

Pediatric Milestones: Lessons Learned and What's Next

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Topics for Discussion

- Milestones Background – a recap
- How the Milestones Were Developed
- Data for Pediatrics
- Current and Prospective Research
- Milestones 2.0

Milestones Background – What?

- Description of the performance levels residents are expected to demonstrate for skills, knowledge, and behaviors in the six competency domains
- Framework of observable behaviors
- One indicator of a program's educational effectiveness

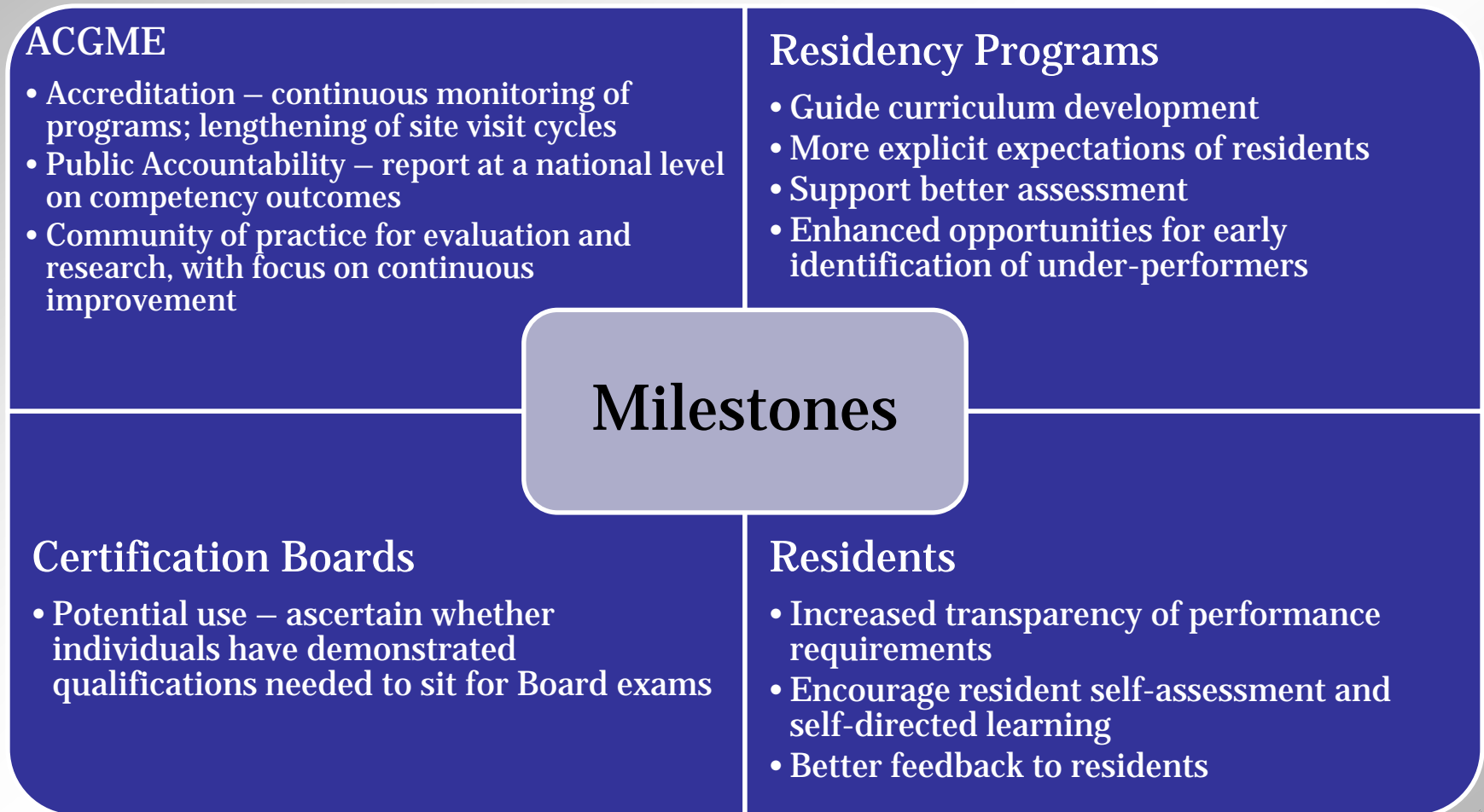
Milestones Background – What?

