USF GME Quality Improvement and Patient Safety Resource Directory

Table 1. ACGME and Common Program requirements for quality improvement (QI), patient safety (PS), and handoffs. Additionally, each Program may have specialty-specific requirements for QI/PS.

each Program may have specialty-specific requirements for C	
ACGME CLER recommendations	ACGME Common Program requirements
Quality improvement	
QI 1. Access to data to improve systems of care, reduce healthcare disparities, and improve patient outcomes	QI 3. Residents must receive training and experience in QI processes, including an understanding of health care disparities.
QI 2. Opportunities to participate in QI initiatives	QI 4. Residents and faculty members must receive data on quality metrics and benchmarks related to their patient populations.
	QI 5. Residents must have the opportunity to participate in interprofessional QI activities
Patient safety	
PS 1. Access to systems for reporting errors, adverse events, unsafe conditions, and near misses in a protected manner that is free from reprisal PS 2. Opportunities to contribute to root cause analysis or similar risk-reduction processes	PS 3. Residents should have the opportunity to participate in the disclosure to patients of patient safety events, real or simulated. PS 4. Know their responsibilities in reporting patient safety events at the clinical site PS 5. Know how to report patient safety events, including near misses, at the clinical site PS 6. Be provided a summary information of their institution's patient safety reports PS 7. Participate as team members in real and/or simulated interprofessional clinical patient safety activities, such as root cause analyses or other activities that include analysis, as well as formulation and implementation of actions PS 8. All residents must receive training in how to disclose adverse events to patients and families.

Handoffs or Transitions of care

- **H1.** Facilitate professional development for core faculty members and residents/fellows regarding effective transitions of care
- **H2.** In partnership with its ACGME-accredited program(s), ensure that and monitor effective, structured patient handover processes to facilitate continuity of care and patient safety at participating sites
- **H3.** Engage residents/fellows in standardized transitions of care consistent with the setting and type of patient care.

- **H4.** Design clinical assignments to optimize transitions in patient care, including their safety, frequency, and structure.
- **H5.** In partnership with their Sponsoring Institutions, must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.
- **H6.** Ensure that residents are competent in communicating with team members in the hand-over process.
- **H7.** Maintain and communicate schedules of attending physicians and residents currently responsible for care at clinical sites.
- **H8.** Ensure continuity of patient care, consistent with the program's policies and procedures referenced in H5, in the event that a resident may be unable to perform their patient care responsibilities due to excessive fatigue or illness, or family emergency.

PROGRAM SELF-ASSESSMENT

ACGME RECOMMENDATION FOR QUALITY	HOW OUR PROGRAM ADDRESSES THIS RECOMMENDATION?	OPPORTUNITY FOR IMPROVEMENT
QI 1. Access to data to improve systems of care, reduce healthcare disparities, and improve patient outcomes		□Yes □No
QI 2. Opportunities to participate in QI initiatives		□Yes □No
QI 3. Residents must receive training and experience in QI processes, including an understanding of health care disparities.		□Yes □No
QI 4. Residents and faculty members must receive data on quality metrics and benchmarks related to their patient populations.		□Yes □No
QI 5. Residents must have the opportunity to participate in interprofessional QI activities		□Yes □No

Refer to Table 2 to evaluate available resources and suggestions to address opportunities for improvement.

ACGME RECOMMENDATION FOR PATIENT SAFETY	HOW OUR PROGRAM ADDRESSES THIS RECOMMENDATION?	OPPORTUNITY FOR IMPROVEMENT
PS 1. Access to systems for reporting errors, adverse events, unsafe conditions, and near misses in a protected manner that is free from reprisal		□ Yes □ No
PS 2. Opportunities to contribute to root cause analysis or similar risk-reduction processes		□ Yes □ No
PS 3. Residents should have the opportunity to participate in the disclosure of patient safety events, real or simulated.		□ Yes □ No
PS 4. Know their responsibilities in reporting patient safety events at the clinical site		□ Yes □ No
PS 5. Know how to report patient safety events, including near misses, at the clinical site		□ Yes □ No
PS 6. Be provided a summary information of their institution's patient safety reports		□ Yes □ No
PS 7. Participate as team members in real and/or simulated interprofessional clinical patient safety activities, such as root cause analyses or other activities that include analysis, as well as formulation and implementation of actions		□ Yes □ No
PS 8. All residents must receive training in how to disclose adverse events to patients and families.		□ Yes □ No

Refer to Table 2 to evaluate available resources and suggestions to address opportunities for improvement.

