



CONNECTING  
**PHYSICIAN-SCIENTISTS**  
IN TRAINING

American Physician Scientists Association  
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July 11, 2017

National Board of Medical Examiners  
3750 Market Street  
Philadelphia, PA 19104-3102

Dear National Board of Medical Examiners,

We write to seek support from the National Board of Medical Examiners (NBME) in establishing a nation-wide policy of a 10-year minimum time limit for completing the USMLE Step 1 to 3 examinations for MD/PhD students. We write on behalf of the American Physician Scientists Association (APSA), an organization representing MD and DO students in dual-degree programs and those with an interest in careers combining medicine and science. APSA would like the NBME to ask the Federation of State Medical Boards (FSMB) to adopt this 10-year minimum time limit as a nation-wide policy, and to encourage each state to do the same. With the support of APSA and the NBME, we believe the FSMB will readily encourage each state to adopt the 10-year minimum time limit. Additionally, we are seeking support from the American Medical Association and Association of American Medical Colleges, through collaborations with their respective student liaisons, to further advance this platform.

Currently, twenty-nine states have already set their state policy time limit for MD/PhD students to at least 10 years (figures 1, 2).<sup>1</sup> For comparison, thirty-seven states allow at least 10 years for DO/PhD students to complete the COMLEX exams (a comparable exam sequence – figure 1).<sup>1</sup> Unfortunately, the lack of a nation-wide policy leads to situations where students with identical training timelines have substantially different outcomes, simply depending on the state's policy where they receive training. Without the 10-year nation-wide policy, the careers of many physician scientist trainees would suffer, especially those in diverse research fields such as the Social Sciences and Humanities (SSH). A recent study by Holmes et al. (2017) measures the average time to complete SSH MD/PhDs to be 9 years.<sup>2</sup> The 10-year nation-wide policy would give MD/PhD students the time they need to adequately train for their research careers, especially SSH MD/PhD students, as they are disproportionately affected due to the number of years their programs require.

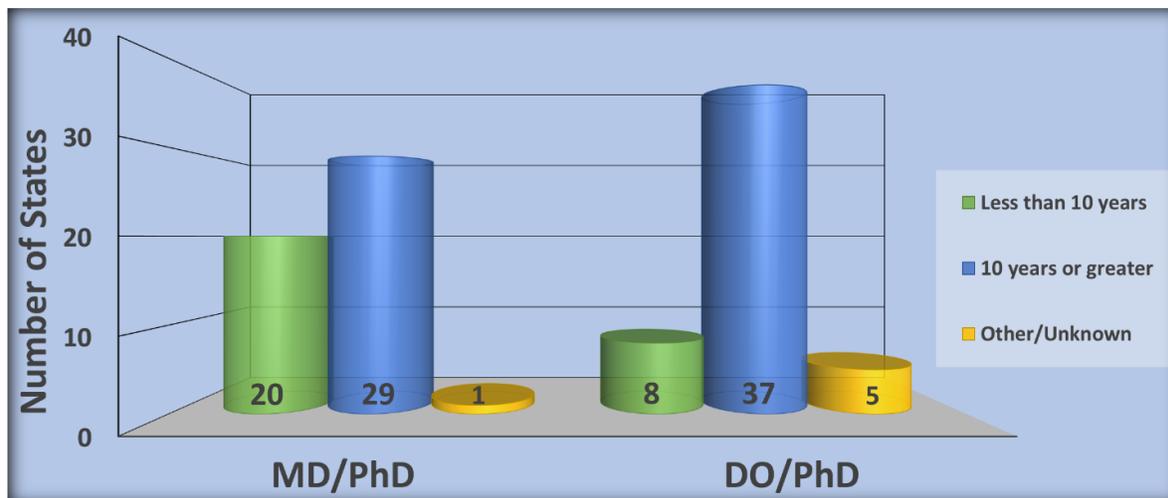


Figure 1. Maximum limit for the number of years' states allow to complete USMLE and COMLEX exam sequence.<sup>1</sup>

The rationale for implementing a 7-year time limit to complete all USMLE Steps stems from the belief that an extended period between basic science training and clinical practice leads to a greater loss of knowledge and poorer clinical performance.<sup>3</sup> The study by Dyrbye et al. (2007) links delays of 3 years or greater between the second and third years of medical school to lower outcomes on clinical knowledge tests.<sup>3</sup> Other studies (Tambly et al. 1998, Norcini et al. 2014) demonstrate that higher licensing examination scores relate to higher quality of care in certain contexts.<sup>4,5</sup> However, there are several factors about these studies which leads APSA to believe that their results do not apply to current MD/PhD students. In the studies by Tambly and Norcini, the target cohorts were international medical school graduates or those in foreign healthcare systems, respectively – not physician-scientist trainees.<sup>4,5</sup> The study by Dyrbye uses clerkship, NBME subject examination, and USMLE Step 2 scores as proxies for clinical performance, while disregarding the notion that the bulk of specialty competency stems from post-graduate residency.<sup>3</sup> Even though these studies imply that an extended period between the basic science training and clinical practice leads to poorer clinical performance, the target cohorts are not physician-scientist trainees and they disregard the importance of post-residency training.