- What do they know? (Medical Knowledge)
- What can they do? (Patient Care)
- How do they conduct themselves?
(Interpersonal and Communication Skills,
Practice-based Learning and Improvement,
Professionalism, and Systems-based Practice)

Milestones Background – Why?

- Fulfill the promise of the Outcome Project
- Increased use of educational outcome data in accreditation
- ACGME accountability to public
- Support the educational process

Milestones Background – How are they used?



Milestone Development – Who?

Working Group

- Review Committee
- Certification Boards
- Program Directors
- Residents/ Fellows
- Specialty Societies

Advisory Group

- Leaders within the specialty community

Milestone Development – How?

Milestone Description: Template

Level 1	Level 2	Level 3	Level 4	Level 5
What are the expectations for a beginning resident?	What are the milestones for a resident who has advanced over entry, but is performing at a lower level than expected at mid-residency?	<p>What are the key developmental milestones mid-residency?</p> <p>What should they be able to do well in the realm of the specialty at this point?</p>	<p>What does a graduating resident look like?</p> <p>What additional knowledge, skills & attitudes have they obtained?</p> <p>Are they ready for certification?</p>	Stretch Goals – Exceeds expectations
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Comments:				

Milestone Development – How?

- Each specialty began the same way with a review of available documents:
 - Program Requirements
 - Certification Exam Outlines
 - Competency Statements created by specialty groups
 - National Curricula
 - Milestones created by other specialties

Milestone Development – How?

- Brainstorming of topics that were important to resident education
- Drafting, rejecting, redrafting, etc
- Development of what the Working Group believed was a near final product
- Review by the Advisory Group and Review Committee
- Survey of Program Directors
- Final edits and publication

FUN FACT – Number of Volunteers

There were **916** volunteers who created all the milestones!



That is **3** times as many current RRC members that are serving at the ACGME

FUN FACT – Number of Meetings

It took about **100** meetings to create the milestones!



Lightning strikes the earth approximately **100** times every second!

FUN FACT – Number of Institutions Represented

There were representatives from over **250** different institutions!

There are **250** toothpicks in a standard box



FUN FACT – Number of Volunteer Hours

It took over **1500** volunteer hours to create all the milestones!



It takes **1500** flight hours to become a certified pilot

FUN FACT – Number of Milestone Threads

There were **1916** milestone threads created!



There are over **1900** types of edible insects in the world

VALIDITY

Validity of Milestones Data

- Evidence of progression in NAS*
 - to support CBME
 - comprehensive approach to competencies
 - “entrustability”
 - how do we know this is working?
 - CQI approach
- Assessment validity framework
 - validity depends on research and CQI model

*Nasca *et al.* The Next GME Accreditation System: Rationale and Benefits. *N Engl J Med*, 366:1051-6;2012.

Milestone Database

- *Dec 2013 = 5 specialties*
- June 2014 = 8 specialties
- *Dec 2014 = 90 specialties*
- June 2015 = 96 specialties
- *Dec 2015 = 140 specialties*
- June 2016 = all specialties reporting Academic Year-End

