

# 10 Hypoxia

Unexplained oxygen desaturation

## START

- ➊ **Call for help and a code cart/defib.**
  - ▶ **Ask: “Who will be the crisis manager?”**
- ➋ **Turn FiO<sub>2</sub> to 100%** at high gas flows
  - ▶ Confirm inspired FiO<sub>2</sub> = 100% on gas analyzer
  - ▶ Confirm presence of end-tidal CO<sub>2</sub> And changes in capnogram morphology
- ➌ **Hand-ventilate** to assess compliance
- ➍ **Listen to breath sounds**
- ➎ **Check ...**
  - ▶ Blood pressure, PIP, pulse
  - ▶ ET tube position
  - ▶ Pulse oximeter placement
  - ▶ Circuit integrity: look for disconnection, kinks, holes
- ➏ **Consider actions to assess possible breathing issue ...**
  - ▶ Draw blood gas
  - ▶ Suction (to clear secretions, mucus plug)
  - ▶ Remove circuit and use ambu-bag
  - ▶ Bronchoscopy

## ➐ Consider causes...

- ▶ Is Airway / Breathing issue suspected?

### NO airway issue suspected

#### Circulation

- Embolism
  - Pulmonary embolus, *go to* ▷CHKLST 21
  - Air embolism – Venous, *go to* ▷CHKLST 1
  - Other emboli (fat, septic, CO<sub>2</sub>, amniotic fluid)
    - Amniotic Fluid Embolism, *go to* ▷CHKLST 13
- Heart disease
  - Congestive heart failure
  - Coronary heart disease
  - Myocardial ischemia, *go to* ▷CHKLST 16
  - Cardiac tamponade
  - Congenital/anatomical defect
- Severe sepsis
- If hypoxia associated with hypotension *go to* ▷CHKLST 9

#### Drugs / Allergy

- Recent drugs given
- Dose error / allergy / anaphylaxis
- Dyes and abnormal hemoglobin (e.g., methemoglobinemia, methylene blue)

### YES airway issue suspected

#### Airway / Breathing

- Aspiration
- Atelectasis
- Bronchospasm, *go to* ▷CHKLST 14
- Hypoventilation
- Obesity/positioning
- Pneumothorax, *go to* ▷CHKLST 19
- Pulmonary Edema
- Right mainstem intubation
- Ventilator settings, leading to auto-peep

#### Additional DIAGNOSTIC TESTS

- Fiberoptic bronchoscope
- Chest x-ray
- Electrocardiogram
- Transesophageal echocardiogram