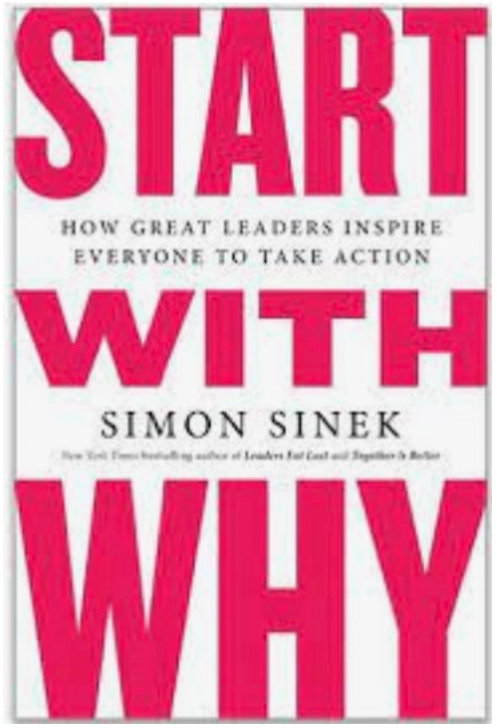
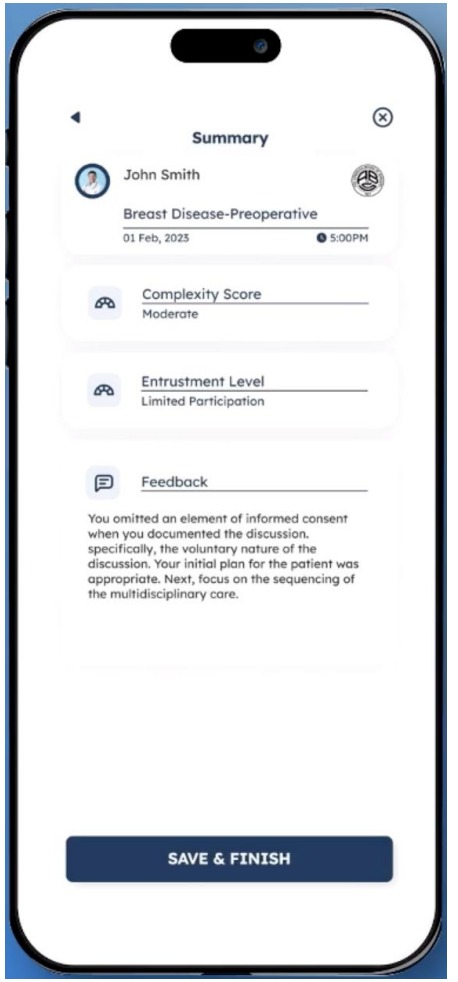
Entrustable Professional Activities:
Our Once-A-Generation Opportunity to Advance Surgical Education

ABS EPA PROJECT GRAND ROUNDS

Why, What, and How of EPAs





Why are We Talking About This?

PAPERS OF THE 133RD ASA ANNUAL MEETING

General Surgery Residency Inadequately Prepares Trainees for Fellowship

Results of a Survey of Fellowship Program Directors

Samer G. Mattar, MD, Adnan A. Alseidi, MD, FACS,† Daniel B. Jones, MD, FACS,‡ D. Rohan Jeyarajah, MD, FACS,§ Lee L. Swanstrom, MD, FACS,|| Ralph W. Aye, MD, FACS,¶ Steven D. Wexner, MD, FACS, FRCS, FRCS(Edin), PhD (Hon),** José M. Martinez, MD, FACS,†† Sharona B. Ross, MD, FACS,‡‡ Michael M. Awad, MD, FACS,§§ Morris E. Franklin, MD, FACS,|||| Maurice E. Arregui, MD, FACS,¶¶ Bruce D. Schirmer, MD, FACS,*** and Rebecca M. Minter, MD, FACS†††*

Ann Surg 2013

EDUCATION

Are General Surgery Residents Ready to Practice? A Survey of the American College of Surgeons Board of Governors and Young Fellows Association

Lena M Napolitano, MD, FACS, FCCP, FCCM, Mark Savarise, MD, FACS, Juan C Paramo, MD, FACS, Laurel C Soot, MD, FACS, S Rob Todd, MD, FACS, Jay Gregory, MD, FACS, Gary L Timmerman, MD, FACS, William G Cioffi, MD, FACS, Elisabeth Davis, PhD, Ajit K Sachdeva, MD, FRCSC, FACS

JACS 2014

DOCTOR AND PATIENT

Are Today's New Surgeons Unprepared?

By PAULINE W. CHEN, M.D. DECEMBER 12, 2013, 12:20 PM 159 Comments

iStock

E-MAIL FACEBOOK TWITTER SAVE MORE

The surgeon had no prestigious named professorship, no N.I.H. grant and no plum administrative position in the hospital's hierarchy. But to the other surgeons-in-training and me, he was exactly who we wanted to be.

DOCTOR AND PATIENT
Dr. Pauline Chen on medical care.

New York Times Dec 12, 2013

Our Current Training System

“Enough” cases

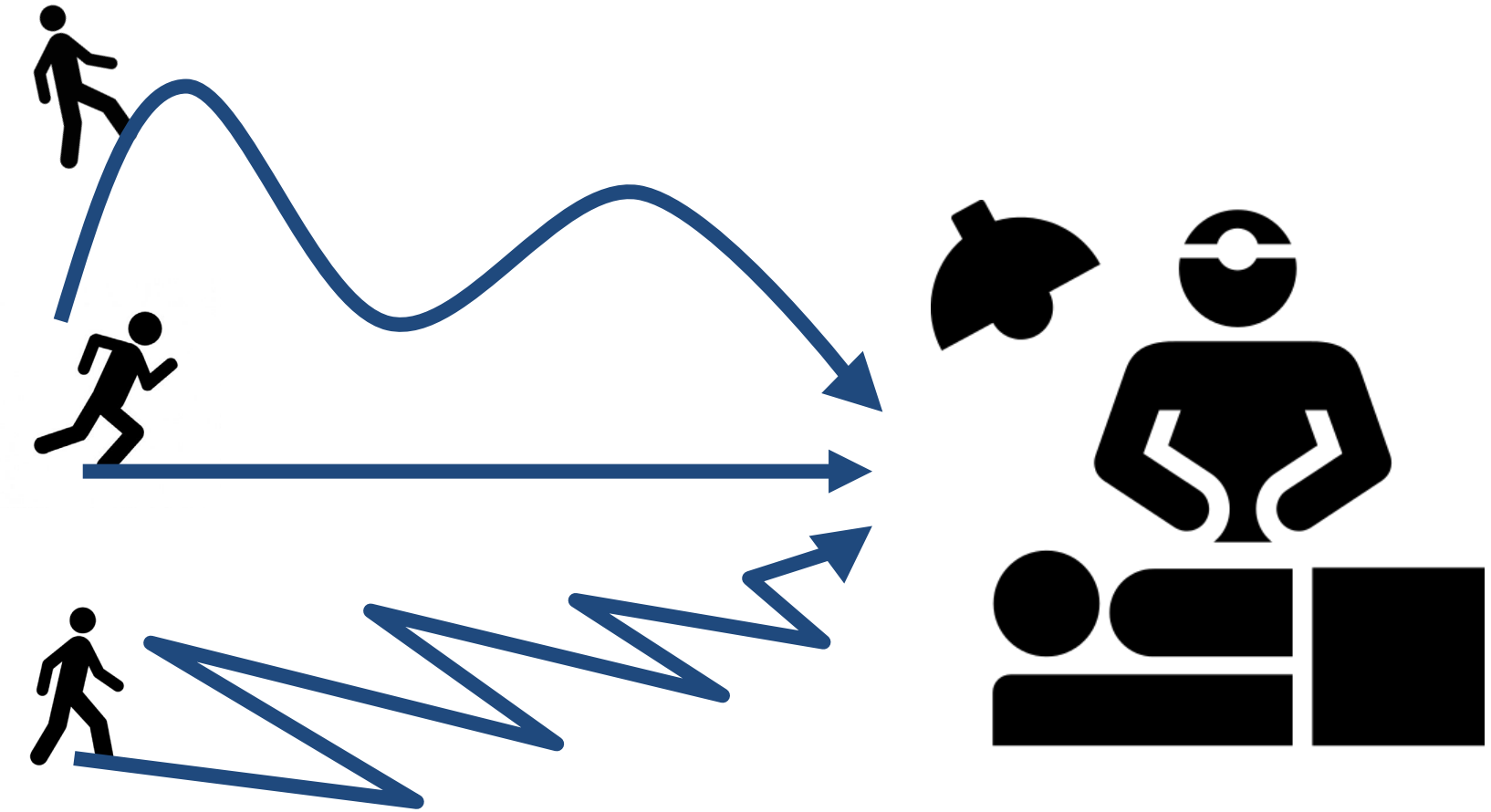
“Index” cases

“The hardest” cases

Case completion $\neq$

Competence for the case

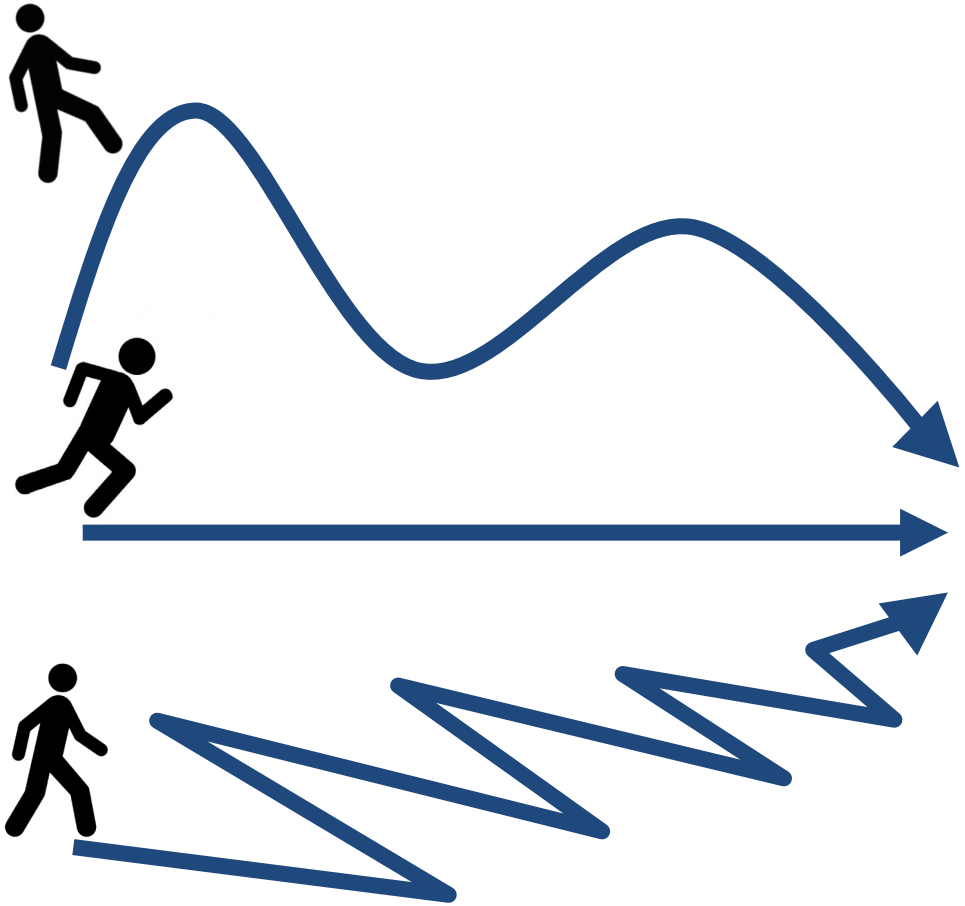
Current System

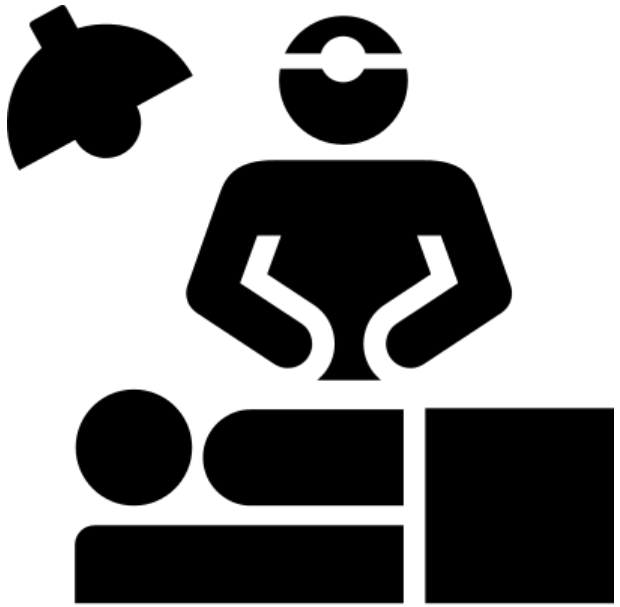


Fixed Time = Variable Outcome

The Public Trust

Goal System





Fixed Outcome

A Brief History of Competency-Based Medical Education

ACGME Outcomes Project

Pre-1999

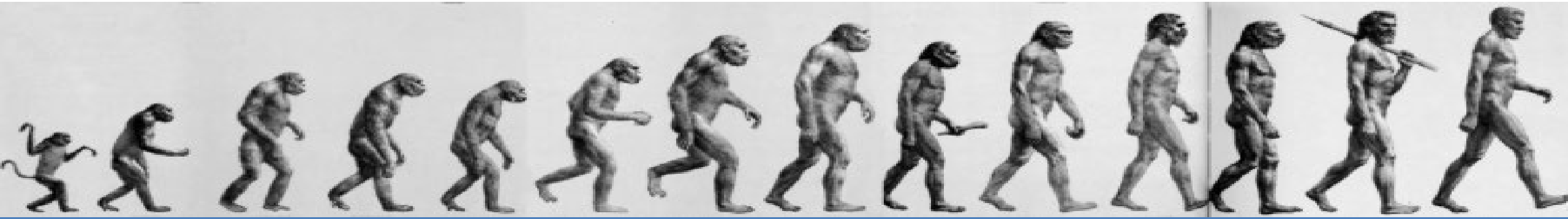
1999

2002-2008

No work hour restrictions
Few actual requirements

ACGME/ABMS Adopt 6 Core Competencies

Residencies integrate Competencies into curricula



How to evaluate physician competencies?

