

# ADVANCING INNOVATION IN RESIDENCY EDUCATION (AIRE) REQUEST FOR PROPOSALS

Accreditation Council for Graduate Medical Education (ACGME)

#### BACKGROUND

The implementation of the Next Accreditation System offers an opportunity to help catalyze, recognize, and highlight innovation in graduate medical education (GME). While the current Program Requirements already provide substantial flexibility to test new educational and assessment approaches, the ACGME anticipates the potential need to offer waivers to compliance with selected requirements to further foster innovation in GME.

#### PILOT GOAL AND OBJECTIVES

The overarching goal is to catalyze greater innovation in residency and fellowship training that improves the quality and safety of health care delivered by graduates of those programs. To help achieve this goal, the ACGME is initiating a pilot program with the dual aims of 1) enabling the exploration of novel approaches and pathways in GME, and 2) enhancing the attainment of educational and clinical outcomes through innovative structure and processes in resident and fellowship education.

The pilot will encourage the adoption of the key principles of competency-based medical education (CBME) and outcomes. See Appendix A for detailed information on these principles and characteristics.

## **APPROVAL PROCESS**

Pilot proposals will be initially reviewed by the Innovation Pilot Research Committee (Innovation PRC) for completeness and methodological rigor. The Innovation PRC is an ACGME staff committee consisting of individuals with experience in curricular design and assessment. The goal of the Innovation PRC review is to provide useful feedback to the proposers before forwarding to the appropriate Review Committee for review and potential approval. If the Innovation PRC has concerns regarding the proposal, it will provide specific feedback to the proposers and invite a re-submission.

Implicit in this approval process is an understanding that these pilots represent complex interventions in GME training. As such, the ACGME understands that pilot study interventions and anticipated outcomes will likely require modification as the pilot projects evolve. Each pilot project must critically review and iteratively assess the project design and outcomes based on real-time learning during the implementation period, and collaborate closely with ACGME staff members and

project facilitators in this work. Regular monitoring reports will be shared with the respective Review Committee to ensure learner safety and address adverse events in the event they occur. Applicants should be mindful that the review process will ensure that pilots provide innovative approaches to GME without jeopardizing program accreditation, trainee certification eligibility, or the learning environment. To that end, programs participating in the pilot may need to obtain approval and/or relief from existing board certification requirements. We strongly recommend that programs contact the pertinent certification board prior to submitting a proposal to ensure that graduates will be Board-eligible.

# **Review Committee Approval**

Proposals that include requests for a waiver/variation/suspension of Common Program and/or Specialty Program Requirements require ACGME approval; such proposals will be reviewed by ACGME staff members prior to consideration by the applicable Review Committee. The Review Committee Executive Director will provide official notification to the program director and designated institutional official (DIO) of the Review Committee's decision, to include:

- The duration of the approval will depend on the nature of the innovation and submitting programs should clearly specify the rationale for the requested duration.
- 2. The method of monitoring (e.g., progress reports, updates) will be determined by the Innovation PRC staff at ACGME in collaboration with the Review Committee, and at a minimum will include yearly program updates and performance by the residents or fellows on the Milestones.
- 3. Supporting evidence from the program of assessment developed to support the innovative pathway should be specified in the proposal (see below).

# PILOT REQUIREMENTS Initial Proposal

Proposals must be grounded in sound educational principles and theory, including competency-based training principles with a clear focus on outcomes, a clear rationale for what the pilot program intends to accomplish from a patient, learner, faculty, educational system, and public perspective. In addition, pilot programs must meet the following requirements:

- 1. Have a faculty lead/champion;
- Have obtained local approval and support as evidenced by letters of support from the organizational entity responsible for the program's oversight, the GMEC, and the DIO;
- 3. Provide evidence that the executive leadership of the pertinent clinical learning environment (CLE) in which these residents or fellows will train has signed off on the proposal and attests to:
  - a. local monitoring by its DIO and GMEC;

- how the innovation could impact the CLE, including issues of supervision policies that are understood for traditional trainees within the CLE;
- c. how their GME community would view success/failure of such a pilot, and;
- d. what they believe the scalability of such a change in training would look like if such pilots are successful.