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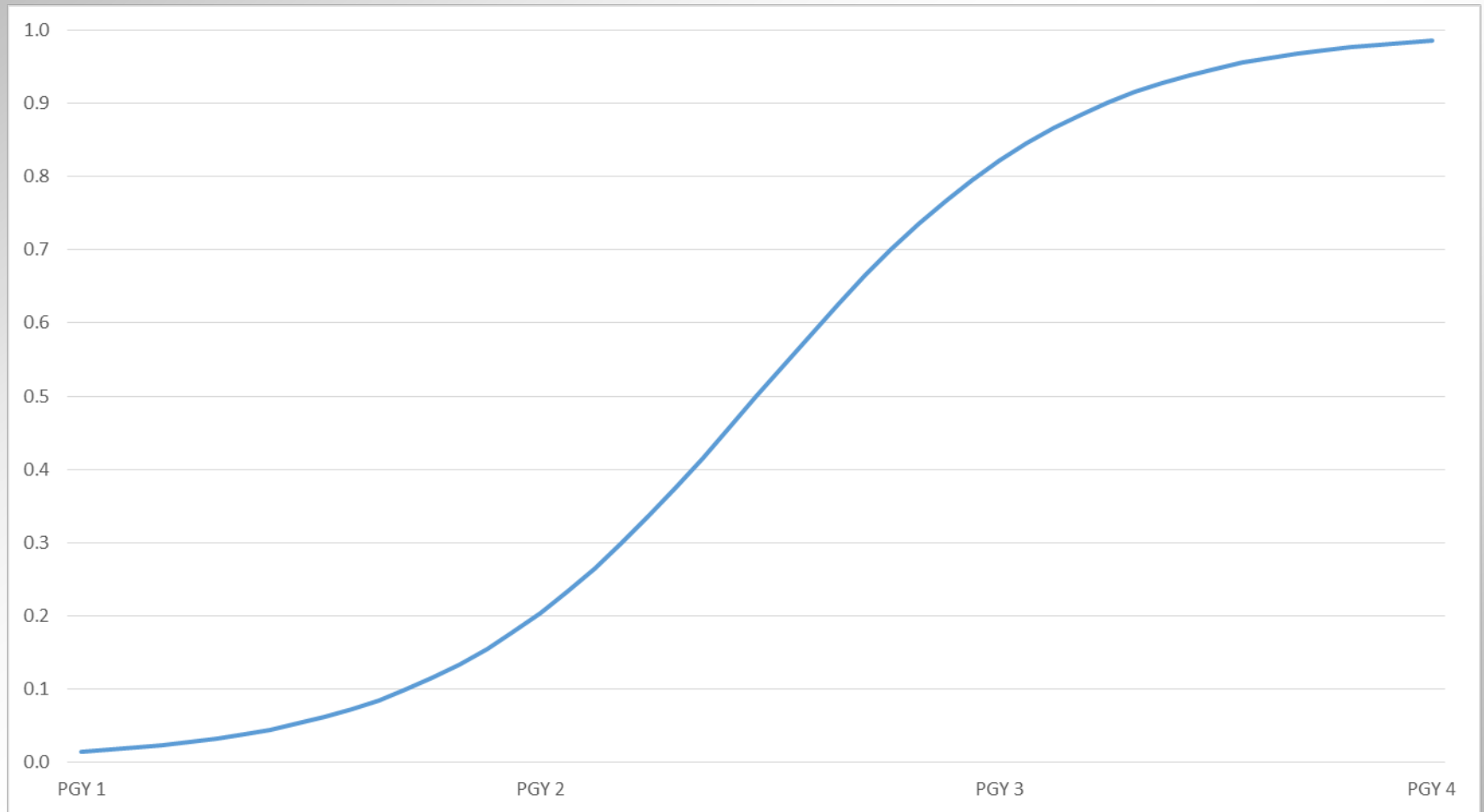
Milestones

- How do we know we're improving?