Medical Knowledge

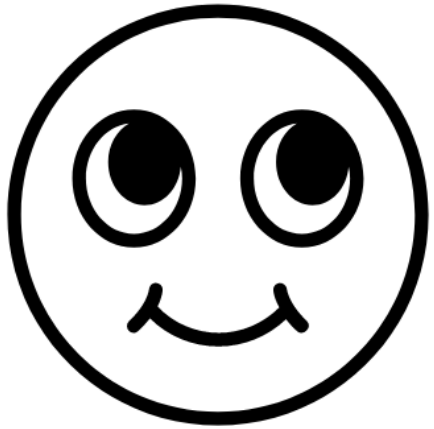
Interpersonal Communication Skills

Systems-Based Practice

Patient Care

Professionalism

Practice-Based Learning & Improvement



A Brief History of Competency-Based Medical Education

ACGME Outcomes Project

ACGME Milestone Project

Pre-1999 **1999** **2002-2008** **2012** **2013-**

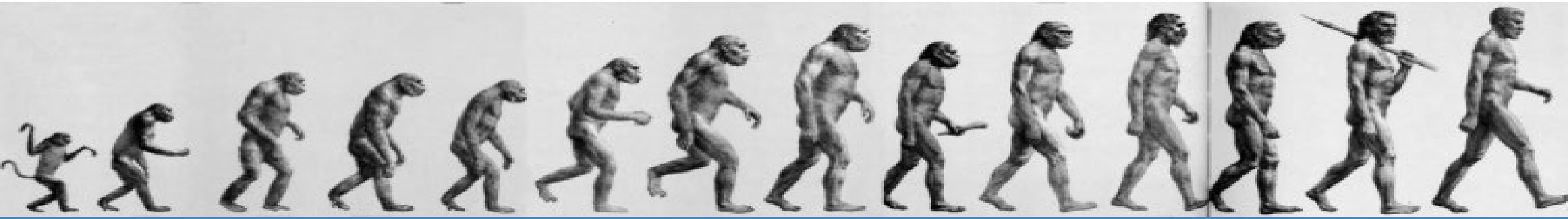
No work hour restrictions
Few actual requirements

ACGME/ABMS Adopt 6 Core Competencies

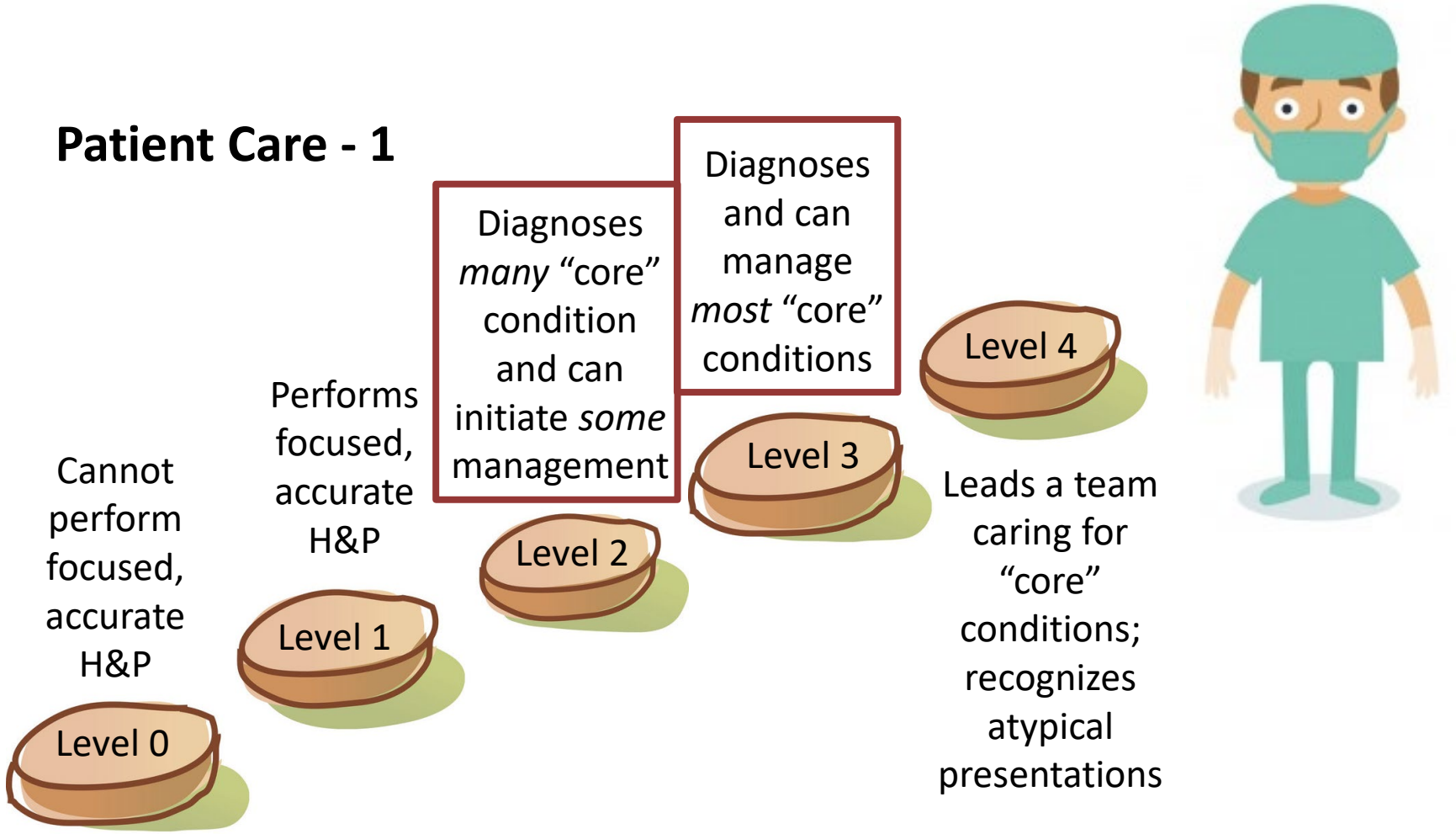
Residencies integrate Competencies into curricula

ABS publishes Surgery Milestones

Residencies report Milestone data to ACGME



Milestones



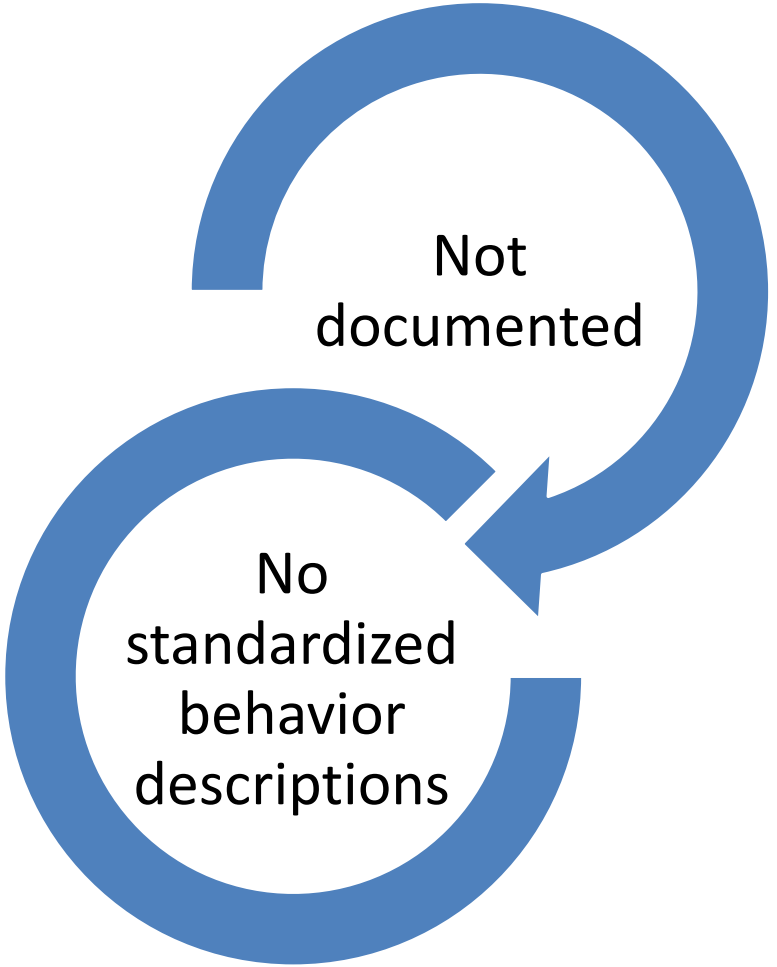
Englander, *Med Educ,* 2017

Holistic View

Would you trust this learner to perform this task without supervision?

We Already Do This

I can let the resident start and scrub in for the key portion



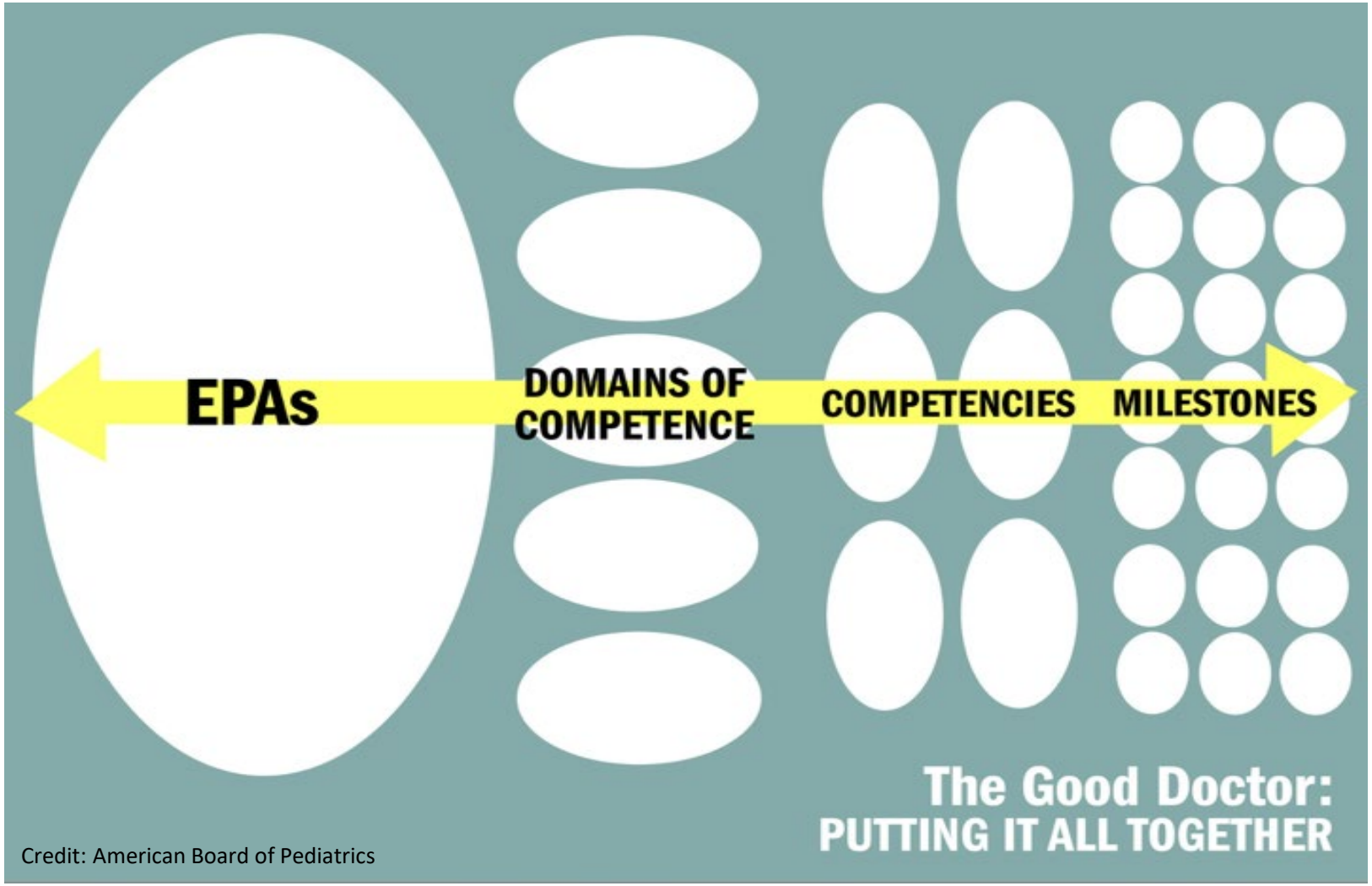
EPAs (Entrustable Professional Activities)

Essential task of a “discipline” that an individual can be trusted to perform independently in a given context

Together, mass of critical elements that define a specialty

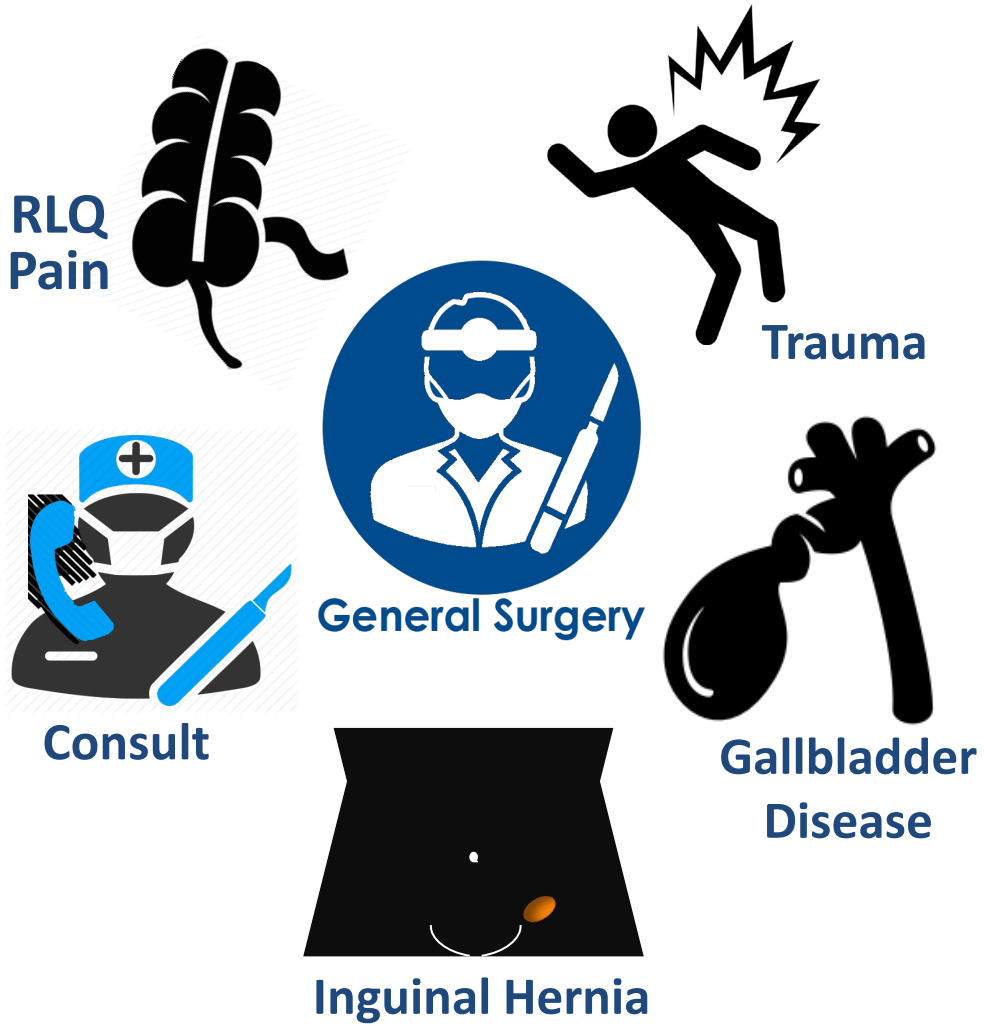
Shifts assessment focus from abstract and independent competencies to the work that must be done

Integrating Competencies / Milestones / EPAs



Credit: American Board of Pediatrics

General Surgery EPAs



EPAs Chosen to Represent:

