

No Intern Left Behind; Designing a boot camp around milestones

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- None for either party



Boot Camp?



Objectives

- Contemplate differences in readiness to begin internship
- Discuss difficulties in early identification of at risk residents
- Demonstrate curriculum design for early milestones assessment and identification of needs
- Consider the importance of the flipped classroom, and the value of using simulations and group activities to prove understanding
- Utilize techniques to provide early corrective action with at-risk learns to allow for correction of deficits
- Develop strategies to implement intensive intern school

On the variability of new interns

A tale of two Interns

- Intern 1
 - Out-of-state Medical School. Passed all Step exams first attempt. Step 2 score 31st percentile. Failed one medical school class (M1 year), Honored class on retake (over summer, graduated on time).
- Intern 2
 - In-state Medical School. Passed all Step exams first attempt. Step 2 score 11th percentile. No class/rotation failures.

Inconsistent Medical School Experiences

- Different Schools
- Different rotations, Different Goals
- Different Patient experiences (and even when done well, a general dearth.)
 - “To study medicine without books is to sail an uncharted sea, while to study medicine only from books is not to go to sea at all.”
- Sir William Osler

A tale of two Interns

- Intern 1
 - ITE score as PGY-1: 7th percentile
 - 16 sub-competency deficiencies on initial milestones evaluation
- Intern 2
 - ITE score as PGY-1 : 31st percentile
 - 0 sub-competency deficiencies on initial milestones evaluation

Identifying at risk Interns

Your Experiences

- Tell us about a time when you learned your intern wasn't ready, or unexpectedly didn't meet expectations

Milestones Data

- We first become aware of Milestones deficits with interns at initial CCC evaluation and with ITE results
- We have found that it can be difficult to correct a deficit if it is “entrenched”

FACULTY EVALUATION OF RESIDENT COMPETENCIES

Resident Name: Dr. Medi Oaker
 Attending: Dr. Sven Seldinger
 Rotation: 11/5/18 - 11/30/18
 Rotation Date: Critical Care

