# IAMSE Webinar Jan. 7, 2021
# USMLE Transition to Pass/Fail: Implications for Resident Candidate Assessment and Selection

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# Disclosures- None

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# USMLE Transition: Resident Assessment and Selection

## Agenda

1. Evolution of USMLE as a screening tool and transition to P/F

2. Resident Perspective

3. Program Director Perspective

4. Challenges during COVID and future approaches

5. Open Discussion

# USMLE Transition: Resident Assessment and Selection

USMLE: How did we get here?

1992: USMLE inception co-sponsored by NBME and FSMB to evaluate physicians for state licensure

1999: Computerized exam

Current format:

Step 1: Foundational Curricula, during MS2, 3 digit score

Step 2: Clinical knowledge (CK), during MS 4, 3 digit score

Step 2: Clinical Skills (started in 2004), during MS 4, P/F

Step 3: A Foundations of Independent Practice PGY 1-3

       B Advanced Clinical Management PGY 1-3

# USMLE Transition: Resident Assessment and Selection

- Prior to USMLE, numerical scores were reported on all NBME exams since 1916. This was reviewed and upheld in 1989 and 1997

- CEUP (Committee to Evaluate USMLE Program) considered conversion to P/F in 2008 but eventually maintained 3 digit score

Pros: Exams are standardized and reliable

    Lack of uniformity and potential bias of alternative assessment parameters

Cons: "USMLE" mania

    "Teaching to the test",  focus away from relevant curriculum

    Increasing student anxiety

    Inherent bias against diversity in recruitment

# USMLE Transition: Resident Assessment and Selection

## DISCUSSION POINTS

Why have PD's increasingly relied on Step 1 for candidate selection?

1. Is a key differentiator providing objective data.

2. Lack of uniformity in candidate evaluation by medical schools (Class rank, grades, MSPE, etc)

3. Application "inflation"

4. Practical: USMLE scores are the only nondemographic continuous variable screenable by filter on ERAS.

# USMLE Transition: Resident Assessment and Selection

## DISCUSSION POINTS

Although numerical Step 1 scores are not the only factor used by PDs in considering resident candidacy, consensus has been developing that a high stakes exam intended for state licensing is no longer appropriate for holistic evaluation of resident candidates or equitable distribution of resident positions.

Further concerns include decreased medical student well-being, shifting of the medical school towards a parallel curriculum, and reduced diversity in both resident candidates and eventual clinical care.

# Pros/Cons to Maintaining 3-digit Score Reporting

| PROS | CONS |
|---|---|
| USMLE offers highly reliable, objective assessment of relevant competencies. A national standard. | A passing score on USMLE demonstrates minimum competency. Pass/Fail reporting suffices for this. |
| Mitigates the reliability challenges of some medical school assessments | Licensure requires only a Pass/Fail outcome |
| May stimulate student preparation more than a Pass/Fail outcome | Focus on numeric scores negatively impacts student well-being |
| Incremental numeric USMLE performance correlates with other valued measures e.g., specialty board certification, state board disciplinary actions, improved practice | Standardized test scores best predict other standardized test scores (vs. clinical performance) |
| Offers a "level playing field" for all examinees, including those from international and new or lesser known schools | Maintaining 3-digit score reporting may limit diversity within various specialty programs |
| If no USMLE numeric score exists, and the demand for a national assessment remains, what fills the gap? | Maintaining 3-digit score reporting has an opportunity cost due to students' heavy focus on maximizing USMLE scores (e.g., less time for research, volunteerism) |

# USMLE Transition: Resident Assessment and Selection

Discussion culminated in the Invitational Conference on USMLE Scoring (InCUS) in March 2019, convened by AAMC, AMA, ECFMG, FSMB, and NBME. The purpose was to explore the foregoing issues and to make recommendations specific to USMLE score reporting and the transition from UME to GME.

A major takeaway of InCUS was that Step 1 was no longer serving the stakeholders in what had become a flawed transition from UME to GME. After public comment, the recommendation was to transition USMLE Step 1 to Pass/Fail after January 2022. However, the general consensus was although changes were needed, USMLE alone would not be the only component requiring a "fix".

