Assessing Competencies in Internal Medicine Residencies:

Connecting Milestones to Entrustable Professional Activities (EPAs)

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Workshop Objectives

- Identify how assessment of Milestones can be the building blocks for assessment of EPA's
- Identify possible EPA's for use in assessment of resident competence
- Understand an approach to operationalizing Milestones and EPA's for the purpose of assessing resident competence in core competency domains

Competency

An observable ability of a health professional, integrating multiple components such as knowledge, skills, values and attitudes.

The International CBME Collaborators, 2009

Competent

Possessing the required abilities in all domains in a certain context at a defined stage of medical education or practice.

The International CBME Collaborators, 2009

Competence

Competence entails more than the possession of knowledge, skills and attitudes; it requires you … to apply these [abilities] in the clinical environment to achieve optimal results.

ten Cate, *Med Teach*, 2010

Competenglish

Competency – the thing(s) they need to do

Competent – can do all of the things

Competence – does all of the things consistently, adapting to contextual and situational needs

How Brady gets to Drive a Car

- Competency
  - Can accelerate and brake smoothly
  - Can approach an intersection and can turn left
- Competent
  - Passes driver's education classes
  - Passes driver's exam to get the license
- Competence
  - Drives safely on interstate or during bad weather, avoids accidents, no traffic tickets
  - Dad gives him the keys and walks away

A new paradigm

In Competency-Based Medical Education (CBME) we must know the trainee has demonstrated competence and is ready to progress to the next stage of their career:

- Requires clear definition of expected competencies (i.e. thing they need to do)
- Requires assessment to determine whether these things are done consistently and within the contextual needs of the clinical environment

Internal Medicine Milestones

- Organized by the ACGME general competency domains
- The milestones define the abilities expected of IM residents as they progress through training
  - Integrate knowledge, skills, values and attitudes
- Framed in behavioral terms
  - They are observable
  - Sets the stage for assessment of competence

Milestones Challenge

- Ensure that assessment and evaluation of milestones demonstrate competence in the activities that define the profession
  - …or at least a professional-in-training!
- Do they equate to the things that the public trusts that physicians are doing?
- Entrustable Professional Activities (EPA's)

An Entrustable Professional Activity

- Part of essential work for a qualified professional
- Requires specific knowledge, skill, attitude
- Acquired through training
- Leads to recognized output
- Observable and measureable, leading to a conclusion
- Reflects the competencies expected
- EPA's together constitute the core of the profession

ten Cate 2005

How is an EPA used?

- Individual faculty member making entrustment decision for a specific trainee
  - Level 1 – not allowed to practice EPA
  - Level 2 – practice with full supervision
  - Level 3 – practice with supervision on demand
  - Level 4 – "unsupervised" practice allowed
  - Level 5 – supervision task may be given

ten Cate et al, 2007

How is an EPA used?

- Program director or competency committee
  - Determine resident progression to next steps of training
  - Attestation to accreditation or certification bodies regarding developmental progression
  - Attestation to public that resident is entrusted to practice independently

Linking IM Milestones to EPA's

- Milestones are used to define (or inform) the design and assessment of the EPA

- Individual faculty assessment of a discreet task
  - Evaluate a new patient in ambulatory clinic
  - Implement a safe discharge plan in inpatient setting
- Competency committee evaluation of progression through training
  - Schedule resident to be ward team supervisor
  - Schedule resident to advance to PGY-2 year

Small Groups - Example

- Please split up into groups of ~6 people

- Example EPA – Lead a Family Meeting
  - Learning goals and description of EPA
  - Assessments used to inform this EPA
  - How determine entrustment decision?
  - What milestones used to inform the assessment of this entrustment decision?

Small Group Exercise 1 (25 min)

- EPA #1 – Develop safe discharge plan
  - Complete pages 1 and 2
- EPA #2 – Ambulatory new patient
  - Complete pages 1 and 2
- Discussion

Small Group Exercise 2 (15 min)

- EPA #1 – Develop safe discharge plan
  - Complete page 3
- EPA #2 – Ambulatory new patient
  - Complete page 3
- Discussion

Large Group Exercise (25 min)

- Question and answer session
- Wrap-up

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Thanks for your attendance!