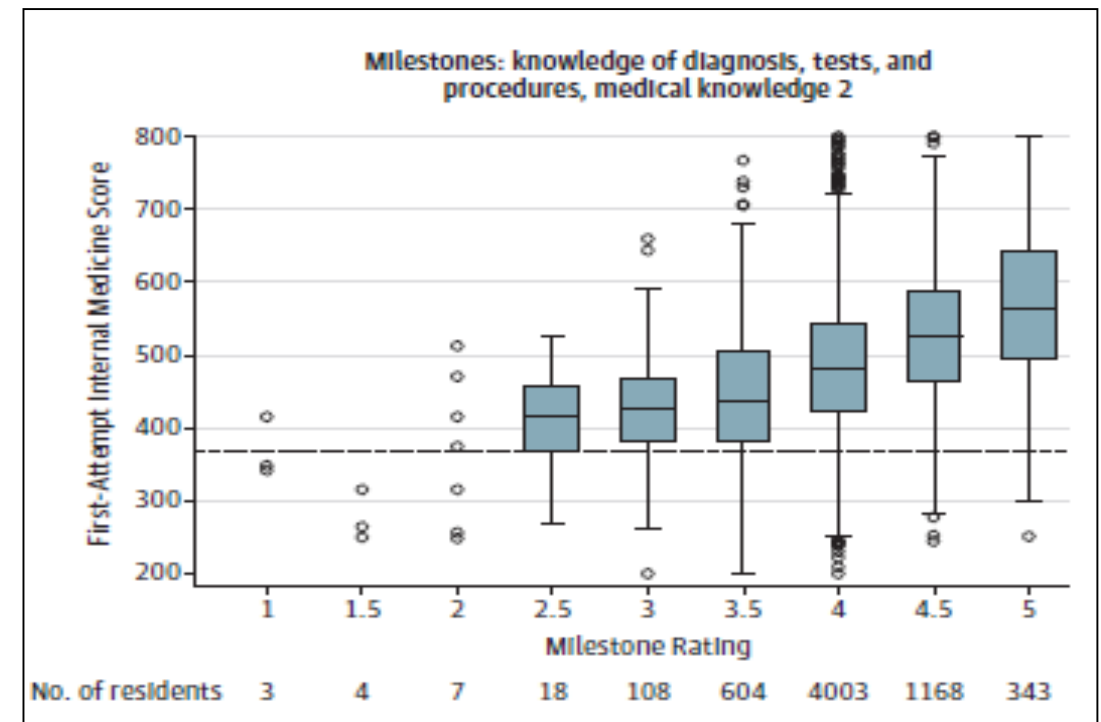
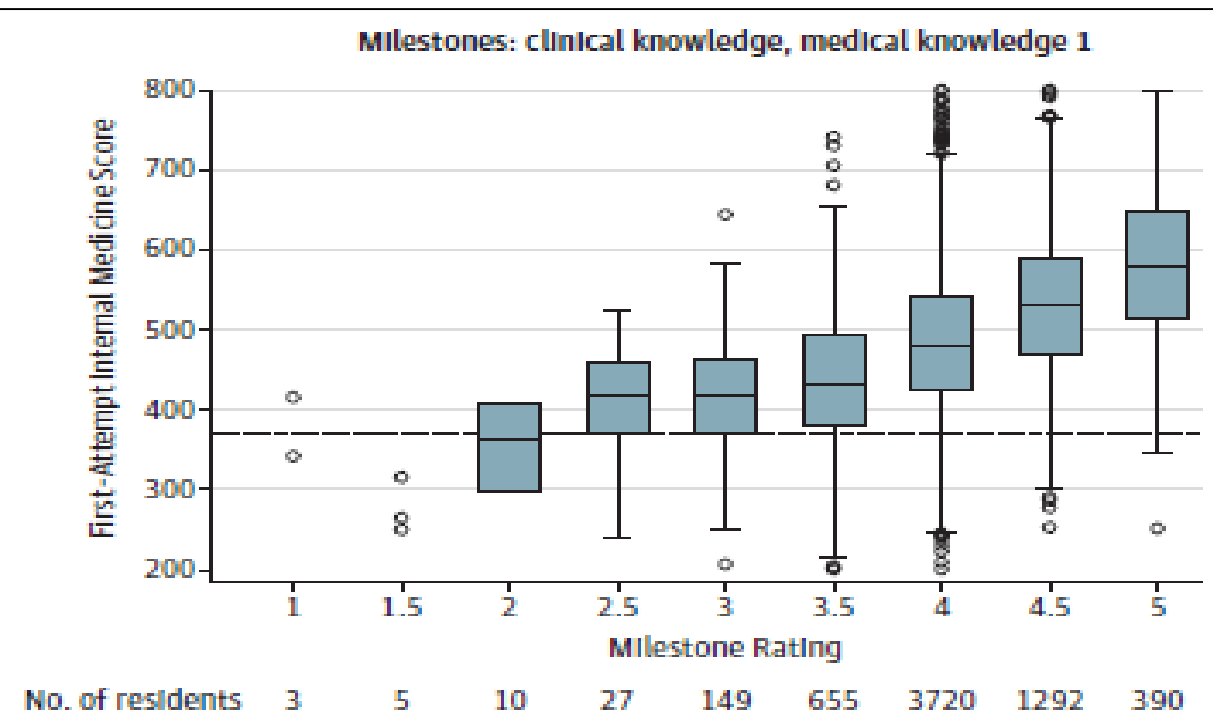
1 = Needs Remediation, 2 = Doesn't Meet All Expectations, 3 = Meets Expectations, 4 = Above Expectations, 5 = Exceptional, N/O = Not Observed	1	2	3	4	5	N/O
PATIENT CARE						
1. Conducts accurate and comprehensive history and physical examinations.					X	
2. Written and/or dictated documentation (H&P, progress notes, discharge summaries) is complete, thorough, clear and timely.						
3. Utilizes diagnostic resources and consultations in a timely, efficient and cost-conscious manner.						
4. Makes appropriate diagnostic and therapeutic decisions based on sound medical judgment and available evidence.						
Comments:						
MEDICAL KNOWLEDGE						
1. General medical knowledge is appropriate.						
2. Able to answer questions concerning disease process, diagnostic tests, and treatment plan.						
3. Understands complex relationships, interactions, and mechanism of disease.						
4. Independently active and resourceful in the learning process by reading and being well prepared for rounds.						
Comments:						
PRACTICE-BASED IMPROVEMENT						
1. Aware of limitations, evaluates own performance.						
2. Responds well to feedback on patient care.						
3. Performs literature searches and attempts to review current evidence for patient management.						
Comments:						
COMMUNICATION						
1. Communicates effectively with patients and family by using understandable language, open-ended questions and actively listening.						
2. Reviews diagnosis, treatment plans, and follow-ups with team and patient.						
3. Patient presentations during rounds are appropriate, well organized, and precise.						
4. Communicates effectively with nursing and ancillary staff.						
Comments:						
PROFESSIONALISM						
1. Is responsive to differences in patients' lifestyles and values.						
2. Presents self in a professional manner during rounds including: demeanor, dress, and behavior.						
3. Is a respectful, reliable, punctual, and hard working team player.						
Comments:						
SYSTEM-BASED IMPROVEMENT						
1. Effectively accesses and utilizes available resources within the healthcare system for coordination and management of patient care.						
2. Considers approaches to reduce errors and improve patient care.						
Comments: <u>Great Resident! I would let them take care of my mom! Also great technique!</u>						