ACGME RECOMMENDATION FOR HANDOFF	HOW OUR PROGRAM ADDRESSES THIS RECOMMENDATION?	OPPORTUNITY FOR IMPROVEMENT
H1. Facilitate professional development for core faculty members and residents/fellows regarding effective transitions of care		□ Yes □ No
H2. In partnership with its ACGME-accredited program(s), ensure that and monitor effective, structured patient handover processes to facilitate continuity of care and patient safety at participating sites		□ Yes □ No
H3. Engage residents/fellows in standardized transitions of care consistent with the setting and type of patient care.		□ Yes □ No
H4. Design clinical assignments to optimize transitions in patient care, including their safety, frequency, and structure.		□ Yes □ No
H5. In partnership with their Sponsoring Institutions, must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.		□ Yes □ No
H6. Ensure that residents are competent in communicating with team members in the hand-over process.		□ Yes □ No
H7. Maintain and communicate schedules of attending physicians and residents currently responsible for care at clinical sites.		□ Yes □ No
H8. Ensure continuity of patient care, consistent with the program's policies and procedures referenced in H5, in the event that a resident may be unable to perform their patient care responsibilities due to excessive fatigue or illness, or family emergency.		□ Yes □ No

Refer to Table 2 to evaluate available resources and suggestions to address opportunities for improvement.

Table 2. QI and PS resources integrated with ACGME CLER recommendation and ACGME Common Program Requirements

	<u> </u>	and PS resources integrated with AC				<u> </u>	IIIIIC	Idati	on a	110 / (CON		OIIIII	10111	rogi	uiii i	toqu	II CITI	51113				
	#	Available tools, activities, & resources	QI 1	2 10	QI 3	QI 4	3 ID	PS 1	PS 2	PS3	PS 4	PS 5	9 Sd	LS4	PS 8	H1	H2	ЕН	H 4	H2	9H	Н7	8H
	1	USF GME QI and PS website	Χ			Χ		Χ				Χ			Χ								1
ess	2	USF QI platform	Χ	Χ	Χ		Χ																
Access	3	Organizational QI/PS leadership	Χ	Χ		Χ	Χ		Χ				Χ	Χ									
	4	RL solutions						Χ			Χ	Χ											
Learning modules	5	Creation of a specialty-based QI dashboard	Х			Χ																	
arni odul	6	IHI Open School QI modules			Χ																		
Le.	7	IHI Open School PS modules									Χ				Χ								
	8	Radiology-TEACHES			Χ																		
	9	AHRQ WebM&M (M&M Rounds on the Web)							Χ		X			Χ	X								
	10	AMA GME Competency Education Program			Х										X	Х							
	11	Gamified RCA							Χ		Χ	Χ		Χ	Χ								
ng	12	RCA ² process							Χ		Χ	Χ		Χ	Χ								
arni	13	ABMS MOC QI requirements		Χ		Χ	Χ																,
Interactive learning	14	Reflective practice portfolio/ Individual learning plan						Χ		Χ	Χ												ı
erac	15	Simulation exercises		Χ	Χ		Χ							Χ									
Inte	16	Program-specific QI/PS lecture series			Х						X	Χ			X	Χ							
	17	Skills-based training			Χ		Χ								Χ	Х							
	18	Types of errors training			Χ				Χ					Χ									
	19	Cognitive bias training			Χ																		
	20	GME PS workshop						Χ	Χ	Χ	Χ	Χ		Χ	Χ	Χ							
	21	QI toolkit		Χ	Х		Χ																
ia _	22	GME-TGH initiative QI boot camps		Χ	Χ		Χ																
ent	23	Handoff evaluation .														Χ	Χ	Χ					
Experiential learning	24	QI/PS leader	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ					
X ≥	25	USF GME QI elective at TGH	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ					
	26	USF GME Grants Program	Χ	Χ	Χ	Χ	Χ																