- Undeniable **core skills** of a general surgeon
- Common conditions
- Include other essential non-technical skills
  - Communication
  - Professionalism
- Management of the **entirety of the disease process**

General Surgery EPA Feasibility Pilot

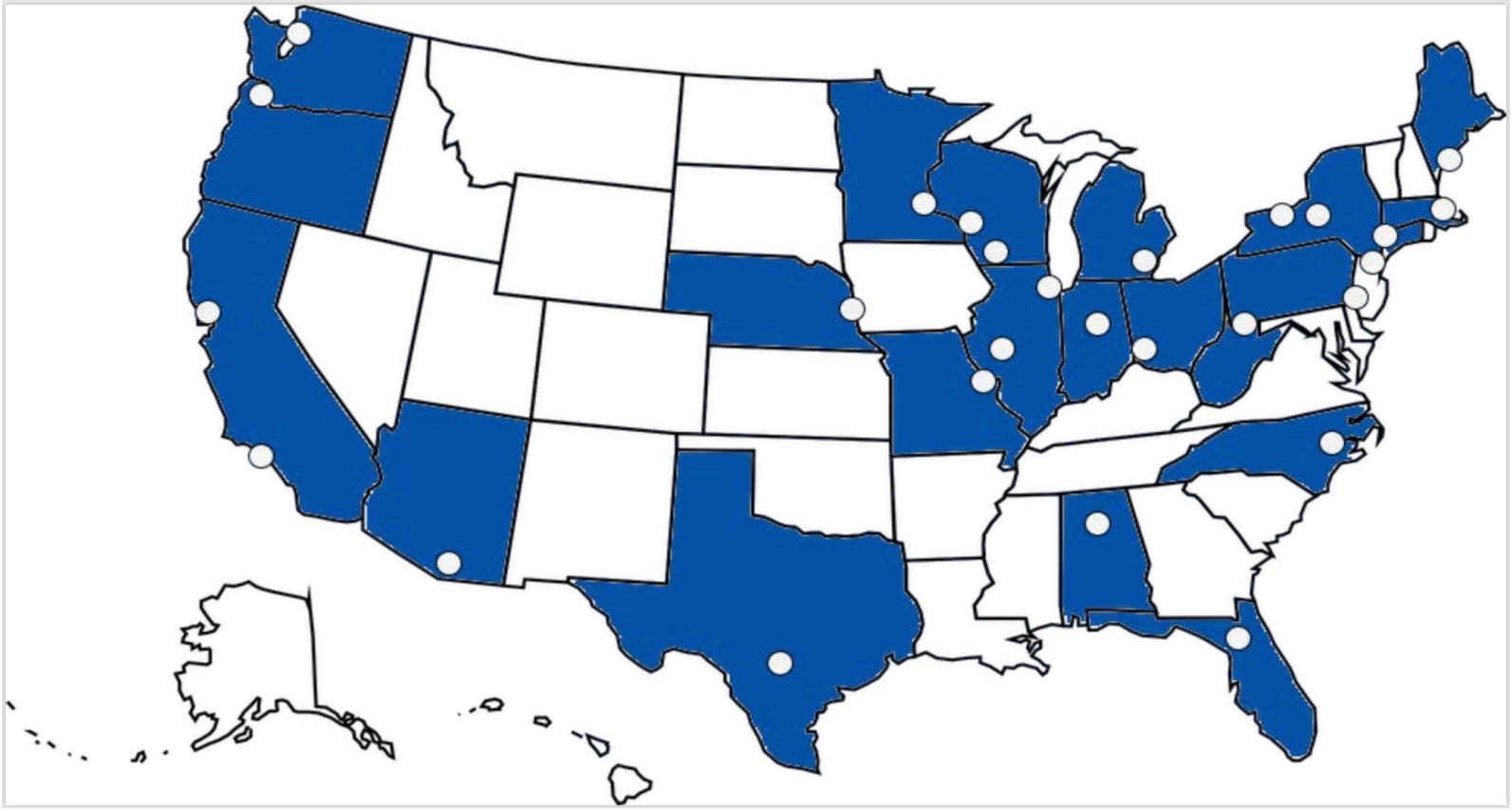
2 Goals:

Determine relationship of EPA assessments to milestone evaluations

Identify successes and barriers to EPA implementation across general surgery programs

Pilot Details

- 28 Programs
- Each assigned 2 EPAs
- Asked to innovate around assessment collection
- Data collected bi-annually



If faced with this problem in the future, I trust this trainee to perform this EPA with:

Learner: Attending:

Date:

I would rate this case as:

- Straightforward
- Moderate
- Complex

1 Limited Participation

2 Direct Supervision

3 Indirect Supervision

4 Practice Ready

5 Can Teach Others

How do EPA assessments compare to current metrics?

Concurrent Validity Evidence for Entrustable Professional Activities in General Surgery Residents

Brazelle, Morgan MD; Zmijewski, Polina MD, MA; McLeod, Chandler PhD; Corey, Britney MD, FACS; Porterfield, John R Jr MD, FACS; Lindeman, Brenessa MD, MEHP, FACS

Author Information

Journal of the American College of Surgeons: May 2022 - Volu
doi: 10.1097/XCS.0000000000000168

A Phased Approach: The General Surgery Experience Adopting Entrustable Professional Activities in the United States

Brenessa Lindeman [1], Karen Brasel [2], Rebecca M Minter [3], Jo Buyske [4], Marni Grambau [5], George Sarosi [6]

Gender Differences in Entrustable Professional Activity Evaluations of General Surgery Residents

Elena P Padilla [1], Christopher C Stahl [2], Sarah A Jung [2], Alexandra A Rosser [2], Patrick B Schwartz [2], Taylor Aiken [2], Alexandra W Acher [2], Daniel E Abbott [2], Jacob A Greenberg [2], Rebecca M Minter [2]

Study Population Characteristics

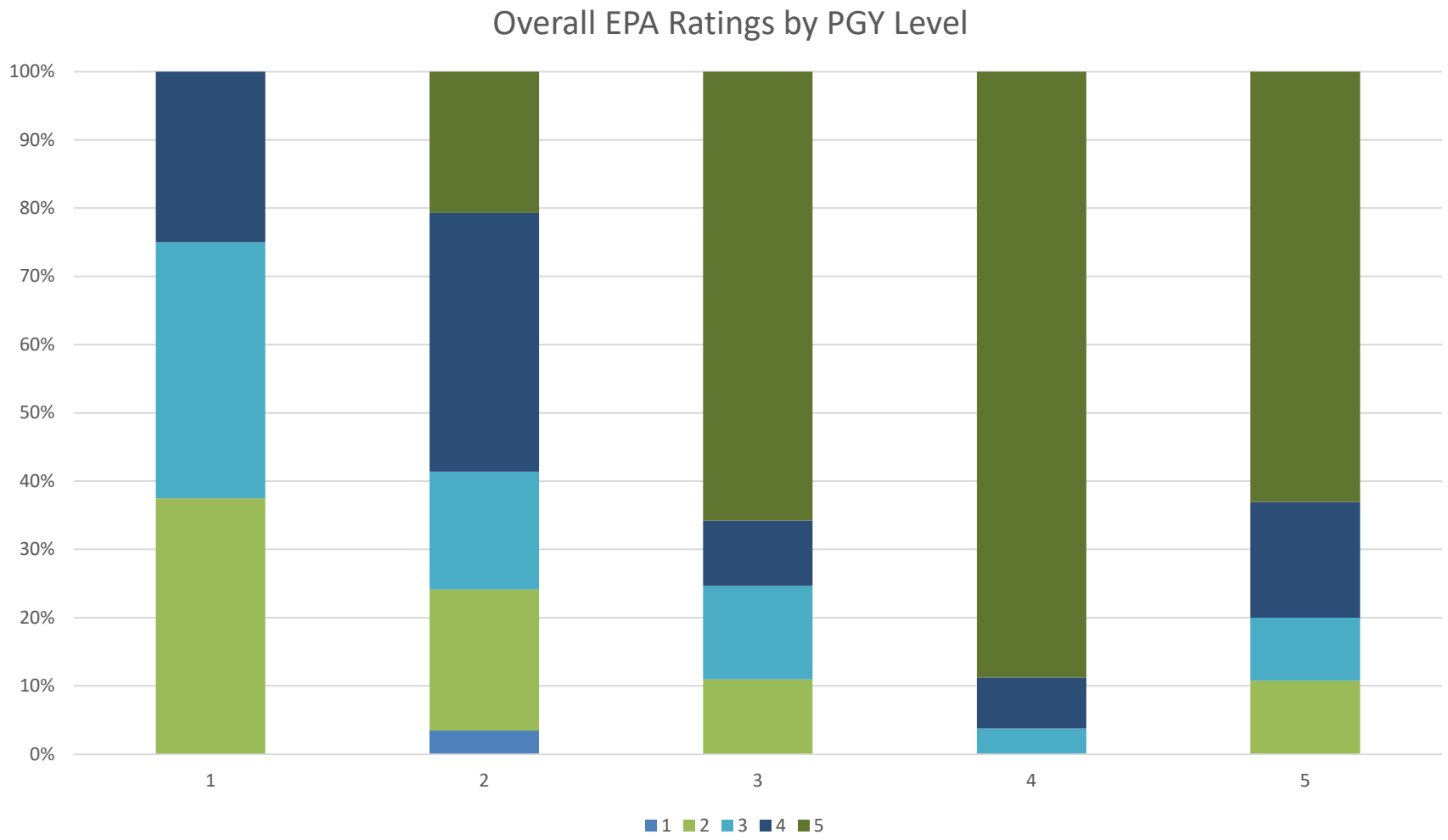
320 Entrustment Ratings

34 Unique Residents

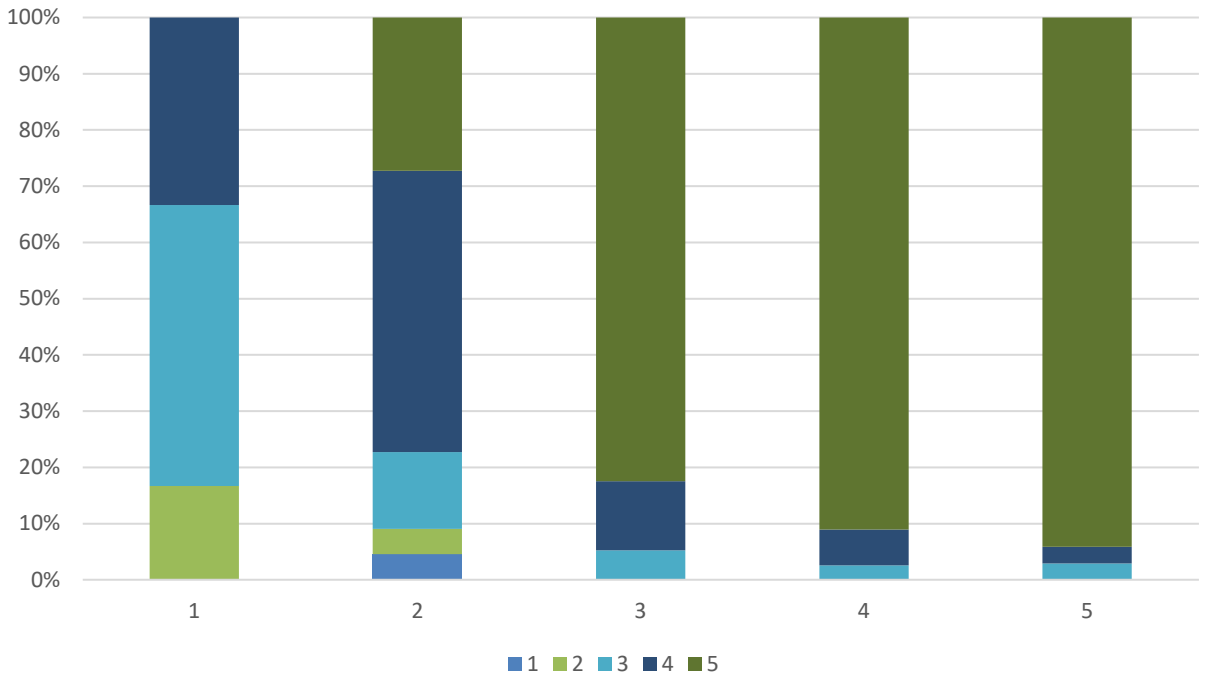
Range of Evals/Resident: 1-44

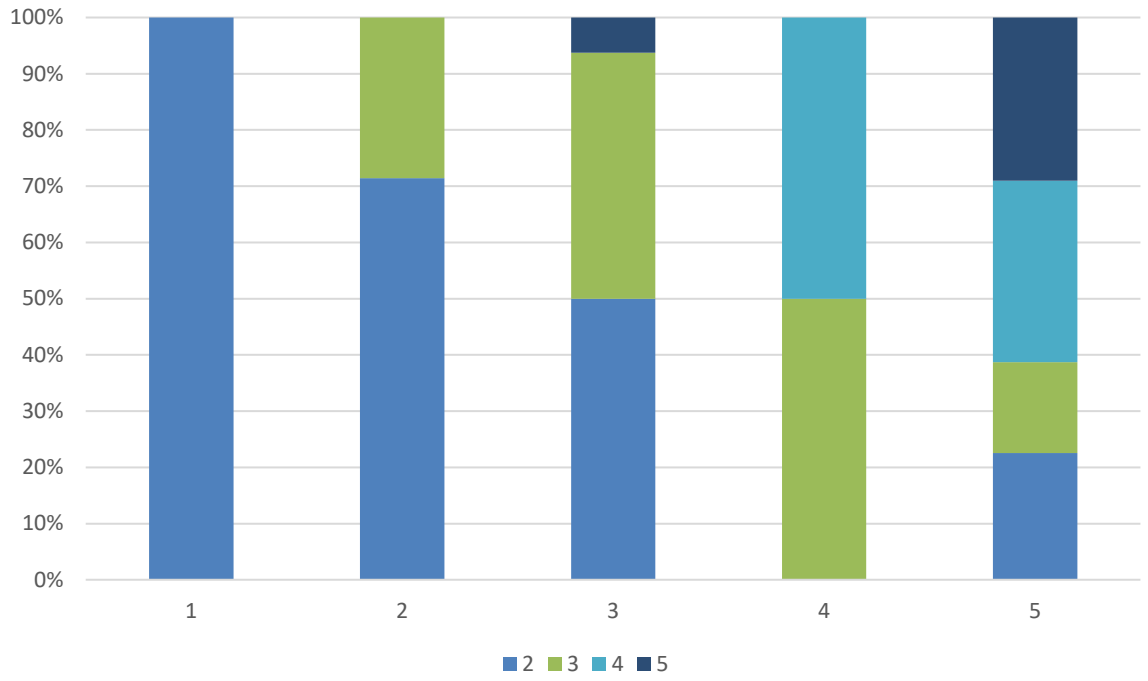
Characteristic	Resident # (n=34)	Eval # (n=320)
Gender (%)		
Female	15 (44)	114 (36)
Male	19 (56)	206 (64)
PGY Level (%)		
1	6 (14.3)	8 (2.5)
2	11 (26.1)	30 (9.4)
3	7 (16.7)	74 (23.1)
4	10 (23.8)	136 (42.5)
5	8 (19.0)	72 (22.5)
EPA (%)		
Inguinal Hernia	16 (47.1)	37 (11.6)
RLQ Pain	12 (35.3)	18 (5.6)
Gallbladder Disease	24 (70.6)	102 (31.9)
Consultation	21 (61.8)	72 (22.5)
Trauma	6 (17.6)	91 (28.4)