S. Seldinger, MD
 FACULTY SIGNATURE

Medi Oaker MD
 RESIDENT SIGNATURE

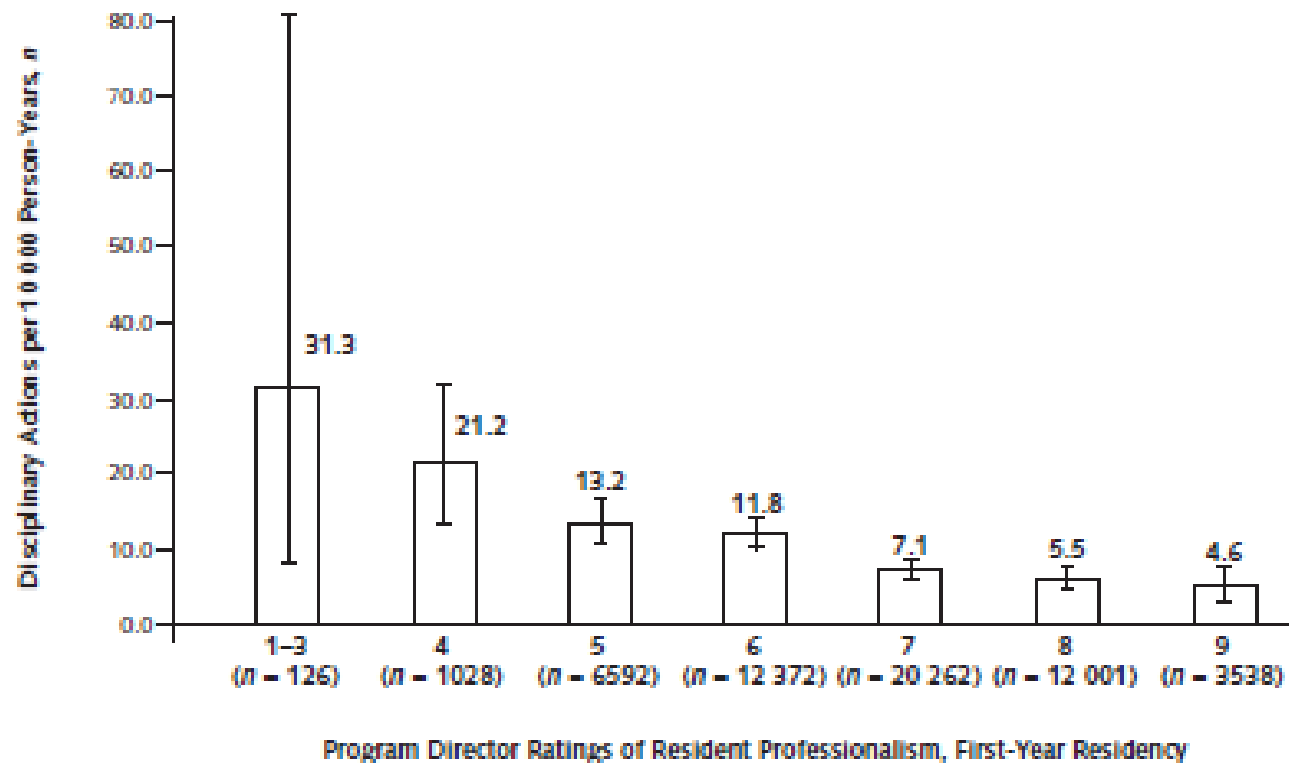
Milestones and ABIM Scores¹

Figure 3. Internal Medicine Certification Examination Score Distribution by Medical Knowledge Ratings and Milestone Ratings Among Postgraduate-Year 3 Residents Who Attempted the 2014 Certification Examination (n = 6260)



Professionalism evaluations and future actions against license²

Figure 1. Incidence of disciplinary actions, by program director rating.