Example
Family Meeting Entrustable Professional Activity (EPA)
UCSF Internal Medicine Residency

Setting: inpatient medicine ward or general internal medicine continuity clinic

EPA: Lead a family meeting to discuss serious or sensitive news with patient and/or family and other health providers

Learning goals for interns and second year residents

- Learn to conduct a meeting with a patient and/or family to discuss serious news during internship
- Conduct a meeting with a medical team and patient/family to discuss serious news as an intern and/or second year resident

Description

- Establish rapport with the patient and/or family
- Assess the patient/family's understanding of the patient's current condition
- Summarize the patient's medical course and current medical condition
- Deliver serious/sensitive news with clarity and compassion
- Elicit patient/family goals and preferences
- Involve other care providers in the discussion
- Establish a plan of care for the patient

Information that informs performance of this EPA:

- Attendings' global evaluations
- Other team members' global evaluations
- Attending feedback on the encounter using rubric
- Resident reflection – brief write up of how the PGY2 thinks s/he's doing on milestones and learning goals

How to determine that the PGY2 can be trusted to perform this activity independently?

- Review above information 1-2 times per year = progress review
    - Global evaluations, attending feedback, resident reflection forwarded to CHEF advisor
    - PGY-2 meets with CHEF advisor
- Resident who cannot be entrusted by the midpoint of the PGY2 year could receive additional guidance to be on track to be entrusted by end of PGY2 year, and to teach this skill to PGY1s and PGY2s in the R3 year

Main competencies and milestones addressed with this EPA

- **Patient care**
  - Seek and obtain appropriate, verified, and prioritized data from secondary sources (e.g. family, records, pharmacy)
  - Obtain relevant historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information
  - Role model gathering subtle and reliable information from the patient for junior members of the healthcare team
  - Recognize when to seek additional guidance
  - Customize care in the context of the patient's preferences and overall health
- **Medical knowledge**
  - Demonstrate sufficient knowledge of socio-behavioral sciences – i.e. health care economics, medical ethics, medical education
- **Practice Based Learning**
  - Determine if clinical evidence can be generalized to an individual patient; Customize clinical evidence for an individual patient
  - Communicate risks and benefits of alternatives to patients
  - Integrate clinical evidence, clinical context, and patient preferences into decision-making
  - Respond welcomingly and productively to feedback from all members of the health care team including faculty, peer residents, students, nurses, allied health workers, patients and their advocates
  - Actively seek feedback from all members of the health care team
  - Calibrate self-assessment with feedback and other external data
  - Reflect on feedback in developing plans for improvement
  - Maintain awareness of the situation in the moment, and respond to meet situational needs
  - Reflect (in action) when surprised, applies new insights to future clinical scenarios, and reflect (on action) back on the process
- **Interpersonal and communication skills**
  - Provide timely and comprehensive verbal and written communication to patients/advocates
  - Effectively use verbal and non-verbal skills to create rapport with patients/families
  - Use communication skills to build a therapeutic relationship
  - Engage patients/advocates in shared decision making
  - Role model effective communication skills in challenging situations
  - Actively seek to understand patient differences and views and reflect this in respectful communication and shared decision-making with the patient and the healthcare team
  - Engage in collaborative communication with all members of the health care team
- **Professionalism**
  - Demonstrate empathy and compassion to all patients
  - Demonstrate a commitment to relieve pain and suffering
  - Provide support (physical, psychological, social and spiritual) for dying patients and their families
  - Provide leadership for a team that respects patient dignity and autonomy
  - Recognize scope of his/her abilities and ask for supervision and assistance appropriately
  - Serve as a professional role model for more junior colleagues
  - Recognize when it is necessary to advocate for individual patient needs and effectively advocate
  - Treat patients with dignity, civility and respect, regardless of race, culture, gender, ethnicity, age or socioeconomic status
- **Systems-based practice**
  - Understand unique roles and services provided by local health care delivery systems
  - Manage and coordinate care and care transitions across multiple delivery systems including ambulatory, subacute, acute, rehabilitation, and skilled nursing
  - Negotiate patient-centered care among multiple care providers.

