**New Application: Adult Congenital Heart Disease**

**Review Committee for Internal Medicine**

**ACGME**

**Oversight**

**Participating Sites**

Describe the collaborative relationship between the subspecialty program director and the cardiovascular disease fellowship director. [PR 1.2.b.]

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| Will the program require fellows to travel more than 60 miles from the primary clinical site for a required rotation? [PR 1.6.a.] | YES  NO |

If yes, describe how the program will ensure that the fellows are not unduly burdened by required rotations at geographically distant sites. (Limit response to 250 words)

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**Resources**

Will the program, in partnership with its Sponsoring Institution:

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| ensure that the program has adequate space available, including meeting rooms, classrooms, examination rooms, and office space? [PR  1.8.a.] | YES  NO |
| ensure that the program has adequate access to computers, visual, and other educational aids? [PR  1.8.a.] | YES  NO |
| ensure that appropriate in-person or remote/virtual consultations, including those done using telecommunication technology, are available in settings in which fellows work? [PR  1.8.b.] | YES  NO |
| provide access to an electronic health record (EHR)? [PR  1.8.c.] | YES  NO |

Explain any “NO” responses. (Limit response to 250 words)

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| How will the program provide fellows with access to training using simulation to support education and patient safety? [PR  1.8.d.] (Limit response to 300 words) |
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| Describe how the program will provide fellows with a patient population representative of the broad spectrum of clinical disorders and medical conditions managed by subspecialists in this area, and of the community being served by the program. [PR 1.8.e.] (Limit response to 300 words) |
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| Will the patient population provide fellows with at least 100 adult patients diagnosed with complications related to congenital heart disease? [PR  1.8.e.1.] | YES  NO |

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| Will the patient population provide fellows with a at least 275 ambulatory patient visits (among at least 150 unique individual ambulatory patients) with congenital heart disease? [PR  1.8.e.2.] | YES  NO |

Explain any “NO” response. (Limit response to 250 words)

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Will the physician faculty include members with documented experience and expertise in the following? [PR 2.6.a.1. – 2.6.a.11.]

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| Both inpatient and outpatient management of cardiovascular care of adults with congenital heart disease | YES  NO |
| Catheterization of patients with congenital heart lesions, and catheter-based interventions in adult and pediatric patients | YES  NO |
| Congenital cardiac and vascular basic and advanced imaging | YES  NO |
| Congenital heart disease surgery in both pediatric and adult patients | YES  NO |
| Pediatric and adult congenital heart electrophysiology | YES  NO |
| Catheterization of patients with congenital heart lesions, and catheter-based interventions in adult and pediatric patients | YES  NO |
| Congenital cardiac and vascular basic and advanced imaging | YES  NO |
| Critical care and post-operative management of adults with congenital heart disease | YES  NO |
| Heart failure, mechanical circulatory and ventilator support, and both heart and lung transplantation | YES  NO |
| Medical research methodology | YES  NO |
| Pulmonary vascular disease | YES  NO |

**Educational Program**

**ACGME Competencies**

**Patient Care and Procedural Skills**

Will fellows demonstrate competence in the prevention, evaluation, and management of both inpatients and outpatients with the following? [PR 4.4.a.1. - 4.4.a.24.]

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| Aortic coarctation | YES  NO |
| Atrial arrhythmias associated with congenital heart disease | YES  NO |
| Atrial septal defects (secundum, primum, venosus) | YES  NO |
| Atrioventricular defects | YES  NO |
| Bicommissural and unicommissural aortic valve | YES  NO |
| Congenital abnormalities of left-sided inflow, including pulmonary vein disease, cor triatriatum, and mitral valve abnormalities | YES  NO |
| Congenital coronary anomalies | YES  NO |
| D-transposition of the great arteries with arterial switch repair | YES  NO |
| D-transposition of the great arteries with atrial switch repair (Senning, Mustard) | YES  NO |
| Ebstein anomaly | YES  NO |
| Eisenmenger syndrome and pulmonary hypertension associated with congenital heart disease | YES  NO |
| Heart failure (including mechanical circulatory support and transplantation) associated with congenital heart disease | YES  NO |
| L-transposition of the great arteries | YES  NO |
| Patent ductus arteriosus | YES  NO |
| Pregnancy associated with maternal congenital heart disease | YES  NO |
| Pulmonary stenosis (subvalvular, valvular, supravalvular, and peripheral pulmonary stenosis) | YES  NO |
| Single ventricle anatomy (double outlet right ventricle, double inlet left ventricle, pulmonary atresia, hypoplastic left ventricle, tricuspid atresia) | YES  NO |
| Subvalvular aortic stenosis | YES  NO |
| Supravalvular aortic stenosis | YES  NO |
| Syndrome-associated and inherited forms of congenital heart and vascular disease (including Down, Williams, Turner, Noonan, Marfan) | YES  NO |
| Tetralogy of Fallot | YES  NO |
| Tetralogy of Fallot with pulmonary atresia | YES  NO |
| Ventricular arrhythmias associated with congenital heart disease | YES  NO |
| Ventricular septal defects | YES  NO |