Note: The ACGME Clinical Learning Environment Review (CLER) Program team will be informed of the pilot and will also be included as part of the monitoring activity.

- 4. Describe in sufficient detail the re-design of the specific curriculum based on CBME principles for the pilot;
- 5. Provide a description of the pilot design and methodology that documents how the pilot project will advance the assessment and evaluation of trainees in an outcomes-based education framework;
- Include a clear definition of the outcome measures that will be used to demonstrate over time how the innovation improved educational outcomes, in keeping with CBME principles;
- 7. Include an evaluation plan to generate evidence-based data and outcomes, including plans on how the program will track the learner after completion of the program, that is focused on actionable learning from the strengths and weaknesses of the project and its overall impact;
- 8. Use rigorous assessment methods;
- 9. If a new assessment method or tool is utilized, describe how the method or tool will be evaluated to collect validity evidence.
- 10. Continue to use a competency or promotions committee to review assessment data and provide attestation regarding competency of trainees:
- 11. Provide a specific corrective action plan for trainees, including remediation and how trainees would be transitioned back into other pathways (where applicable) if they fail to meet pilot developmental standards;
- 12. Define how faculty development activities required to implement the innovation will be organized and delivered, and how outcomes of faculty development will be assessed;
- 13. Provide information on how the program will meet infrastructure and resource needs to conduct the pilot; and,
- 14. Describe how the Milestones will be used as part of the pilot.

Appendix B provides a template to organize your proposal. Appendix C provides a planning tool to help you put your proposal together but you are not required to submit this document. Pilot project submissions must address all of the above requirements as part of the pilot approval process.

#### **Past Innovations**

The ACGME is proud of its past efforts in innovation and would encourage potential applicants to review some of these efforts. For example, the

Educational Innovation Project (EIP) in internal medicine helped to lay the foundation for the current approach to accreditation. Some internal medicine programs dramatically altered their curricular and assessment approaches as part of their innovations. The article by Warm and colleagues provides a nice overview of how to build a community of practice for innovation. (Warm 2013)

#### **Use of Milestones in the Innovation Pilots**

While the use of the Milestones in innovation pilots is required as a component of the pilot proposal, the current version of the Milestones has not been sufficiently studied to support using the Milestones as the sole mechanism for decision making around trainee progression.

# **Clinical Competency Committees in the Innovation Pilots**

Clinical Competency Committees (CCCs) must be used in all pilots. The ACGME strongly encourages proposals to explicitly describe how the CCC process will be used in the pilot. Research has demonstrated that effectively-performed group process leads to better judgments and decisions. The ACGME recommends that proposals include robust and innovative approaches to group decision making.

# **Common Program Requirements**

The innovation pathway is not intended to provide relief from key components of the Common Program Requirements. *Specifically, Sections I, II, III, V, and VI must be met as part of the pilot.* Pilots must also abide by duty hour requirements. This innovation pathway is not to be used for relief or changes to duty hour requirements.

# **Program Evaluation**

Since it will be important to determine the success of approved pilot studies, these proposals must emphasize the program evaluation approach to support the pilot, especially with regard to ongoing assessment that enables faculty members to more accurately determine learners' developmental progress, and to help learners through frequent feedback, coaching, and adjustments to learning plans (Holmboe 2010; van der Vleuten, 2012; Kogan 2013). Many approaches exist to program evaluation; it is recommended, if at all possible, to work with educational experts with experience in program evaluation to provide guidance in determining the most logical approach for the specific innovation and context. The ACGME also expects that the results of the innovation be shared with the community through presentations and scholarly publications.

### **Implementation**

Implementation of innovations is a complex task and often where innovations fail despite comprehensive planning. The ACGME suggests that programs consult the literature on frameworks to monitor and assess their implementation efforts. Damschroder and colleagues provide a consolidated framework for implementation research (CFIR) that may be a helpful place to start and provides a nice review of the literature (Damschroder 2009).