# USMLE Transition: Resident Assessment and Selection

## USMLE P/F: Challenges to the Program Director

Elimination of an objective evaluation tool

Absence of other hard data to predict resident performance

Other tools including MSPE, medical school reputation and preclinical grades, clinical course grades, personal statements, and letters of reference can be highly variable, subjective, and institution-specific.

Increased burden in reviewing applications, potential resulting in less in depth individual review, to the disadvantage of applicants

COVID-19: No inperson away rotations or interviews

# USMLE Transition: Resident Assessment and Selection

USMLE P/F:   Challenges to the applicants

1. What will the PD use instead of step 1 scores? Step 2?

2. How will students distinguish themselves for competitive specialties?

3. What will effect be if students apply from a newer or less well-known med school, or a non-US med school?
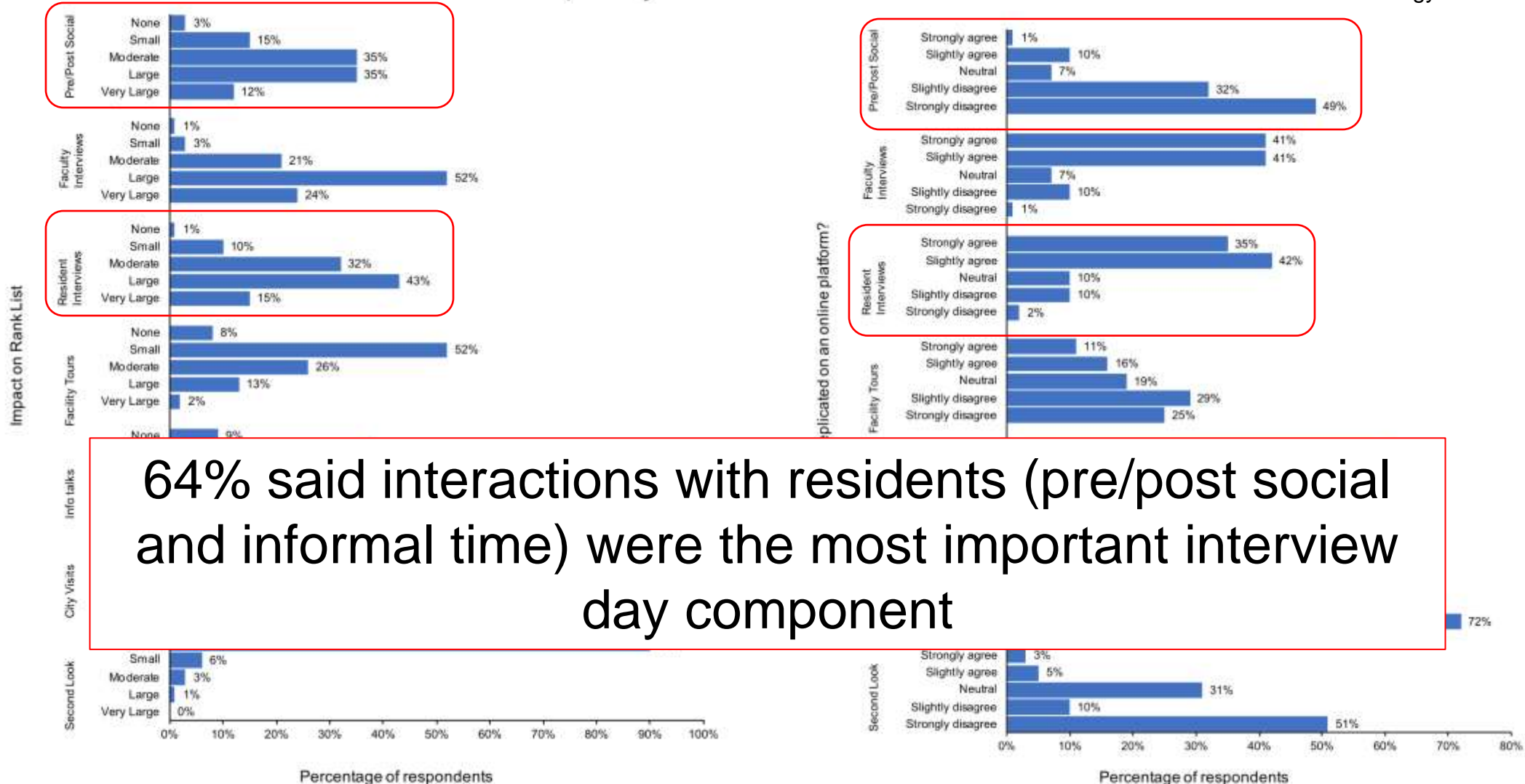
# USMLE Transition: Resident Perspective