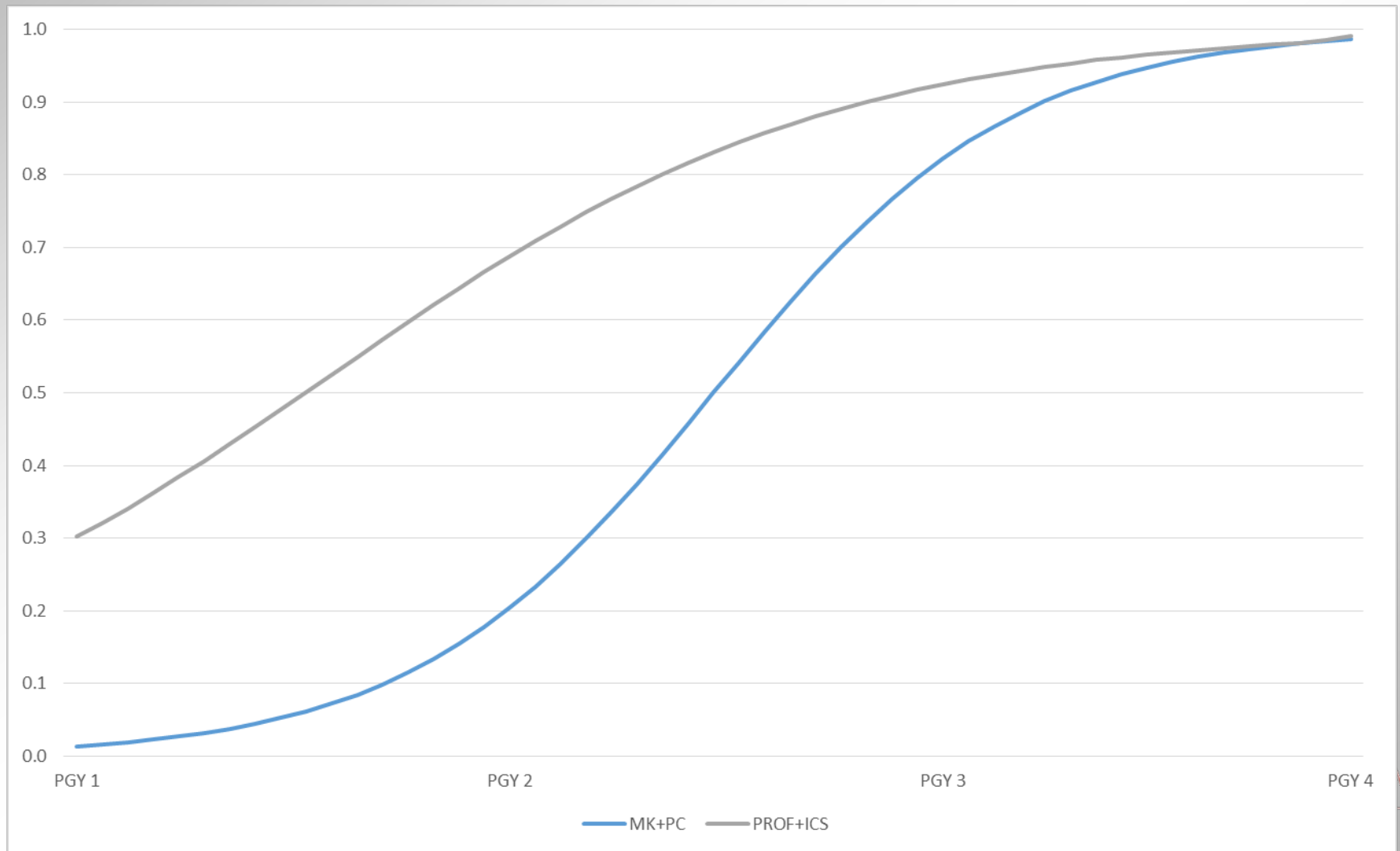
Data Extraction and Analysis

- For each resident (across all PGY-levels), we determined whether they had attained the recommended Level 4 (or higher) for all sub-competencies within a core competency.
- Then we determined the percentage of residents within a specialty who attained Level 4 across all programs.
- For Pediatrics, we looked at Level 3 and Level 4