Will fellows demonstrate competence in the ability to:

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| perform diagnostic and therapeutic procedures relevant to their specific career paths? [PR 4.5.a.] | YES  NO |
| treat their patients’ conditions with practice that are patient-centered, safe, scientifically based, effective, timely, and cost-effective? [PR 4.5.b.] | YES  NO |
| participate in pre-procedural planning, including the indications for a procedure, and the selection of the appropriate sedation and anesthetic agents, procedures, or instruments? [PR 4.5.c.] | YES  NO |
| provide post-procedure care? [PR 4.5.d.] | YES  NO |

Will all fellows demonstrate competence in ACHD evaluation, to include:

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| applying and interpreting approaches to evaluating symptom severity, functional capacity, and health-related quality of life in patients with congenital heart disease? [PR 4.5.e.] | YES  NO |
| recognizing clinical features in all forms and etiologies of congenital heart disease? [PR 4.5.f.] | YES  NO |
| recognizing the indications for, understanding the complications with, and interpreting the results of all diagnostic tests and modalities relevant to evaluating and managing patients with or suspected of having congenital heart disease; in particular, recognizing the impact of such testing on the management of these patients, including [PR 4.5.g.] | YES  NO |
| transthoracic ACHD echocardiography, transesophageal ACHD echocardiography, and diagnostic catheterization? [PR 4.5.g.1.] | YES  NO |
| transesophageal ACHD echocardiography? [PR 4.5.g.2.] | YES  NO |
| diagnostic catheterization? [PR 4.5.g.3.] | YES  NO |

Will all fellows demonstrate competence in ACHD management, to include:

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| determining timing and methods of surveillance for each lesion? [PR 4.5.h.] | YES  NO |
| surveillance, diagnosis, and both medical and mechanical management of atrial and ventricular arrhythmias in the unoperated and post-operative state? [PR 4.5.i.] | YES  NO |
| surveillance, diagnosis, and both medical and mechanical management of heart block and conduction abnormalities in the unoperated and post-operative state? [PR 4.5.j.] | YES  NO |
| recognizing the indications for and prescribing non-pharmacologic, non-device treatment modalities, including diet and exercise [PR 4.5.k.] | YES  NO |
| recognizing the indications for, understanding the complications of, and interpreting the results of all interventional modalities relevant to managing patients with or suspected of having congenital heart disease; in particular, recognizing the impact of such interventions on the management of these patients, including [PR 4.5.m.] | YES  NO |
| interventional catheterization? [PR 4.5.m.1.] | YES  NO |
| cardiac or electrophysiologic procedural interventions and cardiovascular surgery? [PR 4.5.m.2.] | YES  NO |
| non-cardiac surgery? [PR 4.5.m.3.] | YES  NO |
| pregnancy? [PR 4.5.m.4.] | YES  NO |

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| Will fellows be supervised by a qualified faculty member until they attain proficiency in performing required procedures? [PR 4.11.d.] | YES  NO |

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| Will fellows’ performance and interpretation of procedures be documented in the fellow’s record, including indications, outcomes, diagnoses, and supervisor(s)? [PR 4.11.e. | YES  NO |

Explain any “NO” responses. (Limit response to 250 words)

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**Medical Knowledge**

Will fellows demonstrate knowledge of indications and contraindications of, limitations and complications with, techniques for, and interpretation of results from those diagnostic and therapeutic procedures, integral to the discipline, to include the appropriate indications for and use of screening tests/procedures, including: [PR 4.6.a.]

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| electrocardiogram (EKG) and electrophysiologic testing and intervention? | YES  NO |
| cardiopulmonary function assessment and exercise testing? | YES  NO |
| transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE); cardiac and vascular computed tomography (CT) and magnetic resonance imaging (MRI)? | YES  NO |
| hemodynamics and catheterization-based imaging and intervention? | YES  NO |
| surgeries, including peri-operative and procedure-related anesthetics and mechanical cardiopulmonary support techniques? | YES  NO |

Will fellows demonstrate knowledge of basic mechanisms underlying each type of cardiac anomaly, including: [PR 4.6.b.1. – 4.6.b.12]