- Importance of resident input in residency applicant selection

  - No published data looking at impact


- Residents spend the most time with co-residents

  - Hypothesize input builds resident cohort morale and builds a team that facilitates environment of learning, collegiality and sound patient care

# USMLE Transition: Resident Perspective

**Urology Residency Applications in the COVID-19 Era**

Alexander P. Kenigsberg, Roger K. Khouri Jr., Amy Kuprasertkul, Daniel Wong, Vishnu Ganesan, and Gary E. Lemack

64% said interactions with residents (pre/post social and informal time) were the most important interview day component

# USMLE Transition: Resident Perspective

**What makes a "great resident": the resident perspective**

Venu M. Nemani · Caroline Park · Danyal H. Nawabi    Curr Rev Musculoskelet Med 2014

- Highlighted qualities defining a 'great' resident
  - Trustworthy, efficient, self-directed learners, detail-oriented, professional, personable and academically oriented

- Overall 'fit' among the resident cohort

- How residents assess qualities of 'fitness' of an applicant
  - Research projects
  - Medical student rotations/electives
  - Sub-internships and visiting sub-interns
  - Interview day (pre/post social, resident interviews)
    - communication and professionalism, point out "red flags"

# USMLE Transition: Selection Factors

- Mixed data on Step 1 predicting resident success. Are there other selection criteria that predict performance better?

- Varied heterogenous studies
  - Difference in the definition of resident performance or success
  - Performance assessed with objective (in service exams, boards, research productivity) and/or subjective metrics (faculty evaluations or ranking)

# USMLE Transition: Selection Factors

**Which Applicant Factors Predict Success in Emergency Medicine Training Programs? A Scoping Review**

| Publication | Type [a] | USMLE/COMLEX (Step 1) | USMLE/COMLEX (Step 2) | SLOE/LOR | MSPE | Interview | Medical School Attended | Core Clerkship Grades | EM Rotation/Audition Elective | AOA/GHHS | NRMP Rank | OSCE | Other [b] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bhat, 2015 | p | ● | ○ | ○● | ○ | ● | ○ | ○ | ● | ○● | ○ | | ● |
| Bohrer-Clancy, 2018 | p | ◆ | ◇ | ◆ | | | | | | | | | ◆ |
| Burkhardt, 2015 | p | ● | | ○ | | ●○ | ● | | ○ | | ○ | | |
| Caffery, 2016 | p | ▲ | ▲ | | | | | | | | | | |
| Harmouche, 2017 | p | ▲ | ▲ | | | | | | | | | | |
| Hayden, 2005 [c] | p | ■ | ■ | ■ | ■ | □ | ■ | | | | | | ■ |
| Hiller, 2015 | p | ▲ | ▲ | | | | | | | | | | |
| Li, 2014 | p | ▲ | ▲ | | | | | | | | | | |
| Schaider, 1997 | p | | | ■ | | | | | | | | | |
| Sklar, 1996 [c] | p | | | | | | | | | | ■ | | |
| Thaxton, 2018 | p | | | | | ◆ | | | | | | | |
| Thundiyil, 2010 | p | ▲ | ▲ | | | | | | | | | | |
| Van Meter, 2017 | p | □▲ | | | | | | | | | ■▲ | | |
| Wagner, 2016 | p | □ | | | | | | | ■ | | □ | | |
| Wallenstein, 2010 | p | | | | | | | | | | | ● | |
| Trail, 2014 | u | □ | ■ | □ | ■ | □ | □ | ■ | □ | ■ | | | □ |
| Ahn, 2009 | a | | | | | | | | | ▲ | | | |
| Ambroz, 2002 | a | ▲ | ▲ | | | | | | | | | | |
| Boudreaux, 2002 | a | ○ | | | | | | | | | | | |
| Bruno, 1999 | a | ▲■ | | | | | | | | | △■ | | |
| Green, 2014 | a | | ▲ | | | | | | | | | | |
| Nelson, 2017 | a | ▲ | △▲ | | | | | | | | | | |
| Perret, 2001 | a | ▲ | | | | | | | | | △ | | |
| Pierce, 2013 | a | ▲ | ▲ | | | | | | | | | | |
| Sajadi-Ernazarova, 2018 | a | □ | □ | | | | | | | | | | |
| Silverman, 2009 | a | | | | ■ | | | | | | | | |
| Tyndall, 2001 | a | ▲ | ▲ | | | | | | | | | | |