Small Group	Setting	Description	Learning Goals	#	Milestones eliminated	#	evaluations	Addl. Information	#	trust trainee to perform a
1A	Inpatient Setting	Medication reconciliation, Follow-up Appointment, hand off communication, Ancillary services need, Patient Education & teach back, discharge summary	Learn to develop implementation, Supervise R1 implementing		MK2, IC4, SBP3-8		Global evaluation, 360 evaluation from social workers direct observations	Review of discharge summary, supervising resident evaluations, readmission rates,		
	Inpatient Setting	Medication reconciliation, Follow-up Appointment, hand off communication, Ancillary services need, Patient Education , timely & effective discharge summary	Intern - learn to develop & implement safe discharge plan, Resident develop and do the actual discharge plan		MK2, IC4-11, SBP 0		Chart audit, direct observation	Patient Survey, read discharge summary, call referring physician, 360 evaluation		
	Inpatient Setting	Medication reconciliation, Follow-up Appointment, hand off communication, Ancillary services need, Patient/family Education , timely & accurate discharge summary	Understand/learning effictive discharge planning, conduct and surpervise a safe discharge plan, how to engage multidisciplinary team, intern think independentlyif patient is ready for discharge		MK2, IC8-11, SBP8		Multi source evaluation, faculty global evaluation, discharge summary evaluation, direct observation			
	Inpatient Setting	Patient meets appropriate criteria of a discharge, Incorporate patients socioeconomic/values into plan accurate complete need list, follow-up appointment,			MK2, IC1, SBP0		Chart review, evaluations, CEX	feedback from Primary care Physician, feedback from patient/family, 360 evaluation		chart review, evaluation by faculty
	Inpatient Setting	appropriate handoff, support services, patient education reconciling medication list, transitions of care, patient education, ready for discharge ?, Realistic plan?			MK2, IC3, SBP8		Global evaluations, 360 evaluations, readmission data			
	Inpatient Setting		engage with multidisciplinary team		MK2, IC1,2,4,9,10 & 11, SBP1,2,5,6		Nursing, MA,PA, Attending, Resident	Self assessment, Direct observation		Advancement criteria, Program Director
	Inpatient Setting	reconcile medication list, followup appointments, hand-off/discharge communication, ancillary services, Patient education	learn to develop a safe discharge plan, Implement a safe discharge plan		MK2, IC3, 4, 11, SBP1, 5-8		global evaluation by attending or peers, Checklist document that demonstrates all items	detailed discharge summary list, direct observation, multisource feedback		

	Inpatient Setting	Determine patient need discharge criteria, complete discharge form, discuss with patient, check for patient understanding (teachback), answer patient questions, ensure achievable plan is in place, communicate with followup MD, Timely discharge summary	learn to complete the discharge, learn to supervise someone doing it	MK2, SBP6 & 8	Direct observation, attending global evaluations, senior resident global evaluation, counseling, CEX	Patient survey 360 evaluation, Followup provider survey/feedback, phone call to pharmacy did patient fill perscriptions?, chart review, read discharge summary, 360 social workers	Competency committee
1B	Inpatient Setting	recognize when a patient is able to be successful in the outpatient setting, Gather data of success, synthesize key steps in the plan, educate on disease & plan, generate prescriptions/do medication reconciliation, summarize accurately and successfully the hospital cause, communicate verbally with patient and family, Communicate with in writing	learn to recognize key elements requiring inpatient care, learn to recognize key barriers to successful outpatient care, inplement practices for preventing readmissions , conduct a medication review & reconciliation, accurately summarize a hospital course, have care measure documented, recognize system based resources	PC2,3 &6, PBL3, P11	End of rotation goals, EMR oversight of discharges when program director is rounding, faculty oversight of discharge notes, case managers 360, documentation specialist, outcome managers reports on core measures	Spot audit or checks systematically structured for each resident, could do OSCE or simulation for communication skills, survey patients, survey primary care physicians on adequacy of discharge hand over	
	Inpatient Setting	Accurate medicne reconciliation, effectively engage multidisciplinary team in discharge planning, effectively educate patient, family & care givers, effectively communicate to the continuity care environment			Case managers/MSW evaluation, chart stimulated recall	data on readmissions (unplanned), Information from post-discharge phone calls	
	Inpatient Setting	Medicine reconciliation, concensus to discharge, patient/family ecucation on discharge/teach back, patient follow through	elements of safe discharge, system/rehab core measures	PC2,3 &6, PBL1,3, P3 &8	360, untimely discharge summary	Primary care physician followup, case management specific evaluation, CEX	

