

CARDIOLOGY FELLOWSHIP PROGRAMS

FREQUENTLY ASKED QUESTIONS

The Residency Review Committee for Internal Medicine has answered the following questions from cardiology fellowship programs. The answers provided represent a summary of the actions previously taken by the Committee. You should not interpret the answers as a second set of standards. The RRC-IM provides these answers to give training programs insight on how the peer review process works. Each program reviewed is unique. The RRC-IM interprets substantial compliance with the Program Requirements that reflect the unique composite of a given program. The Requirements are as stated.

Abbreviations Used

PR = Program Requirement
PD = Program Director
APD = Associate Program Director
Sub = Internal Medicine subspecialty program
Sub-sub = Subspecialty requiring completion of training in a parent subspecialty (i.e., clinical cardiac electrophysiology, interventional cardiology, transplant hepatology)
RRC-IM = Residency Review Committee for Internal Medicine
ACGME = Accreditation council of Graduate Medical Education
DIO = Designated Institutional Official (usually serves as chair of GMCEC)
GMCEC = Graduate Medical Education Committee, as required by the IRC
IRC = Institutional Review Committee
PIF = Program Information Form
KCF = Key Clinical Faculty
Pub = Peer-reviewed publication or other acceptable product of scholarship as defined by the RRC-IM
CV = Cardiovascular
IC = Interventional Cardiology
CCEP = Clinical Cardiac Electrophysiology

Section I-VII General Subspecialty Program Requirements

Question:

“Do the General Subspecialty Program Requirements apply to Cardiology?”

Program Requirements:

For Sections I. through VIII., see:

- **ACGME Program Requirements for Fellowship Education in the Subspecialties of Internal Medicine**
- **RRC-IM Web Subspecialty FAQ**

Answer:

Absolutely

Cardiology PDs should study carefully the General Subspecialty Program Requirements, and the FAQs related to these PRs. The requirements cover required structural elements in the program such as required institutional support, facilities and resources, key faculty and PD qualifications and responsibilities, conferences, continuity clinic, scholarship and research, evaluation, etc.

Subspecialty fellowship programs are expected to be in full compliance with both the General Subspecialty

Program Requirements, and the Subspecialty Specific Program Requirements.

Section VIII - XI Cardiology Program Requirements

Section VIII. Educational Program

Program Configuration

Question:

“Our cardiology fellowship is 4 years in length. Can we spread out the clinical training over 48 months?”

“Can we use the time fellows spend in continuity clinic to reduce the block time of 24 months clinical?”

Program Requirement:

The program must have, at a minimum, the following experiences:] The training program must be, at a minimum, 3 years in duration. (Educational Program, Section VIII.B.1.)

There must be at least 24 months of clinical training, including inpatient and special experiences. (Educational Program, Section VIII.B.2.)

[The program director must obtain review and approval of the sponsoring institution’s GMEC/DIO before submitting to the ACGME information or requests for the following:] major changes in program structure or length of training. (Program Personnel and Resources, Program Director, Section II.A.4.n.3.)

Answer:

All required training must be completed within the accredited 36-months of training.

An additional year of training (i.e., for research may be required (or offered) by the program, but the required training (at least 24 months clinical, continuity clinic, conferences, and research) must be completed during the accredited three years (36 months) of training:

Time spent in continuity clinic (one-half day weekly x 36 months) may not be used to reduce the minimum block time required for clinical training.

Minimum Clinical Experience

Question:

“What are the minimum exposure required for each clinic experience?”

Program Requirement:

[The program must have, at a minimum, the following experiences:] [There must be at least 24 months of clinical training, including inpatient and special experiences. A minimum of 12 months must be spent in the following areas:] (Educational Program, Section VIII.B.2.a)(1) - VIII.B.2.b))

Four months in the cardiac catheterization laboratory.

Six months in non-invasive cardiac evaluations [consisting of the following.]

- three months of echocardiography and Doppler.
- two months of nuclear cardiology, to include the fellow's active participation in daily nuclear cardiology study interpretation (a minimum of 80 hours) during the rotation.
- One month of other noninvasive cardiac evaluations, which includes at least exercise stress testing, ECG interpretation, ambulatory ECG monitoring, and cardiovascular magnetic resonance and other techniques (e.g., electron beam or fast helical computed tomography).
- These rotations may be done in conjunction with other block rotations or concurrently with other clinical rotations.

