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## Medical School Transition to Residency (TTR) Courses: Recent Trends and Current Status

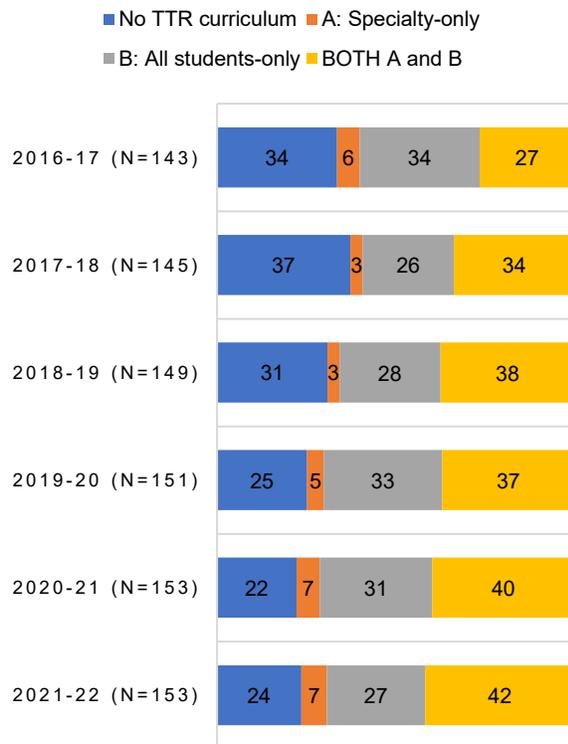
The goals of this Data Snapshot are threefold: (1) to examine trends among U.S. MD-granting schools in transition to residency (TTR) course requirements between academic years 2016-17 and 2021-22, (2) to examine trends in topics covered in required TTR courses over this timeframe, and (3) to provide a summary of the extent of TTR courses (both required and elective) in the 2021-22 academic year.

### Recent Trends Among MD-Granting Schools in TTR Course Requirements

This study examines (a) data collected in the academic years 2016-17 through 2021-22 in the Liaison Committee for Medical Education (LCME) Annual Medical School Questionnaire Part II survey and (b) operational data collected by the AAMC. Across the six surveys, medical school officials were asked to “indicate where in the curriculum the following topics to specifically prepare students for entry to residency training are covered,” and were asked to select all the responses that applied. The survey question included nine topics that were consistent across all six years of the survey. The survey respondent could indicate if a topic was covered in a required fourth-year TTR course that was a specialty-specific course, in a required fourth-year TTR course for all students, or in both types of courses. Aligned with AAMC Curriculum Reports regarding how a medical school was categorized as having a required specialty-specific TTR course or a required TTR course for all students,<sup>1</sup> a medical school was categorized for the purposes of this Data Snapshot as having a TTR course if the medical school reported a required fourth-year TTR course that included at least one of the listed topic areas.

As shown in Figure 1, we examined TTR course trends over a six-year period. We created a four-category variable for required TTR courses (“No TTR course,” “Specialty-specific TTR course only,” “TTR course for all students only,” and “both Specialty-specific TTR and All-students’ TTR courses”) to describe the extent of required TTR courses among responding medical schools in each of the six years. Over the six-year period, the total number of medical schools increased from 143 to 153. To assess change over time, we tested for a correlation ( $r$ ) between year and proportion of medical schools in each of these four categories.

**Figure 1.** Required TTR curricula at U.S. MD-granting schools, academic years 2016-17 through 2021-22.



**Key takeaway:** Data showed a decreasing trend in the percentage of “no TTR curriculum” medical schools between 2016-17 and 2021-22 ( $r=-0.892$ ;  $p=0.017$ ) – a decrease from 34% (48/143) to 24% (36/153).

The percentage of medical schools indicating topics were covered **both** within a required specialty-specific fourth-year TTR course and a required fourth-year TTR course for all students (“Both A and B”) increased over time ( $r=0.925$ ;  $p=0.008$ ) from 27% (N=38/143) to 42% (N=64/153), an annual percentage growth rate of 10%.

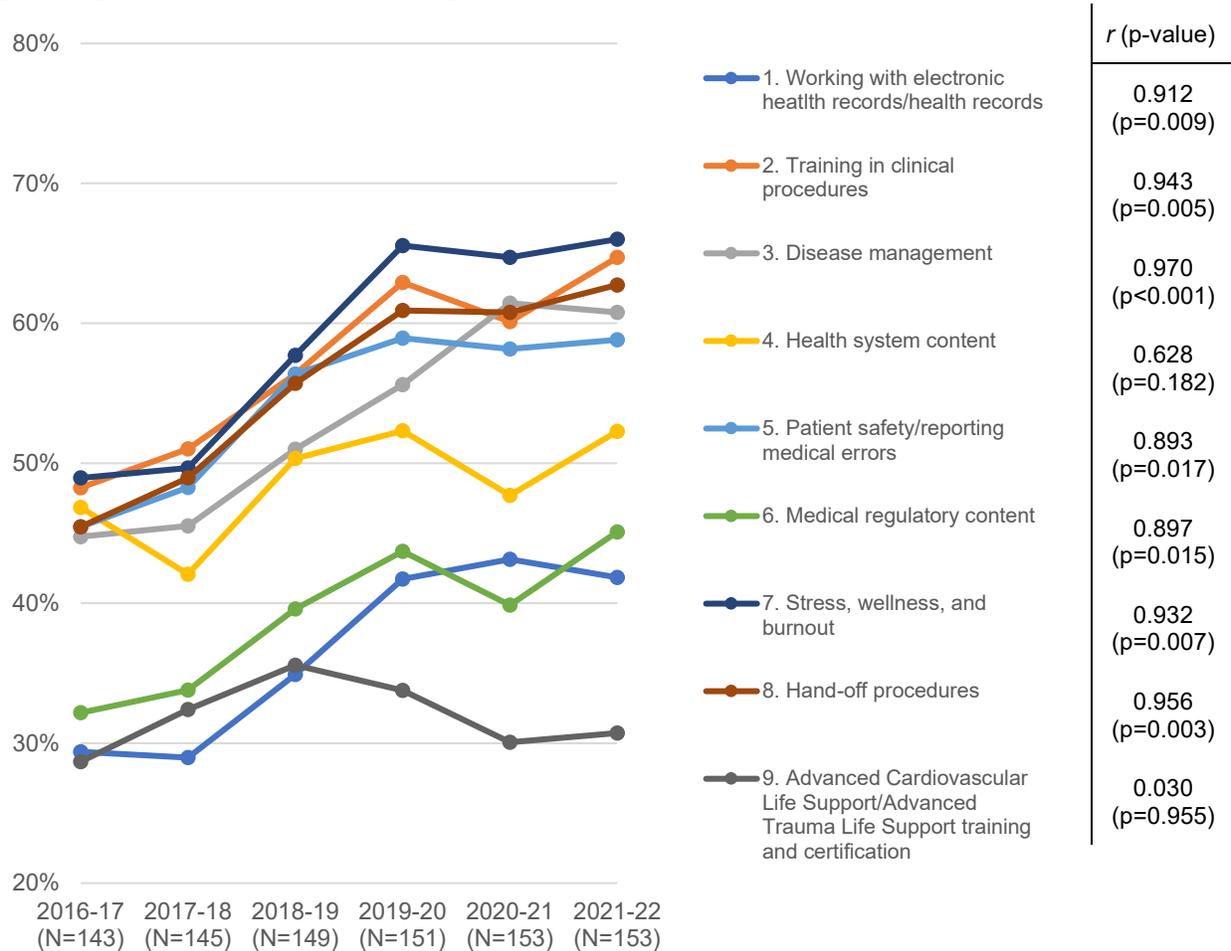
No trend was observed in the percentage of medical schools offering only specialty-specific courses (“A: Specialty-only”) or of medical schools offering only a generic course (“B: All student-only”).

## Nationwide Trends in Topics Covered in Required TTR Courses

In Figure 2, for each of the nine curriculum topics shown, we examined the percentage of medical schools that indicated that the topic was covered in any required fourth-year TTR course. To assess change over time, we tested for a correlation ( $r$ ) between year and proportion.

**Key takeaway:** Over the six survey years, the percentage of medical schools that covered topics in the curriculum of any TTR course increased significantly for seven of nine topics examined (all topics except “health system content” and “Advanced Cardiovascular Life Support/Advanced Trauma Life Support training and certification”).

**Figure 2.** Topics covered in any type of required fourth-year TTR course(s) at U.S. MD-granting schools, 2016-17 through 2021-22.

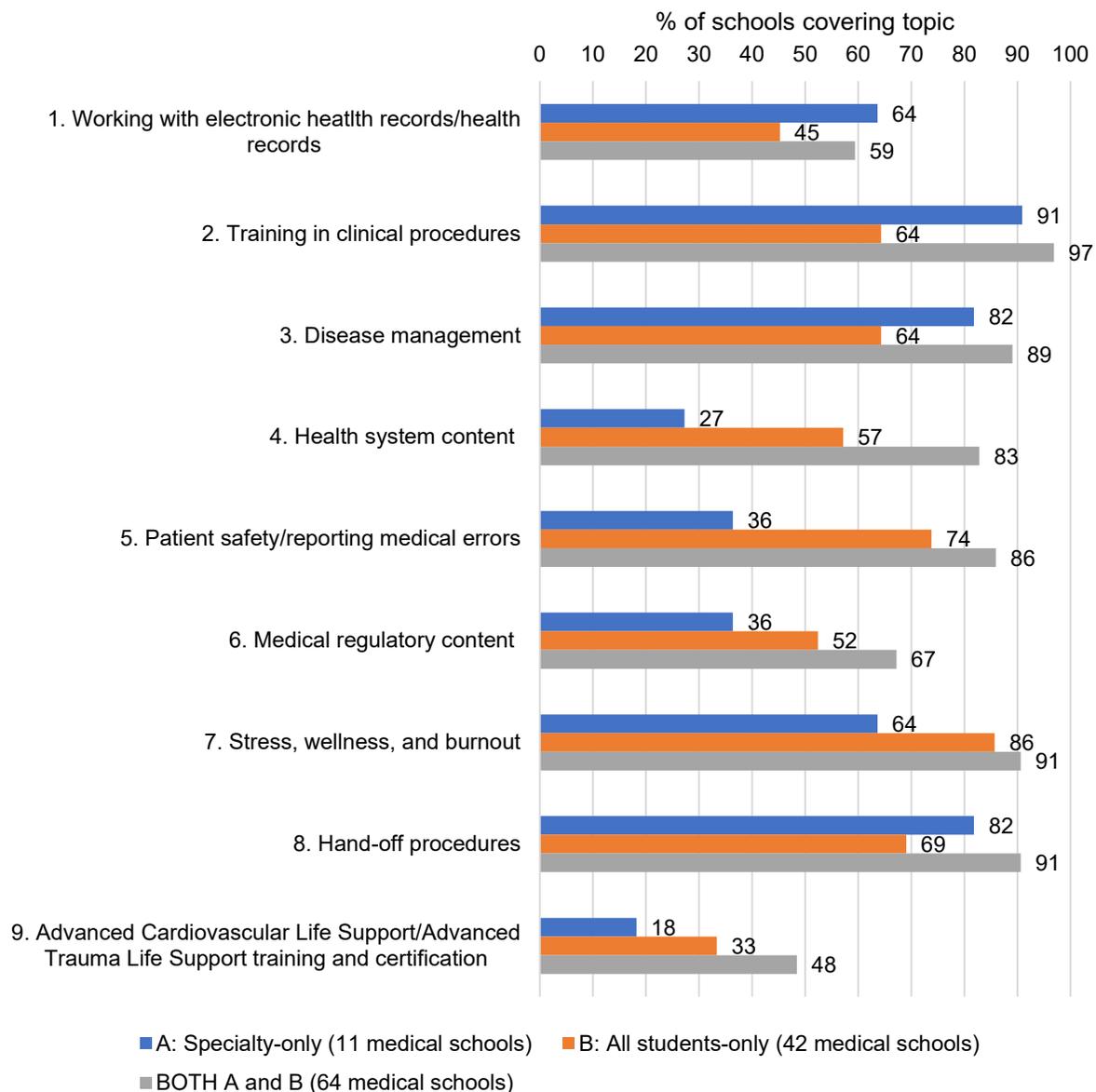


For the 117 medical schools in 2021-22 that indicated at least one topic was covered, Figure 3 shows the topics covered by three categories of medical schools: (a) medical schools that offered only specialty-specific courses (n=11), (b) medical schools that offered only courses for all students (n=42), and (c) medical schools that offered both (n=64).