# Monitoring

Proposals much include a description of how the innovation will be monitored, especially for unintended consequences. For example, if the innovation targets only a subset of learners, how will the quality of the program for non-participants be maintained? The proposal should also describe how an innovation will be suspended or ended should problems arise.

Proposals must include learner outcome measures. In addition, inclusion of outcomes related to the quality of care experienced by patients is encouraged.

#### SUBMISSION OF PROPOSAL

Proposals should be submitted to <a href="AIRE@acgme.org">AIRE@acgme.org</a>. All information must be provided and must be complete before the proposal will be considered. Appendix B provides a template for proposals.

#### References

Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation science of health services research findings into practice: a consolidated framework for advancing implementation science. Implementation Sci 2009; 4:50. Available at <a href="http://www.implementationscience.com/content/4/1/50">http://www.implementationscience.com/content/4/1/50</a>.

Holmboe ES, Sherbino J, Long DM, Swing SR, Frank JR. The role of assessment in competency-based medical education. Med Teach. 2010;32(8):676-82.

Kogan JR, Holmboe E. Realizing the promise and importance of performance-based assessment. Teach Learn Med. 2013;25 Suppl 1:S68-74.

van der Vleuten CP, Schuwirth LW, Driessen EW, Dijkstra J, Tigelaar D, Baartman LK, van Tartwijk J. A model for programmatic assessment fit for purpose. Med Teach. 2012;34(3):205-14.

Warm EJ, Logio LS, Pereira A, Buranosky R, McNeill D. The Educational Innovations Project: A Community of Practice. Am J Med. 2013; 126 (12): 1145-49.



#### APPENDIX A

#### **COMPETENCY-BASED MEDICAL EDUCATION**

Competency-based educational models are not new. Competency-based models for medical education were first promoted for wide use by McGaghie and colleagues as part of a report to the World Health Organization in 1978. Their 1978 report defined CBME as:

"The intended output of a competency-based programme is a health professional who can practise medicine at a defined level of proficiency, in accord with local conditions, to meet local needs."

In a 2002 review, Carraccio and colleagues compared the elements between the two different models:

Comparison of the Elements of Structure/Process-based vs. Competency-based Educational Programs		
	Educatio	nal Program
Variable	Structure/Process	Competency-based
Driving force for	Content-knowledge	Outcome-knowledge
curriculum	acquisition	application
Driving force for process	Teacher	Learner
Path of learning	Hierarchical	Non-hierarchical
_	(Teacher→student)	(Teacher⇔student)
Responsibility for content	Teacher	Student and Teacher
Goal of educ. Encounter	Knowledge acquisition	Knowledge application
Typical assessment tool	Single subjective measure	Multiple objective measures
Assessment tool	Proxy	Authentic (mimics real tasks of the profession)
Setting for evaluation	Removed (gestalt)	"In the trenches" (direct observation)
Evaluation	Norm-referenced Criterion-referenced	
Timing of assessment	Emphasis on summative	Emphasis on formative
Program completion	Fixed time	Variable time

Adapted from Carraccio, 2002.

Finally, Carraccio et al. also described a four-step process for implementing CBME: 1) Identification of the competencies (i.e., ACGME Competencies); 2) determination of competency components and performance levels (e.g., the Milestones); 3) competency evaluation; and 4) overall assessment of the process.

More recently, a group of international educators worked to "modernize" the definition of CBME and lay out the theoretical rationale for a CBME system (Frank et al. 2010). This group defined CBME as:

"An <u>outcomes-based</u> approach to the design, implementation, assessment and evaluation of a medical education program using an <u>organizing</u> <u>framework</u> of competencies."

Competency-based programs usually require a change in both curriculum and assessment. More importantly, changes in curriculum and assessment need to be integrated – assessment drives learning and learning drives assessment (van der Vleuten; 2012). Organizations seeking to implement CBME-designed pilot studies will need to attend to both curriculum and assessment. Van der Vleuten's model of programmatic assessment is an excellent place to start.