DESCRIPTIONS OF CATEGORIES LISTED BELOW

Programs are encouraged to have learning objectives for each QI/PS activity conducted, to evaluate curricular outcomes using the Kirkpatrick framework^{1,2}, and to make learner assessments using Miller's pyramid.³

Outcomes of each learning activity can be described using the Kirkpatrick framework

Kirkpatrick level	Description	Examples
Level 1	Learner satisfaction	Likert scale evaluation
Level 2A	Learner attitudes	Tests, Perceptions and feedback, Problem-
Level 2B	Learner knowledge acquisition	based exercises, Performance-based activities, Game-based activities, Project-based activities
Level 3	Changes in learner behavior	Self-report, Peer evaluation, Observation, Interview, Survey
Level 4A	Impact on clinical processes	Compliance with an identified process,
Level 4B	Impact on patient outcomes	Evaluation of patient outcomes

DETAILED DESCRIPTIONS OF TOOLS, ACTIVITIES, AND RESOURCES

Each tool includes: a brief description of the tool; the educational setting the tool can be used in; teaching methods and curricular content, including supplemental tools to support its use; and learning outcomes using Kirkpatrick model.

1. USF GME QI and PS website

https://health.usf.edu/medicine/gme/current/quality-improvement

- What is this? Bring awareness to USF GME's QI and PS website, which includes resources and important contacts related to our QI and PS efforts.
- Where can we apply this? Resident conference, Handbook, Orientation materials
- How can we use this? Didactics
- How do we assess effectiveness of this activity with learners? Learner satisfaction
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? None

2. USF GME QI platform (in development)

- What is this? Utilize the USF GME's QI platform, which is a central repository of QI initiatives that involve USF faculty and trainees. A major benefit is the transparency this will bring for Programs, GME, and potential interprofessional partners regarding ongoing and completed initiatives. The platform is structured to facilitate use of QI methodology by participants so that they can move through the steps of an initiative and request feedback or QI coaching at any stage. All initiatives submitted to the platform require alignment with organizational goals, bringing awareness of these goals to faculty and trainees.
- Where can we apply this? QI initiative (individual, team-based, institutional)
- How can we use this? Team-based learning, QI coaching
- How do we assess effectiveness of this activity with learners? Impact on clinical processes and/or patient outcomes
- Educator knowledge level? Advanced beginner
- What additional resources are needed to facilitate this activity? QI toolkit

3. Organizational QI/PS leadership

 What is this? Provide awareness of their institution's quality and safety priorities, quality improvement initiatives, and benchmarked data.

•	Quality department	Patient safety	
Affiliate site	contact	contact	Website
	Carol Ward, Chief of Quality	Same	
Bay Pines	Systems		
VA	Office # Bldg 24 rm 106		
	E-mail: carol.ward@va.gov		
	Laura Smith	Dr. Ana Kraus	
	Acting Chief, Quality	Associate Chief of	
	Management Service	Staff for Performance	
	Laura.smith72693@va.gov	Improvement &	
James A.	Ph: 813.972.2000 x7849	Informatics	
Haley VA		(ACOS/PII)	
		Ana.kraus@va.gov	
		Ph: 813.972.2000	
		x6607	
	Angela Green, PHD, RN	Same	
	Senior Director Patient Safety		
Johns	and Quality		
Hopkins/All	Office #		
Childrens	E-mail:		
	angela.green@jhmi.edu		
	Donna Moran	Same	
NA CCU	Interim Quality & Patient		
Moffitt	Safety Manager		
Cancer Center	Donna.moran@moffitt.org		
Ceriter	Ph: 813-745-3291		
	Dr. Laura Haubnar Chief	Como	https://www.tah.org/potionto
	Dr. Laura Haubner, Chief Quality Officer	Same	https://www.tgh.org/patients- visitors/patients/quality-
	Ihaubner@tgh.org		metrics
TGH	Office #813-844-8567		metros
	QI chief resident		
	Dr. Terri Ashmeade, Chief	Same	
USF	Quality Officer		
_	tashmead@health.usf.edu		
	Office # 813-974-3163		