Yang et al., AEM
Educ Train 2020

# USMLE Transition: Selection Factors

Assessment of which selection criteria predict resident performance varies even within specialties

**Associations between Otolaryngology Applicant Characteristics and Future Performance in Residency or Practice: A Systematic Review**

Sarah N. Bowe, MD[1], Adrienne M. Laury, MD[3], and Stacey T. Gray, MD[1,2]

- Reviewed 6 retrospective articles

- Few criteria correlated with residency success, some contradictory
  - USMLE (3): 2 no assoc. w/ success, 1 a/w in-service scores
  - AOA (3): 2 no assoc. w/ success, 1 a/w post-residency academic appt
  - MSPE (2): 1 no assoc. w/ faculty ranking, 1 H surgery core = high performance
  - LOR (1): a/w with post-residency academic appt and 1st tertile rank
  - Interviews (2): 1 weakly a/w faculty rank

- Inconsistent findings and high risk of bias

# USMLE Transition: Resident Assessment and Selection
# What do PDs Use?

Factors in Selecting Applicants to Interview[a]

| Aspect of Application | Percentage of Residency Directors Who Use Aspect | Importance (Out of 5) |
|---|---|---|
| USMLE Step 1/COMLEX Level 1 score | 94 | 4.1 |
| Letters of recommendation in the specialty | 86 | 4.2 |
| MSPE | 81 | 4.0 |
| USMLE Step 2 CK/ COMLEX Level 2 CE score | 80 | 4.0 |
| Personal statement | 78 | 3.7 |
| Grades in required clerkships | 76 | 4.1 |
| Any failed USMLE/ COMLEX | 70 | 4.5 |
| Class ranking/quartile | 70 | 3.9 |
| Perceived commitment to specialty | 69 | 4.3 |
| Grades in clerkship in desired specialty | 67 | 4.3 |
| Evidence of professionalism and ethics | 65 | 4.5 |
| Applicant was flagged with Match violation | 37 | 4.8 |

## A Narrative Review of the Evidence Supporting Factors Used by Residency Program Directors to Select Applicants for Interviews