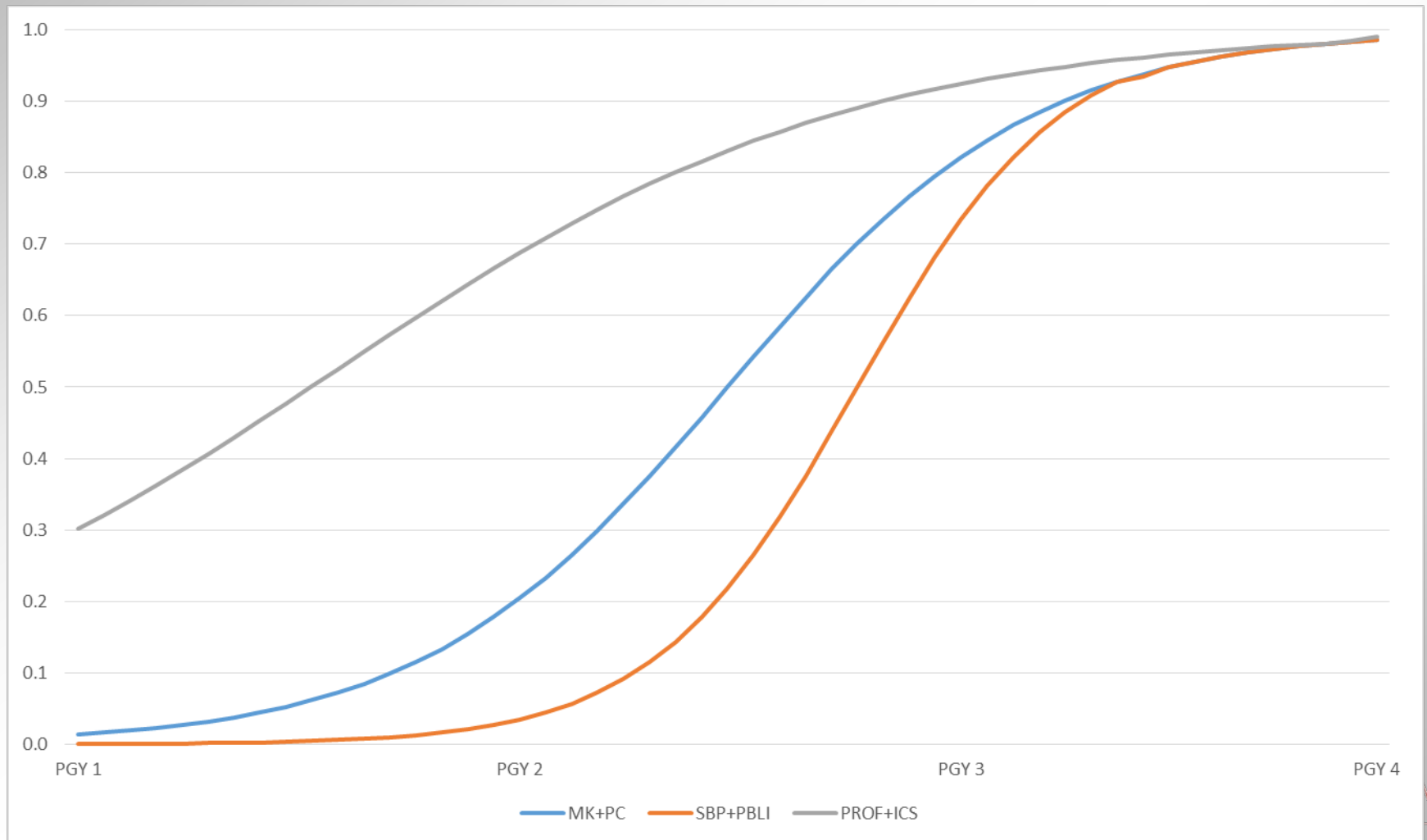
Learning Curves (theoretical)