Incidence of disciplinary actions per 10 000 person-years over 16 years for 66 171 internal medicine diplomates, based on professionalism rating by the program director after the first year of residency. Ratings range from 1 (lowest) to 9 (highest). Error bars indicate 95% CIs.

ITE Data

- We have seen a wide array of intern ITE scores, ITE as an intern predictive of future ITE scores
- ITE scores predict board pass rate³

Ren

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LEGENDARY FAIL

For when an Epic Fail wasn't enough

and mandatory

those enrolled,

Intern School

Prior Bootcamp data

- Previous work⁴ has shown earlier achievement of independence in patient management and procedural ACGME competencies in surgical residency with a senior medical student preparatory course.

A 5 week dedicated introductory block

- Provide a standardized baseline
- Provide a starting point for wellness/resiliency
- Recognize (and start correcting) deficits early
- Provide hands on experience
 - Not usual rotations

An attempt to standardize baselines

- Making sure the “must-know” topics
 - ACS, Stroke, CHF, Arrhythmia, etc.
- Introduce expectations
 - Functionality from day one of first clinical rotation

A starting point for wellness

- Class bonding
- Team-building activities
- Meet and Greet Party
- Wellness half days (with suggestions)
- Gatekeeper training for suicide prevention
- Initiation of Group Counseling

An attempt to recognize deficits early

- Much of the week was education leading toward a simulated experience.
- Both the simulations as well as case-based discussions were evaluated using the ACGME milestones

An attempt to provide hands on experience – The functionality of internship

- Just over 1/3 of the block was clinical time
- Spent on various core rotations
 - Learning roles, experiencing service lines
 - How to admit, how to consult, order sets, notes, etc.
- Change in team structure to allow for this

Schedule

- Monday-Friday for 5 weeks
- Typically 1-2 simulation half-days per week in groups of 4
- Reading assignments associated with topics covered in discussion/case-based lectures to be covered before meeting (flipped classroom)

Topics Covered

- Case-base discussions
 - Reading EKG, Reading CXR
 - How to approach common chief complaints
 - De-escalation training, personal safety, safety policies and procedures
 - Creating a culture of safety, Sick vs. Not Sick
 - Expectations, How to respond to common issues/pages

Benefits of Simulation



Topics Assessed in Simulation

- Codes/Arrhythmias
- Acute Abdomen, DKA, Acute Aortic Syndromes, GI bleed
- PE, Septic Shock, Hypercapnia, Status Epilepticus
- Procedural Simulation, Ultrasound Simulation
- Stroke

Sample Week Schedule

Monday 6/25		Tuesday 6/26	Wednesday 6/27	Thursday 6/28	Friday 6/29	
Breakfast and Welcome 7:30-8:00		EKGs and CXR basics - Battisti	Inpatient Diabetes Management (Including DKA/HHS) - Battisti	Substance Abuse - Battisti		De-escalation Training (Security) (08:00 - 10:30)
Codes and Arrhythmias - Battisti			Inpatient Hypertension Mgmt - Battisti	Opioids - Battisti		Purple Circle, Code Brown, Pink Slip, etc. Battisti
			Sick vs. Not sick - Battisti	Alcohol Abuse/Withdrawal - Battisti		
			Creating a Culture of Safety - Battisti			
			Interns A, B, C, D	Interns E, F, G, H		
VTACH Battisti/Whoever	Reading Time/Wellness Time	General Housekeeping and Ground Rules, Karen and Dr. Weiss	Approach to the end of life Hagen/Zellner/Donaldson	VTACH Battisti/Whoever	Reading Time/Wellness Time	Something Fun -- Escape Room. Battisti to drop off only
PEA Battisti/Whoever			Palliative Do's/Don'ts Hagen/Zellner/Donaldson	PEA Battisti/Whoever		
A Fib/RVR Battisti/Whoever			Hospice Hagen/Zellner/Donaldson	A Fib/RVR Battisti/Whoever		
3rd AV Block Battisti/Whoever			Opioids Hagen/Zellner/Donaldson	3rd AV Block Battisti/Whoever		

