

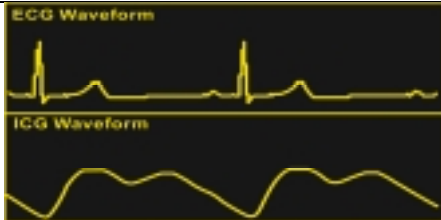
## Impedance Cardiography: Noninvasive Hemodynamic Monitoring Competency

### Critical Performance Elements

Complies

Yes

No

1. Provide a general overview of impedance cardiography (ICG).		
2. Describe how ICG reveals problems.		
3. Discuss the indications and clinical applications of ICG.		
4. Identify precautions in patient populations that may produce unreliable data.		
5. Describe patient assessment parameters and preparation prior to initiation of ICG.		
6. Demonstrate the correct placement of sensors.		
Uses the root of the neck as a reference for vertically locating the rectangular shaped detecting sensor being positioned directly superior and inline with the ear lobe. <b>Heart symbol faces down.</b>		
Uses the xiphoid process as a reference for vertically locating the rectangular shaped detecting sensor with the corresponding circular shaped transmitting sensor. <b>Heart symbol faces up.</b>		
Identify left and right branches of the patient cable (with respect to the patient) as indicated on the patient cable yoke diagram and <b>connect the respective leads in order from top to bottom: blue, purple, green and orange.</b>		
7. Demonstrate the skills required to perform ICG: noninvasive hemodynamic monitoring.		
Press 'Start Monitor', and enter patient data: ID, Name, Gender, Height, Weight, Age, BP (manual entry or ICG), CVP (or use default CVP value), PAOP (or use default CVP value).		
View default parameters. Adjust as needed.		
Ensure the patient is in the supine position with the head of the bed less than 30 degrees		
Place the ECG electrodes in a lead that produces an upright R wave.		
Observe ICG waveform and ECG displayed on monitor.		
To print report, make sure printer is on. Press <b>[PRINT]</b> hardkey.		
Select the <b>[STATUS REPORT]</b> softkey followed by the <b>[COMPLETE STATUS]</b> softkey to print the report.		
When finished monitoring, press <b>[STOP MONITORING]</b> hardkey.		
Remove sensors from patient (if one time monitoring event only)		
8. Describe important concepts and waveforms in ICG analysis including patient monitoring and care. Assess baseline and trends in:		
Continuously displayed cardiac output (CO) or cardiac index (CI)		
Evaluating stroke volume (SV) response to physiologic fluid challenge		
Afterload: Systemic vascular resistance (SVR)		
Thoracic fluid content (TFC)		
9. Discuss the hemodynamic parameters measured by or derived from ICG.		
10. Identify the steps taken when troubleshooting ICG monitoring system to ensure accurate ICG results.		
Display screen does not show ECG or ICG waveforms		
There is excessive noise or 60-cycle interference on ECG or ICG waveforms		
ICG data does not correspond to patient clinical presentation.		
11. Describe documentation requirements including patient response, waveform measurements and analysis, and therapeutic effects.		
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Identifies normal ICG waveform in relation to ECG.</b> </div> 		

Comments:

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Reviewer's Signature/Date:

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