Furthermore, Dyrbye's study mentions both an alternative pathway for MD/PhD students, and a means to remedy their lower scores without a 7-year time limit. Dyrbye writes "MD/PhD graduates ... typically pursue fellowships and/or post-doctoral research training and have successful, productive Research Careers."<sup>3,6</sup> For those MD/PhD graduates who do go into clinical medicine, the study suggests, "the students may benefit from a '[re-entry]' curriculum to brush up on clinical knowledge"<sup>3</sup>. A medical school can establish a re-entry curriculum within its MD/PhD program, giving students the opportunity to "brush up on clinical knowledge" without the need of a state policy dictating a 7-year time limit.<sup>3</sup> APSA believes these pathways, in conjunction with the nation-wide 10-year minimum time limit, are more appropriate for MD/PhD trainees.

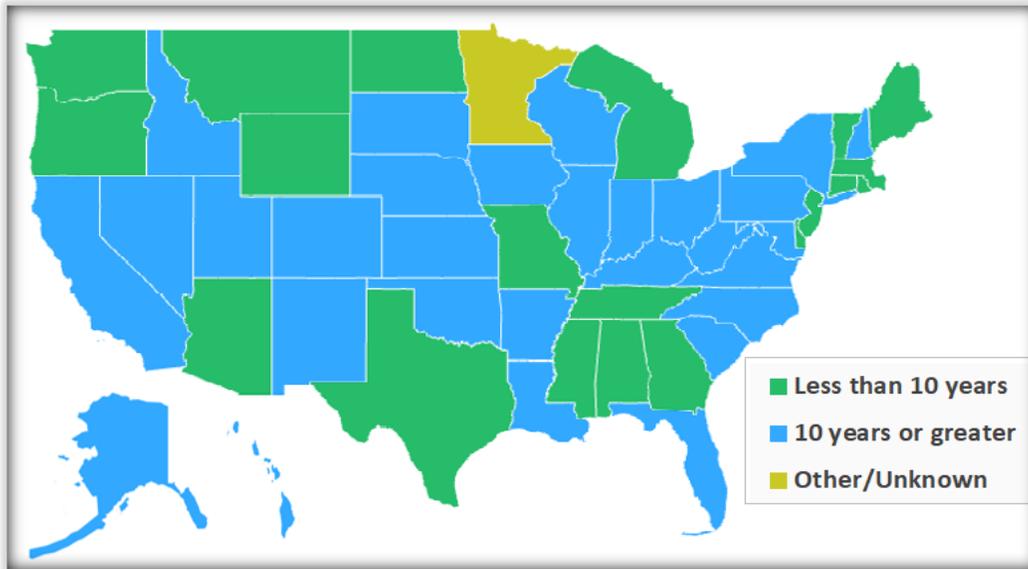


Figure 2. United States map displaying the maximum number of years each state allows MD/PhD students to complete the USMLE Step exams.<sup>1</sup>

We understand in recent years, score inflation in the USMLE Step 1 and Step 2 CK exams may disadvantage dual-degree trainees when comparing Step 1 scores to peers at the time of residency application (figure 3).<sup>7,8</sup> We are aware of this issue and are currently collecting data on match outcomes.

As the national organization dictating the guidelines regarding subject competency, the NBME’s recommendations are considered by state licensing bodies, including the FSMB, to determine policies appropriate for sound medical practices. Those who set the state policies regarding the 7-year time limit for completing all USMLE Step exams may be swayed by the support of an influential organization such as yours. We believe this issue extends beyond the physician-scientist population, as more medical students are pursuing additional research experiences and other advanced degrees, such as the MPH, MBA, MSc, JD as well as global or additional service experiences.

We look forward to working with you to garner support for the national 10-year minimum time limit to complete the USMLE Step exams, including discussions and/or recommendations to the FSMB. We also wish to thank the current student representatives to the NBME for their input, including Andy Zureick (AMA-MSS), Sarah A. Williams (AAMC-OSR), and Courtney M. Johnson (SNMA) and Brandon Tabman (AMA-MSS). Please let us know how we can be of assistance in the process.

Sincerely,

Jillian Liu, APSA President  
 Cindy Chou, APSA Policy Chair  
 Thomas McIntyre, APSA Policy Vice-Chair

## REFERENCES

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