Small Groups: Design your own intern school

Using engaging and interactive teaching techniques

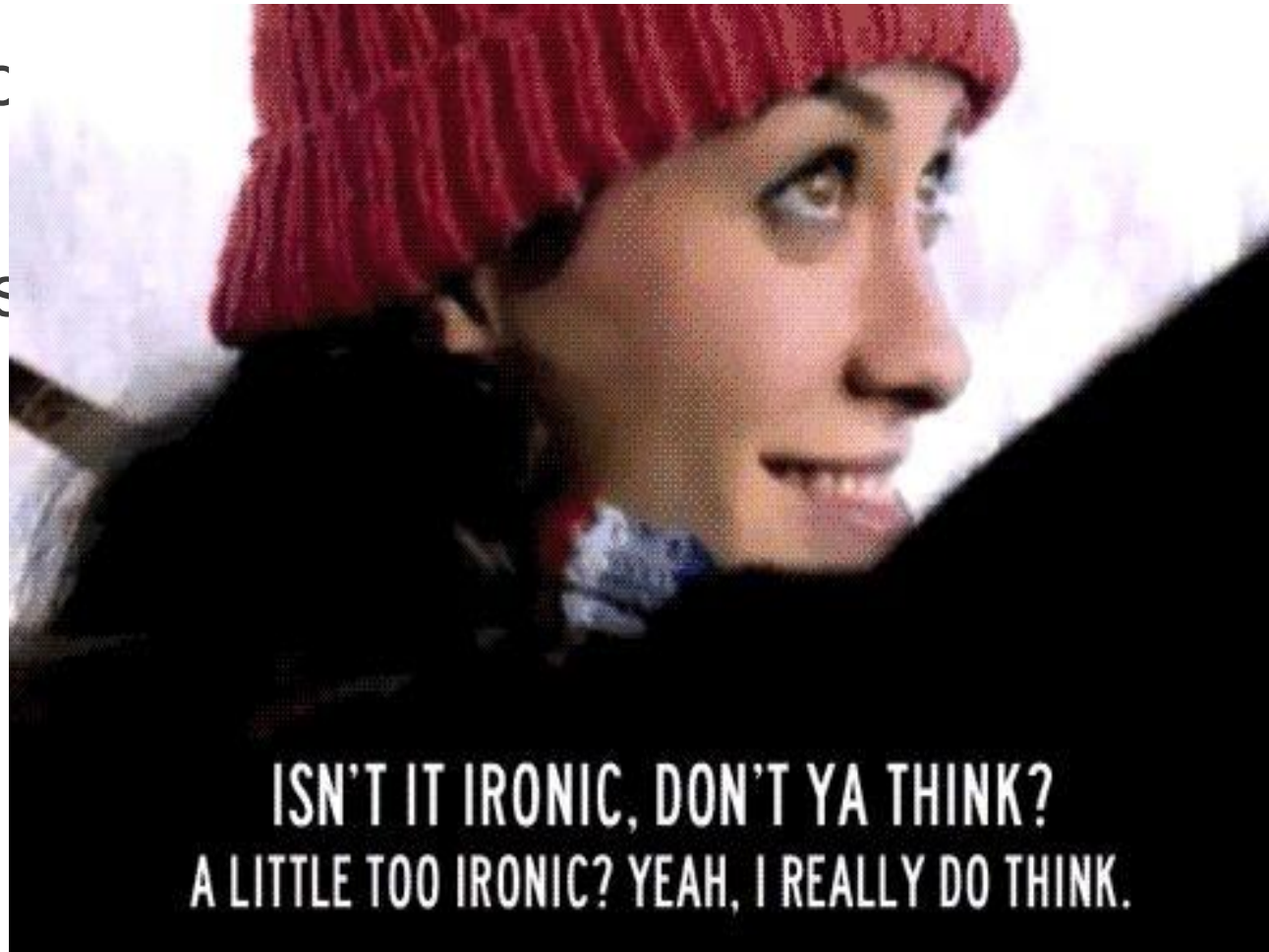
The Millennial Learner



The Millennial Learner

- Mc

- Dis



small group-oriented

Educational Methods of Intern School

- Flipped classroom
 - Content assimilation is done outside of classroom (in desired method of learner)
 - Homework (problem solving) done in the classroom
- This allows you to assess their understanding in the classroom and correct their deficits in real time

Educational Methods of Intern School

- Play to competitive nature
 - Simulation time (17% of the block)
 - Games (especially for more tedious but necessary items)
- Reinforcing of topics through multiple modalities

Assessing milestones in Intern School

Applying ACGME Milestones

- Faculty assigned milestone sub-competencies (6-10) to each activity they led
- Following the session this faculty member completed evaluation
- Evaluation form was as painless as possible

JNT CARMEL

comments

Communicating Progress/Deficits

- Formative real time feedback
 - Sim debriefing, case-based interactions (more towards simulated bedside teaching)
 - Reinforcing and corrective
- Feedback from the learners
- Summative end of block milestones evaluation
 - 477 data yes/no points on each intern as related to sub-competencies