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| childhood palliative and complete surgical and interventional repairs, including the associated intermediate- and longer-term outcomes, for each type of anomaly? | YES  NO |
| differential diagnosis that includes specific etiologies of and exacerbating factors for each type of anomaly? | YES  NO |
| expected presenting symptoms, physical examination, and cardiac conduction findings for each type of anomaly? | YES  NO |
| genetics, to include common mutations leading to congenital heart disease? | YES  NO |
| guidelines-specific recommendations regarding diagnosis and management of each type of anomaly? | YES  NO |
| the impact of age- and development-specific chronic disease skills and psychosocial factors on the manifestation, expression, and management of ACHD across the lifespan of disease? | YES  NO |
| important genetic associations specific to each individual type of anomaly, particularly as related to outcomes? | YES  NO |
| lesion- and repair-specific effects on pregnancy and maternal health risk and interventions, and potential complications? | YES  NO |
| lesion- and repair-specific, intermediate- and longer-term effects on myocardial function? | YES  NO |
| principles of cardiac development and anatomy in unrepaired and repaired states for each type of anomaly? | YES  NO |
| principles of physiology in unrepaired and repaired states for each type of anomaly? | YES  NO |
| important genetic associations specific to each individual type of anomaly, particularly as related to outcomes? | YES  NO |

**Practice-Based Learning and Improvement**

Briefly describe how fellows will demonstrate competence in investigating and evaluating their care of patients, appraising and assimilating scientific evidence, and continuously improving their patient care based on self-evaluation and lifelong learning. [PR 4.7.] (Limit response to 400 words)

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**Interpersonal and Communication Skills**

Briefly describe how fellows will develop skills that result in the effective exchange of information and collaboration with patients, their families and health professionals. [PR 4.8.] (Limit response to 400 words)

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**Systems Based Practice**

Briefly describe how fellows will demonstrate an awareness of and responsiveness to the larger context and system of health care, including the structural and social determinants of health, as well as the ability to call effectively on other resources to provide optimal health care. [PR 4.9.] (Limit response to 400 words)

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**Curriculum Organization and Fellow Experiences**

How many months of experience will the fellowship program provide each fellow with the following?

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| Inpatient or consultative service that provides comprehensive care for ACHD patients [PR 4.11.a.1.] | # |
| Comprehensive diagnostic and interventional services and imaging (transthoracic echocardiography, transesophageal echocardiography, cardiac computed tomography angiography and cardiac magnetic resonance imaging) for ACHD patients [PR 4.11.a.2.] | # |
| ACHD catheterization (diagnostic and interventional), including experience in the limits and applications of measurements and definition of vascular resistance and flows, pressure gradients, and optimal correlation of angiography with physiologic measures and additional imaging modalities [PR 4.11.a.3.] | # |
| Intensive care and surgical services that provide comprehensive care for patients, including experience in the optimal transition from pre- to intra- to post-operative care environments, as well as development, provision, and communication of care plans through short-, intermediate- and longer-term post-operative follow-up [PR 4.11.a.4.] | # |

Will each fellow have clinical experience in the following areas?

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| On pediatric, internal medicine, or cardiology services? [PR 4.11.a.5.] | YES  NO |
| Caring for patients in the context of a multidisciplinary disease management program [PR 4.11.a.6] | YES  NO |
| End-of-life care [PR 4.11.a.7] | YES  NO |
| Evaluating patients for cardiac or pulmonary transplantation or mechanical assist devices [PR 4.11.a.8] | YES  NO |

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| Will the program provide fellows individualized educational experiences to allow them to participate in opportunities relevant to their future practice or to further skill/competency development in the foundational educational experiences in the subspecialty? [PR 4.11.b.] | YES  NO |

Explain “NO” response. (Limit response to 250 words)

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**Continuity Ambulatory Clinic Experiences**

Provide information for the fellows’ follow-up, ambulatory experiences. List each experience indicating the name of the experience, site number, duration of the experience, number of half-day sessions per week, whether faculty supervision is provided, and the percent of female patients.

| **Name of Experience** | **Site #** | **Duration** | **Sessions Per Week** | **Average # of Patients Seen Per Session** | **On-site concurrent faculty supervision present?** | **% Female Patients** |
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**Didactic Experience**

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| Briefly describe the conduct of Core Curriculum Conference Series in your program. [PR 4.11.c.] |
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Describe how the program will ensure that fellows have an opportunity to review all knowledge content from conferences that they were unable to attend. [PR 4.11.c.1.] (Limit response to 300 words)

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| Will the faculty participate in required conferences? [PR 2.7.d.] | YES  NO |

Describe how the fellows will receive instruction in practice management relevant to the subspecialty. [PR 4.11.f.] (Limit response to 300 words)

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**Evaluation**

**Fellow Evaluation**

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| Describe the method for assessment of procedural competence. [PR 5.1.f.] |
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| Will the program use multi-source evaluation, including patients, peers, and non-physician team members, to assess each fellow's ability to meet professional responsibilities? [PR 5.1.b.1.] | YES  NO |

**Faculty Evaluation**

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| Will these evaluations be written and confidential? [PR 5.4.b.] | YES  NO |
| Will the results of these evaluations be communicated on a regular basis, at least annually, to faculty members? [PR 5.4.c.] | YES  NO |