# CAPNOGRAPHY

(Revised: April 2019)

**Normal waveform:**

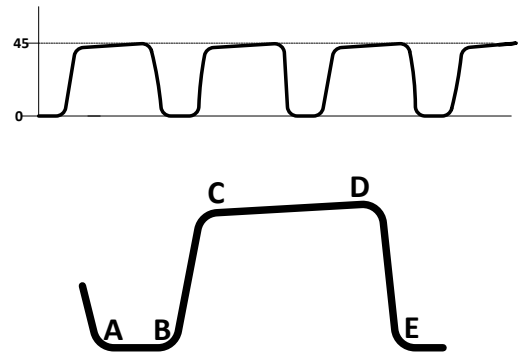
**A – B** Respiratory baseline

**B – C** Expiratory upslope

**C – D** Expiratory plateau

**D** End-tidal value – peak $CO_2$ concentration – at the end of the exhalation

**D – E** Inspiratory downstroke







**Sudden loss of waveform, $EtCO_2$ near zero:**

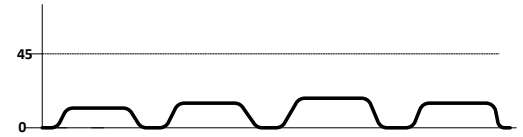
- ET tube disconnected, dislodged, kinked or obstructed
- loss of circulatory function


**Decreasing $EtCO_2$ with loss of plateau:**

- ETT cuff leak or deflated cuff
- ETT in hypopharynx
- partial obstruction

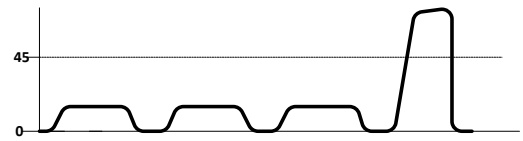

**CPR assessment:**

- attempt to maintain minimum 10mmHg




**Sudden increase in $EtCO_2$:**

- return of spontaneous circulation




**NOTES:**

- It is important to utilise waveform to assist in interpretation of information; do not rely only on the numerical reading.
- Critical values in critical patients:
  - **cardiac arrest**: $EtCO_2$ consistently above 15mmHg seems to have some positive correlation with ROSC
  - patients with **acute intracranial pathology** – $PaCO_2$ should be in the range of 30 – 45mmHg. Therefore, *$EtCO_2$ should be in the range of 27 – 40mmHg*