- Where can we apply this? Resident conference, Handbook, Orientation materials
- How can we use this? Identifying opportunities for involvement in organizational QI/PS activities, data transparency and awareness,
- How do we assess effectiveness of this activity with learners? Learner satisfaction
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? NA

4. RL solutions

- What is this? Online patient safety reporting system
- Where can we apply this? Resident conference, Handbook, Orientation materials
- How can we use this? Challenge each resident to submit at minimum 1 patient safety event per year
- How do we assess effectiveness of this activity with learners? Learner satisfaction, number of safety events reported per year by residents and faculty
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? Faculty education regarding safety reporting and use of RL solutions

5. Creation of a specialty-based QI dashboard

- What is this? Program directors can create a specialty's QI dashboard. Potential contacts for this information may be the Medical Director for a clinical care area or Division Chief.
- Where can we apply this? Resident conference
- How can we use this? QI initiative, PBLI activities
- How do we assess effectiveness of this activity with learners? Learner satisfaction
- Educator knowledge level? Advanced beginner
- What additional resources are needed to facilitate this activity? Sources of data may be the electronic medical record, or a sample of patient-level data related to the QI goal.

6. IHI Open School QI modules (QI 101-105)

• What is this? Participate in the Institute of Healthcare Improvement (IHI) developed webbased modules, which teach fundamental QI principles.

I		Class #	Duration	Content
		QI 101	1 hour 15 minutes	Dimensions of quality in healthcare Value of improvement science
		QI 102	1 hour 30 minutes	IHI's Model for Improvement Measures (process, outcome, balancing) PDSA cycle introduction
	Jer	QI 103	1 hour 15 minutes	Testing and measuring change using PDSA cycles
	Learner	QI 104	1 hour 30 minutes	Interpreting data using run charts, control charts, and other measurement tools
		QI 105	1 hour 15 minutes	Leading QI IHI's Framework for Spread Understanding and overcoming resistance to change Interprofessional teamwork
		GME 201	30 minutes	Understanding the importance of engaging trainees in QI and PS
	tor	GME 203	30 minutes	The Faculty role: Understanding and modeling fundamentals of QI and PS
	Facilitator	GME 204	30 minutes	Role of didactic learning in QI/PS Understanding how QI/PS training materials can be integrated into a curriculum Characteristics of a successful QI/PS curriculum for adult learners
		GME 205	1 hour 0 minutes	Roadmap for facilitating experiential learning in QI

GME 206	1 hour 0 minutes	Aligning GME with organizational QI/PS goals

- Where can we apply this? Independent study for faculty or trainees
- How can we use this? Web-based learning, upon completion of each modules, a certificate can be printed and submitted to the Program
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition, number of completed modules
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? Access to online module, Enroll as a student at IHI Open School (no fee for membership; http://www.ihi.org/education/ihiopenschool/Pages/default.aspx)

7. IHI PS modules

• What is this? Participate in Institute of Healthcare Improvement (IHI) developed web-based modules, which teach fundamental PS principles.

	Class #	Duration	Content
	PS 101	1 hour 30 minutes	Understanding medical errors and patient safety Responding to errors and harm
	PS 102	1 hour 0 minutes	Swiss cheese model of error Active vs. latent failures James Reason's classification of unsafe acts
	PS 103	1 hour 0 minutes	Human factors contributing to error Understanding simplification, standardization, constraints, forcing functions and redundancies Use of technology to improve PS
Learner	PS 104	1 hour 15 minutes	Effective teamwork to promote PS Culture of safety Behaviors to promote team work, communication, and culture of safety Structured communication techniques
	PS 105 1 hour 45 minutes	Steps to take after an adverse event occurs Error disclosure Impact of adverse events on providers Root cause analysis introduction	
	PS 201	1 hour 30 minutes	Root cause analysis to address problems in health care
	PS 202	1 hour 15 minutes	Culture of safety
	GME 201	30 minutes	Understanding the importance of engaging trainees in QI and PS
'n	GME 203	30 minutes	The Faculty role: Understanding and modeling fundamentals of QI and PS
Facilitator	GME 204	30 minutes	Role of didactic learning in QI/PS Understanding how QI/PS training materials can be integrated into a curriculum Characteristics of a successful QI/PS curriculum for adult learners
	GME 205	1 hour 0 minutes	Roadmap for facilitating experiential learning in QI