In summary, the fundamental characteristics of CBME are shown below, and it will be important for programs to attend to these key features as they design innovative educational pilot proposals.

- 1. Graduate outcomes in the form of achievement of predefined desired competencies are the goal of CBME initiatives. These are aligned with the roles graduates will play in the next stage of their careers.
- 2. These predefined competencies are derived from the needs of patients, learners, and institutions and organized into a coherent guiding framework (e.g., ACGME/ABMS Competencies).
- 3. Time is a resource for learning, not the basis of progression of competence (i.e., time spent on a ward is not the marker of achievement).
- 4. Teaching and learning experiences are sequenced to facilitate an explicitly defined progression of ability in stages.
- 5. Learning is tailored to the learner's individual progression in some manner. Numerous direct observations and focused feedback contribute to effective learner development of expertise.
- Assessment is planned, systematic, systemic, and integrative.
   Specifically, programmatic assessment systems allow for valid and reliable decision making.

#### **CBME REFERENCES**

Carraccio C, Wolfstahl SD, Englander R, Ferentz K, Martin C. Shifting paradigms: from Flexner to competencies. Acad Med. 2002; 77: 361-67.

Carraccio CL, Englander R. From Flexner to competencies: reflections on a decade and the journey ahead. Acad Med. 2013 Aug; 88(8):1067-73.

Ericsson KA. An expert-performance perspective of research on medical expertise: the study of clinical performance. Med Educ. 2007; 41: 1124-30.

Frank JR, Snell LS, Cate OT, Holmboe ES, Carraccio C, Swing SR, Harris P, Glasgow NJ, Campbell C, Dath D, Harden RM, Iobst W, Long DM, Mungroo R, Richardson DL, Sherbino J, Silver I, Taber S, Talbot M, Harris KA. Competency-based medical education: theory to practice. Med Teach. 2010; 32(8):638-45

Frank JR, Mungroo R, Ahmad Y, Wang M, De Rossi S, Horsley T. Toward a definition of competency-based education in medicine: a systematic review of published definitions. Med Teach. 2010; 32(8):631-7.

Holmboe ES, Sherbino J, Long DM, Swing SR, Frank JR. The role of assessment in competency-based medical education. Med Teach. 2010; 32(8):676-82.

Kogan JR and Holmboe ES. Realizing the Promise and Importance of Performance-based Assessment. Teach Learn Med 2013; 25 Suppl 1:S68-74

McGaghie WC, Miller GE, Sajid AW, Telder TV. Competency-based curriculum development in medical education. World Health Organization. Geneva. 1978.

van der Vleuten CPM, Schuwirth LWT, Driessen EW, Dijkstra J, Tigelaar D, Baartman LKJ, van Tartwijk J. A model for programmatic assessment fit for purpose. Med Teach. 2012; 34: 205-14



# **Appendix B: Proposal Form**

# **Department of Research, Milestone Development, and Evaluation**

l.	Sponsoring Institution and Program Demographics		
1. Describe proposal type. Check the appropriate category.			
	☐ Individual instit	ution	
		nstitutions – one designated lead for proposal. List the utions and the name of the lead for the proposal.	
	<ol> <li>Lead institute</li> <li>List the res</li> </ol>	ution: at of the institutions starting here	
	organization). List	nstitutions coordinated through a specialty society (or other the specialty society (or other organization), the name of the ead, and the participating institutions.	
		society: society lead: astitutions starting here	
		itution and Program Demographics (must be completed for ogram participating in the proposed pilot)	
	A. Review Committee:		
	B. Program Name:		
	C. Program Number:		
	D. Program Director Name:	(Include email and telephone number)	
	E. Program Accreditation Status:		

	F.	Program Citations and/or Areas for Improvement (AFIs):	1.	List each citation or area for improvement included in the program's current Letter of Notification and explain how each has been addressed.
	G.	Sponsoring Institution:		
	H.	Designated Institutional Official Name:		
	l.	Sponsoring Institution Accreditation Status:		
II. A.	A.B.	approval) Letter(s) of sup Board(s). Letter(s) of sup groups.  ROJECT DESCE	oport oport	from the appropriate American Board of Medical Specialties from the appropriate specialty societies and educational
Title l	nere			
B. G	oals	and Objectives	<b>S</b>	
Resp	ond h	nere		
C. D	)esci	ription of the In	nova	ation

