candidate manually ventilating patient
    - HR 146bpm SR
    - BP 76/34

- After intubation: SpO_2 inc to low 90s
    - Very rigid chest when using AMBU bag/test lung with clamp on
    - RR depends on candidate
    - HR 127bpm SR
    - BP 86/45

Faculty Roles:

Bedside Nurse 1:

- You are an experienced ED Nurse
- You are concerned that the patient has been refusing the NIV, and constantly reassure the patient
- You want to help but are wary that the ED reg is conflicting with what the ICU reg is saying

Bedside Nurse 2:

- You are a new starter
- You have basic nursing skills but no specific ICU/airway skills
- You have no idea what is going on, and seem pretty disinterested
- You take direction well
- You are the one who is constantly leaving to retrieve the things that are asked for - blood gases etc
- It is your role to drag the ED reg away immediately after induction of anaesthesia as "the patient's family have arrived and are demanding to know what's going on"

ED reg:

- You are forthright and clear
- When the ICU reg questions what you're doing, you tell them you've been doing this for a long time
- You don't really want their help you just want them to review the patient as they need to go to HDU for NIV
- Dismiss any of their suggestions
- You dismiss any nursing concerns, nor do you listen to the patient who is claustrophobic and doesn't want NIV

ICU consultant:

- Arrive and offer help, take handover

HiLLO: 10, 11