

HOD ACTION: Council on Medical Education Report 3 adopted as amended and the remainder of the report filed.

REPORT 3 OF THE COUNCIL ON MEDICAL EDUCATION (A-16)
Addressing the Increasing Number of Unmatched Medical Students
(Reference Committee C)

EXECUTIVE SUMMARY

Policy D-310.977, National Resident Matching Program Reform, directs our American Medical Association (AMA) to “study, in collaboration with the Association of American Medical Colleges, the National Resident Matching Program, and the American Osteopathic Association, the common reasons for failures to match.” This report is in response to that directive.

This report focuses on those Match participants who are U.S. medical school seniors at allopathic, MD-granting programs accredited by the Liaison Committee on Medical Education. Graduates of osteopathic medical schools (DOs) have the opportunity to participate in both the osteopathic Match as well as the NRMP Match, and as such the data available on match rates of DOs versus MDs are not comparable. In addition, match rates of International Medical Graduates (IMGs), whether U.S. citizens or foreign nationals, are not included in this report in correspondence to the scope of Policy D-310.977. The report finds long-term stability in the Match rates of U.S. medical school seniors and cites data that appear to mitigate concerns of a squeeze in the availability of graduate medical education (GME) positions.

At the same time, of course, past (or current) performance does not predict future results. This is particularly true in light of continued growth in the number of U.S. medical schools and increased enrollments in existing schools. An additional factor is limited growth in GME due to caps in federal funding. Other factors to consider in this complex matrix include 1) the significant and growing number of U.S. citizen international medical graduates (IMGs) who graduate from non-LCME-accredited medical schools and seek to enter residency programs in the United States; 2) changes in medical practice that may affect future health care workforce needs; 3) changes to government funding/reimbursement of medical training, with calls for more transparency and accountability for public funding of GME on the rise; and 4) the increased number of non-physician clinicians (physician assistants, nurse practitioners) who are providing health care and other services. In short, any of a myriad of factors could lead to an increase or decrease in the need for GME positions, and help to catalyze calls for increased or decreased funding.

The report also provides insight into the reasons why students do not match into a residency program, such as academic shortcomings and inadequate Match preparation, as well as the plans of those who do not match. Some leading strategies for those who did not match include research, re-entering the Match and applying in a different specialty, and pursuing clinical work experience. From the institutional perspective, medical schools should continue to explore strategies to enhance students’ ability to match, offer options for students who do not match, and seek to better advise and counsel students.

Future study should encompass: 1) evaluation of the workforce distribution impact of the relatively static number of GME positions (barring any significant increase in this number), and the potential impact on access to care among underserved populations; 2) Match rates and helpful application (and reapplication) strategies for successful matching in a given field; and 3) the potential impact on Match rates of the unification of the GME accreditation systems for allopathic and osteopathic medicine.

HOD ACTION: Council on Medical Education Report 3 adopted as amended and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 3-A-16

Subject: Addressing the Increasing Number of Unmatched Medical Students

Presented by: Darlyne Menscer, MD, Chair

Referred to: Reference Committee C
(Albert M. Kwan, MD, Chair)

1 Policy D-310.977, National Resident Matching Program Reform, directs our American Medical
2 Association (AMA) to “study, in collaboration with the Association of American Medical
3 Colleges, the National Resident Matching Program, and the American Osteopathic Association, the
4 common reasons for failures to match.” This report is in response to that directive.

5
6 This policy was adopted at the 2015 Annual Meeting of the AMA House of Delegates. Testimony
7 at A-15 before Reference Committee C noted that the problem of unmatched medical students was
8 becoming more dire with the continued growth in enrollments in medical schools. Indeed, this was
9 the topic of an educational session at A-15 hosted by the Academic Physicians Section (APS), with
10 the goal of ensuring that medical students obtain needed guidance and counseling pre-Match and
11 assistance with any post-Match problems, including advice on alternative career options, as needed.
12 The AMA is committed to continued study and close monitoring of this issue—through the efforts
13 of the Council on Medical Education and APS, among others—to ensure the highest possible return
14 on the nation’s investment in our future medical workforce.

15
16 This report focuses on those Match participants who are U.S. medical school seniors at allopathic,
17 MD-granting programs accredited by the Liaison Committee on Medical Education. Graduates of
18 osteopathic medical schools (DOs) have the opportunity to participate in both the osteopathic
19 Match as well as the NRMP Match, and as such the data available on match rates of DOs versus
20 MDs are not comparable. In addition, match rates of International Medical Graduates (IMGs),
21 whether U.S. citizens or foreign nationals, are not included in this report in correspondence to the
22 scope of Policy D-310.977.

23
24 **BACKGROUND AND DATA**

25
26 *Historical Stability in Match Rates for U.S. Allopathic Medical School Seniors*

27
28 Research by Sondheimer et al. in the December 8, 2015 issue of *JAMA*¹ may provide some
29 reassurance to those who fear a rapid increase in the number of unmatched U.S. medical students.
30 The authors note, “The percentage of US MD graduates entering GME the year of graduation has
31 remained stable during the past decade despite an increase in the number of graduates.”

32
33 These conclusions were emphasized in an interview with the lead author, Henry Sondheimer, MD.²
34 “[I]n spite of the growth in U.S. MD graduates, the percent of graduates not beginning their GME
35 the year they graduated has remained very stable around 3%.” He adds that, after following the
36 graduates for eight to 10 years after graduation, “more than 99% enter GME or begin practice in

1 some other way”—for example, those with a joint medical/dental degree may obtain a dental
2 residency slot versus a similar position in a medical residency.

