**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 |