Results - Overall



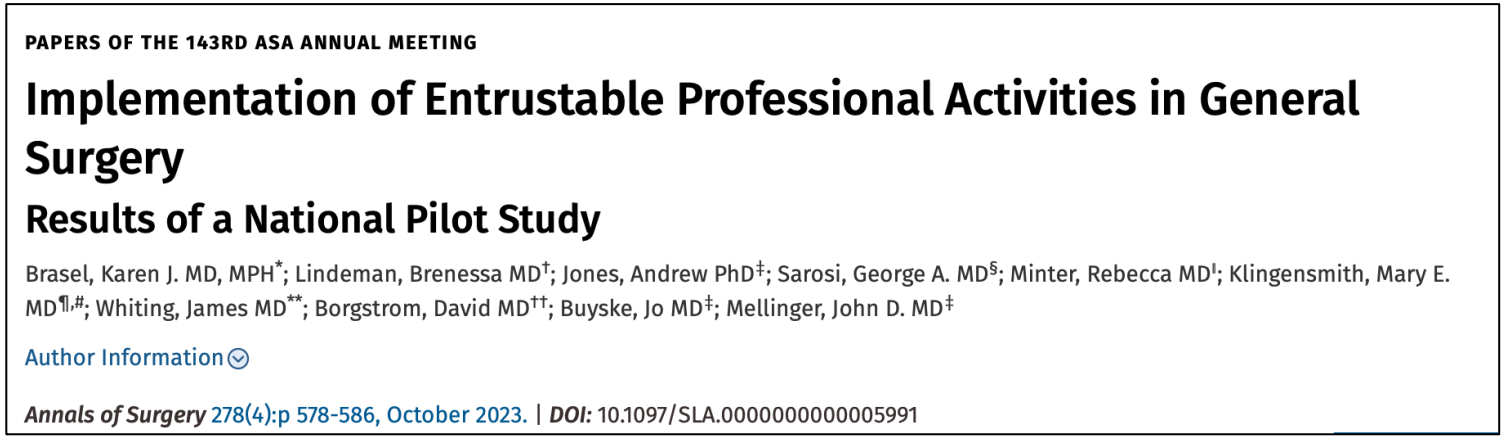
Results – By Activity





Pilot Data Overview

- Total possible residents
  - 1,115 unique resident IDs in file
  - 6,236 Observations
  - Average of 5.6 observations per resident
  - Residents who received at least one observation had a mean of 7.25 observation



PAPERS OF THE 143RD ASA ANNUAL MEETING

Implementation of Entrustable Professional Activities in General Surgery

Results of a National Pilot Study

Brasel, Karen J. MD, MPH*; Lindeman, Brenessa MD†; Jones, Andrew PhD‡; Sarosi, George A. MD§; Minter, Rebecca MD‖; Klingensmith, Mary E. MD¶,#; Whiting, James MD**; Borgstrom, David MD††; Buyske, Jo MD‡; Mellinger, John D. MD‡

Author Information

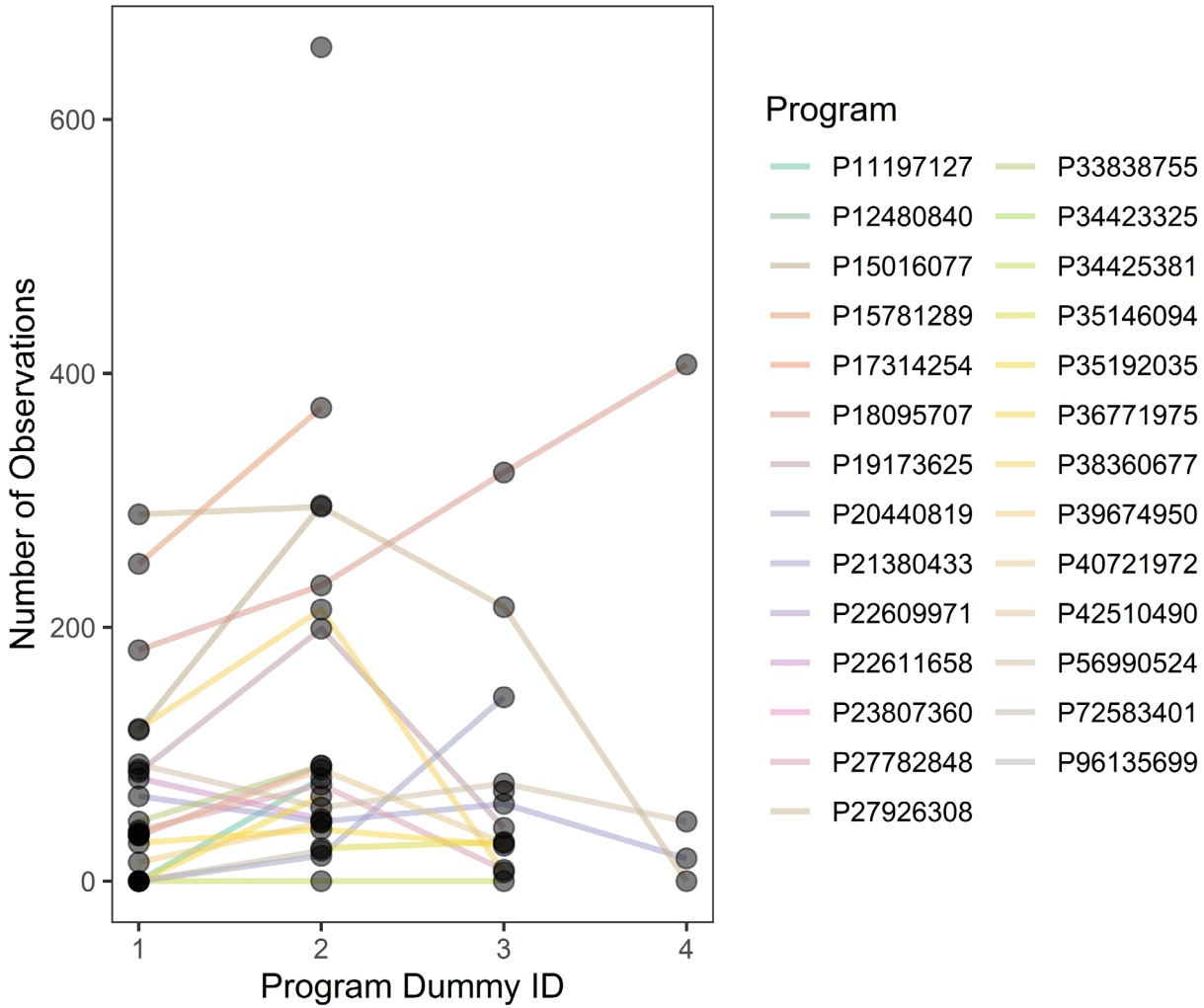
Annals of Surgery 278(4):p 578-586, October 2023. | **DOI:** 10.1097/SLA.0000000000005991

Active residents per cycle

Cycle	Number of Residents	Number (%) of Residents with observations	Number (%) of Residents with No observations
1	845	265 (31.4%)	580 (68.6%)
2	826	355 (43%)	471 (57.0%)
3	432	186 (43.1%)	246 (56.9%)
4	140	54 (38.6%)	86 (61.4%)

8,143 Surgery residents total in US in 2019-20

EPAs Observations by program by cycle

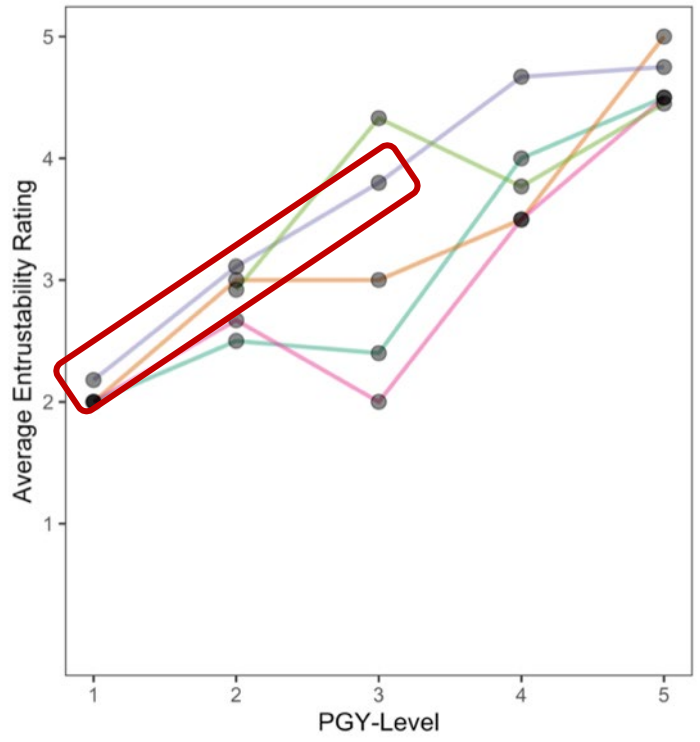


Entrustment Decisions by Phase and EPA

Phase	Gallbladder	Inguinal Hernia	RLQ pain	Trauma	Consult
Pre	102	92	153	108	
Intra operative	272	114	195	165	
Post	81	79	138	118	
Total	455	285	486	391	138

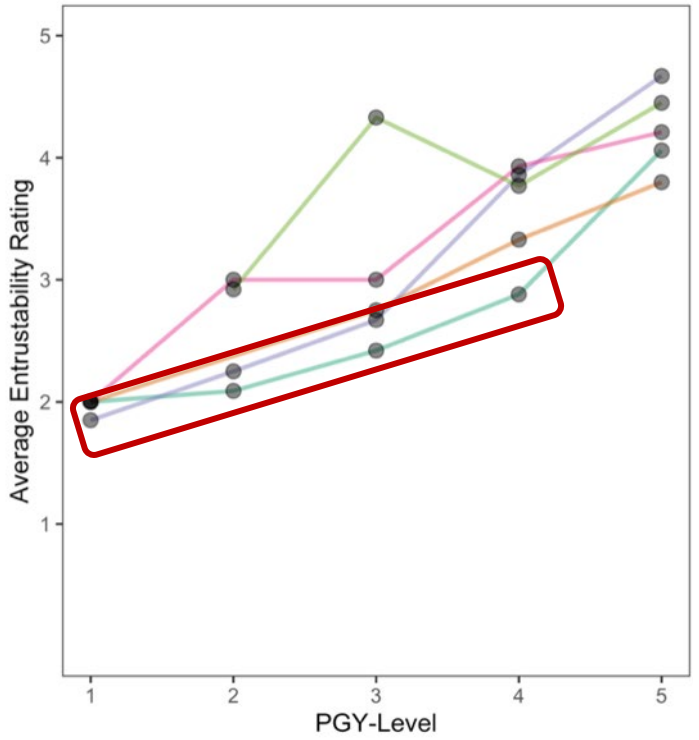
Average Entrustment by Phase and PGY Level

Figure 5. Average entrustment rating by PGY level (pre-operative)*



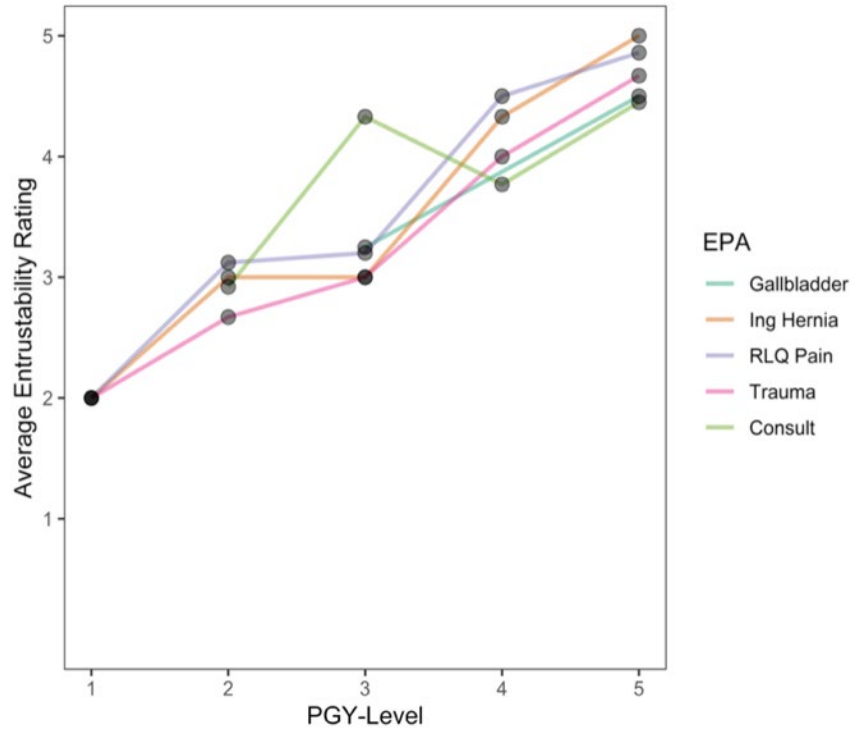
Pre

Figure 6. Average entrustment rating by PGY level (intra-operative)*



Intra

Figure 7. Average entrustment rating by PGY level (post-operative)*



Post

EPAs: The “How”

EPAs (Entrustable Professional Activities):

Essential task of a “discipline” that an individual can be trusted to perform independently in a given context

EPA Language Quiz

EPAs represent:

Assessment Tool

Assessment Framework

OPRS

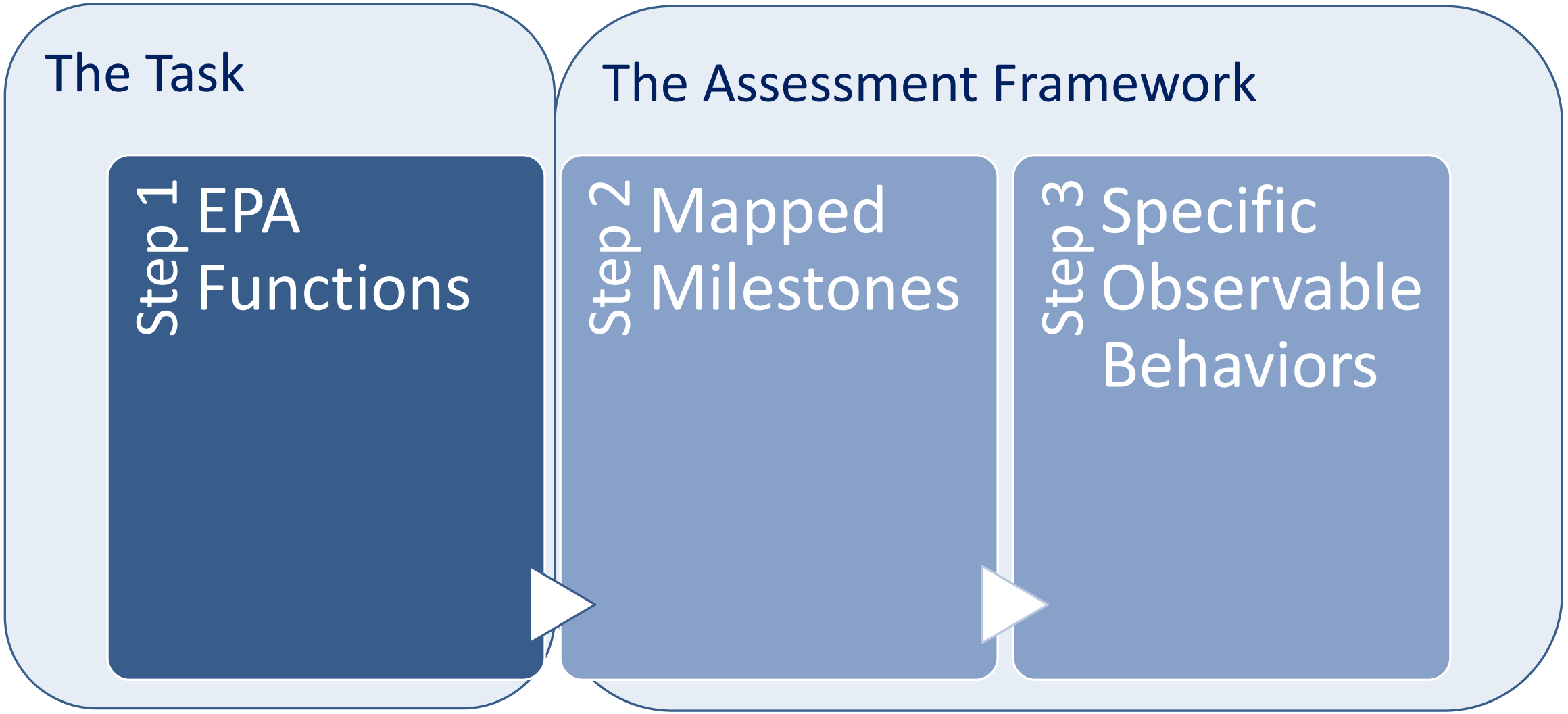
Mini-CEX

OSATS

Zwisch

EPA Micro-Assessment

EPA Components



EPAs: Under the Hood

The Promise of EPAs

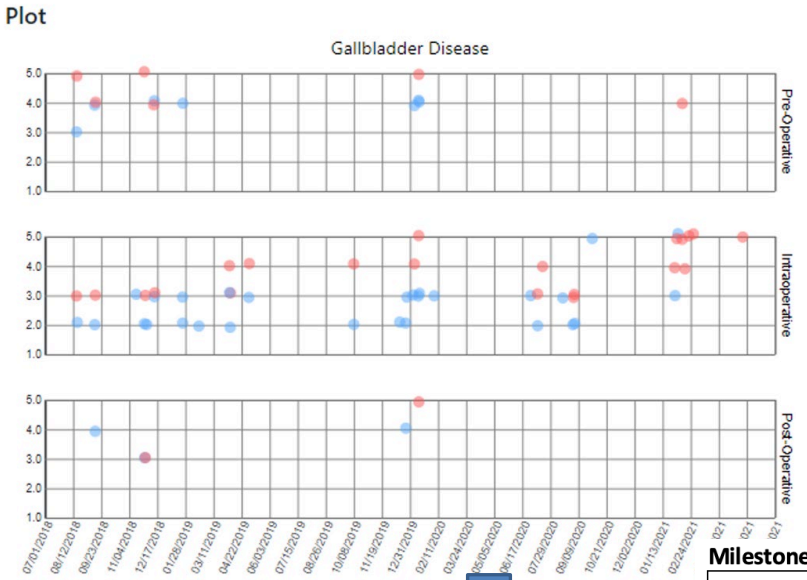
- Provide an assessment framework that makes sense to faculty & trainees
- Facilitate CCC processes
- Help overcome barriers to feedback
- Kickstart teaching at beginning of rotations

Mapping to Milestones

- Each EPA mapped to 6-7 sub-competencies *most* essential to performance
- Only PROF-3 not represented among mapping of all 18 GS EPAs
- CCCs could utilize this mapping to populate the ACGME milestones

COMPETENCY	AB WALL HERNIA	COLON DISEASE	ACUTE ABDOMEN	GALLBLADDER	CRITICALLY ILL	SOFT TISSUE	NECROTIZING PANCREATITIS
PC1	X	X	X	X	X	X	X
PC2	X	X		X			
PC3	X			X		X	
PC4	X	X	X	X		X	
MK1		X			X	X	X
MK2	X			X			
SBP1		X					
SBP2		X	X			X	X
SBP3				X			
PBLI1	X				X		X
PBLI2							
PROF1			X		X		
PROF2						X	
PROF3							
PROF4					X		
ICS1	X		X	X	X	X	X
ICS2			X		X		X
ICS3			X		X		

CCC Summative EPA Ratings Convert to Milestones



Based on Summative Entrustment decisions for EPAs rating for assigned Milestones Result

PC1 Level 3
PC2 Level 2
PC3 Level 2
PC4 Level 3
MK2 Level 3
ICS1 Level 3

CCC Reviews Microassessments and makes Summative rating by phase

Milestone Table:

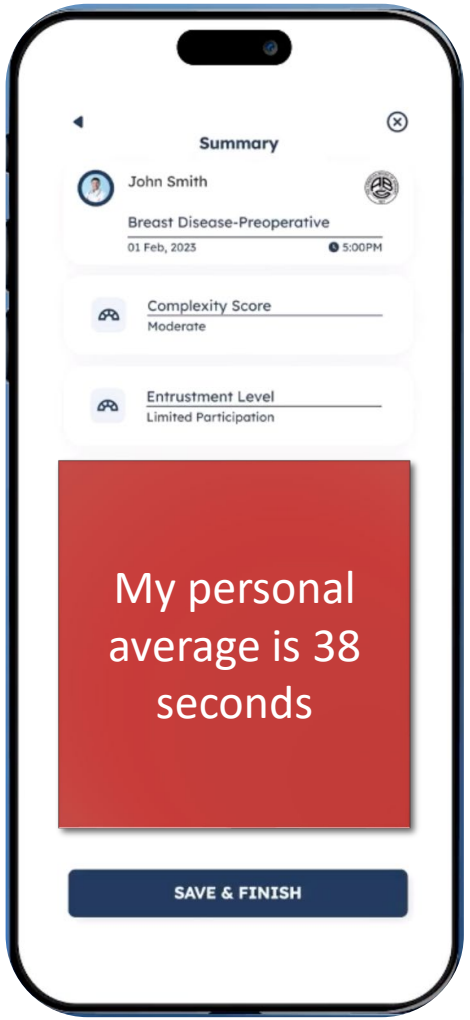
	Preoperative/Assessment	Intraoperative/Procedural	Postoperative/Disposition
1 Limited Participation	PC1 L1 MK2 L1 ICS1 L1 PBLI1 L1	PC2 L1 PC3 L1 MK2 L2	PC4 L1 ICS1 L1
2 Direct Supervision	PC1 L2 MK2 L2 PBLI1 L2 ICS1 L2	PC2 L2 PC3 L2 ✓	PC4 L2 ICS1 L2
3 Indirect Supervision	PC1 L3 MK2 L3 ✓ ICS1 L3	PC2 L3 PC3 L3 MK2 L3	PC4 L3 ICS1 L3 ✓ MK2 L3
4 Practice Ready	PC1 L4 MK2 L4 PBLI1 L4 ICS1 L4	PC2 L4 PC3 L4 MK2 L4 PBLI1 L4	PC4 L4 ICS1 L4

The EPA Set Will Prepopulate Milestones

- CCC Dashboard integrates all assigned summative decisions to display milestones ratings for resident
- CCC reviews assignments and considers other program data to arrive at final rating

EPA Data Sources	Milestone	Est Milestone Level	Lower CI	Upper CI	No. Assessments	No. Assessors
Post-Emergency Department Trauma, GS Consultation, Pre-Operative Gallbladder Disease	ICS1	3.68	1.76	5.00	7	6
Post-Emergency Department Trauma, GS Consultation	ICS2	3.13	1.61	4.66	6	5
Post-Emergency Department Trauma, GS Consultation	ICS3	2.77	1.62	3.93	5	4
GS Consultation	MK1	3.37	2.04	4.71	5	5
Intraoperative Gallbladder Disease, Intraoperative Inguinal Hernia	MK2	2.98	1.49	4.47	21	6
GS Consultation	PBLI1	4.00	2.76	5.00	5	5
GS Consultation, Pre-Operative Gallbladder Disease	PC1	3.83	2.07	5.00	6	6
In-Emergency Department Trauma, Intraoperative RLQ Pain, Intraoperative Gallbladder Disease, Intraoperative Inguinal Hernia	PC2	4.31	2.89	5.00	32	13
Intraoperative RLQ Pain, Intraoperative Gallbladder Disease, Intraoperative Inguinal Hernia	PC3	4.11	2.82	5.00	27	8
GS Consultation	PROF2	3.44	1.69	5.00	5	5
Post-Emergency Department Trauma	SB2	3.00	NA	NA	1	1
	SBP1	3.00	NA	NA	1	1
Post-Emergency Department Trauma	SBP2	3.00	NA	NA	1	1

EPA Micro-Assessments



Date:

Assessor:

Pre-populated

Complexity:

Straightforward | Moderate | Complex

Level of Entrustment: (details next slide)

Narrative Feedback:

Nice use of both hands to provide tension and counter-tension as you dissected. Work on targeting the same area for spreading to enhance efficiency.

Evaluate and manage a patient with gallbladder disease

Intra-Operative Phase

1	Limited Participation	Describes anatomic structures & their relationships; needs assistance to identify them Difficulty coordinating hands & requires prompting to identify/dissect normal planes Describes basic steps of operation & critical view of safety
2	Direct Supervision	Articulates critical view of safety, requires assistance to obtain it Usually coordinated with two hands; needs prompting to move operation forward Identifies plane to remove gallbladder from liver bed; some assistance to stay in plane
3	Indirect Supervision	Obtains critical view of safety in routine cases; consistent careful tissue handling Smooth instrument handling with effective use of both hands Moves fluidly through routine operation & stays in plane; Performs IOC in routine cases
4	Practice Ready	Obtains critical view of safety despite scarring/inflammation; performs IOC in any case Recognizes when operative plan deviation indicated; develops/implements plan to address Adapts operative technique to tissue quality; analyzes how instrumentation affects cost

Evaluate and manage a patient with gallbladder disease

Intra-Operative Phase

Resident A takes the patient to the operating room for cholecystectomy with their attending.

Resident A requires direct guidance to place the initial trocar, and is not sure where to place the other trocars but is able to place them safely following instruction about location. Resident A describes the critical view of safety, but struggles to retract the infundibulum of the gallbladder adequately to obtain exposure. The gallbladder is slightly inflamed, and A is very tentative in their attempts to dissect the hepatocystic triangle.

When A is unable to make any progress after 20 minutes, the attending switches sides with A and completes the dissection. They switch back, and A clips and divides the cystic duct and artery. Then, with coaching, A is able to remove the gallbladder from the liver bed and complete the case, requiring some redirection to stay in plane.

What level of entrustment is this resident demonstrating?

Evaluate and manage a patient with gallbladder disease

Intra-Operative Phase

Describes the anatomic structures and relationships in gallbladder (GB) surgery (eg, cystic duct, cystic artery, hepatocystic triangle) and identifies them with assistance in a routine case. (MK2 L1)

Describes basic steps of the operation and the critical view of safety. (MK2 L1)

Handles instruments safely but tentatively, demonstrates a lack of coordination between both hands, and is inefficient with suturing and knot-tying. (PC2 L1)

Articulates sharps safety, safe surgical energy use, and surgical field sterility. (PC2 L1)

Requires active instruction to move the operation forward. (PC3 L1)

Centers the operative field (anatomy and instruments) with the camera with frequent adjustments and reminders. (PC3 L1)

Coordinates hand movements for simple maneuvers, though inefficiently and with direct instruction. (PC3 L1)

Identifies variations in cystic duct and artery anatomy in a straightforward case; articulates implications for the operation. (MK2 L2)

Knows common positioning options but cannot name factors for one over another. (PC3 L2)

Smoothly performs basic maneuvers, such as suturing and knot-tying. (MK2 L2)

Provides a basic description of the operative plan; omits some steps. (PC3 L2)

Places subsequent laparoscopic trocars after initial entry, uses surgical energy safely, closes skin independently. (PC2 L2)

Demonstrates understanding of port site triangulation and safe entry into the abdomen, requiring guidance. (PC2 L2)

Places clips accurately with guidance. (PC3 L2)

Identifies plane of dissection (eg, to remove the GB from liver bed), requires redirection to maintain the optimal plane. (PC3 L2)

Usually demonstrates careful tissue handling and coordinated use of both hands. (PC3 L2)

Moves the operation forward, though sometimes requires direction. (PC3 L2)

Requires assistance to control bleeding or perform IOC. (PC3 L2)

Identifies variable cystic duct and artery anatomy despite inflammation or scarring, requires assistance to adapt the operative approach in response. (MK2 L3)

Performs lap chole with straightforward anatomy and minimal inflammation safely, including identifying the critical view of safety. (PC2 L2)

Performs IOC independently in a routine case. (PC2 L3)

Demonstrates careful tissue handling. Dissects cystic duct and artery efficiently, obtains critical view of safety, and places clips accurately in a routine case or with 1-2 challenges. (PC3 L3)

Moves fluidly through the operation; anticipates next steps and logistical needs and clearly communicates to the OR team. (PC3 L3)

Identifies plane of dissection (eg, to remove GB from the liver bed) accurately in a routine case. (PC3 L3)

Recognizes when deviation from the initial operative plan (eg, conversion to open or subtotal) is required. (PC3 L3)

Adapts to unexpected/variant anatomy in a complex cholecystectomy (eg, inflamed, shortened cystic duct), changing the operative approach (subtotal or dome-down). (MK2 L4; PC3 L4)

Functions as teaching assistant for a case with normal anatomy, recognizing when technical requirements necessitate them to take over. (PC2 L4)

Performs IOC safely in the presence of scarring and inflammation. (PC2 L4)

Adapts operative technique to tissue quality and case complexity. Identifies correct plane, dissects the cystic duct and artery, obtains critical view of safety in presence of scarring/inflammation. (PC3 L4)

Devises and implements a plan when deviation from the initial operative plan (eg, conversion to open or subtotal cholecystectomy) is required. (PC3 L4)

Implements early management steps, including calling for assistance, when a complication is identified. (PC3 L4)

Analyzes how choice of instruments will affect overall procedure cost. (SBP3 L3)

Alignment and Transparency

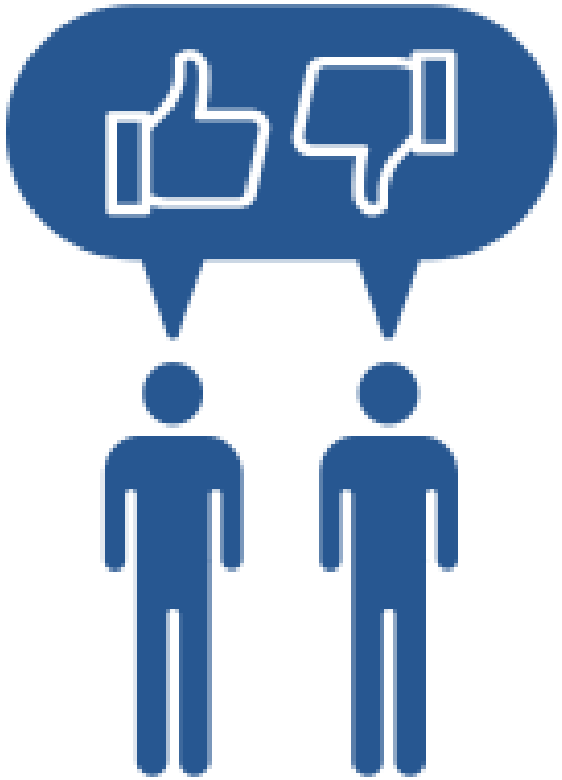
"Resentment occurs when you fail to meet an expectation that I didn't tell you I had."

Judgment

Your performance wasn't good

You didn't meet expectations

You need to try harder



Judgment

3	Indirect Supervision	Obtains critical view of safety in routine cases; consistent careful tissue handling Smooth instrument handling with effective use of both hands Moves fluidly through routine operation & stays in plane; Performs IOC in routine cases

You needed help obtaining the critical view of safety this time

You qualify for direct supervision based on this case

You veered from the plane when taking the gallbladder off the liver bed

Finding the Right Words

Pre-Operative Phase

Initiates gallbladder disease workup, includes unnecessary/duplicate tests; DDx complete
Develops mgmt. plan for straightfoward pt with uncomplicated gallbladder disease
Obtains informed consent including risks/benefits/alternatives

Direct Supervision

Your workup included some unnecessary tests (HIDA scan)

You did a nice job with the plan and consent for this straightforward patient

You qualify for direct supervision based on this case

Kickstarting Teaching

I saw you've been at indirect supervision for your last 2 cases

12 so far

I'll s

Let's have you take the lead to start and we can swap if we're having difficulty

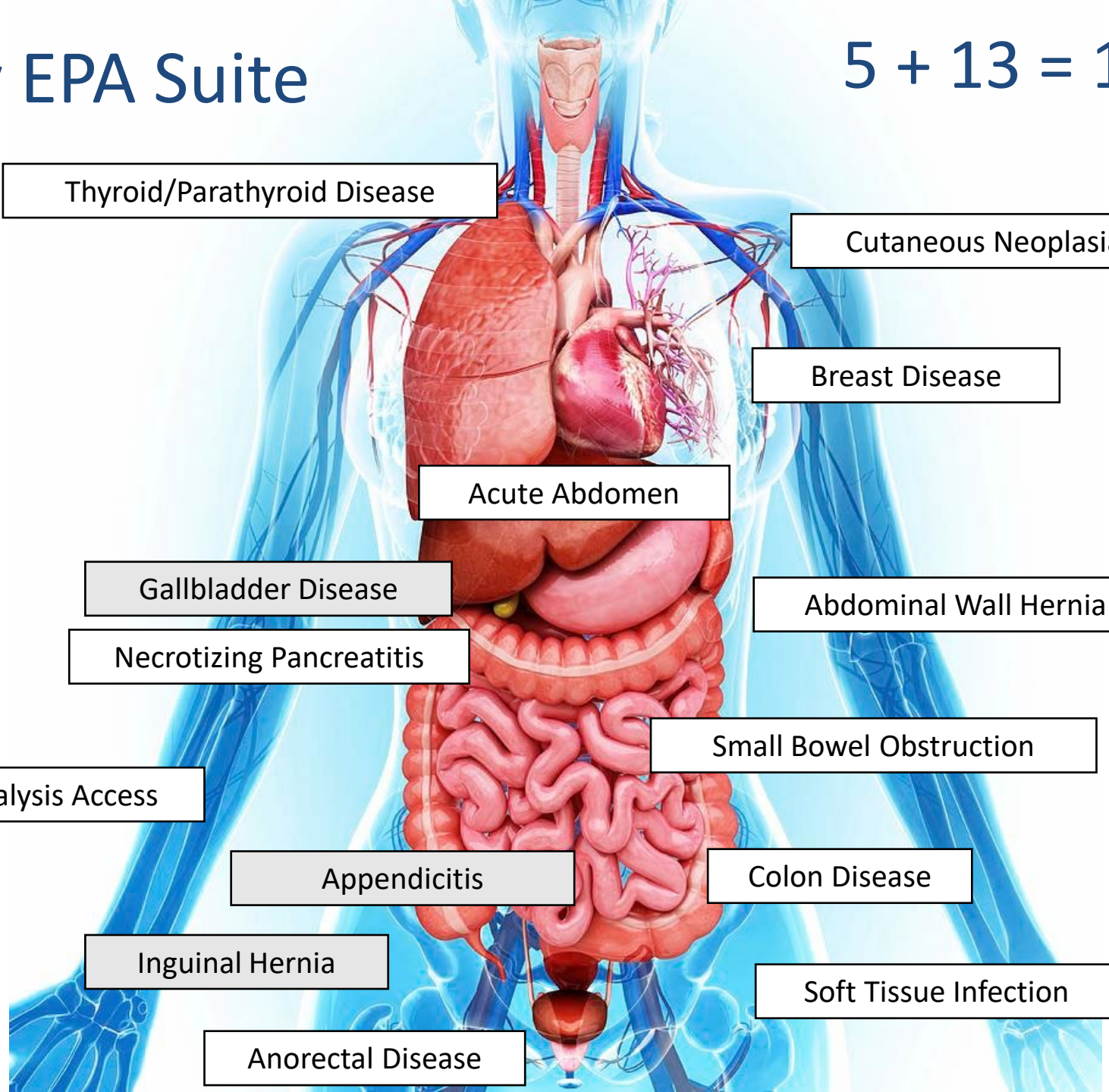
Integration into Workflow

Illustration: Getty Images

Wait, I have to keep track of 18 EPAs?

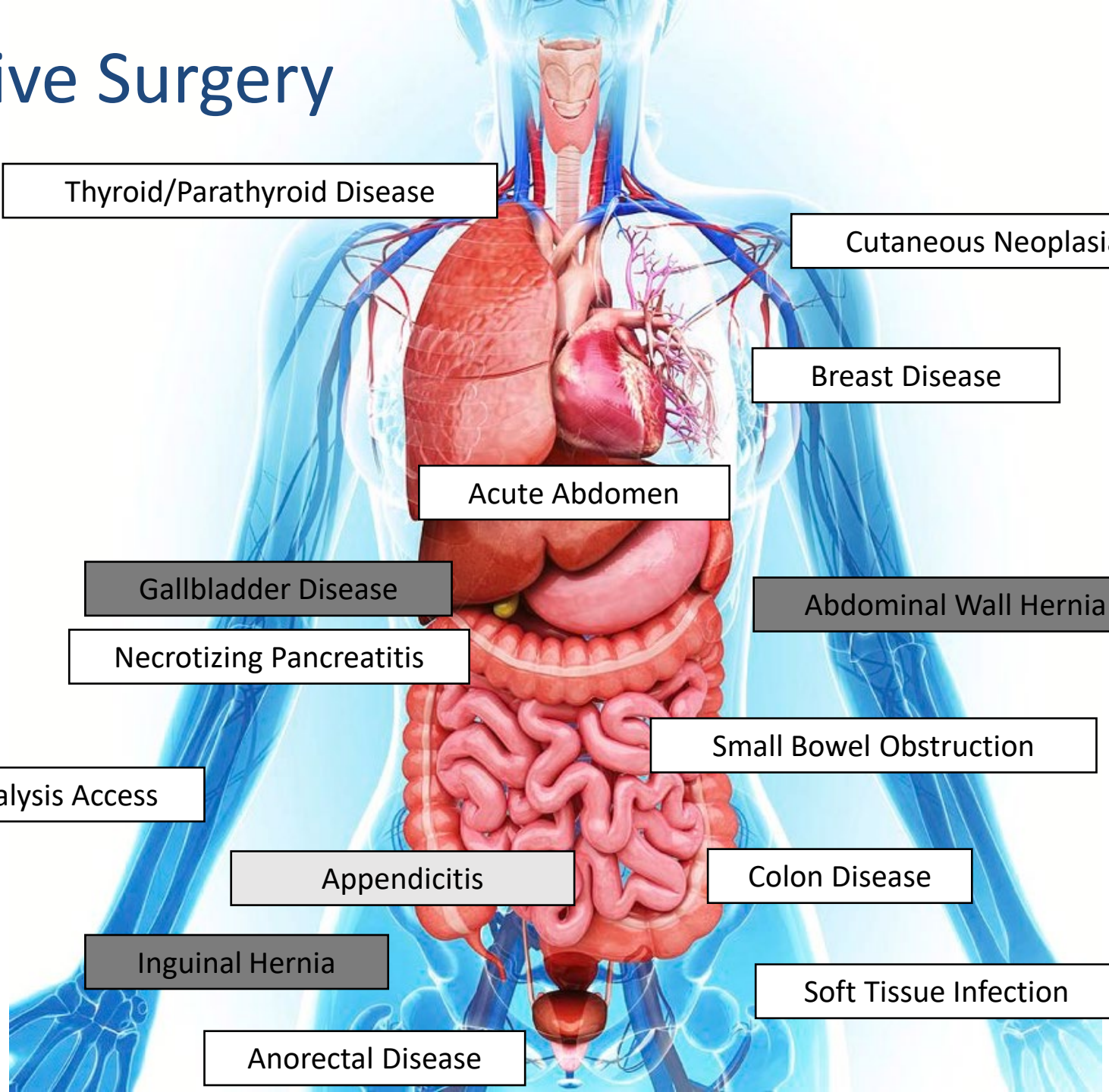
General Surgery EPA Suite

5 + 13 = 18 Total



- Surgical Consultation
- Trauma
- Critically Ill Patient
- Flexible Endoscopy
- Thyroid/Parathyroid Disease
- Cutaneous Neoplasia
- Breast Disease
- Acute Abdomen
- Gallbladder Disease
- Abdominal Wall Hernia
- Necrotizing Pancreatitis
- Small Bowel Obstruction
- Hemodialysis Access
- Appendicitis
- Colon Disease
- Inguinal Hernia
- Soft Tissue Infection
- Anorectal Disease

Minimally Invasive Surgery



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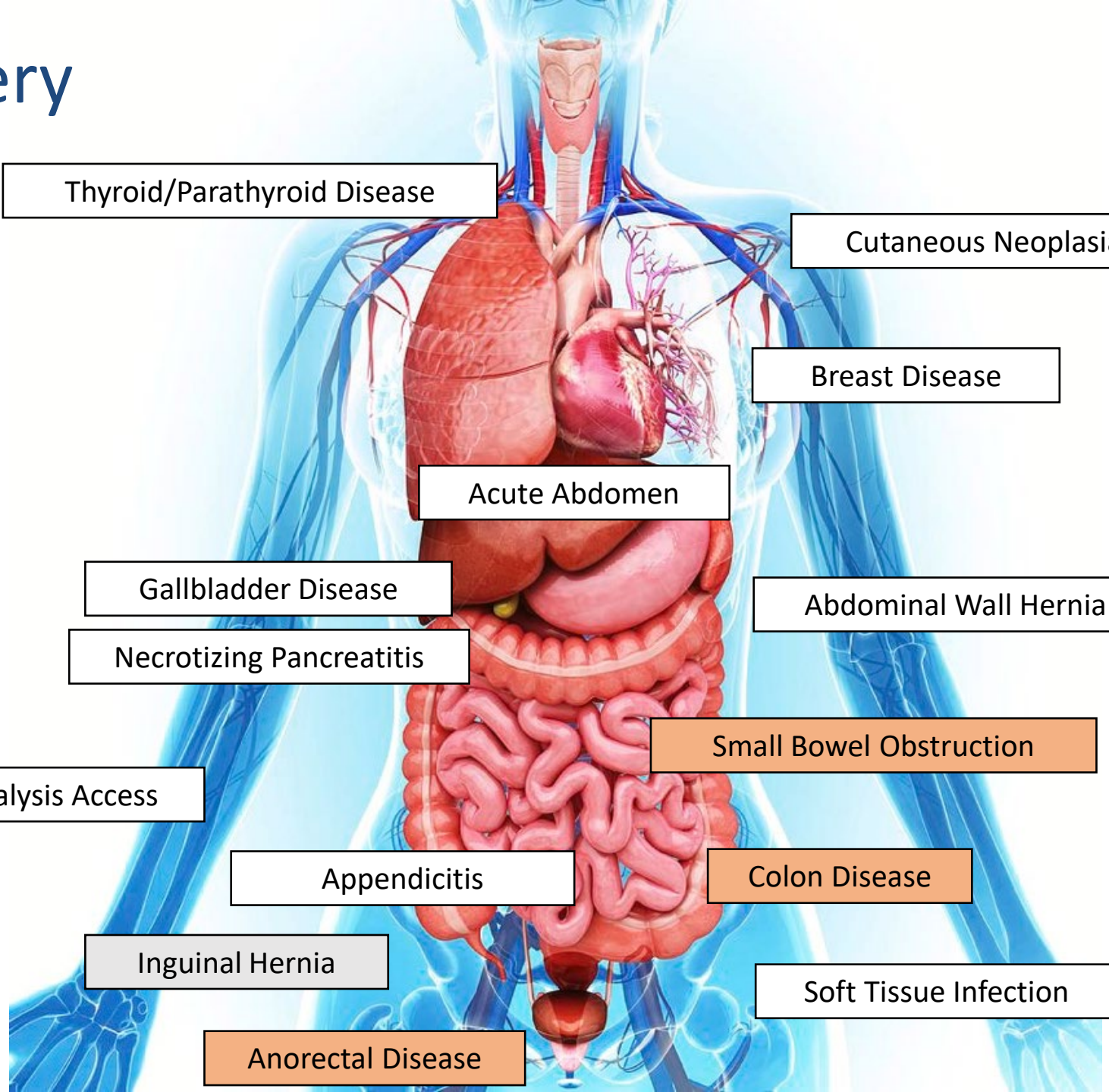
Colorectal Surgery