3
4 The noteworthy long-term stability of Match rates for U.S. medical school seniors is corroborated
5 with data presented by Geoffrey Young, PhD, at the APS meeting in June 2015 in Chicago.³ Dr.
6 Young, senior director, student affairs and programs, Association of American Medical Colleges
7 (AAMC), noted that historical Match rates over the previous five years, 10 years and 30 years are
8 94.2%, 93.8%, and 93.4%.

9
10 As with any numbers, however, Match data can be misinterpreted and may lead to false
11 conclusions and perpetuate misperceptions if not analyzed in the proper context. A recent
12 Associated Press article, for example, titled “More Doctors Fail to Land Residency Positions After
13 School,” states that “Most doctors who apply to participate in residency programs are matched with
14 particular hospitals or health care providers, but the percentage remaining unmatched has risen
15 faster over the past decade than the percentage placed in residency programs.”⁴ The article fails to
16 note, however, that the 75.2% overall Match rate [in 2015] is the highest since 2006, according to
17 NRMP data, and that U.S. seniors generally match at 94%, as noted above. The majority of the
18 25% not matching are IMGs. In short, the article implies one quarter of U.S. medical school
19 graduates cannot find a position, even though the Match rate for this segment is essentially stable
20 and very high.

21
22 Further data that mitigate concerns of a GME squeeze come from a 2015 perspective piece in the
23 *New England Journal of Medicine* authored by Mullan et al. of the George Washington University
24 Health Workforce Institute.⁵ Their analysis suggests that a continued surplus of GME positions
25 versus U.S. medical school graduates—a total of 4,500 positions—is likely through 2023-2024.
26 The authors note, “Although that figure represents a decrease in the gap between GME positions
27 and graduates from 21.7% in 2014–2015 to 13.5% in 2023–2024, the number of GME positions
28 available will continue to substantially exceed the number of U.S. medical graduates seeking them.
29 This enduring gap suggests that any current or foreseeable failure of U.S. graduates to obtain
30 residency positions is not attributable to a lack of positions.” They go on to state, “The primary
31 goal of public GME support . . . is to produce trained physicians to meet the country’s health care
32 needs and not to fulfill the personal preferences of individual graduates for the specialties of their
33 choice. Although the GME gap will narrow slowly, it appears likely that there will be ample
34 positions for all U.S. graduates over the next decade, assuming that this group will be given priority
35 in residency selection. It would seem difficult to argue that Congress should fund more GME
36 positions in order to create a larger margin for U.S. graduates.” The authors also note, “Greater
37 competition for residency opportunities may challenge U.S. medical students’ traditional
38 assumptions about specialty selection and give new importance to the advice about appropriate
39 specialties provided by medical school faculty and advisors.”

40

41 *Future Shock? The Complexity of Health Care Workforce Needs*

42

43 In spite of these data, it is important to remember that past (or current) performance does not
44 predict future results. This is particularly true in light of continued growth in the number of U.S.
45 medical schools (both allopathic and osteopathic) and increased enrollments in existing schools. An
46 additional factor is limited growth in GME due to caps in federal funding. Accordingly, the AMA
47 and other organizations, such as the Association of American Medical Colleges, support legislation
48 to increase federal funding of GME. A list of current proposed legislation to increase the number of
49 federally funded residency slots is available via the AAMC website at
50 aamc.org/advocacy/campaigns_and_coalitions/355904/gmebills.html.

1 Despite the cap, financial support of GME has continued over the last two decades from a number
 2 of sources, writes Edward Salsberg in a recent *Health Affairs* blog, “including funding from the
 3 Health Resources and Services Administration for primary care programs, new teaching hospitals
 4 eligible for Medicare GME, expanded funding for GME through the Veterans Health
 5 Administration, state funding, and hospital self-funded positions.” He notes that “this growth has
 6 included entry positions into pipeline programs that lead to initial board certification. However, by
 7 percentage most of the growth in GME positions has been in hospital-based specialty and
 8 subspecialty continuing programs, where teaching hospitals have self-funded additional GME
 9 positions ‘over the cap.’”⁶

10
 11 Other factors to note include the significant and growing number of U.S. citizen international
 12 medical graduates (IMGs) who graduate from non-LCME-accredited medical schools and seek to
 13 enter residency programs in the United States—along with foreign national IMGs (although, as
 14 noted in the introduction, this report does not address this issue). Further, changes in medical
 15 practice may affect future health care workforce needs. In addition, changes to government
 16 funding/reimbursement of medical training may occur, with calls for more transparency and
 17 accountability for public funding of GME on the rise.⁷ An increased number of non-physician
 18 clinicians (physician assistants, nurse practitioners⁸) are providing health care and other services,
 19 and the pace of medical practices hiring such clinicians has increased recently.⁹ In short, workforce
 20 prediction is an inexact science (or art), due to the complexity and number of moving parts. Any of
 21 a myriad of factors could lead to an increase or decrease in the need for GME positions, and help to
 22 catalyze calls for increased or decreased funding.
 23

24 *Why Students do not Match*

25
 26 Data from the Liaison Committee on Medical Education (LCME) provide insight into the reasons
 27 provided by medical schools as to why their students did not match into a residency program. The
 28 LCME Part II Annual Medical School Questionnaire from 2014-2015 (with responses from 141
 29 schools) shows that academic shortcomings and inadequate Match preparation are two key reasons
 30 for failure to match.
 31

32 8c. For each student identified in Q8b who sought but did not find a residency position,
 33 select the main reason. (Select one reason for each student.)