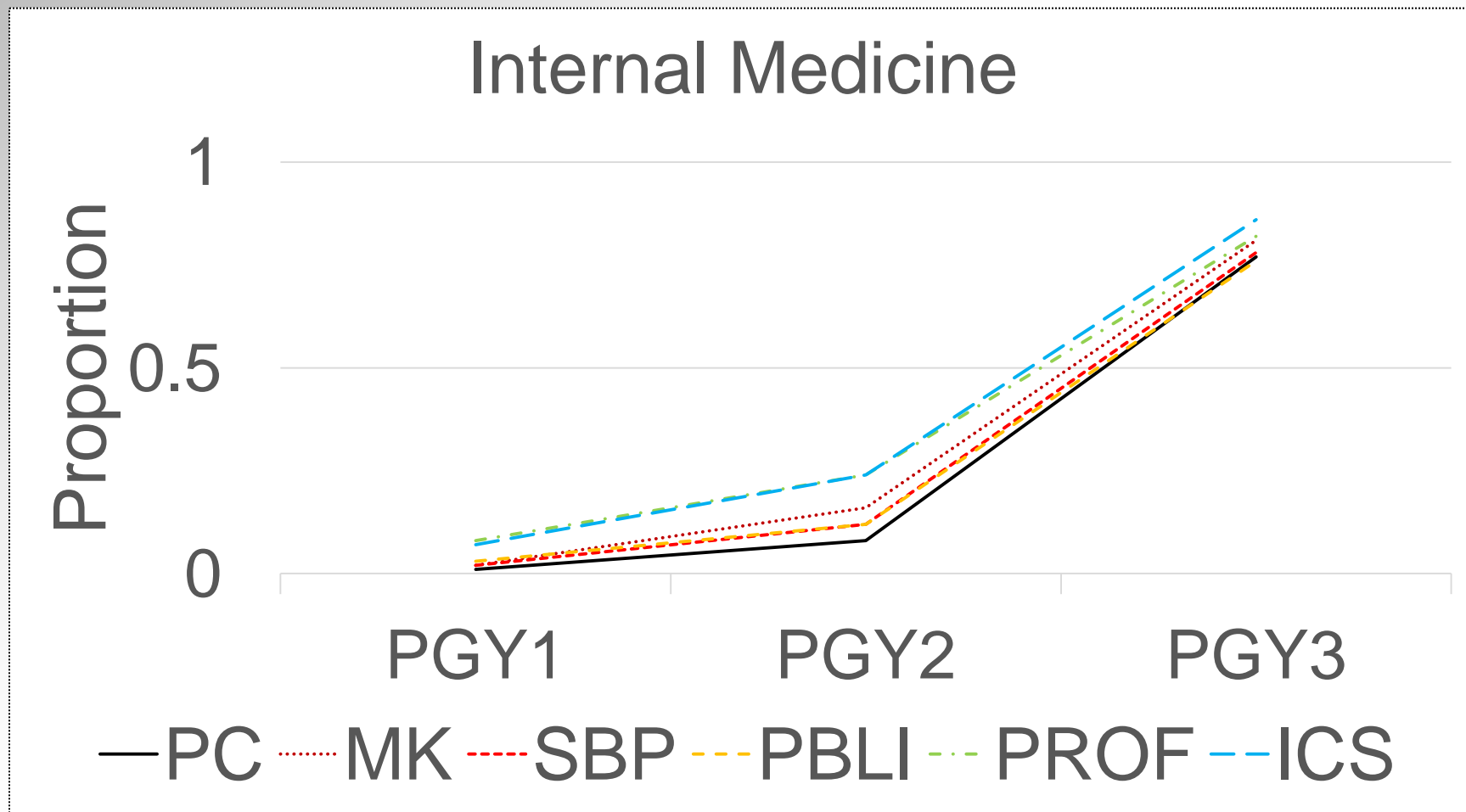
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