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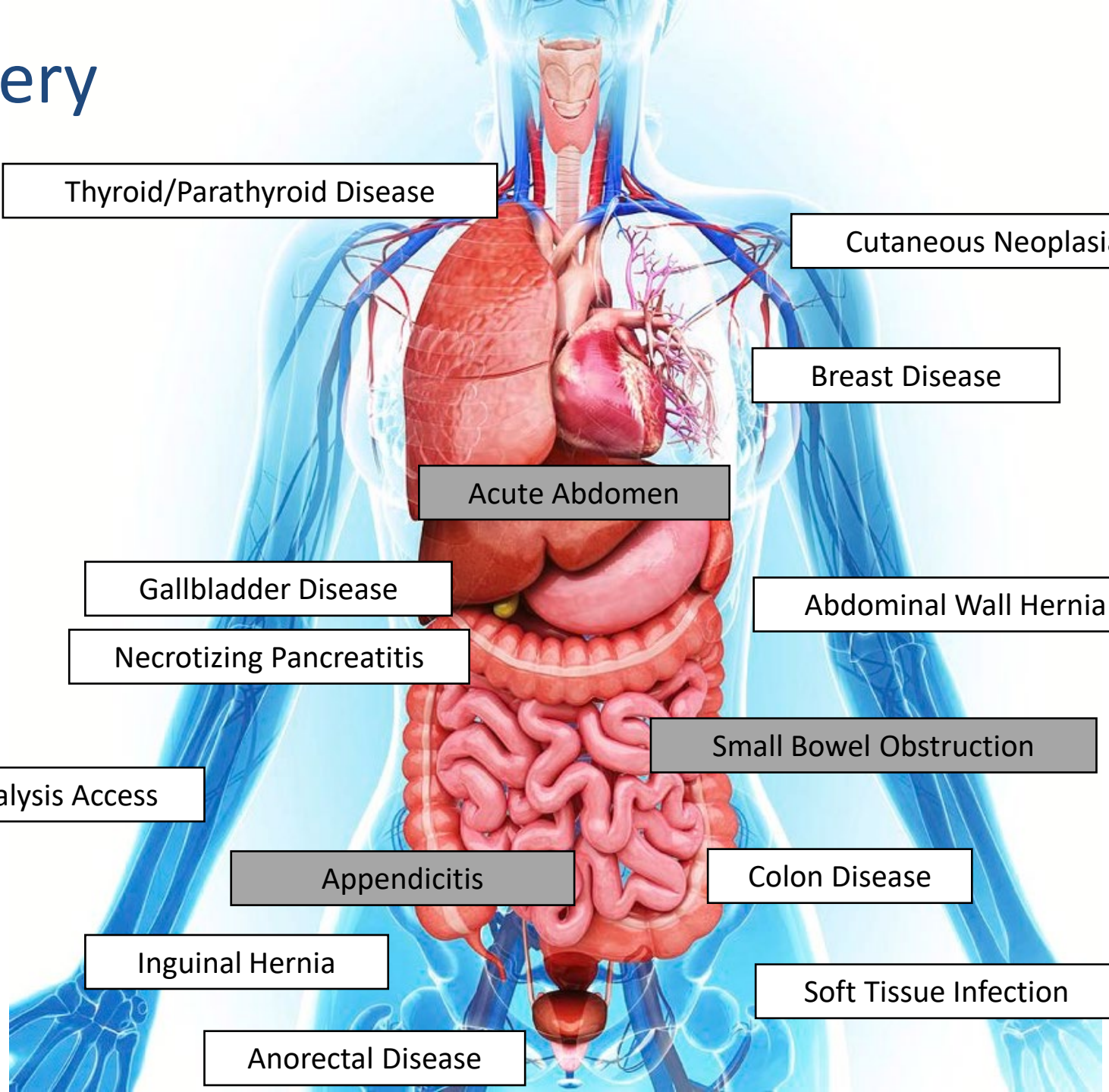
Acute Care Surgery



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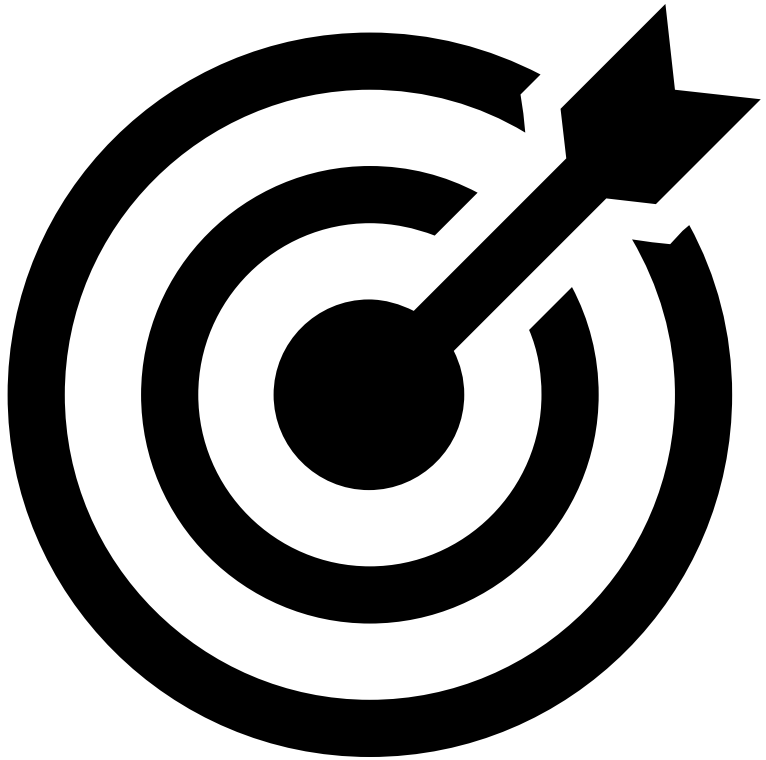
Anorectal Disease

Service Structure to Guide EPA Assessments

	Consult	GB	Appy	G Hernia	V Hernia	SBO	Breast	Colon	Thyroid	Crit Ill	
MIS	X	X		X	X	X					
Breast	X						X				
Vascular	X										X
Peds	X		X	X							
Surg Onc	X	X					X				X
SICU										X	
Cardiothoracic	X										
ACS	X	X	X			X		X		X	X
TBICU										X	X
Colorectal	X					X		X			
Endocrine	X								X		
VA / Highlands	X	X	X	X	X	X		X	X		

Service Structure to Guide EPA Assessments



Individual

Division

Program

Example Structures:

Division	Individual	Program
Every Operation = 3-4/day = 12 assessments/week	1 EPA / day on service = 5 assessments/week	At least 10 EPA assessments from at least 2 different faculty
1-2 patients/clinic/learner = 2-4 assessments/week	1 EPA / clinic = 1 assessment/week	
~60 assessments over a 6-week rotation	~35 assessments over a 6-week rotation	~10 assessments over a 6-week rotation

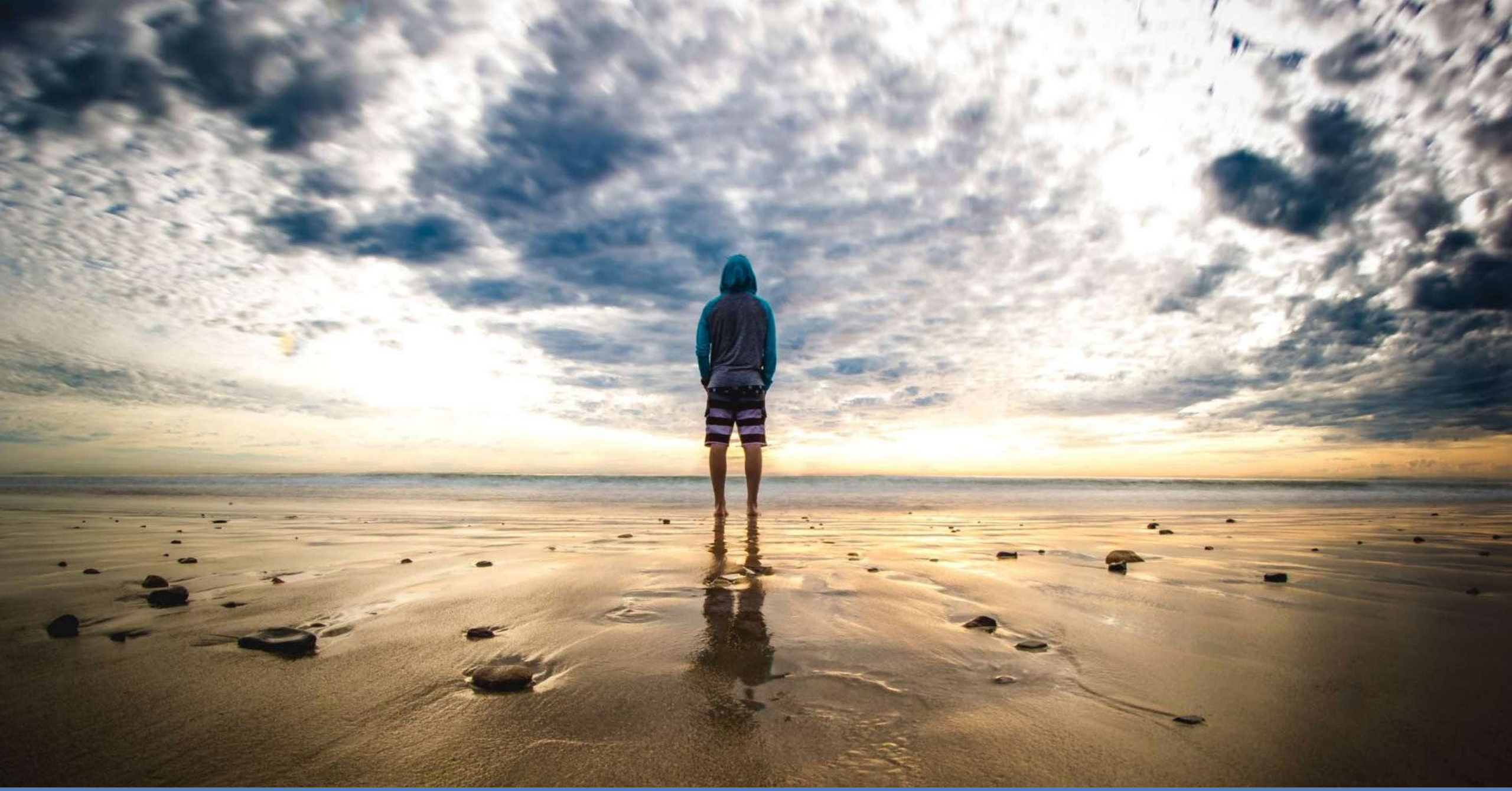
Example Structures:

Division	Individual	
Every Operation = 3-4 = 12		
...week rotation	~35 assessments over a 6-week rotation	~10 assessments over a 6-week rotation

All more than the 1 assessment most trainees previously received

Addition by Subtraction

- Elimination of less meaningful assessments
  - Global End of Rotation Evaluation
- Grounding of CCC conversations->efficiency
- Enhancement of career transition handoffs
- Potential for integration with and automation of ACGME required elements
  - ‘Case logs’, milestones maps, faculty development



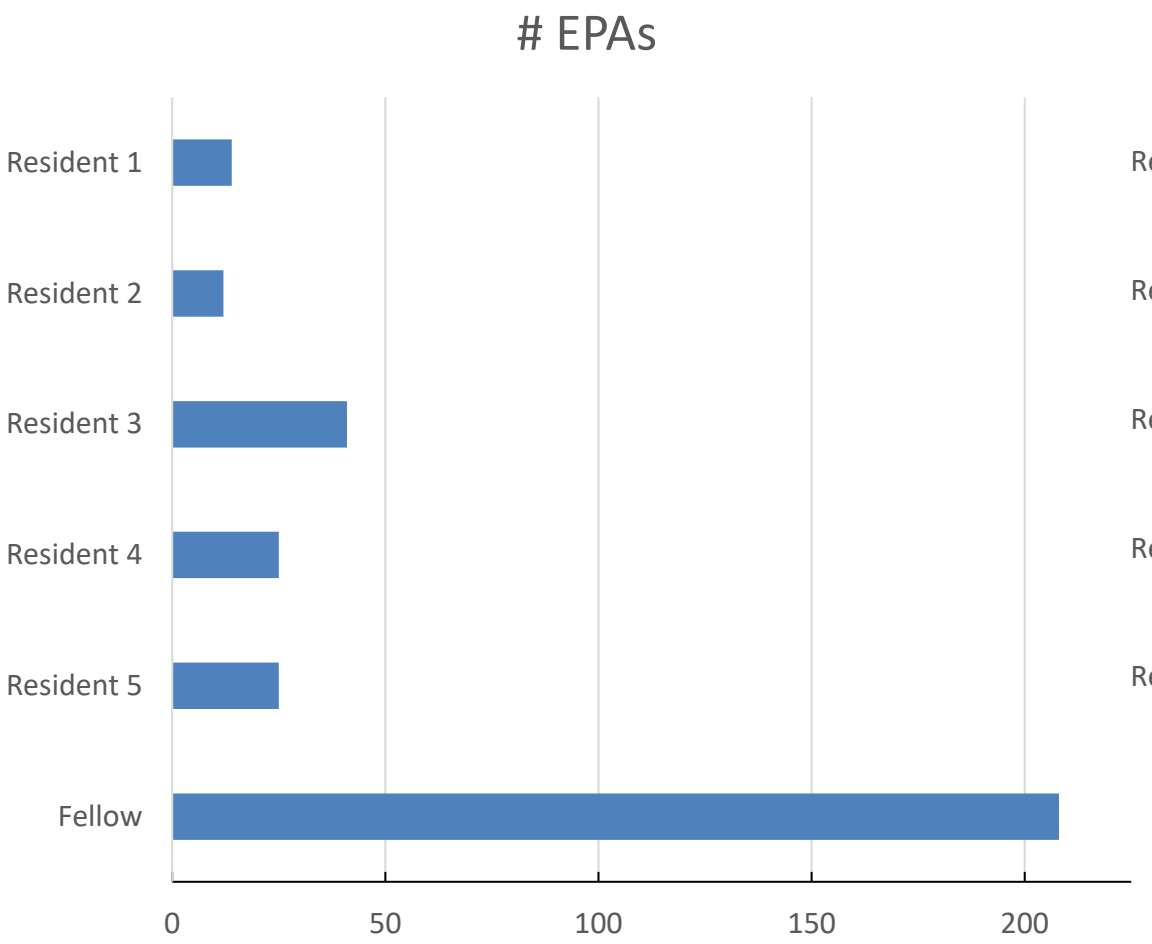


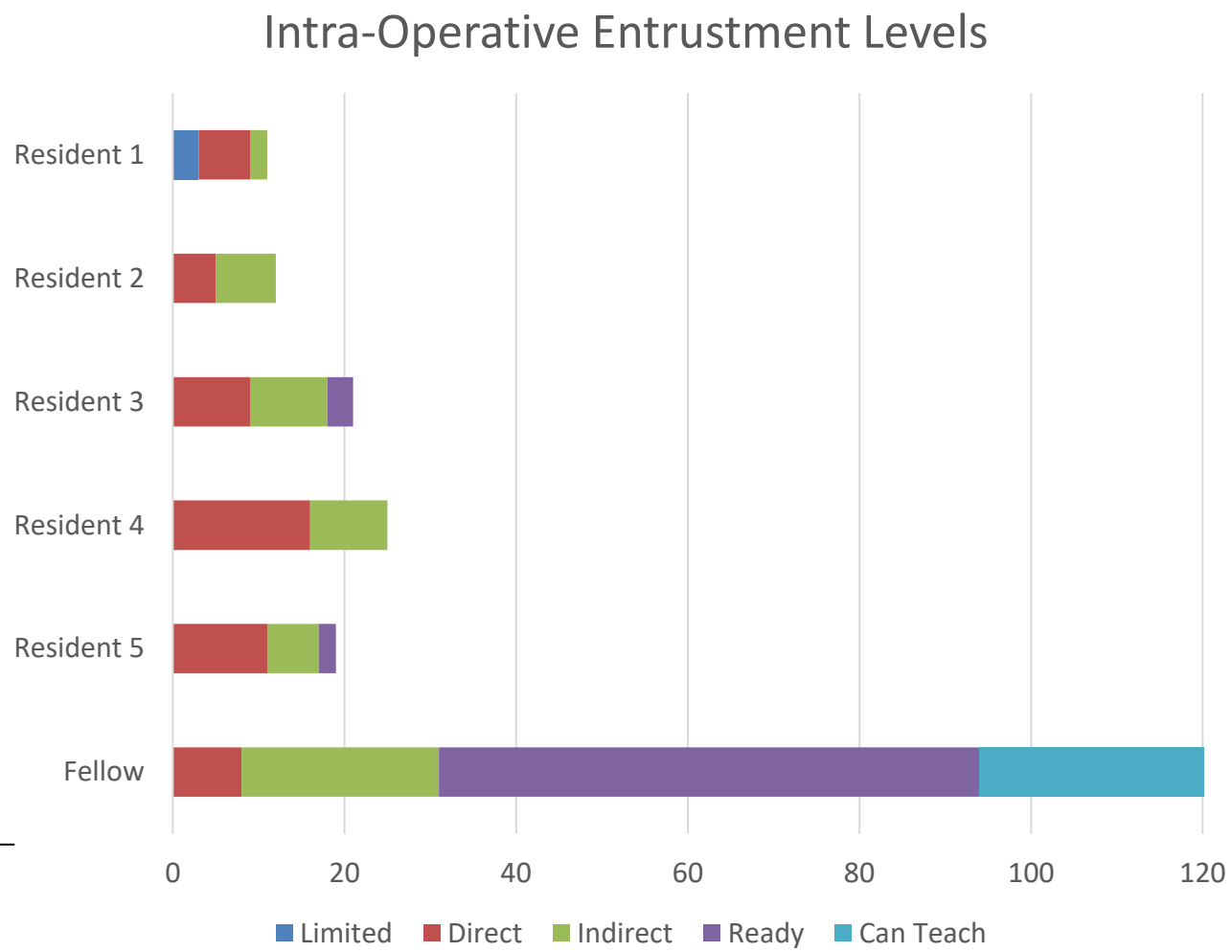

Thank You!

blindeman@uabmc.edu

@BrenessaL
@UABSurgery

Endocrine Surgery EPA Pilot





Evaluate and manage a patient with gallbladder disease

Pre-Operative Phase

Resident B is called to the ED to evaluate a 32-year-old post-partum woman with a 24-hour history of right upper quadrant pain radiating around to her right flank & right-sided shoulder pain.