Nicholas D. Hartman, MD, MPH
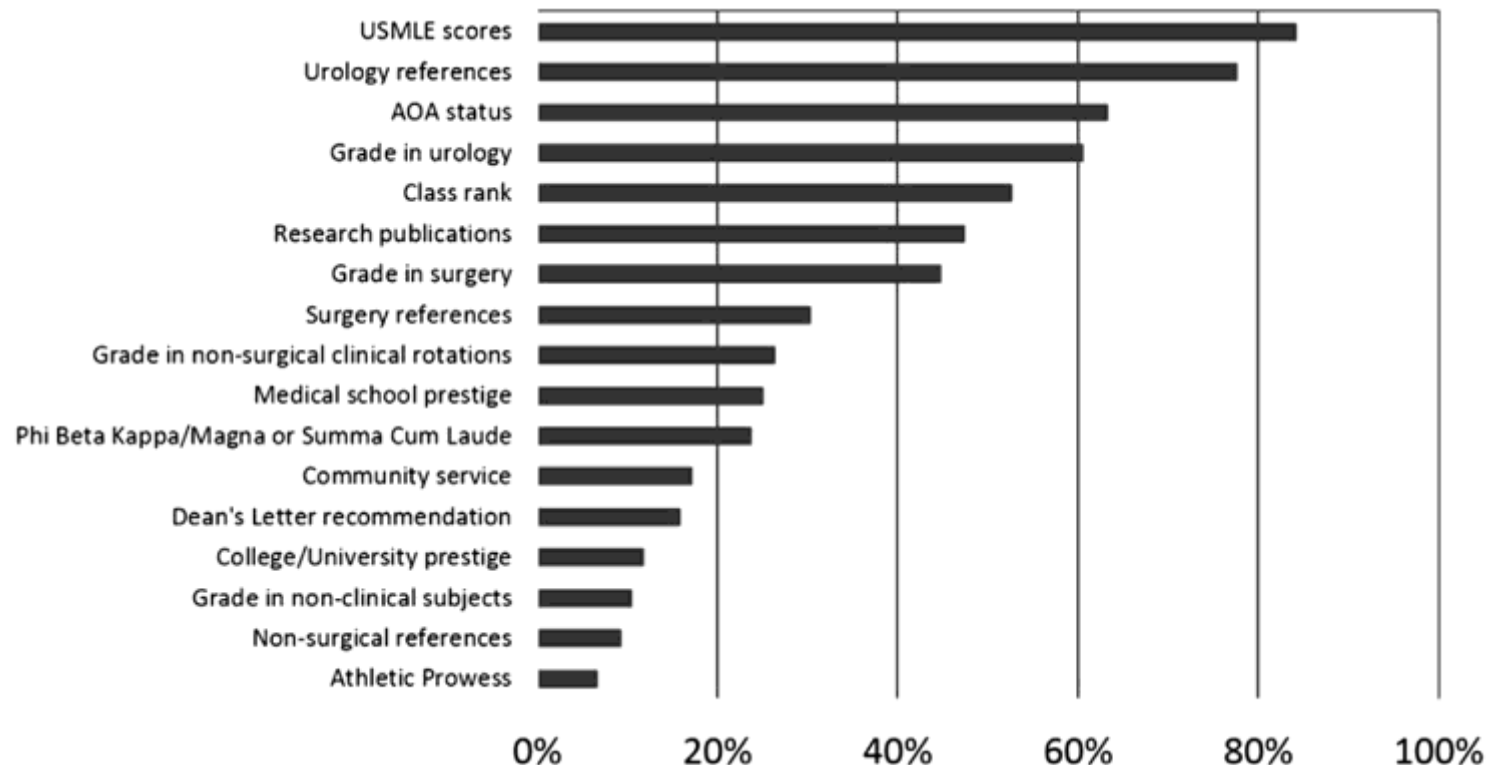Cedric W. Lefebvre, MD
David E. Manthey, MD

# USMLE Transition: Resident Assessment and Selection

## Program Directors' Criteria for Selection Into Urology Residency

**Steven J. Weissbart, Jeffrey A. Stock, and Alan J. Wein**

**Figure 1.** Percentage of program directors who citied the factor as extremely important or higher (score $\geq 8$ on questionnaire). AOA, Alpha Omega Alpha.

# USMLE Transition: Resident Assessment and Selection

**Beyond the United States Medical Licensing Examination Score: Assessing Competence for Entering Residency**

Carrie L. Radabaugh, MPP, Richard E. Hawkins, MD, Catherine M. Welcher, George C. Mejicano, MD, MS, Alejandro Aparicio, MD, Lynne M. Kirk, MD, and Susan E. Skochelak, MD, MPH
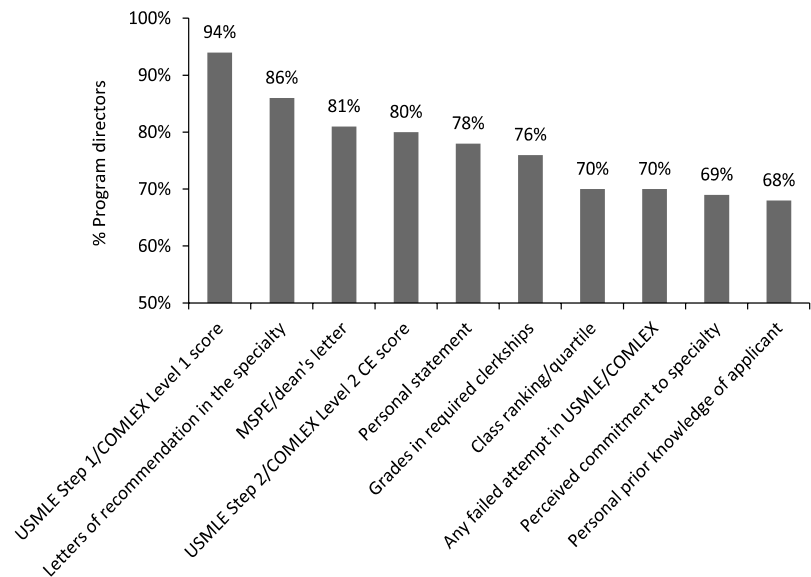


**Figure 1** Factors that residency program directors commonly use to select applicants for interview.[5] Abbreviations: USMLE indicates United States Medical Licensing Examination; COMLEX, Comprehensive Osteopathic Medical Licensing Examination; MSPE, medical student performance evaluation; CE, clinical examination.
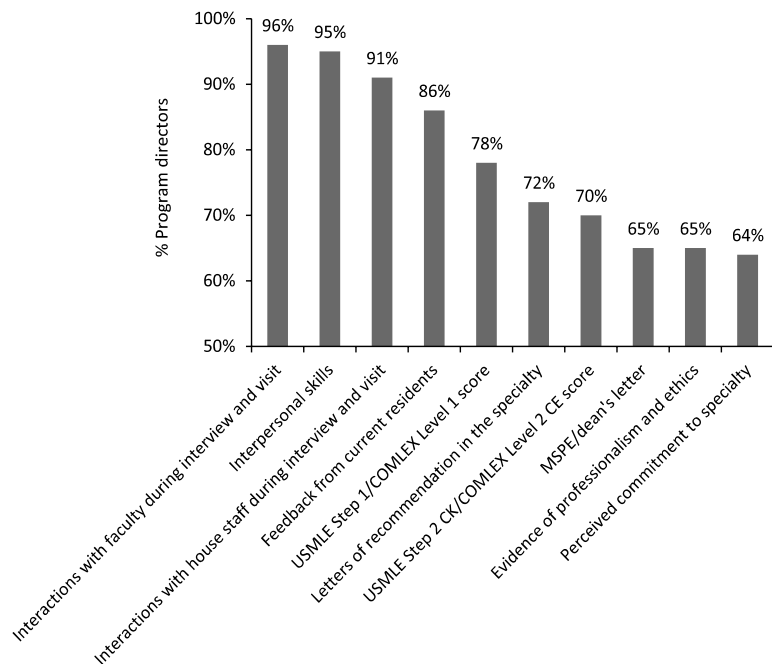


**Figure 2** Factors that residency program directors commonly use to rank candidates for the Match.[5] Abbreviations: USMLE indicates United States Medical Licensing Examination; COMLEX, Comprehensive Osteopathic Medical Licensing Examination; MSPE, medical student performance evaluation; CE, clinical examination.

# USMLE Transition: Resident Assessment and Selection

Numerical Versus Pass/Fail Scoring on the USMLE: What Do Medical Students and Residents Want and Why?