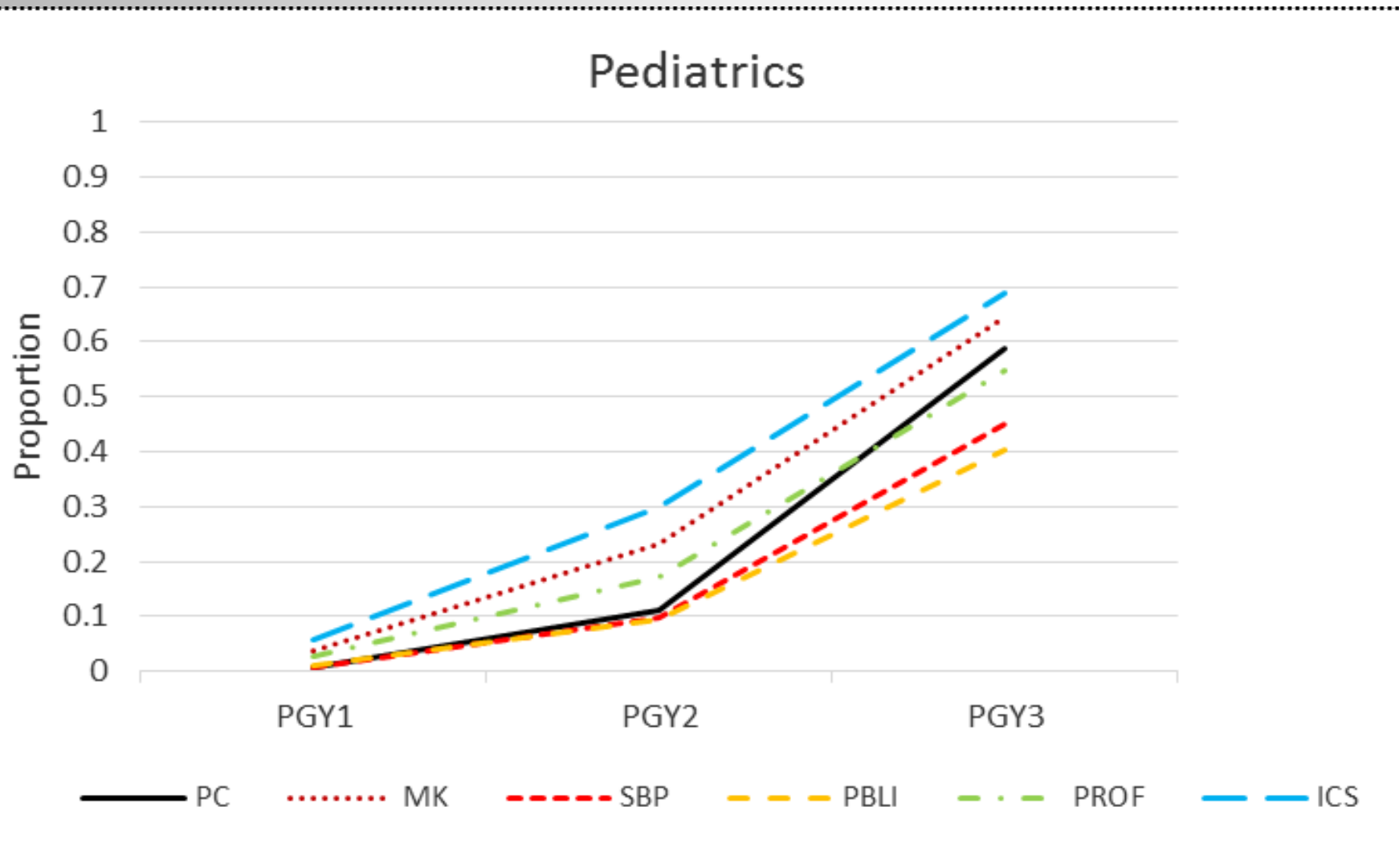
Learning Curves (theoretical)