Two months be devoted to electrophysiology, pacemaker follow-up and ICDs.

There must be at least 9 months of non-laboratory clinical practice activities (e.g., consultations, cardiac care units, postoperative care of cardiac surgery patients, congenital heart disease, heart failure/cardiac transplantation, preventive cardiology, and vascular medicine).

Answer:

24 months of clinical training, including inpatient and special experiences

- 4 months in the cardiac catheterization laboratory
- 6 months in noninvasive cardiac evaluations, consisting of:
 - 3 months of echocardiography
 - 2 months nuclear CV
 - 1 month other noninvasive, to include:
 - ECG
 - Stress testing
 - Ambulatory ECG
 - Cardiac MRI
- 2 months EP
(devoted to electrophysiology, pacemaker follow-up and ICDs)
- 9 months of non-laboratory clinical practice activities
(e.g., consultations, cardiac care units, postoperative care of cardiac surgery patients)

Procedures

Question:

“What procedures does the program need to track for cardiology fellows?”

Answer:

Cardiology Procedures that Must be Documented In Fellow’ Procedure Log
1. Elective cardioversion
2. Insertion and management of temporary pacemakers, including transvenous and transcutaneous
3. Programming and follow-up surveillance of permanent pacemakers
4. Bedside right heart catheterization
5. Right and left heart catheterization including coronary arteriography
6. Exercise stress testing
7. Echocardiography, including transesophageal cardiac studies

Section IX. Faculty

Minimum KCF and KCF Scholarly Productivity

Question:

“What is the minimum number of ABIM-certified KCF for our program.”

“How many publications are required by KCF”

Program Requirement:

See General Subspecialty FAQ for additional details and program requirement.

Answer:

See below for calculation of minimum required key clinical faculty, and the scholarly productivity expected of the KCF.

<p style="text-align: center;">Cardiology KCF and Research Productivity</p> <p style="text-align: center;">Minimum 4 KCF or 1:1.5 ratio for programs with 7 or more fellows</p>

Approved Fellow Complement	Minimum Certified KCF (incl PD)	Majority of Minimum KCF (51%)	<u>PARTICIPATION</u> KCF with at Least 1 Pub Past 3 Years [259]	<u>PRODUCTIVITY</u> Pubs All KCF Past 3 Years (1/yr x 3 yrs) [259]
3	4	3	3	9
4	4	3	3	9
5	4	3	3	9
6	4	3	3	9
7	5	3	3	9
8	6	4	4	12
9	6	4	4	12
10	7	4	4	12
11	8	5	5	15
12	8	5	5	15
13	9	5	5	15
14	10	6	6	18
15	10	6	6	18
16	11	6	6	18
17	12	7	7	21
18	12	7	7	21
19	13	7	7	21
20	14	8	8	24
21	14	8	8	24
22	15	8	8	24
23	16	9	9	27
24	16	9	9	27
25	17	9	9	27
26	18	10	10	30
27	18	10	10	30
28	19	10	10	30
29	20	11	11	33
30	20	11	11	33

- Publication = Research publication, review article, or editorial in a peer review journal (PRJ), funded peer-review grant, or book chapter.
- Scholarly case reports acceptable (Sept 2007) if indexed in Pub Med, and copy submitted with PIF
- Peer review publication = indexed in Pub Med (or Medline). If not in Pub Med, PD must supply evidence of peer review
- In press or accepted for publication counts. Submitted or in preparation does not count.
- Abstract, illustration, letter to the editor, presentation, or publication in non-PRJ does not count.
- Peer-reviewed funding (NIH, NCI, or other government-funded or national-foundation funded) counts
- Industry, pharmaceutical, or other non-peer-review grant does not count.
 - Exception: Pharmaceutical studies in which the KCF is the overall PI (lead investigator) for all sites will be accepted as counting as one product of scholarship
- 1 paper = 1 paper; Do not count multi-author papers more than once.
- Count the last three calendar years prior to PIF submission. If site visit is in Sep. 2008, count publications from 2005, 2006, and 2007 as well as 2008.
- Contribute to participation: Only ABIM certified KCF
- Contribute to productivity:
 - Certified KCF
 - Additional sub-specialty KCF (above minimum required, certified or non-certified)
 - Non-physician faculty and faculty in other specialties IF:

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| <ul style="list-style-type: none">▪ Contribute to fellow education▪ Devote at least 10 hours/ week to the program |
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Section X. Facilities and Resources

Required Facilities

Question:

“What facilities must be present at the Primary Training Site?”