34
 35 Students who did not find a residency position:

#	%	Reason
174	51.3%	The student's academic performance (eg, clinical grades) and/or USMLE scores were below the norm
77	22.7%	The applications were limited to one specialty and did not include backup plans (“plan B” specialty)
66	19.5%	Reason unknown by school
22	6.5%	The number of applications was (relatively) limited

44
 45 Not having a backup plan (“plan B” specialty) may result from candidates’ failure to fully and
 46 realistically evaluate their chances for matching into a given specialty field and/or residency
 47 program. Certain specialty fields of medicine offer attractive compensation and “controllable
 48 lifestyle,” and as such are valued by medical school graduates as inviting career options. These
 49 fields also may have a limited number of positions, making them more competitive. The large and
 50 increasingly burdensome debt load many medical graduates face may also play a role in students’
 51 decisions. Competition for placement into such fields is intense. Students who have not achieved

1 high United States Medical Licensing Examination (USMLE) scores or class ranking may not be
 2 competitive applicants for such programs, and are likely to remain unmatched if their rank order
 3 lists include only highly competitive specialties.

4
 5 In response to student concerns about the availability of positions, the number of residency
 6 programs that the average student applies to has risen precipitously over the last few years, notes
 7 Fitzhugh Mullan, MD, in a post in the *Medical Education Futures Study* newsletter. “The idea that
 8 we are running out of residency positions has become a popular and fear-invoking belief in medical
 9 schools with the result that senior medical students are applying to more and more residencies in
 10 the hope of not becoming losers in the perceived game of GME musical chairs.” He adds that the
 11 average U.S. senior “applied to 47 (forty-seven!) residencies in 2015, up 20% in the last five
 12 years.”¹⁰

13
 14 Student fears of not matching and desire for a residency in a remunerative and/or lifestyle-friendly
 15 field are two causes of this applications approach—despite research that this practice is not
 16 effective.¹¹ This in turn forces program directors to resort even more to using USMLE scores,
 17 grades and other quantitative criteria as a numeric cutpoint—rather than perform an in-depth
 18 review of every application, even though the USMLE score alone is not predictive of success in
 19 residency.¹² Students then react by submitting even more applications, and the situation continues
 20 to spiral.

21
 22 Another key source of data on unmatched medical students is the National Resident Matching
 23 Program (NRMP). A 2015 NRMP survey of Match applicants, presented at the 2015 AAMC
 24 Annual Meeting,¹³ notes the following behaviors by unmatched U.S. MD seniors as compared to
 25 those who matched; these data show how unmatched students were less likely to engage in
 26 recommended strategies for matching and more likely to engage in counterproductive strategies
 27 when developing their rank order lists of programs:

28

	Matched	Unmatched	Behavior
31	92%	81%	Ranked programs in order of preference
32	68%	77%	Ranked all programs where they interviewed
33	77%	64%	Ranked all programs willing to attend
34	65%	43%	Ranked a mix of programs
35	48%	24%	Ranked “safety-net” programs
36	2%	8%	Ranked programs where they did not interview

37
 38 A third data source is the 2015 Match/SOAP (Supplemental Offer and Acceptance Program)
 39 Survey administered by the AAMC to 141 student affairs deans after the 2015 National Resident
 40 Matching Program (NRMP) Match. A total of 97 of 141 schools (69%) completed the survey,
 41 which collected data on the following three groups who participated in the 2015 Match and SOAP:

42
 43 1. 2015 U.S. MD seniors;
 44 2. 2014 U.S. MD seniors who did not match in 2014 and delayed graduation until 2015; and
 45 3. U.S. MDs who graduated between 2009 and 2014.

46
 47 For the first group (2015 U.S. MD seniors), student affairs deans reported that 527 of 10,515 (7%)
 48 were unmatched to first-year GME positions by noon on March 16, 2015, and 254 of these
 49 remained without a position by March 27. Of the 254, 110 (46%) were previously discussed in a
 50 promotions committee during their time in medical school. Indeed, for those students, medical
 51 schools “may need to re-examine their promotions standards, which may be a tough discussion,” as

1 described in an *AMA Wire* article.¹⁴ “At some point, you need to help a student make an exit plan
2 [from medical school]”, said Dr. Young during his APS presentation, as quoted in the *AMA Wire*
3 article.

4
5 Additional survey data from the AAMC, as presented by Dr. Young, show the following reasons
6 for failure to match:

7
8 1. Low scores on a USMLE exam;
9 2. Not competitive for first choice specialty;
10 3. Did not have an appropriate backup/alternate plan;
11 4. Did not follow guidance from faculty advisor or dean’s office;
12 5. Poor interviewing/interpersonal skills;
13 6. Did not rank enough programs; and/or
14 7. Failed a USMLE exam

15
16 *Plans of Students Who Do Not Match*

17
18 As to the plans of students who are initially unmatched, the LCME Questionnaire of medical
19 schools provides additional insight:

20
21 8d. For each student identified in Q8c who did not find a residency position, select the
22 options that meet their future plans. (Select all that apply for each student.)

23
24 Students who did not match:

#	%	Future Plans
---	---	--------------

25
26 245 39.2% Will search for a residency position for entry in 2016
27 157 25.1% Will continue searching for a residency position in 2015
28 133 21.3% Will seek employment, such as a research position
29 47 7.5% Plans unknown by school
30 33 5.3% Will seek an additional degree
31 10 1.6% Will seek a career outside of medicine

32
33
34 These data are reflected in the 2015 AAMC survey of student affairs deans, which describes the
35 following strategies for unmatched 2015 seniors:

36
37 • Re-enter the Match next year
38 • Continue to seek a residency position for 2015
39 • Re-enter the Match next year applying to a different specialty
40 • Pursue a research year

41
42 The AAMC survey also analyzed the experiences of a second group of 2015 Match participants—the
43 203 U.S. MD seniors of 2014 who did not match in 2014 and delayed graduation until 2015. Of
44 these, 12 (6%) were unmatched to first year positions by March 16, 2015, and eight remained
45 without a position by March 27. Meanwhile, for a third group of 2015 Match participants—the 108
46 U.S. MDs who graduated between 2009 and 2014—a total of 67 (63%) were matched into a first-
47 year position while 40 (37%) remained without a position. For this group, the leading strategies for
48 those who successfully matched included research (25%), re-entering the Match and applying in a
49 different specialty (14%), and clinical work experience (13%).

1 *The Role of Medical Schools in Improving Match Rates*

2
3 Medical schools should continue to explore institutional strategies to enhance students' ability to
4 match, offer options for students who do not match, and seek to better advise and counsel students.
5 At the University of Illinois College of Medicine, for example, students, faculty, and staff
6 collaborated to develop the Residency Preparedness Initiative, consisting of a longitudinal career
7 development course and loan interest assistance program.¹⁵ The objectives of the course are that
8 students: 1) demonstrate knowledge of various medical specialty/career options; 2) develop a
9 strategic plan for the Match or an alternative career path; 3) complete the Electronic Residency
10 Application System documents (ERAS) and submit them in a timely manner (if applicable), and 4)
11 match into a residency training program or secure alternative career plans upon graduation.

12
13 Another institutional strategy can be implemented earlier in the pipeline—i.e., during the medical
14 school admissions process. In her presentation to the APS, Betty Drees, MD, former APS liaison to
15 the Council on Medical Education, described how holistic medical school admissions may
16 ultimately help improve Match rates.¹⁶ This perspective is mirrored in a presentation by William
17 McDade, MD, former chair of the Council on Medical Education, to the AMA Commission to End
18 Health Care Disparities at its fall 2015 meeting. Dr. McDade also described the merits of a holistic
19 residency candidate interview process, to deemphasize scores on standardized tests and give greater
20 attention to other important qualities, “such as clinical reasoning, patient care, professionalism, and
21 ability to function as a member of a health care team.”¹⁷

22
23 *Concerns About Students Who Are Partially Matched*

24
25 Even those individuals who are matched into a residency program may be on a short-term “road to
26 nowhere” if the position is only a preliminary or first graduate year (GY1) slot. The majority of
27 specialty programs encompass the first-year preliminary training as “categorical,” in that the
28 resident matches into the specialty program, not the preliminary position. However, some of these
29 one-year positions remain as a prerequisite to enter another specialty program that requires one
30 year of GME prior to entry (there also are some transitional year positions—although they do not
31 guarantee further training in a specialty). In 2015, 2,573 U.S. seniors matched into preliminary or
32 transitional year positions. At the end of SOAP, 605 additional preliminary or transitional year
33 positions had been filled, although published data did not distinguish the type of applicant; i.e., we
34 do not know how many of those positions were filled by U.S. seniors. U.S. seniors, however,
35 comprised the majority of unmatched applicants who found positions in the SOAP (599, or 56.5%).

36
37 Some physicians who complete a preliminary year of residency training do not find a GY2
38 position. If these physicians are U.S. medical school graduates, one option is to obtain a license to
39 practice medicine, without completing additional GME. In 35 of the 55 jurisdictions that issue
40 licenses for medical practice (the 50 states, plus the District of Columbia, Guam, the Northern
41 Mariana Islands, Puerto Rico and the U.S. Virgin Islands), U.S. medical school graduates may
42 obtain a license to practice medicine with one year of GME (these requirements differ for
43 international medical graduates).¹⁸ Physicians who choose this option are not eligible for
44 certification by a member board of the American Board of Medical Specialties, as they have not
45 completed the required years of residency training. Obtaining hospital admitting privileges may
46 also be challenging for this group, if not impossible, and receiving payments from insurers may be
47 difficult as well. Finally, from a patient safety perspective, legitimate concerns may be raised about
48 the quality of care provided by such physicians.

1 *Bypassing the Match: The Assistant Physician Route*

2
3 Three U.S. states (Arkansas, Kansas, and Missouri) have passed legislation to allow medical school
4 graduates to practice as “assistant physicians” or “graduate registered physicians” under the
5 supervision of a licensed physician in the state, without having completed any GME. Legislatures
6 in Washington and Virginia considered but did not pass similar bills in 2016. While the laws in
7 Arkansas and Missouri created new license categories for these individuals, Kansas’ law
8 established a process through which an individual can obtain a special permit to practice under
9 physician supervision for a limited time.

10
11 The stated rationale for these legislative efforts is both the need for primary care services in
12 underserved areas and concerns about difficulty in matching into GME programs. The AMA and
13 other medical organizations are in opposition to such legislation, on the basis of patient safety and
14 quality concerns about the inadequate preparation of new physicians who lack any exposure to
15 GME but yet would be engaged in the practice of medicine.¹⁹

16
17 **RELEVANT AMA POLICY**

18
19 At the AMA’s 2015 Interim Meeting, the House of Delegates approved new policy that calls for
20 the AMA to pursue a national public advocacy campaign to “educate the public on the definition
21 and importance of graduate medical education, student debt and the state of the medical profession
22 today and in the future.” Such work is aligned with other AMA efforts, such as the SaveGME.org
23 website, which is focused on advocacy to Congress.

24
25 Currently, the AMA has a significant number of policies that address both Match policies and
26 GME funding, as shown in the appendix to this report.

27
28 Of particular note is D-310.977, National Resident Matching Program Reform. This policy states
29 that our AMA will:

30
31 • Work with the NRMP to better inform applicants about the NRMP matching process;
32 • Evaluate and comment on all proposals to modify the Match;
33 • Request that the NRMP explore the possibility of including the Osteopathic Match in the
34 NRMP Match;
35 • Work with the NRMP and others to develop mechanisms that limit disparities within the
36 residency application process and allow both flexibility and standard rules for applicants;
37 and
38 • Encourage the NRMP to study the effects of the Supplemental Offer and Acceptance
39 Program on the number of residency spots not filled through the Main Residency Match
40 and include stratified analysis by specialty and other relevant areas.

41
42 The policy also calls on the AMA to work with other key stakeholders to:

43
44 • Evaluate current data or propose new research on how many students graduating from U.S.
45 medical schools each year do not enter into a U.S. residency program; how many never
46 enter into a U.S. residency program; whether there is disproportionate impact on
47 individuals of minority racial and ethnic groups; and what careers are pursued by those
48 with an MD or DO degree who do not enter residency programs;
49 • Study whether U.S. medical school graduates and IMGs who do not enter residency
50 programs may be able to serve unmet national health care needs; and

1 • Evaluate the feasibility of a national tracking system for U.S. medical students who do not
2 initially match into a categorical residency program.

3

4 SUMMARY AND RECOMMENDATIONS

5

6 A second Council on Medical Education report, planned for the 2017 AMA Annual Meeting, will
7 address Policy D-310.977 (15): “Our AMA will discuss with the National Resident Matching
8 Program, Association of American Medical Colleges, American Osteopathic Association, Liaison
9 Committee on Medical Education, Accreditation Council for Graduate Medical Education, and
10 other interested bodies potential pathways for reengagement in medicine following an unsuccessful
11 match and report back on the results of those discussions.” Aside from this work, one of the key
12 areas to monitor will be the workforce distribution impact of the relatively static number of GME
13 positions (barring any significant increase). Foreign national IMGs are more likely to practice in
14 underserved urban and rural communities²⁰ despite state regulations that often serve to impede
15 IMGs’ licensure to practice medicine—e.g., through use of approved lists of foreign medical
16 schools. If the increasing numbers of U.S. graduates displace IMGs from the Match over the next
17 10 or more years, then, fewer IMGs may be able to practice in underserved areas. Therefore,
18 current health workforce shortages affecting underserved populations could be exacerbated if U.S.
19 graduates do not fill that breach (although, from a global perspective, the “brain drain” would be
20 reduced, which may result in improved access to care in less developed countries). The work of
21 such organizations as ACGME-International is key in improving the standards of residency
22 education and patient care in other countries.

23

24 Additional research may also be warranted into the impact of applicants’ race/ethnicity on Match
25 outcomes. Indeed, the research by Sondheimer et al., cited earlier in this report, was developed in
26 response to concerns in this regard. That study found that “Unplaced black, Hispanic, and non-US
27 citizen graduates increased over time. Racial/ethnic minority graduates were consistently less likely
28 to begin GME the year they graduated than whites. . . .” The authors also noted that, although
29 nearly all graduates entered GME or began medical practice in the United States within six years
30 after graduation, “The racial/ethnic differences seen at graduation diminished with time but
31 remained statistically significant.” Wider adoption of a holistic approach to both medical school
32 admissions and the residency candidate interview process could help ameliorate this trend.

33

34 Additional studies could examine in further detail the impact of IMGs and their Match behaviors.
35 One previous study, in the *Journal of Graduate Medical Education*, “looked at differences in
36 interview and ranking behaviors between matched and unmatched IMGs participating in the 2013
37 Match and explored strategic errors made by unmatched IMGs when creating rank order lists.”²¹
38 The authors found that “Unmatched IMGs were more likely than matched IMGs to rank programs
39 at which they did not interview and to rank programs based on their perceived likelihood of
40 matching.” They conclude, “The interview and ranking behaviors of IMGs can have far-reaching
41 consequences on their Match experience and outcomes.” This study reinforces the experiences of
42 U.S. medical school seniors, as outlined in this report.

43

44 Other research may focus on Match rates and helpful application (and reapplication) strategies for
45 successful matching in a given field. For example, a recent study looked at the experiences of
46 unmatched residency applicants in orthopedic surgery, one of the most competitive specialties to
47 enter. The authors found that pursuing a preliminary internship or research fellowship in the year
48 prior to reapplication to orthopedic surgery did not increase the success rate among such applicants.
49 They conclude, “Success of reapplication into orthopaedic surgery may be less dependent on
50 research or internship and more dependent on developing relationships with faculty at a local or
51 regional institution.”²²

1 For prospective and newly matriculated medical students, up-front disclosures on Match potential
2 and a realistic assessment of career possibilities are needed. Students should be provided accurate
3 data about graduation and Match rates, as well as projected Match rates for the institution. In the
4 legal field, for example, entering students are informed that graduation is no guarantee of a career
5 in law. A more informed perspective on future career prospects can also affect student borrowing
6 as well as lender practices. Although this is not currently an issue, the Department of Education is
7 beginning to look closely at this metric as a medical school outcome. In short, what does a medical
8 school degree prepare one to do? Further, can one do anything else (that is, a non-clinical career)
9 that would make going to medical school worth the investment?

10
11 Finally, the potential impact on Match rates of the unification of the GME accreditation systems for
12 allopathic and osteopathic medicine is another area for possible study.

13
14 The Council on Medical Education therefore recommends that the following recommendations be
15 adopted and that the remainder of the report be filed.

16

- 17 1. That our AMA reaffirm D-305.967 (4) and (22), The Preservation, Stability and Expansion
18 of Full Funding for Graduate Medical Education: “4. Our AMA will strenuously advocate
19 for increasing the number of GME positions to address the future physician workforce
20 needs of the nation” and “22. Our AMA will advocate for the appropriation of
21 Congressional funding in support of the National Healthcare Workforce Commission,
22 established under section 5101 of the Affordable Care Act, to provide data and healthcare
23 workforce policy and advice to the nation and provide data that support the value of GME
24 to the nation.” (Reaffirm HOD Policy)
- 25 2. That our AMA reaffirm Policy H-200.954 (4) (5) (6) (7), US Physician Shortage: “Our
26 AMA: . . . (4) encourages medical schools and residency programs to consider developing
27 admissions policies and practices and targeted educational efforts aimed at attracting
28 physicians to practice in underserved areas and to provide care to underserved populations;
29 (5) encourages medical schools and residency programs to continue to provide courses,
30 clerkships, and longitudinal experiences in rural and other underserved areas as a means to
31 support educational program objectives and to influence choice of graduates' practice
32 locations; (6) encourages medical schools to include criteria and processes in admission of
33 medical students that are predictive of graduates' eventual practice in underserved areas
34 and with underserved populations; (7) will continue to advocate for funding from public
35 and private payers for educational programs that provide experiences for medical students
36 in rural and other underserved areas.” (Reaffirm HOD Policy).
- 37 3. That our AMA reaffirm D-310.977 (11), National Resident Matching Program Reform:
38 “Our AMA: . . . (11) will work with the Association of American Medical Colleges
39 (AAMC), American Osteopathic Association (AOA), American Association of Colleges of
40 Osteopathic Medicine (AACOM), and National Resident Matching Program (NRMP) to
41 evaluate the current available data or propose new studies that would help us learn how
42 many students graduating from US medical schools each year do not enter into a US
43 residency program; how many never enter into a US residency program; whether there is
44 disproportionate impact on individuals of minority racial and ethnic groups; and what
45 careers are pursued by those with an MD or DO degree who do not enter residency
46 programs.” (Reaffirm HOD Policy).

1 4. That our AMA encourage the Association of American Medical Colleges to work with
2 U.S. medical schools to identify best practices, including career counseling, used by
3 medical schools to facilitate successful matches for medical school seniors, and reduce the
4 number who do not match. (Directive to Take Action).

Fiscal note: \$500 for staff time.

APPENDIX: RELEVANT AMA POLICIES

D-310.977 National Resident Matching Program Reform

Our AMA:

- (1) will work with the National Resident Matching Program to develop and distribute educational programs to better inform applicants about the NRMP matching process;
- (2) will actively participate in the evaluation of, and provide timely comments about, all proposals to modify the NRMP Match;
- (3) will request that the NRMP explore the possibility of including the Osteopathic Match in the NRMP Match;
- (4) will continue to review the NRMP's policies and procedures and make recommendations for improvements as the need arises;
- (6) does not support the current the "All-In" policy for the Main Residency Match to the extent that it eliminates flexibility within the match process;
- (7) will work with the NRMP, and other residency match programs, in revising Match policy, including the secondary match or scramble process to create more standardized rules for all candidates including application timelines and requirements;
- (8) will work with the NRMP and other external bodies to develop mechanisms that limit disparities within the residency application process and allow both flexibility and standard rules for applicant;
- (9) encourages the National Resident Matching Program to study and publish the effects of implementation of the Supplemental Offer and Acceptance Program on the number of residency spots not filled through the Main Residency Match and include stratified analysis by specialty and other relevant areas;
- (11) will work with the Association of American Medical Colleges (AAMC), American Osteopathic Association (AOA), American Association of Colleges of Osteopathic Medicine (AACOM), and National Resident Matching Program (NRMP) to evaluate the current available data or propose new studies that would help us learn how many students graduating from US medical schools each year do not enter into a US residency program; how many never enter into a US residency program; whether there is disproportionate impact on individuals of minority racial and ethnic groups; and what careers are pursued by those with an MD or DO degree who do not enter residency programs;
- (12) will work with the AAMC, AOA, AACOM and appropriate licensing boards to study whether US medical school graduates and international medical graduates who do not enter residency programs may be able to serve unmet national health care needs;
- (13) will work with the AAMC, AOA, AACOM and the NRMP to evaluate the feasibility of a national tracking system for US medical students who do not initially match into a categorical residency program;
- (14) will study, in collaboration with the Association of American Medical Colleges, the National Resident Matching Program, and the American Osteopathic Association, the common reasons for failures to match; and
- (15) will discuss with the National Resident Matching Program, Association of American Medical Colleges, American Osteopathic Association, Liaison Committee on Medical Education, Accreditation Council for Graduate Medical Education, and other interested bodies potential pathways for reengagement in medicine following an unsuccessful match and report back on the results of those discussions.

H-200.955 Revisions to AMA Policy on the Physician Workforce

It is AMA policy that: (1) any workforce planning efforts, done by the AMA or others, should utilize data on all aspects of the health care system, including projected demographics of both providers and patients, the number and roles of other health professionals in providing care, and

practice environment changes. Planning should have as a goal appropriate physician numbers, specialty mix, and geographic distribution. (2) Our AMA encourages and collaborates in the collection of the data needed for workforce planning and in the conduct of national and regional research on physician supply and distribution. The AMA will independently and in collaboration with state and specialty societies, national medical organizations, and other public and private sector groups, compile and disseminate the results of the research. (3) The medical profession must be integrally involved in any workforce planning efforts sponsored by federal or state governments, or by the private sector. (4) In order to enhance access to care, our AMA collaborates with the public and private sectors to ensure an adequate supply of physicians in all specialties and to develop strategies to mitigate the current geographic maldistribution of physicians. (5) There is a need to enhance underrepresented minority representation in medical schools and in the physician workforce, as a means to ultimately improve access to care for minority and underserved groups. (6) There should be no decrease in the number of funded graduate medical education (GME) positions. Any increase in the number of funded GME positions, overall or in a given specialty, and in the number of US medical students should be based on a demonstrated regional or national need. (7) Our AMA will collect and disseminate information on market demands and workforce needs, so as to assist medical students and resident physicians in selecting a specialty and choosing a career.

