

Advanced Heart Failure Levels of Care

Procedure/Skill	Level of care	Supervision	Milestones	Milestone Level	Competency
Right Heart Catheterization	PGY 7	Direct	Cognitive and Technical knowledge of Invasive Cardiology & hemodynamics	3	PC, MK, ICS
Echo-Guided Endomyocardial Biopsy (Internal jugular access)	PGY 7	Direct	Access and tissue acquisition	3	PC, MK, ICS
Fluoro-Guided Endomyocardial Biopsy (internal jugular access)	PGY 7	Direct	Access and tissue acquisition	3	PC, MK, ICS
Fluoro-Guided Endomyocardial Biopsy (femoral access)	PGY 7	Direct	Access and tissue acquisition	3	PC, MK, ICS
Review endomyocardial specimens with a range of pathology, in collaboration with a pathologist	PGY 7	Direct	Cognitive knowledge/ recognition of acute cellular and antibody-mediated rejection	3	PC, MK
Interpret the severity of CAV from a coronary angiogram using the ISHLT cardiac allograft vasculopathy grading system	PGY 7	Indirect	Cognitive knowledge/ recognition of cardiac allograft vasculopathy	3	PC, MK
Pulmonary vasodilator challenge	PGY 7	Direct	Perform and interpret in patients with pulmonary hypertension	3	PC, MK, ICS
Observe implant of VADs	PGY 7	Indirect	Cognitive knowledge of VAD implant procedure and complications that can occur perioperatively	2	PC, MK
Perform and interpret LVAD interrogation	PGY 7	Direct	Cognitive and Technical knowledge of interpretation of LVAD interrogation	3	PC, MK, ICS
Oversee the medical care, including anticoagulation and VAD speed of LVAD recipients	PGY 7	Direct	Cognitive knowledge of care of the VAD patient	3	PC, MK, ICS
Biventricular Pacemaker Interrogation	PGY 7	Indirect	Cardiac rhythm disturbance management	2	PC, MK, ICS,
Defibrillator Interrogation	PGY 7	Indirect	Cardiac rhythm disturbance management	2	PC, MK, ICS,
Participate in end of life or palliative care discussions	PGY 7	Direct	Cognitive knowledge of end of life concerns and patient management	3	MK, PC, ICS
Observe procurement of donor organs	PGY 7	Indirect	Cognitive knowledge of donor recovery and complications that can occur perioperatively	2	MK

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Observe cardiac transplant surgery	PGY 7	Indirect	Cognitive knowledge of cardiac transplant surgery and complications that can occur perioperatively	2	PC, MK
Oversee the medical care, including immunosuppressive regimen of a cardiac transplant recipient	PGY 7	Indirect	Cognitive knowledge of care of the cardiac transplant patient	3	PC, MK
Cardiopulmonary Stress testing	PGY 7	Indirect	observe and interpret CPX	2	PC, MK, ICS,

KEY
Supervision
Direct -the supervising physician is physically present with the resident and patient.
A faculty physician, other than another resident, is physically present during the key portions of the procedure or is immediately available.
Indirect -the supervising physician is physically within the hospital or other site of patient care and is immediately available to provide direct supervision.
Oversight - the supervising physician is available to provide review of procedures/encounters with feedback after care is provided.
Core Competencies
1. Patient Care (PC)
2. Medical Knowledge (MK)
3. Practice-Based Learning & Improvement (PBL)
4. Systems-Based Practice (SBP)
5. Interpersonal & Communication Skills (IC)
6. Professionalism (P)