Program Requirement:

See Section X

Answer:

Facilities required at the Primary Training Site

- Cardiac radionuclide laboratories
- Active cardiac surgery program
The Committee considers this an important requirement.
Program applications have been withheld for lack of a cardiac surgery program at the primary site.
- Cardiac surgery intensive care unit
 - The committee prefers separate cardiac surgical ICU and Medical CCU, but will accept mixed units with adequate educational rationale.
- ECG Labs
(ECG, ambulatory ECG, and exercise testing laboratories at the primary training site.)
- Echocardiography labs
- Cardiac Catheterization Labs
 - The Committee strongly encourages at least two catheterization laboratories.
 - It will consider models in which a lab is shared between EP and cardiac catheterization, with adequate educational rationale and documentation.
- EP Labs
- CCU
 - The Committee strongly encourages the presence of a dedicated and geographically distinct CCU at the primary training site.
 - It will consider models in which a CCU is a defined and dedicated “unit within a unit,” with adequate educational rationale and documentation.
- EP Services
- PFT Labs
- Vascular Labs

Section XI. Specific Program Content

Cardiac Rehabilitation

Question:

“We were cited for lack of clinical experience in cardiac rehabilitation. How can we meet this requirement?”

Program Requirement:

[Fellows must have formal instruction, clinical experience, and must demonstrate competence in the prevention, evaluation and management of both inpatients and outpatients with:] cardiovascular rehabilitation. (Specific Program Content, Clinical Experience, Section XI.A.1.1))

Answer:

Programs can meet this requirement in one of two ways:

- By providing trainees with knowledge of cardiac rehabilitation through didactic lectures and experience through referral of patients to cardiac rehabilitation
- Through direct experience in a comprehensive cardiac rehabilitation program.

Procedural Minimums

Question:

“What are the minimum procedural requirements for each fellow?”

Answer:

Procedures:

- 100 right and left heart catheterization (including coronary arteriography)
- 50 stress ECG tests
- 75 Echo – Perform
- 150 Echo – Interpret
- 3500 electrocardiograms – Interpret
- 150 ambulatory ECG recordings

Interventional Experience

Question:

“What are the requirements for fellow participation in percutaneous interventions?”

Program Requirement:

[Fellows must have formal instruction and clinical experience in performing:] percutaneous transluminal coronary angioplasty and other interventional procedures. (Specific Program Content, Technical and Other Skill, Section XI.B.3.c)

Answer:

The PR indicates that the RRC-IM expectation for fellows in cardiology are that fellows must:

- 1) Participate in the procedure by performing the work up these patients in order to understand the indications and contraindications of the procedure.
- 2) Participate in the diagnostic cath component of some patients undergoing PCI, and then be present for the performance of the interventional procedure of these patients.

The fellow does not need to actively perform the PCI procedure as either a primary or secondary operator, but must be present “at the table” in the interventional laboratory during the procedure. They should be involved in the interpretation of the post-procedure angiographic findings as well.

Cardiovascular Trauma - Experience

Question:

“What are the requirements for cardiology fellow experience with cardiac trauma?”

Program Requirement:

Fellows must have formal instruction and clinical experience in the prevention, evaluation and management of both inpatients and outpatients with:] cardiovascular trauma. (Specific Program Content, Clinical Experience, Section XIV.A.2.c)

Answer:

- The RC-IM recognizes that cases of cardiac trauma are uncommon, even in centers with a level 1 trauma center.
- Each resident must have didactic instruction related to the prevention, evaluation, and management of cardiovascular trauma. Specific clinical experience is not required.