	GME 206	1 hour 0 minutes	Aligning GME with organizational QI/PS goals	
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- Where can we apply this? Independent study for faculty or trainees
- How can we use this? Web-based learning, upon completion of each modules a certificate can be printed and submitted to the Program
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition, number of completed modules
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? Access to online module, Enroll as a student at IHI Open School (no fee for membership; http://www.ihi.org/education/ihiopenschool/Pages/default.aspx)

8. Radiology-TEACHES

- What is this? An online portal that uses case vignettes to simulate the process of ordering
 imaging studies via integrated clinical decision support. Learners receive immediate
 feedback on decisions during the cases, which can help them improve appropriateness of
 imaging and reduce overutilization of testing.
- Where can we apply this? Independent study
- How can we use this? Web-based learning, upon completion Program Director can review dashboard for completion of modules
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition, number of completed modules
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? Access to Radiology-TEACHES

9. AHRQ WebM&M (Morbidity and Mortality Rounds on the Web)

- What is this? Use cases of medical errors anonymously reported by readers are analyzed by experts. There are a variety of cases available for review which include learning objectives, a case description, and commentary. Cases that are designated as a "Spotlight Case" are interactive, have resources linked to the case, a developed PowerPoint presentation of the case, and upon completion can award CME/CEU credit.
- Where can we apply this? Independent study, Resident conference
- How can we use this? Web-based learning, Interactive teaching sessions (i.e., mock
 morbidity & mortality conference, case discussion, awareness of errors to report, how to
 disclose safety events to patients), scholarly activity (i.e., publish local case)
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition
- Educator knowledge level? Advanced beginner
- What additional resources are needed to facilitate this activity? Access to AHRQ WebM&M (https://www.ahrq.gov/cpi/about/otherwebsites/webmm.ahrq.gov/index.html)

11. AMA GME Competency Education Program

- What is this? Use of online modules designed to complement teachings in patient setting sand didactic curricula in residency and fellowship programs. It helps residents and their institutions to meet core competency requirements.
- Where can we apply this? Independent study
- How can we use this? Web-based learning, upon completion of each modules a certificate can be printed and submitted to the Program
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? Access to AMA learning modules (https://www.ama-assn.org/education/improve-gme/ama-gme-competency-education-program)

DURATION HH:MM:SS	ONLINE MODULE TITLE
00:13:30	AMA Building the patient-physician relationship
00:19:00	AMA Coding and documentation for resident physicians
00:15:00	AMA Cultural competency
00:10:04	AMA Effective patient communication
00:12:30	AMA Health care quality: Measuring physician performance
00:12:30	AMA Managing unconscious bias
00:14:00	AMA Patient handoffs
00:14:00	AMA Patient safety
00:34:53	AMA Quality improvement panel
00:20:00	AMA Working effectively within an interprofessional team

12. Gamified RCA

- What is this? A style of interactive RCAs using game theory to teach analysis of systemsrelated issues and development of action plans. A "Mystery Dinner RCA" slide set for 4
 common errors and RCA tools is available. These can be conducted several times during
 resident training. Contact GME Director of Quality and Safety if your program is interested in
 conducting a "Mystery Dinner RCA" or learning how to facilitate the learning session.
 Training should include information on how to disclose errors to patients and a review of RL
 solutions.
- Where can we apply this? Resident conference
- How can we use this? Interactive teaching sessions led by residents or faculty, Morbidity and Mortality conference
- How do we assess effectiveness of this activity with learners? Learner knowledge aquisition
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Mystery Dinner RCA slide set, trained facilitators (1 facilitator for 8-10 learners), conference room that allows for small group learning