Developing Individualized Learning Plan

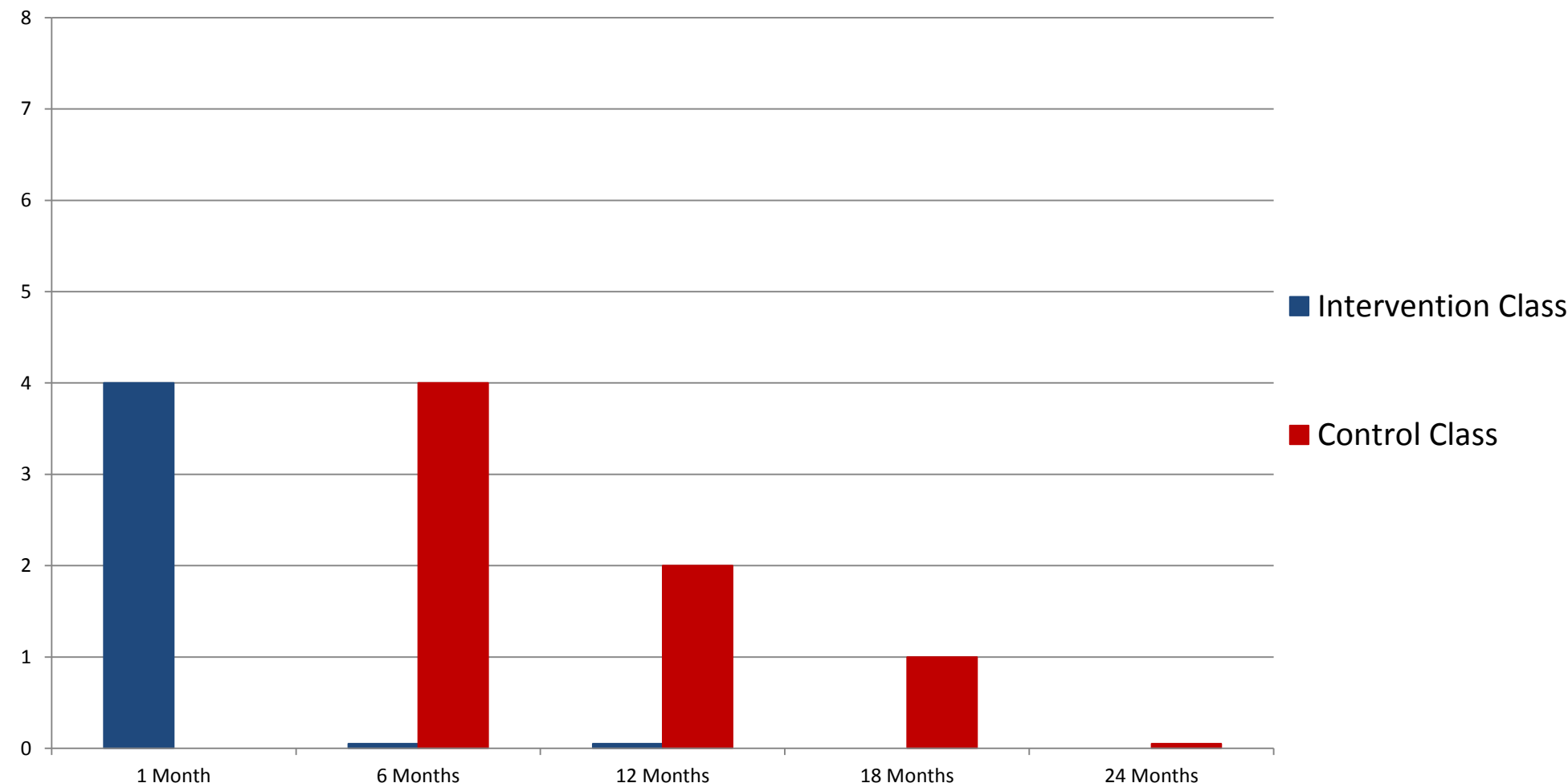
- Case example 1: Intern E struggled with EKG interpretation. This intern was asked how they would like to improve. They wished to read every EKG of every patient on service to their attending. The CCC communicated this to the attending. The intern was held to this and improved dramatically.

