College of Intensive Care Medicine of Australia and New Zealand

Work-Based Competency Assessment: Ventilation

This assessment is designed as a learning tool and for assessment purposes. Prior to presenting for assessment the trainee should have developed the knowledge, behaviours and skills necessary for safe management of ventilated patients. This competency can be assessed by a Fellow of the CICM. To **be deemed competent (passing) the trainee will demonstrate adequate or good knowledge and skills in <u>all</u> performance indicators.**

Trainee		
Assessor		
Date		
Result (please circle)	**Passed**	**To be repeated**

Trainee signature:……

Assessor signature:……

Professional Elements of Practice	Performance Criteria	Improvement required	Acceptable	Good	Comments
Principles (knowledge)	Describes the principle components of bellows and turbine ventilators				
	Outlines requirement for power and gas supply				
	Identifies the components of a ventilator circuit and describes their role				
	Describes circuit • Dead space • Compliance • Resistance • Testing				
	Describes requirements for filtering / scavenging				
	Describes the means by which the ventilator measures pressure and flow				
	Outlines the methods by which PEEP may be applied				
	Outlines the differences between mandatory and spontaneous modes of ventilation				
	Outlines the differences between volume and pressure controlled ventilation				
	Describes the relationship between flow, I time, I:E ratio and the presence or absence of an inspiratory pause				
	Describe the mechanisms by which compliance, I time and airway resistance influence tidal volume in PCV mode				
	Describes methods of triggering and cycling in spontaneous ventilation				
	Describes the role and limitations of non-invasive ventilation				

Application	Safely programs volume control ventilation for a paralysed patient with normal physiology				
	Safely programs pressure control ventilation for a paralysed patient with normal physiology				
	Safely prescribes supportive ventilation for a spontaneously breathing patient				
	Sets reasonable alarm limits for the three scenarios above				
	Responds appropriately to the following alarms • High airway pressure • Low airway pressure • Gas supply failure				
	Describes safe principles for ventilating a patient with • ARDS • Severe bronchospasm • Broncho-pleural fistula				
	Outlines information available from plots of • Pressure vs time (constant flow) • Flow vs time • Volume vs time				
	Demonstrates methods to measure iPEEP				
	Identifies common causes of patient ventilator dyssynchrony and methods to address this • Triggering problems • Flow starvation • Cycling problems				

Feedback: