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BACKGROUND

The current shortage of healthcare workers (HCW) across the country has been exacerbated by the COVID-19 pandemic. This study sought to compare competency expectations between medical technologists (MT) and infection preventionists (IP) to better understand the bridge between the two professions, with the intent of highlighting MTs as qualified candidates for novice IP positions.

OBJECTIVES

- 1) Describe the qualifications of experienced medical technologists based upon available proficiency guidelines as it relates to the 2019 APIC competency model.
- 2) Address the current and future employment needs in the field of infection prevention by bolstering the candidate pool.
- 3) Optimize future infection prevention program models to advance pathways for the recruitment of medical technologists.

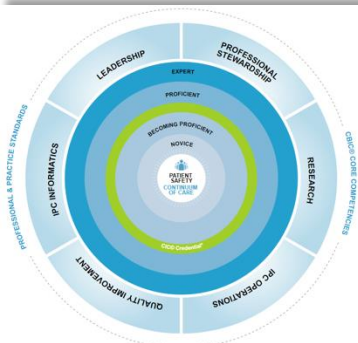


Figure 1: Infection Prevention Competency Model, Association for Professionals in Infection Control and Epidemiology, 2019

METHODS

This study evaluated available competency guidelines for MTs and compared them to the 2019 Association for Professionals in Infection Control and Epidemiology (APIC) competency model for the IP (Figure 1). The primary source used for this study was the Competency Guidelines for Laboratory Professionals resource made available through the Centers for Disease Control and Prevention (CDC).

RESULTS

Results (Table 1) showed a 74% complete and partial match between the APIC 2019 competency model and domains within the CDC MT competency model, or 29 of 39 domains. With supplemental competency data, there was an 82% complete and partial match between sources, or 32 of 39 domains.

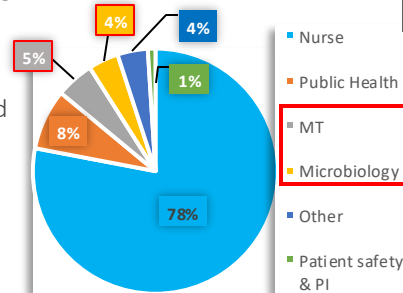


Figure 2: MegaSurvey results, 2020; PI, Performance Improvement

Table 1

APIC future-oriented competency model (2019) primary domains	APIC competency model (2019) secondary domains	Addressed by CDC competency model?			CDC Clinical Laboratory Competency Guideline (2015)	Beck and Doig Competency Research (2002)		
		Yes	Partial	No		Without education		
						With education		
1. Leadership	1. Communication	x			Primary Domain			
	2. Critical Thinking	x						
	3. Collaboration	x						
	4. Behavioral Science	x						
	5. Program Management	x						
	6. Mentorship			x		Not Addressed		x
2. Professional Stewardship	7. Accountability	x			Primary Domain			
	8. Ethics	x						
	9. Financial acumen	x						
	10. Population health			x		Not Addressed		
	11. Continuum of care			x		Not Addressed		
3. Quality Improvement	12. Advocacy			x	Not Addressed			
	13. IP as subject matter expert (SME)			x	Concept discussed			
	14. Performance improvement	x						
	15. Patient safety			x	Concept discussed			
	16. Data utilization	x						
	17. Risk assessment and risk reduction	x						
4. IPC Operations	18. Epidemiology and surveillance	x			Not Addressed			
	19. Education	x						
	20. IPC Rounding			x		Not Addressed		
	21. Cleaning, Disinfection, Sterilization			x		Concept discussed		
	22. Outbreak detection and management			x		Concept discussed		
	23. Emerging technologies			x		Concept discussed		
	24. Antimicrobial stewardship			x		Not Addressed		
	25. Diagnostic stewardship			x		Not Addressed		x
	5. IPC Informatics			x		Primary Domain		

APIC, Association for Professionals in Infection Control and Epidemiology; CDC, Centers for Disease Control and Prevention; MT, Medical Technologist; IP, Infection Prevention; IPC, Infection Prevention and Control

Table 1 (Continued)

APIC future-oriented competency model (2019) primary domains	APIC competency model (2019) secondary domains	Addressed by CDC competency model?			CDC Clinical Laboratory Competency Guideline (2015)	Beck and Doig Competency Research (2002)		
		Yes	Partial	No		Without education		
						With education		
6. Research	26. Surveillance technology	x			Primary Domain			
	27. Electronic medical records (EMR) an electronic data warehouse (EDW)	x						
	28. Data management, analysis, and visualization	x						
	29. Application of diagnostic testing data and techniques			x		Not Addressed		x
	30. Evaluation of research			x		Concept discussed		x
6. Research	31. Comparative effectiveness research			x	Not Addressed			
	32. Implementation and dissemination science	x						
	33. Conduct or participate in research or evidence-based practice	x						

APIC, Association for Professionals in Infection Control and Epidemiology; CDC, Centers for Disease Control and Prevention; MT, Medical Technologist; IP, Infection Prevention; IPC, Infection Prevention and Control

LIMITATIONS AND FUTURE DIRECTIONS

This study was limited by the available MT competency guidelines, which are directed primarily toward public health laboratorians. Though CDC indicates applicability to any MT professional, it would be more beneficial to develop competencies for MTs with a program that encompasses all clinical facets of the profession. While the APIC 2020 MegaSurvey showed a reduction in lab/microbiology background for IP responders from the previous survey (Figure 2), results are showing an increase in other backgrounds joining the field. APIC has begun addressing academic pathways to IP that will ideally address staffing shortages and improve the transition of professionals into the field.

CONCLUSION

This study demonstrates that MTs possess a strong foundational knowledge set and are qualified candidates for novice IP positions.



As a station for Professionals in Infection Control and Epidemiology (2019), Infection Prevention and Control (IP) competency model. An association for Professionals in Infection Control and Epidemiology. <http://apic.org/practicing/infection-prevention-ipc-competency-model/>
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