Developing Individualized Learning Plan

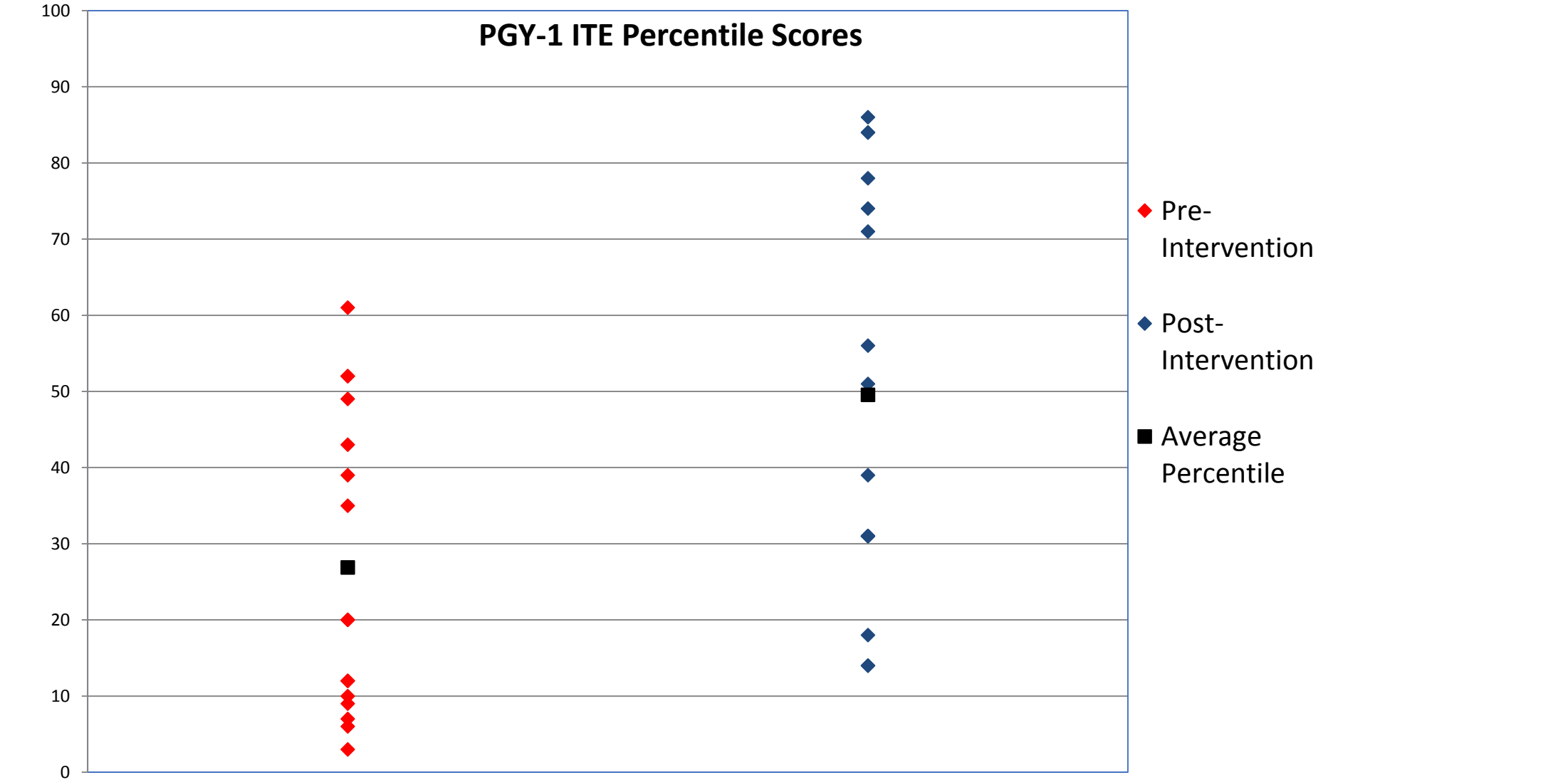
- Case example 2: Intern I had issues with respecting patient privacy. Once intern was informed of behavior and its consequences, this intern changed behavior.

Changing the Milestones Trajectory

Number of Residents With One or More Unsatisfactory Milestones Subcomptency Rating



Changing the ITE Trajectory



Small Groups:
Apply a milestones
subcompetency assessment
to your intern school

Implementation strategies and pitfalls

Convincing others of the value

- A tale of two Interns ... the real truth
 - Intern two underwent Intern School
- Milestones improvements
- ITE improvements
- Recruiting tool
- Premediation?