H-305.929 Proposed Revisions to AMA Policy on the Financing of Medical Education Programs

It is AMA policy that: (1) Since quality medical education directly benefits the American people, there should be public support for medical schools and graduate medical education programs and for the teaching institutions in which medical education occurs. Such support is required to ensure that there is a continuing supply of well-educated, competent physicians to care for the American public. (2) Planning to modify health system organization or financing should include consideration of the effects on medical education, with the goal of preserving and enhancing the quality of medical education and the quality of and access to care in teaching institutions are preserved. (3) Adequate and stable funding should be available to support quality undergraduate and graduate medical education programs. Our AMA and the federation should advocate for medical education funding. (4) Diversified sources of funding should be available to support medical schools' multiple missions, including education, research, and clinical service. Reliance on any particular revenue source should not jeopardize the balance among a medical school's missions. (5) All payers for health care, including the federal government, the states, and private payers, benefit from graduate medical education and should directly contribute to its funding. (6) Full Medicare direct medical education funding should be available for the number of years required for initial board certification. For combined residency programs, funding should be available for the longest of the individual programs plus one additional year. There should be opportunities to extend the period of full funding for specialties or subspecialties where there is a documented need, including a physician shortage. (7) Medical schools should develop systems to explicitly document and reimburse faculty teaching activity, so as to facilitate faculty participation in medical student and resident physician education and training. (8) Funding for graduate medical education should support the training of resident physicians in both hospital and non-hospital (ambulatory) settings. Federal and state funding formulas must take into account the resources, including volunteer faculty time and practice expenses, needed for training residents in all specialties in non-hospital, ambulatory settings. Funding for GME should be allocated to the sites where teaching occurs. (9) New funding should be available to support increases in the number of medical school and residency training positions, preferably in or adjacent to physician shortage/underserved areas and in undersupplied specialties.

D-305.967 The Preservation, Stability and Expansion of Full Funding for Graduate Medical Education

... 3. Our AMA will actively seek congressional action to remove the caps on Medicare funding of GME positions for resident physicians that were imposed by the Balanced Budget Amendment of 1997 (BBA-1997). ... 11. Our AMA: (A) recognizes that funding for and distribution of positions for GME are in crisis in the United States and that meaningful and comprehensive reform is urgently needed; (B) will immediately work with Congress to expand medical residencies in a balanced fashion based on expected specialty needs throughout our nation to produce a geographically distributed and appropriately sized physician workforce; and to make increasing support and funding for GME programs and residencies a top priority of the AMA in its national political agenda; and (C) will continue to work closely with the Accreditation Council for Graduate Medical Education, Association of American Medical Colleges, American Osteopathic Association, and other key stakeholders to raise awareness among policymakers and the public about the importance of expanded GME funding to meet the nation's current and anticipated medical workforce needs. ... 13. Our AMA will continue to strongly advocate that Congress fund additional graduate medical education (GME) positions for the most critical workforce needs, especially considering the current and worsening maldistribution of physicians. ... 19. Our AMA will continue to work with stakeholders such as Association of American Medical Colleges (AAMC), ACGME, AOA, American Academy of Family Physicians, American College of Physicians, and other specialty organizations to analyze the changing landscape of future physician workforce needs as well as the number and variety of GME positions necessary to provide that workforce. ... 22. Our AMA will advocate for the appropriation of Congressional funding in support of the National Healthcare Workforce Commission, established under section 5101 of the Affordable Care Act, to provide data and healthcare workforce policy and advice to the nation and provide data that support the value of GME to the nation.

D-305.992 Accounting for GME Funding

Our AMA will encourage: (1) department chairs and residency program directors to learn effective use of the information that is currently available on Medicare funding accounting of GME at the level of individual hospitals to assure appropriate support for their training programs, and publicize sources for this information, including placing links on our AMA web site; and (2) hospital administrators to share with residency program directors and department chairs, accounting and budgeting information on the disbursement of Medicare education funding within the hospital to ensure the appropriate use of those funds for Graduate Medical Education.

D-305.958 Increasing Graduate Medical Education Positions as a Component to any Federal Health Care Reform Policy

2. Our AMA will work with the Centers for Medicare and Medicaid Services to explore ways to increase graduate medical education slots to accommodate the need for more physicians in the US.

H-310.917 Securing Funding for Graduate Medical Education

Our American Medical Association will: (1) continue to be vigilant while monitoring pending legislation that may change the financing of medical services (health system reform) and advocate for expanded and broad-based funding for graduate medical education (from federal, state, and commercial entities); and (2) continue to advocate for graduate medical education funding that reflects the physician workforce needs of the nation.

REFERENCES

¹ Sondheimer HM, Xierali IM, Young GH, Nivet MA. Placement of US Medical School Graduates Into Graduate Medical Education, 2005 Through 2015. *JAMA*. 2015;314(22):2409-2410. Available at: <http://jama.jamanetwork.com/article.aspx?articleid=2474417>. Accessed December 16, 2015.

² Most Medical School Graduates Get The Resident Education Required For Licensure. MedicalResearch.com Interview with Henry Sondheimer, MD. Available at: <http://medicalresearch.com/author-interviews/most-medical-school-graduates-get-the-graduate-education-required-for-licensure/19806/>. Accessed December 16, 2015.

³ Young GH. 2015 Match/SOAP. Presented at the AMA Academic Physicians Section (AMA-APS) meeting, June 2015, Chicago. Available at: <http://www.ama-assn.org/resources/doc/medical-schools/x-pub/a15-sms-young.pdf>. Accessed December 16, 2015.