	Inpatient Setting	Engage medicine team in discharge planning - consensus, medicine reconciliation, ensure patient and family understand plane of care, ensure handoff to followup provider		PC2,3 &6, PBL1,3			
	Inpatient Setting	Determine medical readiness for discharge, effectively engage resources to get consensus across disciplines, engage patient & family instructions, medicine reconciliation, effective handoff	Understand elements of safe discharge, consistely perform these elements effectively	PC2, 3& 6, PBL1 & 3	Global peer and faculty evaluations (especially if decided to ask specifically about discharge), delinquent discharge summaries	Social worker evaluations of discrete activities, chart audit, review of readmission data (eg. Readmission M &M), peer review of discharge summary example and overall discharge handoof when seeing a recent discharge in followup, Primary Care physician evaluation	
	Inpatient Setting	recognize patient readiness for discharge, generate a discharge plan, level of care - need for followup and when, medicine reconciliation, communicate plan to patient & ambulatory care providers, Integrate& doccument info to create a complete& accurate discharge plan, Identify barriers to discharge	Learn when a patient is stable & ready for discharge to a lower level of care, conduct a safe discharge	PC2,3&6, PBL1&3, P2,5,10 & 11	Discharge summary timeliness, case manager evaluation, discharge summary audits, direct observation by attending, medicine reconciliation errors, care measures metrics coding & billing	patient feedback/survey, primary care physician evaluation of discharge process (quality of discharge summary & timeliness	
2C	Ambulatory Clinic	Introduce self and establish rapport, Agenda setting, H&P exam, secondary data, plan					
	Ambulatory Clinic	establish rapport, obtain patient's agenda, H&P-accurately present to preceptor, prioritize patient problems/risk status formula, nonjudgment exam of patient	Learn about preventive medicine, learn to be a patient advocate	PC4, 7 & 11, P1-4,	Mini CEX, Chart review	360 evaluation/patient survey, patient outcomes, OSCE	Must be preceptor that evaluates resident

Ambulatory Clinic	showup on time, establish rapport, demonstrate empathy,get patient's agenda, get accurate H&P, synthesize a available data to develop appropriate assessment, be able to present case in an organized manner, age specific planning (note medical knowledge), obtain patient's preference	Learn how ot efficiently obtain patient H&P in an outpaitent setting, Prioritize problem list, organize problem list	PC7, 11, P1	Mini CEX, Chart/note review by peers and attending, patient evaluation, nursing evaluation	Self reflection, Standardized patients, dashboard	Continuity clinic preceptor
Ambulatory Clinic	Be Ontime, Raporrt with patient - get agenda, H&P, assessment plan/prioritize problems/ present to preceptor, talk to patient			Mini CEX - different aspects different types, progress note review, resident reflection, nurse & patient evaluations		
Ambulatory Clinic	establish rapport - verbalize (CIS), Professional behavior - show up on time dress, obtain patient's agenda, obtain accurate H&P exam, inplementing a TX plan		PC4			
Ambulatory Clinic	Review pertinent medical records, develop therapeutic relationship, obtain complete history, prerform conprehensive physical exam, present presentation, develop appropriate action plan, counsel patient	intern- evaluate a new patient in continuity clinic, Resident - prioritization increased efficiency minimal supervision	PC4, P1,3 & 4, SBP1	Global evaluation, patient survey	Documentation checklist	progress review at semi-annual
Ambulatory Clinic	Rapport & agenda, accurate H&P, Direct exam, plan, counseling	Interns to steps 1,2&3, Resident do all 5 steps	PC4, P1,3 & 4, SBP1 - 4	Mini CEX, H&P writeup, progress notes, chart audit	Patient feedback/survey, no-show rate, Primary care Provider change requests	