Briefly describe the innovation (or experimentation), including changes or improvement the current process and the anticipated outcomes. If the innovation requires a request waiver/variation/suspension of common, institutional, and/or specialty-specific requires provide the exact requirement reference (e.g., Common Program Requirements, Sect Include current methods for requirement compliance and how that will change. A diag highlighting key design features and processes is encouraged.	for ments, ion, etc.).
Respond here	
D. Methodology and Evaluation	
Describe in detail the specific changes to the curriculum and assessment program (Se Appendix B for guidance). Describe how the innovation will improve graduate medical education and improve learner and patient outcomes. For example, how will the project improve the learning environment and resident education? How will it improve patient quality/continuity/access/outcomes and/or better support the reporting and tracking of competence? How might the innovation help address remediation challenges with structures and fellows? Given robust, rigorous assessment is essential to effective combased medical education, provide examples of what assessment approaches and instability be used in this pilot. This proposal should also assess the effectiveness (reliability feasibility, cost effectiveness, educational impact and acceptability) of proposed assess tools and faculty development activities aimed at improving effectiveness. As noted at new assessment approaches are to be used, the proposal must describe how the new approaches will be studied.	et care aggling apetency- ruments , validity, esment bove, if
The specific requests in Section D have been broken out to allow for specific response	es.
<b>D1)</b> Curriculum Changes (provide narrative describing how the pilot will change curriparticipating programs and complete the table)	culum in

D1 Here			

Competency Area	Describe how this innovation will advance curriculum in the applicable Core Competencies	
Patient Care		
Medical Knowledge		
Practice-based Learning and Improvement		
Interpersonal and Communication Skills		
Professionalism		
Systems-based Practice		

**D2)** Assessment Program (provide a narrative describing the pilot's assessment program and complete the tables). For reference, the table below provides a list of assessment tools/methods that are recommended and can be used for specific competency areas. The proposal should address the assessment of each of the Core Competencies.

Assessment Tool/Method	Targeted Competency Area
Faculty evaluation	Multiple Competencies
Direct observation	Patient Care, Interpersonal and
	Communication Skills, and Medical
	Knowledge ("in vivo")
Multi-source feedback	Professionalism, Interpersonal and
	Communication Skills, and Systems-
	based Practice
Audit and performance data	Practice-based Learning and
	Improvement and Systems-based
	Practice
Simulation (if available)	Procedures (Patient Care and
	Interpersonal and Communication Skills)
IT exam (if available)	Medical Knowledge

|--|

Assessmen t Method/Too I	Core Competenc y (ies) Targeted for Assessmen t	Assessment of Tool's Effectiveness (High/Medium/Low)	Rotation or Location of Applicatio n	Frequency of Assessmen t

\*The effectiveness of an assessment tool can be determined using a framework like the Ottawa Framework for Good Assessment (*Norcini J et al. Med Teach 2018*). This framework lists attributes of an assessment tool and asks you to determine how effectively the tool achieves those attributes. Attributes include reliability, validity, reproducibility, feasibility, educational effect (of and for learning), and acceptability. This framework informs judgement regarding the likelihood that an assessment approach will generate good assessment. If a tool lacks any of these attributes, its effectiveness will be substantially diminished. For instance, a tool such as direct observation that is not accepted by faculty members (takes too long) or is deemed too expensive (decreased Relative Value Unit (RVU) generation) may be unlikely to be successfully implemented (low effectiveness). Provide a judgment on the effectiveness of the proposed assessment tools. If the assessment tool scores low using this framework, identify potential faculty development activities that may enhance the tool's effectiveness.