⁴ More Doctors Fail to Land Residency Positions After School. Associated Press. December 12, 2015. Available at: <http://abcnews.go.com/US/wireStory/doctors-fail-land-residency-positions-school-35734080>. Accessed December 21, 2015.

⁵ Mullan F, Salsberg E, Weider K. Why a GME Squeeze Is Unlikely. *N Engl J Med* 2015; 373:2397-2399. Available at: <http://www.nejm.org/doi/full/10.1056/NEJMp1511707>. Accessed December 21, 2015.

⁶ Salsberg E. Update on Graduate Medical Education Positions. *Health Affairs* blog, December 17, 2015. Available at: <http://healthaffairs.org/blog/2015/12/17/update-on-graduate-medical-education-positions/>. Accessed December 21, 2015.

⁷ Graduate Medical Education That Meets the Nation's Health Needs. National Academy of Medicine, 2014. Available at: <http://iom.nationalacademies.org/Reports/2014/Graduate-Medical-Education-That-Meets-the-Nations-Health-Needs.aspx>. Accessed December 22, 2015.

⁸ Van Vleet A, Paradise J. Tapping Nurse Practitioners to Meet Rising Demand for Primary Care. Kaiser Family Foundation, January 20, 2015. Available at: <http://kff.org/medicaid/issue-brief/tapping-nurse-practitioners-to-meet-rising-demand-for-primary-care/>. Accessed February 2, 2016.

⁹ Larson J. More Practices Hiring Non-physician Providers. *AMN Healthcare News*, April 21, 2014. <https://www.amnhealthcare.com/latest-healthcare-news/more-practices-hiring-non-physician-providers/>

¹⁰ Mullan F. Misinformation About GME - Industrial Grade. *Medical Education Futures Study Newsletter*, December 18, 2015. Available at: <http://us2.campaign-archive1.com/?u=b9850d25b4dd96dd60bf33f88&id=52f7b77fca>. Accessed December 21, 2015.

¹¹ Weissbart SJ, Kim SJ, Feinn RS, Stock JA. Relationship Between the Number of Residency Applications and the Yearly Match Rate: Time to Start Thinking About an Application Limit? *Journal of Graduate Medical Education*, March 2015, Vol. 7, No. 1, pp. 81-85. Available at: <http://www.jgme.org/doi/abs/10.4300/JGME-D-14-00270.1>. Accessed January 4, 2016.

¹² Prober CG, Kolars JC, First LR, Melnick DE. A Plea to Reassess the Role of United States Medical Licensing Examination Step 1 Scores in Residency Selection. *Academic Medicine*. January 2016; 91:1; pp. 12-15. Available at: http://journals.lww.com/academicmedicine/Fulltext/2016/01000/A_Plea_to_Reassess_the_Role_of_United_States.11.aspx. Accessed January 4, 2016.

¹³ Signer M. NRMP Update. AAMC Annual Meeting presentation, November 8, 2015. Available at: <http://www.nrmp.org/wp-content/uploads/2015/11/Signer-NRMP-at-AAMC-2015-Annual-Meeting1.pdf>. Accessed December 16, 2015.

¹⁴ Why medical students aren't matching--and what happens next? *AMA Wire*, June 7, 2015. Available at: <http://www.ama-assn.org/ama/ama-wire/post/arent-medical-students-matching-happens-next>. Accessed December 16, 2015.

¹⁵ Kashima K. Unmatched Medical Students: A Call for Action. Presented at the AMA Academic Physicians Section (AMA-APS) meeting, June 2015, Chicago. Available at: <http://www.ama-assn.org/resources/doc/medical-schools/x-pub/a15-sms-kashima.pdf>. Accessed December 16, 2015.

¹⁶ Drees B. Holistic Admissions Review. Presented at the AMA Academic Physicians Section (AMA-APS) meeting, June 2015, Chicago. Available at: <http://www.ama-assn.org/resources/doc/medical-schools/x-pub/a15-sms-drees.pdf>. Accessed December 16, 2015.

¹⁷ McDade W. Changing Medical Education to Reduce Health Disparities. Presented at the Commission to End Health Care Disparities meeting, September 2015, Chicago. Available at: <http://www.ama-assn.org/resources/doc/public-health/x-pub/william-mcdade-092515.pdf>. Accessed December 16, 2015.

¹⁸ *State Medical Licensure Requirements and Statistics*. American Medical Association, 2014 edition.

¹⁹ Rosin T. Missouri law would let medical school grads skip residency: 5 things to know. *Becker's Hospital Review*, December 14, 2015. Available at: <http://www.beckershospitalreview.com/hospital-physician-relationships/missouri-law-would-let-medical-school-grads-skip-residency-5-things-to-know.html>. Accessed December 21, 2015.

²⁰ International medical graduates in American medicine: Contemporary challenges and opportunities. AMA-IMG Section Governing Council, January 2013.

²¹ Liang, M, Curtin LS, Signer MM, Savoia MC. Understanding the Interview and Ranking Behaviors of Unmatched International Medical Students and Graduates in the 2013 Main Residency Match. *Journal of Graduate Medical Education*, December 2015. Available at: <http://www.jgme.org/doi/pdf/10.4300/JGME-D-14-00742.1>. Accessed December 21, 2015.

²² Rivero S, Ippolito J, Martinez M, Beebe K, Benevenia J, Berberian W. Analysis of Unmatched Orthopaedic Residency Applicants: Options After the Match. *Journal of Graduate Medical Education*, March 2016. Available at: <http://www.jgme.org/doi/pdf/10.4300/JGME-D-15-00176.1>. Accessed December 21, 2015.