	Ambulatory Clinic	evaluate medical record, introduce yourself in a way that you identify yourself as the Primary Care doctor and that you are taking responsibility for their care, obtaining hypothesis driven history with emphasis on , performing physical exam, come up with an appropriate action plan for the patient, obtain document and present the plan to attending	evaluate a new patient in clinic, evaluate a new patient in clinic in an effiecient prioritized manner	PC4,7,8,10 & 11,	Mini CEX, attending global	360, OSCE, Standardized Patient, chart reviews	Semi annual review of Mini CEX's
	Ambulatory Clinic	Establish rapport/introduction, agenda setting - agreed outcomes, H&P exam, review data, differntial diagnosis data,					
2D	Ambulatory Clinic	Introduce self and role to patient, establish rapport, elicit all concerns/problems of patient, negotiate overall approach and session agenda, conducts H&P for session agenda, reports assesment to patient, negotiates plan for further care, invites questions, closes the session	Can list the element tasks of seeing a new patient, can perform each of the tasks		Mini CEX # sets of three, Patient feedback, patient outcomes - return to clinic progression toward meeting outcome standards	Patient satisfaction survey, patient simmulators	Comment: The struggle we had with picking the relevant milestones is a foundational struggle in this task of mapping them to EPA's: nearly all 142 milestones could apply to almost any EPA. Where does one draw the line? How good a fit is good enough?
	Ambulatory Clinic	Introduction, H&P - listening skills, Physical exam, Discussion with patient lay out treatment plan, Ask questions of patient		MK1, PBL1,2,4,5, IC1,3,5,6,7,8,9, 10	Direct observation/feedback, Mini CEX, chief resident as supervisor, chart audit, patient feedback	ordering appropriate tests, trace practice for followup visit	
	Ambulatory Clinic	Establish rapport with the patient, set agenda for appointment, ask open ended questions to elicit patient history, complete physical exam, allow time for patient to ask questions followup, perscriptions, consults	new patient evaluation in outpatient setting, balancing agenda patient vs. physician	PBL1,2 & 3, IC3-6	Direct observation, global evaluation	patient survey, nursing input and evaluation, chart stimulated review, checking inbox to see if lab results and other tests are followed up in a timely fashion	lead attending in clinic

Ambulatory Clinic	elicit a complete history, perform a full physical exam, medication reconciliation, assess reason for visit, come up with a plan pased on 1,2 &4, order specific labs/radiology/	Time management, writing an effective note, communicating with consults/past caregivers(Primary Care physician, ER & etc)	PBL1,2,4,5	patient satisfaction evaluation, faculty global assessment	feedback from nurses/social workers, show reate as surrogate for satisfaction, reviewing ordered labs/rads, outpatient OSCE on a scheduled patient	
Ambulatory Clinic	Establish rapport, obtain history, physical exam, develop assessment plan, summarize	rapport and H&P		Attending CEX	360 evaluation, PDSA, chart review	
Ambulatory Clinic	Establish rapport, obtain history, physical exam, synthesize data, summarize to preceptor, establish plan	concise H&P	PBL2,3 &5, IC3-10	Mini CEX, chart audits	360 evaluations-patients peers, nurses, self evaluations	
Ambulatory Clinic	establish rapport and understand agenda and reference agenda, complete H&P, assessment and discussion with patients to elicit goals and preferences, establish a plan of care and followup		MK1, PBL1 & 2, IC1, 6-10	Audit instrument of written documentation, CEX & OSCE	Audit tool dedicated to continuity clinic, Attending checklist	
Ambulatory Clinic	introduction - establish chief complaint /rease for visit & establish agenda, comprehensive H&P, Assess complaint of patient, discuss plan, negotiate plan, discuss well care, discuss barriers and or risk/benefits/side effects	communication of risks, benefits and treatment, appropriate H&P		Writeup accurate descriptions chart audit include medication list, Mini CEX, Patient Satisfaction	# of refills, review communication of abnormal labs/tests, telephone management, appropriate well care	observation & Mini CEX, Ch

Milestone tally

	Competency	Milestone to eliminate Milestone #	Tally
Group 1A	Medical Knowledge	1	0
		2	8
	Interpersonal Com. Skills	1	2
		2	1
		3	2
		4	4
		5	1
		6	1
		7	1
		8	2
		9	3
		10	3
		11	4
	Systems Based Practice	1	2
		2	1
		3	1
		4	1
		5	3
		6	4
		7	2
		8	5
Group 1B	Patient Care	1	0
		2	5
		3	5
		4	0
		5	0
		6	5
		7	0
	Practice Based learning	1	4
		2	0
		3	5
		4	0
		5	0
	Professionalism	1	0
		2	1
		3	1
		4	0
		5	1
		6	0
		7	0
		8	1
		9	0
		10	1

		11	2
Group 2C	Patient Care	1	0
		2	0
		3	0
		4	5
		5	0
		6	0
		7	3
		8	1
		9	0
		10	1
		11	3
	Professionalism	1	4
		2	0
		3	2
		4	3
		5	0
		6	0
		7	0
	Systems-Based Practice	1	2
		2	1
		3	1
		4	1
Group 2D	Medical Knowledge	1	2
		2	0
	Practice Based learning	1	4
		2	5
		3	2
		4	2
		5	3
	Interpersonal Com. Skills	1	1
		2	0
		3	3
		4	2
		5	3
		6	4
		7	3
		8	3
		9	3
		10	3

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Selected Bibliography of Relevant Articles:

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