14. Root cause analysis and action (RCA²) process

- What is this? RCA² is an approach to analyze medical errors using a systems approach that includes development of a corrective action plan.
- Where can we apply this? Resident conference, Institutional or Departmental RCAs
- How can we use this? Interactive teaching sessions, Morbidity and Mortality conference
- How do we assess effectiveness of this activity with learners? Impact on clinical processes
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? RCA² toolkit (see RCA2
 Workbook on GME Website), trained facilitator, engagement of hospital's Risk Management
 Department for potential facilitators and understanding of hospital processes for
 investigating serious safety events (see GME Website)

15. ABMS Maintenance of Certification (MOC) QI requirements

- What is this? Each medical board has MOC requirements tied for individual practice-based improvement tied to board certification maintenance.
- Where can we apply this? Independent or team-based QI initiatives
- How can we use this? Provides sample projects plans for QI initiatives
- How do we assess effectiveness of this activity with learners? Impact on clinical processes, Individual physician outcomes
- Educator knowledge level? Advanced beginner
- What additional resources are needed to facilitate this activity? Access to specialty board MOC website

16. Reflective practice portfolio/Individual learning plan

- What is this? Use personal reflective practice to describe patient safety issues experienced
 by residents. Residents can participate in this activity once in their training or multiple times
 whereby a personal portfolio can be created. We encourage discussion of these
 experiences as a way to expand resident knowledge of QI/PS.
- Where can we apply this? Rotational requirement
- How can we use this? Journal entry through New Innovations submitted to Program director
- How do we assess effectiveness of this activity with learners? Learner attitudes
- Educator knowledge level? Advanced beginner
- What additional resources are needed to facilitate this activity? none

17. Simulation exercises

- What is this? Use simulation, video vignettes, or standardized activities to discuss QI/PS issues, including disclosure of errors and breaking bad news. Examples include House of Horrors, procedure training (e.g., central line placement), or simulated code events.
- Where can we apply this? Resident conference, Workshop, Exercise
- How can we use this? Interactive teaching session
- How do we assess effectiveness of this activity with learners? Changes in learner behavior
- Educator knowledge level? Advanced beginner Competent
- What additional resources are needed to facilitate this activity? Access to simulation equipment or environment

19. Program-specific QI/PS lecture series

- What is this? Develop a program-specific QI/PS lecture series covering topics relevant to their residents. Common topics may include understanding of value healthcare quality, continuous quality improvement, root cause analysis and actions (RCA²), and the disclosure and reporting of medical errors.
- Where can we apply this? Resident conference
- How can we use this? Didactic lecture, Interactive training session
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Curriculum

20. Skills-based training on communication

- What is this? Offer residents QI/PS skills-based training related to communication. This may
 include topics such as TeamSTEPPS tools, error disclosure, and handoff tools between
 residents or residents and interprofessionals (e.g., iPASS, SBAR).
- Where can we apply this? Resident conference, Workshop
- How can we use this? Didactic lecture, Interactive teaching session, Direct observation,
 Peer role play
- How do we assess effectiveness of this activity with learners? Changes in learner behavior
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Curriculum for standard programs (e.g., TeamSTEPPS 2.0: https://www.ahrq.gov/teamstepps/instructor/index.html)

21. Types of error training

- What is this? Teach residents the different types of cognitive errors.
- Where can we apply this? Resident conference, Bedside teaching, Morbidity and Mortality conferences, Morning report
- How can we use this? Didactic lecture or assign conferences solely focused on highlighting types of cognitive errors during case discussion
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Educators focused on cognitive errors; types of error training www.improvediagnosis.org/page/EducatorResources

22. Cognitive bias training

- What is this? Teach residents how cognitive bias can contribute to medical errors. Harvard's
 Project Implicit offers a free pre-test (https://implicit.harvard.edu/implicit/takeatest.html) that
 can be done and discussed.
- Where can we apply this? Resident conference
- How can we use this? Didactic lecture, Interactive teaching session
- How do we assess effectiveness of this activity with learners? Changes in learner behavior
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Trained facilitator