**Key takeaway:** The coverage of topics in the curriculum of any TTR course was highest among medical schools that offered **both** required specialty-specific fourth-year TTR courses and a required fourth-year TTR course for all students (n=64). Six of nine topics (“clinical procedures” [62/64; 97%]; “disease management” [57/64; 89%]; “health system content” [53/64; 83%]; “patient safety/reporting medical errors” [55/64; 86%]; “stress,

wellness, and burnout” [58/64; 91%]; and “hand-off procedures” [58/64; 91%]) were each covered by more than 75% (>48) of these 64 medical schools.

**Figure 3.** Topics covered among medical schools in academic year 2021-22 by type of required fourth-year transition to residency course(s) offered.



Medical schools that offered only required specialty-specific fourth-year TTR courses (n=11), on the other hand, had a more focused coverage of topics; however, three of the nine topics (“clinical procedures” [10/11; 91%], “disease management” [9/11; 82%], and “hand-off procedures” [9/11; 82%]) were each covered by more than three quarters (>8) of the 11 medical schools.

## Current Status: TTR Courses

AAMC staff gathered information via telephone interviews and email communications during the 2021-22 academic year with curriculum deans/TTR course directors at 126 participating medical schools (81.8% of all 154 medical schools invited to participate).<sup>2</sup> Of these 126 medical schools, 114 (90.5% of 126) currently offered TTR courses; 20 of these courses were identified as being offered on an elective basis only. Twelve medical schools (9.5% of 126) indicated they do not offer a TTR course at their medical school on either a required or elective basis. Among these 12 medical schools, some offered specialty-specific “boot camps” on an extracurricular basis and several noted that TTR curricular content is already covered for their students in other courses and clinical experiences in the final-year curriculum at their medical schools. Among medical schools that do offer TTR courses on a required or elective basis, barriers and challenges identified included (among others) lack of protected time for the course director and other faculty involved in course design/administration; resources needed to provide simulation and other hands-on experiences for entire classes of students; and optimizing the balance of general and specialty-specific curricular content. Utilization of national curricular resources developed by specialty organizations (e.g., American College of Surgeons, Association of Program Directors in Surgery, Association for Surgical Education Residency Prep Curriculum,<sup>3</sup> American College of Obstetrics and Gynecology Post-match curriculum<sup>4</sup>) varied widely, as did TTR course directors’ awareness of other curricular resources for TTR courses (e.g., TTR Course Educators’ TTR compendium<sup>5</sup>).

**Key takeaway:** Most U.S. MD-granting schools currently have TTR courses that are largely, but not uniformly, offered as part of the required curriculum.

## Discussion

The prevalence of required TTR courses has steadily increased among U.S. MD-granting schools over the past six years, with differences among medical schools regarding the balance of general and specialty-specific course focus and the curricular content of these courses. These findings suggest that there is currently substantial variation among graduating students nationally in required TTR course participation

based on the medical schools they attended. Variation in TTR course participation within the same medical school would also be expected among students graduating from medical schools that offer TTR courses on an elective basis only. While the exposure to topics covered in required TTR courses has steadily increased nationally, this exposure likely varies among medical schools and many required TTR courses cover other topics in addition to some or all the topics listed on the LCME Annual Medical School Questionnaire Part II.<sup>6</sup>

Program directors who may consider TTR course participation in the resident selection process should be aware of this substantial variation in TTR curricular opportunities available to students.<sup>7</sup> Foundational Competencies for Undergraduate Medical Education, currently being developed under the joint sponsorship of three national organizations (the AAMC, the American Association of Colleges of Osteopathic Medicine, and the Accreditation Council for Graduate Medical Education)<sup>8</sup> may provide clarity to TTR course educators about common outcomes that could be translated into standard curricular elements along with additional specialty-specific needs. Ultimately, these more aligned ongoing collaborative efforts will optimize the transition to residency for all learners.<sup>9</sup>

## References

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