Competency	Describe how this innovation will advance assessment in the applicable Core Competencies (If not applicable, state N/A)
Patient Care	
Medical Knowledge	
Practice-based Learning and Improvement	
Interpersonal and Communication Skills	
Professionalism	
Systems-based Practice	

D3) How will the pilot enhance patient outcomes?
D3 here
<b>D4)</b> How will the pilot enhance learner outcomes? (In addition to general learner outcomes, discuss how the pilot will address support for struggling learners, including how such learners can be reintegrated into existing programs if they cannot continue in the pilot, and what role learners will play in implementing the pilot?)
D4 here
<b>D5)</b> How will the pilot enhance the learning environment?
D5 here
<b>D6)</b> Describe how the pilot will enhance the tracking of competency outcomes?
D6 here

<b>D7)</b> Describe the approach to studying new assessment approaches or tools (if a new approach to assessment is part of this pilot).
D7 here
<b>D8)</b> Describe the faculty development approaches that will ensure participating faculty members understand the goals and objectives of the pilot and can effectively use the assessment tools/methods required for effective programmatic assessment in this pilot.
D8 here
E. Clinical Learning Environment Impact Assessment
Describe how the innovation will assess and monitor the impact on the learning environment, especially if the innovation only involves a subset of learners.
In addition, describe how the innovation will assess and monitor the impact of the learning environment on those learners who are not participating in the innovation but that share the learning environment with those learners that do participate?
Respond here.

# F. Monitoring

Describe how the program will monitor progress of the implementation of the innovation. The proposal should describe the evaluation plan (i.e., program evaluation; see G below) for the innovation, addressing the overarching questions, what works, for whom, under what circumstances, and why regarding the innovation.

Respond here.
G. Program Evaluation
Describe how the overall program will be evaluated, and what evaluation approach will be used. For example, a program might wish to use the Kirkpatrick framework of a logic model to describe its program evaluation plan. These tools and framework provide a systematic and rigorous approach to evaluation that can help to increase the chances of success. Program evaluation approaches can also help identify problems and challenges earlier so that changes and alterations can be made in a timely manner.
Respond here.
H. Timeline
Provide the tentative pre-implementation timeline if curriculum and assessment system require further detail.
Respond here.

Provide a timeline that describes the duration of the project. This should include a launch date for the implementation of the pilot and the duration of the pilot.

Respond here.
I. Description of the Measures
Describe the type and frequency of measures by which the innovation will be evaluated. Some of the measures must be outcomes-based in relation to the innovation being proposed.
Respond here.
J. Criteria for Assessing Degree of Success
Describe the criteria for determining success of the innovation, including the related targets/benchmarks and outcomes. This should be included in the program evaluation plans.
Respond here.
K. Applicability

Describe how the innovation's goals and anticipated outcomes may apply to other graduate medical education programs.

Re	spond here.	
L.	Next Step	
mov addi certi appi	re the innovation from tion to identifying the ification requirements ropriate assessment	tion of the innovation timeline, what next steps will be necessary to a pilot to an approved pathway for accreditation and certification? In esteps and stakeholders necessary to defining accreditation and is for such a pathway, next steps should address the requirements for of learners and programs, as well as the required faculty development ment in any future pathway.
Re	spond here.	
	Approval Signatures Program Director:	s and Dates
B.	Department Chair, if applicable:	
C.	If a dependent subspecialty, specialty Program Director	
D.	ABMS	Provide the ABMS letter of approval endorsing the submission of this proposal. Proposals will not be reviewed without this documentation.
E.	Designated Institutional Official:	

F.	Chair, Graduate Medical Education Committee:	
G.	Appropriate Specialty Society and Educational Group:	Provide letters of approval endorsing the submission of this proposal. Proposals will not be reviewed without this documentation.

# IV. Attachments (if applicable)

File Name	Description	Attachment or Link



# **Appendix C: Planning Worksheet**

Provided below is a template to help you plan your pilot and submission to the ACGME. You are not required to submit this as a document, rather use this as a planning guide for your proposal. E-mail guestions to AIRE@acgme.org.