24. GME PS workshop

- What is this? Participate in a 0.5-day workshop offered by USF GME that uses simulation/roleplay, interactive teaching sessions, and didactic lectures to teach 3-4 PS skills to residents (e.g., error reporting and disclosure, mock root cause analysis, House of Horrors, handoff).
- Where can we apply this? Workshop
- How can we use this? Combination of simulation/roleplay, interactive teaching sessions, didactic lectures
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition and/or changes in learner behavior (depending on activities chosen)
- Educator knowledge level? Advanced beginner Competent
- What additional resources are needed to facilitate this activity? Access to PS workshop curriculum, Facilitators (4 per workshop), simulation equipment/environment

25. QI toolkit

- What is this? A QI toolkit that facilitates development of a QI initiative whether it be a
 personal improvement projects or healthcare QI projects (individual, team, institutional). The
 toolkit is available on the USF GME QI website.
- Where can we apply this? QI initiative
- How can we use this? Guides team through steps of developing a QI initiative
- How do we assess effectiveness of this activity with learners? Impact on clinical processes and/or patient outcomes (depending on project chosen)
- Educator knowledge level? Novice
- What additional resources are needed to facilitate this activity? QI toolkit

26. USF GME-TGH QI boot camps

- What is this? Participate in USF GME-TGH boot camps, which are comprised of two to three, 0.5-day sessions at no cost. Requirements include attendance as an interprofessional team, project selection that aligns with organizational goals, and meeting accountability requirements set by GME and TGH.
- Where can we apply this? Workshop
- How can we use this? Didactic lectures, Interactive teaching sessions with feedback on developed material
- How do we assess effectiveness of this activity with learners? Impact on clinical processes or patient outcomes (depending on project chosen)
- Educator knowledge level? NA
- What additional resources are needed to facilitate this activity? Interprofessional team, QI problem

28. Handoff evaluation

- What is this? Develop a standardized Program-specific resident handoff and measure competence of training performing handoffs with this evaluation tool (e.g., I-PASS program and evaluation tool)
- Where can we apply this? Direct observation
- How can we use this? Senior residents or faculty observe handoff and provide feedback by using the evaluation tool
- How do we assess effectiveness of this activity with learners? Impact on clinical processes
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Standardized handoff process and evaluation tool

29. QI/PS faculty leader

- What is this? Sponsor a faculty member to be responsible for the Program's QI/PS teaching, coaching, and activities. This may require investment in QI, PS, leadership, or communication training.
- Where can we apply this? See above.
- How can we use this? See above.
- How do we assess effectiveness of this activity with learners? Impact on clinical processes and/or patient outcomes (depending on the QI/PS activities involved in), learner knowledge
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Interested faculty, Support for development and activities

30. USF GME QI elective at TGH

- What is this? Participate in the USF GME QI elective, which is a 2-4 week elective managed by TGH's Chief Quality Officer. To maximize effectiveness of learning, residents are encouraged to not take any vacation or leave during the rotation. Please contact TGH Chief Quality Officer (lhaubner@tgh.org) for details of learning objectives.
- Where can we apply this? Hospital meetings
- How can we use this? Participation in hospital committees and project meetings, interactive teaching sessions, independent study, one-on-one sessions
- How do we assess effectiveness of this activity with learners? Learner knowledge acquisition
- Educator knowledge level? NA
- What additional resources are needed to facilitate this activity? Elective time, Use of TGH
 resident funding line

31. USF GME Grants Program

- What is this? Encourage residents to submit QI projects for the USF GME Grants Program.
 Grants are awarded to a limited number of QI projects annually and have specific accountability requirements.
- Where can we apply this? QI initiative
- How can we use this? Scholarly activity
- How do we assess effectiveness of this activity with learners? Impact on clinical processes and/or patient outcomes (depending on the project chosen)
- Educator knowledge level? Competent
- What additional resources are needed to facilitate this activity? Selection of initiative by GMEC Research subcommittee

References

- Morrison J. ABC of learning and teaching in medicine: Evaluation. BMJ 2003;326:385-7.
 Prideaux D. ABC of learning and teaching in medicine. Curriculum design. BMJ 2003;326:268-70.
- 3. Norcini JJ. Work based assessment. BMJ 2003;326:753-5.