RESEARCH LETTER

Timing of Certification Stage Completion Associated with Subsequent Certification Exam Outcomes Among Board-Certified Family Physicians

Mingliang Dai, PhD and Andrew W. Bazemore, MD MPH

Objective: **To assess the relationship between the timing of certification stage completion and subsequent certification examination outcomes among board-certified family physicians (FPs)**

Methods: **We analyzed administrative data from the American Board of Family Medicine to determine whether timely completion of certification stage, that is, completing all stage requirements before the deadline, was associated with FPs' passing their subsequent examination to continue their certification and their examination score.**

Results: **Among 22,122 FPs, 79.7% completed their stage timely while 20.3% did so past the deadline. After adjusting for potential confounders, FPs with timely stage completion were twice more likely to pass the examination (O.R. =2.03, $P < .01$) and scored 24 points higher ($P < .01$) compared with their counterparts with late completion.**

Conclusion: **While the difference in examination score was trivial, late compared with timely completion of certification stage was associated with doubled risks of FPs failing the examination. This study offered an invaluable insight for improving the certification process and ensuring the competence of FPs. (J Am Board Fam Med 2024;37:1130–1132.)**

Keywords: **Certification, Family Medicine, Family Physicians, Specialty Boards**

Until recently, board-certified family physicians (FPs) had to complete all requirements of ongoing 3-year stages that are built on professionalism and licensure, self-assessment and lifelong learning, and performance improvement, and then pass the cognitive examination every 10 years to maintain their certification.[1,2] While the continuous certification program is generally well received by FPs,[3–5] the relationship between the timing of stage completion and cognitive examination outcomes is unclear. The goal of this study was to investigate whether the timing of stage completion was associated with subsequent examination outcomes.

This article was externally peer reviewed.
Submitted 17 October 2023; revised 28 May 2024; accepted 3 June 2024.
From the American Board of Family Medicine (MD); Center for Professionalism and Value in Health Care (AB).
Funding: None.
Conflict of interest: Authors are employees of the American Board of Family Medicine.
Corresponding author: Mingliang Dai, 1648 McGrathiana Parkway, Suite 550, Lexington, KY 40511 (E-mail: mdai@theabfm.org).

Methods

We used administrative data from the American Board of Family Medicine to obtain examination performance data for FPs whose 3-year stage leading to the certification examination ended in 2016, 2017, and 2018 and who took the examination in 2017, 2018 and 2019 respectively to maintain their certification. We used the date of stage completion to determine whether the stage completion was timely (ie, before the deadline) or late (ie, past the deadline). FPs who never completed their stage were excluded. In the unadjusted analysis, we calculated the percentage of FPs passing the examination (ie, examination passing rate) and their average examination score by the timing of stage completion. In the adjusted analysis, we controlled for FP's gender, race (eg, White, Black, Asian, and other), international medical graduate (IMG) status, and number of years in practice to account for potential differences in examination performance. In addition, we included an indicator of prior examination type to account for the potential confounding of individual history of maintaining the certification.

Table 1. Timing of Stage Completion and Subsequent Certification Exam Outcomes among Board-Certified Family Physicians

Sample (N)= 21,222	% Sample	% Passing Exam	Mean Exam Score (s.d.)	Odds of Passing Exam	Difference in Exam Score
Stage completion					
Timely	79.7%	97.2%	554 (104)	2.03*	24*
Late	20.3%	94.3%	512 (102)	–	–
Gender					
Female	43.9%	96.6%	537 (103)	0.95	−1
Male	56.1%	96.6%	538 (106)	–	–
Race					
White	75.2%	97.5%	550 (104)	–	–
Black	4.3%	88.7%	460 (90)	0.22*	−71*
Asian	14.1%	95.5%	507 (97)	0.81	−22*
Other	6.4%	95.4%	504 (100)	0.57*	−31*
IMG	17.8%	92.1%	487 (99)	0.25*	−42*
Non-IMG	82.2%	97.7%	549 (103)		
Years in practice					
<10 years.	10.1%	97.7%	550 (100)	2.92*	−21*
10 to 20 years.	45.2%	97.2%	534 (102)	2.33*	3
>20 years.	44.7%	95.7%	538 (108)	–	–
Prior exam type					
Initial certification	29.5%	96.8%	532 (102)	–	–
Re-certification	70.5%	96.5%	540 (106)	0.94	−0.8

Abbreviation: IMG = international medical graduate.
*$P < .01$.

We modeled the odds of passing the examination using logistic regression and the difference in examination score using linear regression.

Results

Among 22,122 FPs, 79.7% completed their stage timely while 20.3% did so past the deadline (see Table 1). On their subsequent certification examination, both the examination passing rate and the examination score were higher among FPs with timely stage completion than FPs with late completion (97.2% vs 94.3% for passing rate, 554 vs 512 for examination score). Both examination outcomes (unadjusted) were comparable by gender, years in practice, and prior examination type, but varied by race and IMG status. After adjusting for all the potential confounders, FPs with timely stage completion were twice more likely to pass the examination (O.R. = 2.03, $P < .01$) and scored 24 points higher ($P < .01$) compared with their counterparts with late completion.

Discussion

This study is the first to investigate the relationship between the timing of certification stage completion and subsequent examination outcomes among board-certified FPs. This analysis revealed that approximately 20% board-certified FPs were late in completing stage requirements leading to their certification examination, suggesting that some physicians struggled to complete their requirements within the allotted 3-year window. Future study is needed to identify underlying causes for physicians to miss the deadlines. While the difference in examination score was trivial, late compared with timely completion of certification stage was associated with doubled risks of FPs failing the examination, which could in turn jeopardize their board certification. Although adequate medical knowledge is key to passing the examination, additional board assistance that facilitates timely completion of stage requirements may help FPs mitigate adverse outcomes on the subsequent examination. Among study limitations, we did not explore the reasons behind late stage completion, nor could we assess the timing of stage completion for FPs participated in the Family Medicine Certification Longitudinal Assessment (FMCLA) program.

In conclusion, the timing of stage completion was significantly associated with subsequent

certification examination outcomes, offering an invaluable insight for improving the certification process and ensuring the competence of board-certified FPs.

To see this article online, please go to: http://jabfm.org/content/37/6/1130.full.

References

1. Newton WP, Baxley E, O'Neill T, Rode K, Fain R, Stelter K. Family medicine certification longitudinal assessment becomes permanent. J Am Board Fam Med 2021;34:879–81.
2. The American Board of Family Medicine. Continue certification. American Board of Family Medicine. Accessed May 28, 2024. Available at: https://www.theabfm.org/continue-certification/.
3. Peabody MR, O'Neill TR, Puffer JC. Performance on the Maintenance of Certification for Family Physicians (MC-FP) examination: comparison of initial certfiers with experienced physicians. J Am Board Fam Med 2015;28:294–5.
4. Puffer JC, Bazemore AW, Newton WP, Makaroff L, Xierali IM, Green LA. Engagement of family physicians seven years into maintenance of certification. J Am Board Fam Med 2011;24:483–4.
5. Fisher DM, Brenner CJ, Cheren M, Stange KC. Engagement of groups in family medicine board maintenance of certification. J Am Board Fam Med 2013;26:149–58.