

Examination Specifications

Name of Credential	Ventricular Assist Device Certification (VAD-C™)
Name of Credentialing Body	Ventricular Assist Device Certification Board (VAD-CB)
Designation Awarded	VAD-C™
Target Population	Healthcare Clinicians who work with Durable Ventricular Assist Devices
Level of Proficiency	Specialty Certification
Scoring Method	Objectively Scored; Number Correct
Decision Outcome Method	Single Hurdle
Total Number of Items	100
Number of Scored Items	80
Number of Pretest Items	20
Administration Time	120 Minutes
Year ECO Created	2021



Examination Content Outline

1	Pre-Operative Management	16
1A	Patient Assessment and Diagnostics	4
1A1	Indications for VAD Candidacy	
1A2	Absolute Contraindications for VAD Candidacy	
1A3	Relative Contraindications for VAD Candidacy	
1B	Cardiac Comorbidities	3
1B1	Arrhythmia	
1B2	Valve and Root Disease	
1B3	Intracardiac Thrombus	
1B4	Valvular Insufficiency	
1B5	Left Ventricular Cavity Dimension	
1C	Non-Cardiac Comorbidities	3
1C1	Pulmonary Hypertension	
1C2	Diabetes	
1C3	Neurological Disorders	
1C4	Malignancies	
1C5	Arterial Disease	
1D	Pre-Operative Optimization	3
1D1	Renal	
1D2	Hepatic and Gastrointestinal	
1D3	Pulmonary	
1D4	Coagulation	
1D5	Metabolic and Endocrine	
1D6	Resolution of Active Infection	
1E	Operative Technique and Procedures	3
1E1	Sternotomy	
1E2	Thoracotomy	
1E3	Cardiopulmonary Bypass	
1E4	Concomitant Procedures	
2	VAD Management	26
2A	Pump Factors affecting Flow	5
2A1	Cannula Position	
2A2	Pump Thrombus	
2A3	RPM	
2A4	Hematocrit	
2A5	Outflow-Graft Integrity	



2B	Physiological Factors affecting Flow	5
2B1	Aortic Valve	
2B2	Hydration Status	
2B3	Tamponade	
2B4	Afterload	
2C	Power Sources for VAD	4
2C1	Direct Current (Battery) versus Alternating Current (Wall)	
2C2	Battery Hygiene	
2C3	Grounding	
2D	Parameters for VAD	4
2D1	Flow	
2D2	Power	
2D3	Speed	
2D4	Pulsatility / Peak-Trough	
2E	Driveline Management	4
2E1	Standardized Dressing Supplies	
2E2	Stabilization	
2E3	Velour-Burying	
2F	Safety Measures	4
2F1	Avoidance of Water Submersion	
2F2	Avoidance of Electrostatic Discharge	
2F3	Avoidance of Electromagnetic Fields (e.g., MRI, scrap-metal magnet, metal detectors)	
2F4	Availability of Power Sources	
2F5	Avoidance of High-Impact Activity (e.g., contact sports)	
2F6	Travel Considerations (e.g. electrical outlets, travel security)	
3	Peri-Operative Management	19
3A	Anticoagulation Management	3
3A1	Anticoagulation and Antiplatelet Medications	
3A2	Intravenous Anticoagulation	
3A3	Long-Term Anticoagulation	
3A4	Anticoagulation Metrics	
3A5	Factors affecting INR	
3A6	Bridging and Reversing	
3B	Post-Operative Hemodynamics	3
3B1	Shock	
3B2	Hemodynamic Parameters	
3B3	Right Ventricular Failure	
3C	Post-Surgical Care	3
3C1	Incision Management	
3C2	Arterial Blood Gas	
3C3	Blood Pressure	
3C4	Transition to Progressive Care	



3D	Driveline Exit Site	3
3D1	Aseptic Technique for Dressing Changes	
3D2	Exit Site Assessment and Diagnostics	
3D3	Modalities to Treat Exit Site Infections	
3D4	Adverse Outcomes of Exit Site Infections	
3E	Complications	7
3E1	Driveline Integrity/Fracture	
3E2	Pump Thrombosis	
3E3	Cerebrovascular Accidents	
3E4	Bleeding Diatheses	
3E5	Arrhythmias	
3E6	Valvular Insufficiency (e.g., aortic, tricuspid)	
4	Continuation of Care	19
4A	Community-Based Health Services	3
4A1	Healthcare Professionals (e.g., cardiology, dialysis, cardiac rehab, home health)	
4A2	Extended Care Facilities (e.g., acute, sub-acute, long-term)	
4A3	Outpatient Follow-Up	
4B	Pre-Hospital Emergency Management	3
4B1	Emergency Protocols (e.g., ACLS, BLS)	
4B2	Emergency Patient Assessment (e.g., hemodynamics, perfusion, device alarms)	
4B3	Emergency Transport (e.g., selecting destination, transportation methods)	
4B4	Emergency Management of Pump Stop (e.g., power loss, restart)	
4C	Myocardial Recovery	3
4C1	Testing for Myocardial Recovery	
4C2	Diagnoses Associated with Myocardial Recovery	
4C3	Medical Therapy Optimization to Promote Recovery	
4C4	Explant and Post-Explant Care	
4D	End-of-Life Care	4
4D1	Advanced Directives	
4D2	Ethics pertaining to End-of-Life Care	
4D3	Pump Deactivation	
4D4	Palliative Care	
4E	Quality of Life	3
4E1	Patient and Caregiver Education	
4E2	Patient and Caregiver Advocacy (e.g., goals of care, caregiver burden)	
4E3	Functional Status (e.g., ADLs, IADLs)	
4E4	Community-Based Support Systems (e.g., school, work, support groups)	
4F	Transplant Eligibility	3
4F1	Monitoring for transplant eligibility	
4F2	Optimizing for transplant eligibility	
4F3	Maintaining transplant eligibility	