Resident B performs a focused H&P and learns:

- Patient had prior episodes of similar pain during pregnancy, never this severe or long-lasting
- She was evaluated for fatty food intolerance during pregnancy and found to have gallstones
- No history of jaundice, does have subjective fevers
- On exam, has RUQ tenderness and fullness, with a Murphy's sign, tachycardia and fever

B orders a CBC, LFTs, an amylase, and a right upper quadrant ultrasound
Personally reviews the images, noting a dilated gallbladder with wall thickening, no biliary dilation or choledocholitiasis
Labs show WBC 16,000, but minimally elevated bilirubin without an elevated alkaline phosphatase.

B starts abx and fluids and tells chief resident Y the patient has severe acute cholecystitis, and doubts choledocholithiasis. B proposes the patient go to the OR, to which the patient is in agreement. B obtains informed consent for cholecystectomy with discussion of complications and unexpected findings.

What level of entrustment is this resident demonstrating?

Evaluate and manage a patient with gallbladder disease

Pre-Operative Phase

Obtains an H&P with cultural humility and develops a differential for a patient with uncomplicated gallbladder (GB) disease in elective and emergent settings. (PC1 L1)

Understands the basic elements of gallbladder anatomy. (MK2 L1)

Communicates basic facts about the condition to patient/caregivers in a respectful way but does not use applicable language services and audio/visual aids. (ICS1 L1)

Understands the elements that constitute an informed consent discussion but omits some when documenting the discussion. (ICS1 L1)

Has basic awareness of costs of care as they relate to diagnostic and treatment options, including radiologic and laboratory assessments for biliary disease. (SBP3 L1)

Accesses evidence and considers patient preference in determining the best approach for managing GB pathology at a basic level (eg, operative vs nonoperative management). (PBL1 L1)

Evaluates a patient with gallbladder disease, interpreting laboratory values and imaging studies. (PC1 L2)

Develops a plan for managing a patient with uncomplicated gallbladder disease. (PC1 L2)

Communicates the basic facts of a plan for uncomplicated gallbladder disease to patient/caregivers, customizing communication to overcome barriers and cultural differences and using applicable language services and audio/visual aids. (ICS1 L2)

Demonstrates understanding of an informed consent discussion for a straightforward cholecystectomy, providing information about risks, benefits, and alternatives and documenting the discussion. (ICS1 L2)

Demonstrates understanding of key components of billing and coding but suggests a duplicate or unnecessary test. (SBP3 L2)

Incorporates published guidelines regarding the cost-effective management of patients presenting with gallstone disease. (PBLI1 L2)

Independently develops, concisely presents comprehensive management plan for complicated and uncomplicated GB disease, considering nonoperative management. (ICS1 L3, PC1 L3)

Communicates with a patient/caregivers across cultural differences to elicit a personalized care plan in shared decision-making for a straightforward presentation. (ICS1 L3)

Conducts informed consent discussion for a straightforward cholecystectomy with cultural humility and documents the discussion related to the operative management of GB disease. (ICS1 L3)

Selects preoperative imaging and testing to diagnose GB pathology in resource- and time-efficient manner; distinguishes cost and outcome differences associated with various treatment strategies. (SBP3 L3)

Applies published guidelines for workup and management of complex GB disease and incorporates patient preference into the plan. (PBLI1 L3)

Manages a patient with complicated gallbladder disease (eg, severe cholecystitis, choledocholithiasis post R-Y gastric bypass) or in a medically complex patient (eg, sepsis, anticoagulation use, cardiac dysfunction), customizing use of nonoperative management. (PC1 L4)

Customizes communication based on an patient's characteristics and preferences across barriers in a critical or life-threatening situation. Manages and de-escalates conflict with a difficult or hostile patient/caregiver. (ICS1 L4)

Conducts informed consent discussion for a complex or emergent cholecystectomy with cultural humility, eliciting patient preferences, and documenting individualized risks and benefits. (ICS1 L4)

Triages treatment of GB disease considering patient circumstances and preferences (ie, comorbidities, socioeconomics). (SBP3 L4)

Applies current published guidelines for workup and management of GB disease, considering nuances and exceptions in a complex situation. (PBLI1 L4)

Summative Entrustment

What do residents say about use of EPAs?

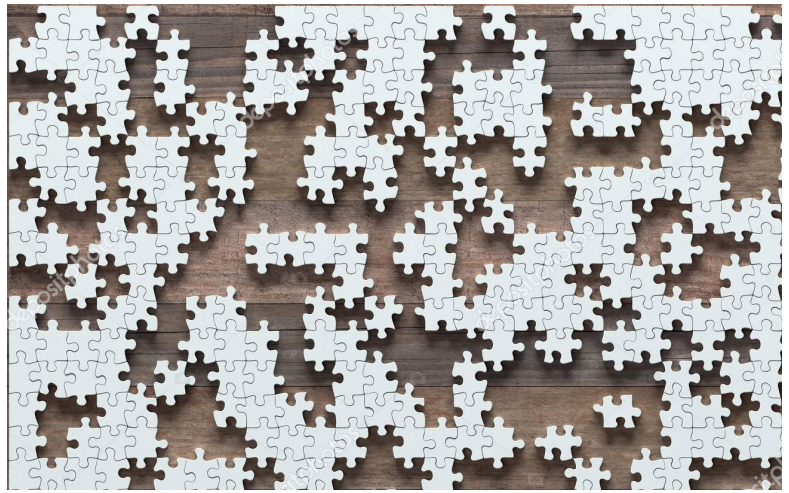
Better Feedback

Adds to workload

What do faculty say about use of EPAs?

Workflow Integration

Minimal Time



Incomplete picture

Evaluate and manage a patient with gallbladder disease

Description of the Activity:

Gallbladder disease is a condition commonly encountered by general surgeons both in the elective and emergent care setting. These surgeons must be able to treat the spectrum of benign biliary disease as well as recognize diseases requiring specialty referral in both adolescent and adult patients.

Functions:

Pre-Operative:

- Synthesize essential information from records, history, physical examination, and initial diagnostic evaluations to develop a differential diagnosis.
- Complete a cost-effective, evidence-based diagnostic evaluation
- Communicate both diagnosis and potential treatment options to patients, families, and consultants
- Obtain informed consent, describing indications, risks, benefits, alternatives, and potential complications of the planned operation, including nuances relevant to the patient's individual condition and comorbidities, and ensure patient understanding
- Identify patients in whom operative intervention may be contraindicated:
  - Patients in whom cholecystostomy placement is indicated
  - Patients with prohibitive surgical or anesthetic risk secondary to medical morbidity
  - High-risk patients who exceed the capacity of the surgical environment
  - Patients with asymptomatic disease or atypical symptoms

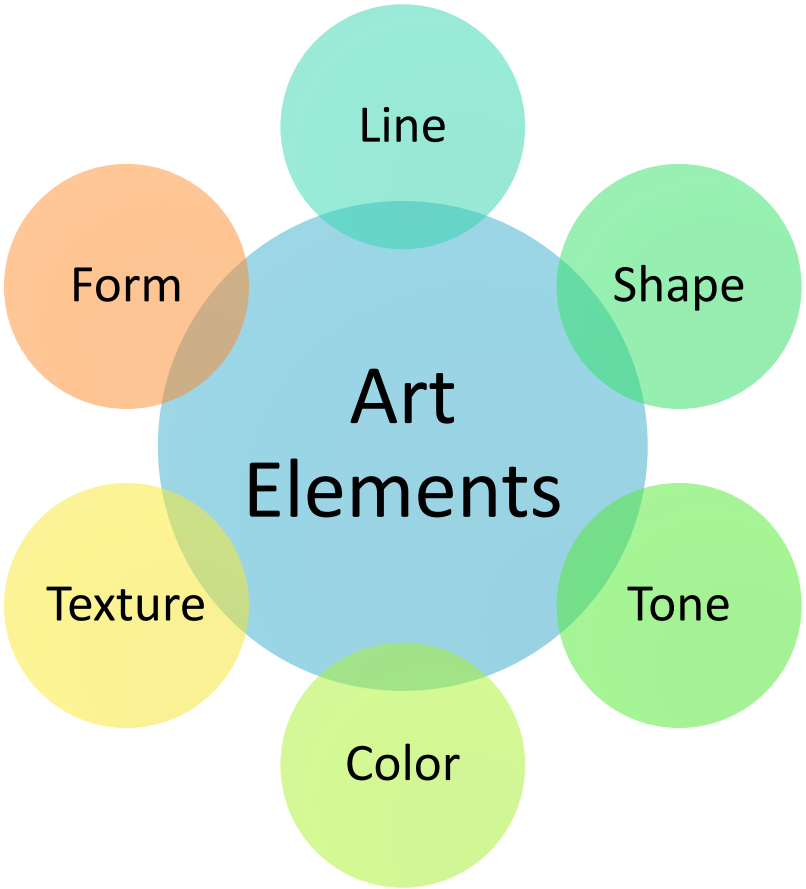
Intra-Operative

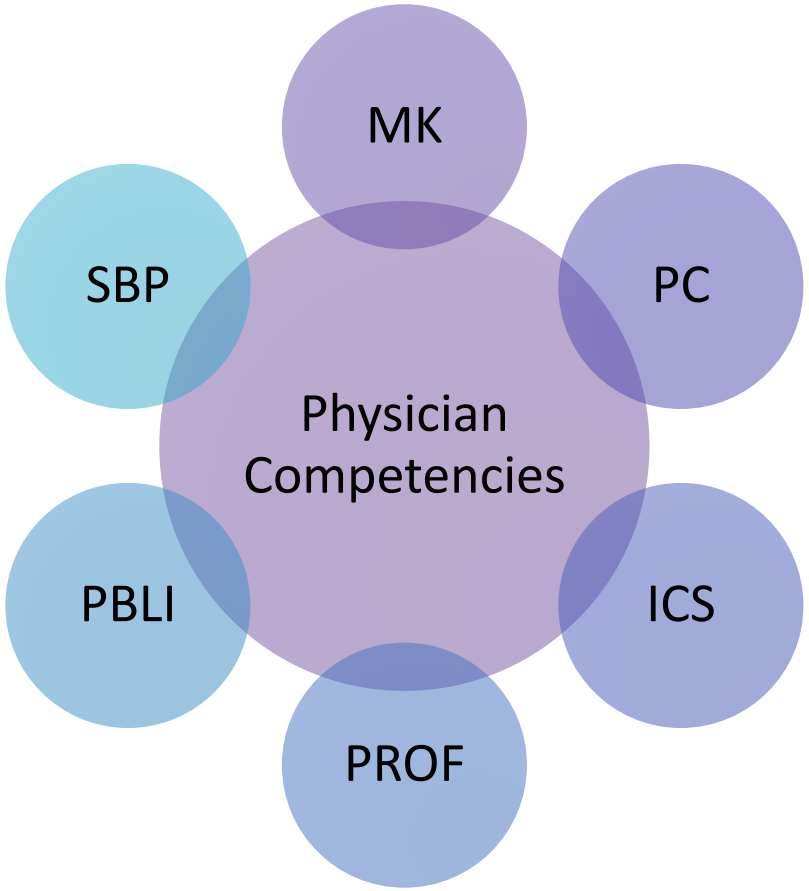
- Perform the procedures required to manage gallbladder disease
  - Cholecystectomy, minimally invasive and open techniques
    - Systematically identify and dissect the structures of Calot's triangle to achieve the critical view of safety
    - Circumferentially expose the cystic duct and cystic artery before clipping and dividing structures
    - Recognize when the cystic plate is obliterated or there is failure to progress and transition to either a laparoscopic or open dome down approach or partial cholecystectomy
- Recognize indications for and perform cholangiography (with interpretation)
    - High suspicion of common duct stones
    - Uncertainty regarding biliary anatomy
- Manage common intraoperative complications such as bleeding from the liver bed
- Recognize and develop a management plan for unexpected intraoperative findings such as choledocholithiasis, gallbladder mass, biliary tract injury, and aberrant anatomy

Post-Operative

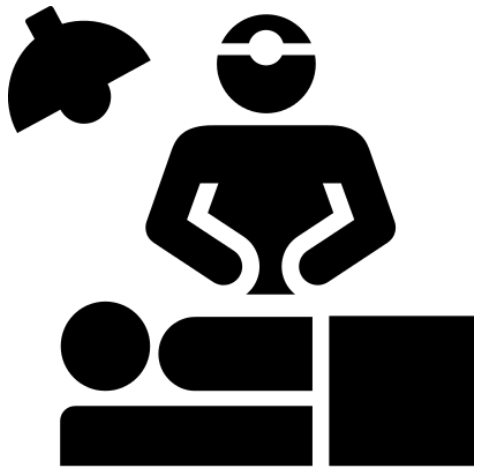
- Provide postoperative management for patients with benign biliary tract disease to include:
  - Routine postoperative, immediate, and follow-up care
  - Management of cholecystostomy tube
- Communication with the patient/family to ensure that instructions are understood
- Recognize early and late complications related to biliary tract procedures
  - Late presentation of biliary injury
  - Retained stone
  - Bile leak
  - Persistent postcholecystectomy pain or chronic diarrhea

How to evaluate art?





Like art, good doctoring requires the integration of elements/competencies



Remain focused on what the overall product looks like at the end