# **Description of Your Innovation Pilot**

We suggest using two tables to assist in describing your innovation training pilot. In the first table, describe the major short-term (one year) and long-term (three to five-year) outcomes that you anticipate for each innovation listed in Column 1 (i.e., start with the end in mind). These could be resident/fellow outcomes, program outcomes, or patient outcomes. For each outcome in the second column, identify how you will measure the outcomes or determine the degree to which each has been achieved. Measures could include trainee evaluation data, exam scores, resident/fellow surveys, analysis of hospital QI data, etc.

Educational Innovation	What are your major intended results/outcomes? Consider short-term (one	What processes, tools, or other measures will you use to determine whether you have achieved these
	year) and long-term (three to five-year)	outcomes?
	outcomes.	

In the second table, repeat your list of educational innovations in the first column what methods you will use for implementation in the second column, and indicators of success in the third column.

Educational Innovation	What methods/activities will you use to implement your innovation?	Indicators of successful implementation – how will you know that you are on the right track during the project? Consider major milestones, deliverables, or intermediate outcome measures for this question.

# **Assessment to Measure Key Outcomes**

In addition to the Milestones, please list the specific assessment methods you will use to generate data on trainee competence in each of the six required ACGME Competencies (Note: A method can be used more than once).

Competency	Assessment Method(s) [and frequency]	Evaluator(s)
Patient Care		
Medical knowledge		
Practice-based		
Learning and		
Improvement		
Interpersonal		
Communication Skills		
Professionalism		
Systems-based Practice		

List each of the assessment tools to be employed and provide a brief description. This should include relevant validity evidence or theoretical justification supporting the use of these tools in this context.

Describe how faculty members completing these assessments will be trained to use the assessment methods listed above.

Describe how trainees (residents or fellows) will be informed of the performance criteria on which they will be assessed.

Describe the process that will be used to complete and document written semiannual evaluations, including the mechanism for reviewing results.

Describe how the program will assess trainees using direct observation of patient encounters. Identify the direct observation tools used (e.g., mini-CEX, procedure checklist, etc.) to assess a resident's or fellow's (a) ability to gather data; (b) clinical reasoning; (c) patient management skills; and (d) procedural skills.

Where applicable, describe how simulation will be used as part of the innovation, especially around procedural skills.

#### Assessment of Patient Care

Documented direct observation of a trainee-patient encounter by supervising attending occurs in the:

Inpatient Setting – Yes/No Ambulatory Setting – Yes/No

Documented direct observation takes place to evaluate a trainee's ability to:

Ability to gather data – Yes/No Clinical reasoning – Yes/No

Patient Management – Yes/No Procedural skill – Yes/No

# **Assessment of Medical Knowledge**

What assessment method(s) is used in evaluating a trainee's medical knowledge?

How often is the assessment given to each trainee?

# **Assessment of Practice-based Learning and Improvement**

Assessment of a trainee's competency in practice-based learning and improvement includes:

Application of evidence to patient care – Yes/No

Practice improvement - Yes/No

Teaching skills involving peers - Yes/No

Teaching skills involving patients – Yes/No

Scholarship – Yes/No

# **Assessment of Interpersonal and Communication Skills**

Does the program use documented direct observation tools to evaluate trainees:

Communication with patient – Yes/No

Communication with family – Yes/No

Teamwork - Yes/No

Communication with peers - Yes/No

Transition of care – Yes/No

Record keeping - Yes/No

Communication with other fellows and/or residents

Which of the following provide assessment of the trainee's interpersonal and communication skills:

Patients – Yes/No

Peers - Yes/No

Nurses – Yes/No

Technicians – Yes/No

Ancillary staff – Yes/No

Allied health professions - Yes/No

Social workers - Yes/No

Clerical staff – Yes/No

Referring physician – Yes/No

Consultants - Yes/No

Physician Assistants – Yes/No

Medical students - Yes/No

Other - Please describe

Communication with other fellows and/or residents

#### Assessment of Professionalism

Which of the following provide assessment of the trainee's professionalism:

Patients – Yes/No

Peers – Yes/No

Nurses – Yes/No

Technicians - Yes/No

Ancillary staff - Yes/No

Allied health professions - Yes/No

Social workers - Yes/No

Clerical staff - Yes/No

Referring physician – Yes/No

Consultants - Yes/No

Physician Assistants - Yes/No

Medical students – Yes/No

Other - Please describe

Other fellows and/or residents

# Does the program assess the trainee's:

Honesty - Yes/No

Integrity – Yes/No

Ability to meet professional responsibilities – Yes/No

Ability to maintain appropriate professional relationships with patients and colleagues – Yes/No

Commitment to self improvement – Yes/No

# **Assessment of Systems-based Practice**

Which of the following provide assessments of the trainee's competency in systems-based practice:

Patients – Yes/No

Peers - Yes/No

Nurses - Yes/No

Technicians - Yes/No

Ancillary staff – Yes/No

Allied health professions – Yes/No

Social workers – Yes/No

Clerical staff - Yes/No

Referring physician – Yes/No

Consultants - Yes/No

Physician Assistants – Yes/No

Medical students – Yes/No

Other - Please describe

Other fellows and/or residents

# Does the program assess the trainee's:

Care coordination - Yes/No

Transition of care - Yes/No

Ability to work in interdisciplinary teams – Yes/No Advocacy for quality care – Yes/No Ability to identify systems problems and participate in improvement activities – Yes/No

#### **Patient Care**

Describe one proposed learning activity designed to identify strengths, deficiencies, and limits in trainee patient care skill involving the care of an individual patient and a patient population under the care of the trainee.

Describe how direct observation of trainees interacting with patients, families, and other health care team members will be documented. Include a description of the number of direct observations that will be completed per year.

Describe the faculty development that will ensure that faculty members have the requisite knowledge, skills, and attitudes needed to complete the above referenced direct observations. Also discuss how the program will develop a common or shared understanding of the criteria that will be used to judge competency through the direct observation process.

# **Practice-based Learning and Improvement**

Describe one proposed learning activity designed to identify strengths, deficiencies, and limits in trainee knowledge and expertise (self-reflection and self-assessment), set learning and improvement goals, identify and perform appropriate learning activities to achieve self-identified goals (lifelong learning).

Describe one example of a learning activity designed to develop the skills needed to use information technology to locate, appraise, and assimilate evidence from scientific studies and apply it to their patients' health problems. The description should include:

- a. locating information
- b. Using information technology
- c. Appraising information
- d. Assimilating evidence information (from scientific studies)
- e. Applying information to patient care

Give one example of a proposed quality improvement activity or project intended to demonstrate trainee's ability to analyze, improve, and change practice or patient care.

Describe how residents or fellows:

- a. Develop teaching skills necessary to educate patients, families, students, and other residents.
- b. Receive and incorporate formative feedback into daily practice.

# **Interpersonal and Communication Skills**

Describe one proposed learning activity/venue in which residents and fellows develop competency in communicating effectively with patients, families, physicians, other health professionals, and health-related agencies.

Describe one proposed learning activity in which residents or fellows develop their skills and habits to work effectively as a member or leader of a health care team. In the example, identify the members of the team, responsibilities of the team members, and how team members communicate to accomplish responsibilities.

Explain (a) how the completion of comprehensive, timely and legible medical records is monitored and evaluated, and (b) the mechanism for providing residents or fellows' feedback on their ability to competently maintain medical records.

#### **Professionalism**

Describe at least one proposed learning activity, other than lecture, by which residents or fellows demonstrate professional responsibilities and an adherence to ethical principles.

How does the program promote and monitor professional behavior in residents, fellows and faculty?

How are lapses in these behaviors addressed?

### **Systems-based Practice**

Describe a proposed learning activity/venue through which trainees will achieve competence in the elements of systems-based practice: work effectively in various health care delivery settings and systems; coordinate patient care within the health care system; incorporate considerations of cost containment and risk benefit analysis in patient care; advocate for quality patient care and optimal patient care systems; and work in inter-professional teams to enhance patient safety and care quality.

Describe an activity that fulfills the requirement for experiential learning in identifying system errors.

