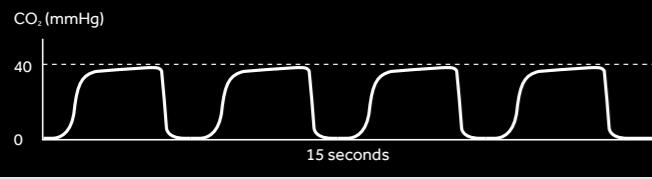


CAPNOGRAPHY DURING PROCEDURAL SEDATION

Changes in capnography values and waveforms may help clinicians understand a patient's level of comfort, sedation, and respiratory function during procedural sedation.¹

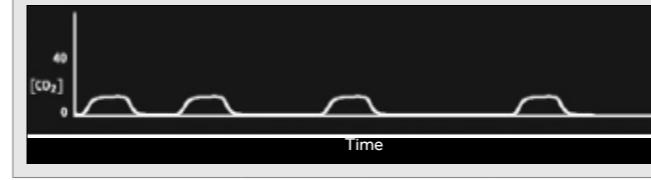
Diagnosis ¹	Values ¹		Intervention ¹	
Normal	SpO ₂	Normal	None required, continue sedation.	
	etCO ₂	Normal		
	RR	Normal		
	Waveform	Normal		
Waveform²				
etCO ₂ 35–45 mmHg				
				

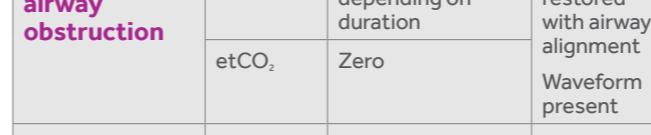
Diagnosis ¹	Values ¹		Intervention ¹	
Physiological variability	SpO ₂	Normal	None required, continue sedation.	
	etCO ₂	Normal		
	RR	Normal		
	Waveform	Variable		
Waveform¹				
etCO ₂ 35–45 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Hyperventilation	SpO ₂	Normal	None required, continue sedation. Hyperventilation can be a sign of anxiety or metabolic issues ³	
	etCO ₂	↓		
	RR	↑		
	Waveform	Decreased amplitude and width		
Waveform¹				
etCO ₂ <35 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Hypopneic hypoventilation	SpO ₂	Normal	Reassess patient and continue sedation	
	etCO ₂	↓		
	RR	↓		
	Waveform	Decreased amplitude		
Waveform¹				
etCO ₂ <35 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Bradypneic hypoventilation	SpO ₂	Normal	Reassess patient and continue sedation	
	etCO ₂	↑		
	RR	↓		
	Waveform	Increased amplitude and width		
Waveform¹				
etCO ₂ >45 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Hypopneic hypoventilation with periodic breathing	SpO ₂	Normal or ↓	Reassess the patient Cease drug administration or reduce dosing Assess for airway obstruction Consider supplemental oxygen	
	etCO ₂	↓		
	RR	↓		
	Waveform	Decreased amplitude		
Waveform¹				
etCO ₂ <35 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Apnea	SpO ₂	Normal or ↓ depending on duration	Reassess patient Use: <ul style="list-style-type: none">- Stimulation- Bag mask ventilation- Reversal agents (as appropriate) Cease drug administration	
	etCO ₂	Zero		
	RR	Zero		
	Waveform	Absent		
Complete airway obstruction				
SpO ₂ Normal or ↓ depending on duration				
				
etCO ₂ Zero				
Complete laryngospasm				
RR Zero				
Waveform Absent				
				
Other Chest wall movement and breath sounds present				
Waveform¹				
etCO ₂ <35 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Partial airway obstruction	SpO ₂	Normal or ↓	Full airway patency restored with airway alignment Reassess patient Establish IV access Consider supplemental O ₂	
	etCO ₂	Normal		
	RR	Variable		
	Waveform	Normal		
Partial laryngospasm				
Other Noisy breathing and stridor resolve				
Airway not fully patent with airway alignment				
Noisy breathing and stridor persist				
Waveform¹				
etCO ₂ <35 mmHg				
				

Diagnosis ¹	Values ¹		Intervention ¹	
Bronchospasm	SpO ₂	Normal or ↓	Reassess patient Bronchodilator therapy Cease drug administration	
	etCO ₂	Normal, ↓ or ↑ depending on duration and severity of bronchospasms		
	RR	Normal, ↓ or ↑ depending on duration and severity of bronchospasms		
	Waveform	Curved		
Other				
Wheezeing				
Waveform¹				
etCO ₂ <35 mmHg				
				