Changes are coming

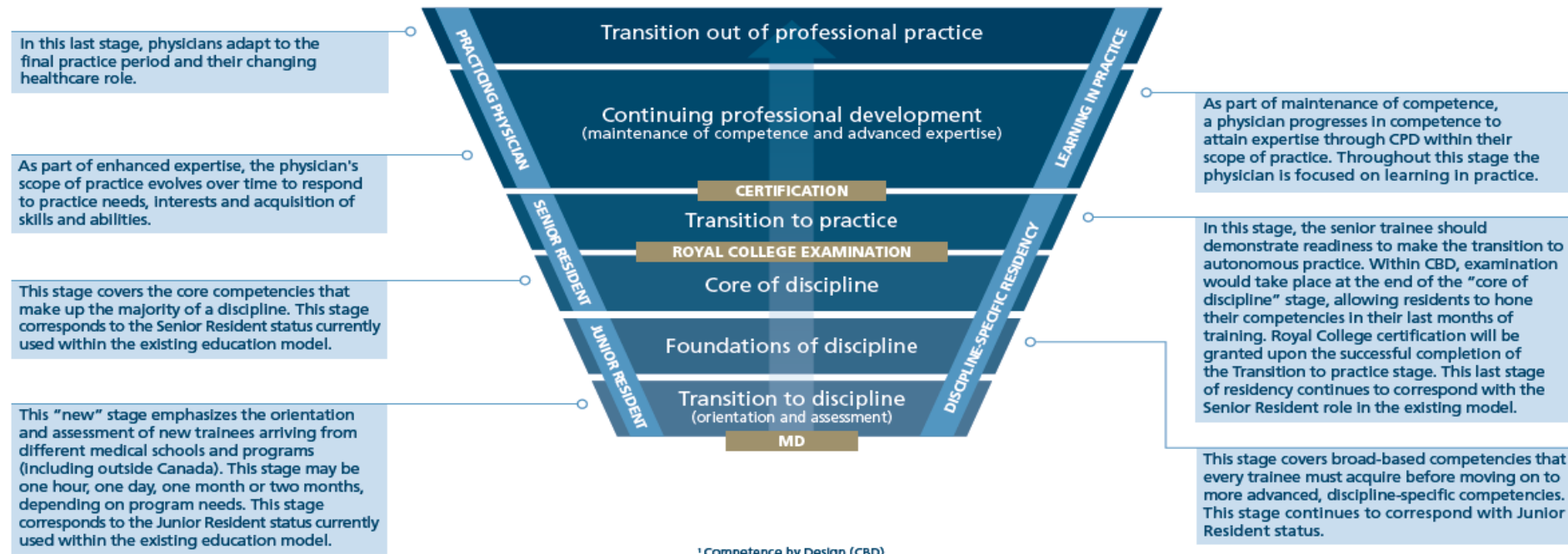


CanMEDS 2015

Competence
by Design

The CBD^{1,2} Competence Continuum

By introducing a competency-based medical education model to resident training and specialty practice, the CBD initiative will break down specialist education into a series of integrated stages — starting at transition to discipline and moving through practice. The CBD Competence Continuum provides a quick look at the new stages which begin upon entry into a discipline-specific residency following the attainment of the MD designation.



¹ Competence by Design (CBD)

² Milestones at each stage describe terminal competencies

June 2015

Developing a Curriculum

- You're already a content expert
- Bring together other interested faculty
 - Brainstorm and work to tailor activities to milestones
 - Use your resources

FAQs

- How are interns not on service?
 - Unique PGY-2 scheduling
 - Challenge for larger institutions
- How did you get so many data points?
 - Emphasis on PAINLESS evaluations
- How did you have enough faculty to lead these sessions?
 - We all pitched in, covered two teams, etc.
 - It is worth it for the months that follow!

Q&A

References

- 1. Correlations Between Ratings on the Resident Annual Evaluation Summary and the Internal Medicine Milestones and Association With ABIM Certification Examination Scores Among US Internal Medicine Residents, 2013-2014
 - Karen E. Hauer, Et al.
 - *JAMA*. 2016;316(21):2253-2262
- 2. Performance during Internal Medicine Residency Training and Subsequent Disciplinary Action by State Licensing Boards
 - Maxine A. Papadakis, Et al.
 - *Ann Intern Med*. 2008;148(11):869-876.
- 3. The Predictive Validity of the Internal Medicine In-Training Examination
 - Stewart F. Babbott, Et al.
 - The American Journal of Medicine, Vol 120, No 8, August 2007
- 4. A surgical residency preparatory course for senior medical students leads to earlier independence in ACGME Competencies.
 - Joshua Wunder, M.D. et al.
 - The American Journal of Surgery 215 (2018) 309-314