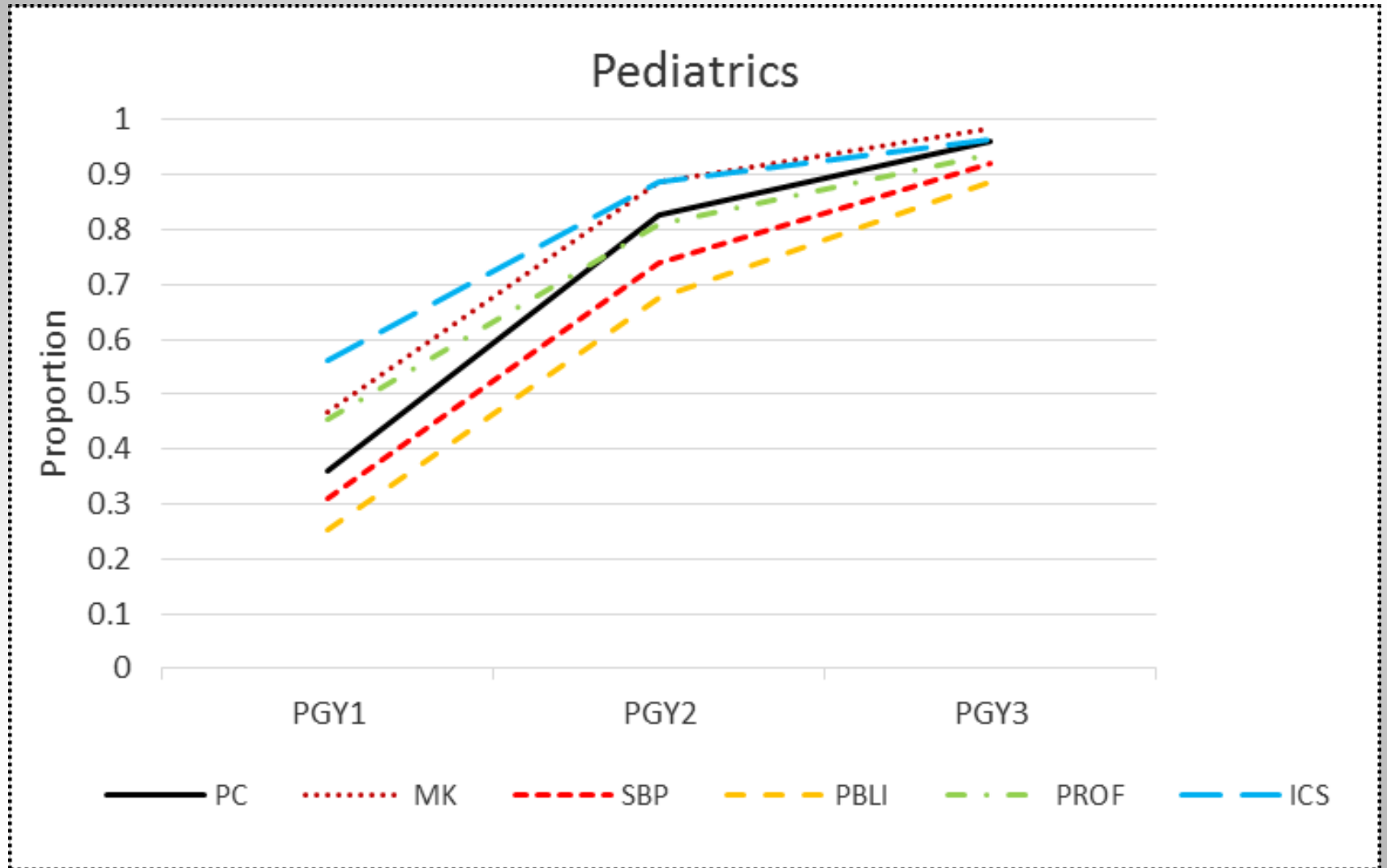
Residents Attaining Level 4 or Higher



Residents Attaining Level 4 or Higher



Residents Attaining Level 3 or Higher



RESEARCH

Advisory Groups:

- Analytic

- John Norcini (FAIMER)
- Reed Williams (SIU/IU)
- Rachel Yudkowski (UIC)
- Ara Tekian (UIC)

- CCC

- Karen Hauer (UCSF)
- Kathy Andolsek (Duke)
- Jamie Padmore (Medstar Washington)
- David Berg (Yale)

Selected Research Projects in Progress

- Emergency Medicine initial validity study
 - Factor structure supported three factor design of EM certification (in press)¹
 - Expected correlation between ITE and MK milestones
- Exploring ITE and milestones associative studies with ABFM and ABPeds
- Neurosurgery PD and resident survey of first year experience
- Hauer - IM CCC experience studies

¹Beeson MS, Holmboe ES, Korte RC, Nasca TJ, Brigham T, Russ CM, Whitley CT, Reisdorff EJ. Initial Validity Analysis of the Emergency Medicine Milestones. *Acad Emerg Med*. 2015; in press.

Osteopathic-based Programs

- Milestone Reporting
- Osteopathic Recognition

What's Next? Milestones 2.0

- Data, comments and suggestions are continually being monitored
- Competency Crosswalk for Interpersonal and Communication Skills, Practice-based Learning and Improvement, Professionalism, and Systems-based Practice

What's Next? Milestones 2.0

- Milestones Summit with representatives from the ABMS Member Boards, AOA Certifying Boards and ACGME Review Committees
- Development will begin late 2016

Where do I find...?



Milestone Resources

Milestone Webpage:

<http://www.acgme.org/acgmeweb/tabid/430/ProgramandInstitutionalAccreditation/NextAccreditationSystem/Milestones.aspx>

Milestone FAQs:

<http://www.acgme.org/acgmeweb/Portals/0/MilestonesFAQ.pdf>

Clinical Competency Committee Guidebook:

<http://www.acgme.org/acgmeweb/Portals/0/ACGMEClinicalCompetencyCommitteeGuidebook.pdf>

We are here to help

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