Catherine E. Lewis, MD
Jonathan R. Hiatt, MD
LuAnn Wilkerson, EdD
Areti Tillou, MD
Neil H. Parker, MD
O. Joe Hines, MD

| TABLE 4 | SURVEY OPINIONS OF MEDICAL STUDENTS AND RESIDENTS REGARDING RANK OF IMPORTANCE OF RESIDENCY APPLICATION ITEMS (1 IS MOST IMPORTANT AND 8 IS LEAST IMPORTANT) | | | |
|---|---|---|---|---|
| | **Item Rank (Average Rank)** | | | |
| **Application Item** | **All** | **MS3** | **MS4** | **Resident** |
| Recommendation letters | 1 (3.12) | 2 (3.48) | 2 (3.07) | 2 (3.04) |
| USMLE scores | 2 (3.15) | 1 (2.61) | 1 (2.95) | 3 (3.33) |
| Dean's letter | 3 (3.19) | 3 (3.61) | 3 (3.75) | 1 (2.96) |
| Medical school prestige | 4 (4.33) | 4 (4.08) | 4 (4.18) | 4 (4.42) |
| Alpha Omega Alpha membership | 5 (4.61) | 5 (4.81) | 5 (4.84) | 5 (4.51) |
| Research experience | 6 (5.36) | 6 (5.05) | 6 (5.02) | 6 (5.51) |
| Personal statement | 7 (5.89) | 7 (6.00) | 7 (5.93) | 7 (5.85) |
| Extracurricular activities | 8 (6.35) | 8 (6.36) | 8 (6.26) | 8 (6.37) |

Abbreviations: MS3s, third-year medical students; MS4s, fourth-year medical students; USMLE, United States Medical Licensing Examination.

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Journal of Graduate Medical Education, March 2011
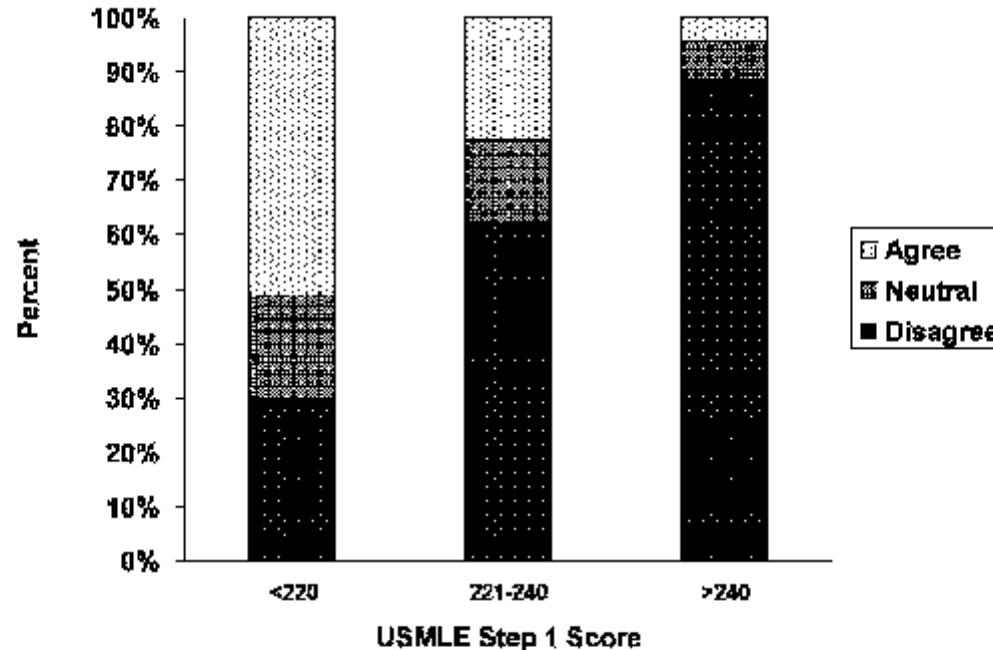


**FIGURE** Medical Student and Resident Agreement With United States Medical Licensing Examination Step 1 Pass/Fail Scoring by Reported Step 1 Score

Univariate $x^2$ analysis demonstrated that respondents with Step 1 scores above 240 were more likely to prefer numerical scoring compared with respondents with scores between 220 and 240 and those with scores below 220 (88% versus 63% versus 29%; P, .001)

# USMLE Transition:
# How Should We Be Selecting Residents?

The association between United States Medical Licensing Examination scores and clinical performance in medical students
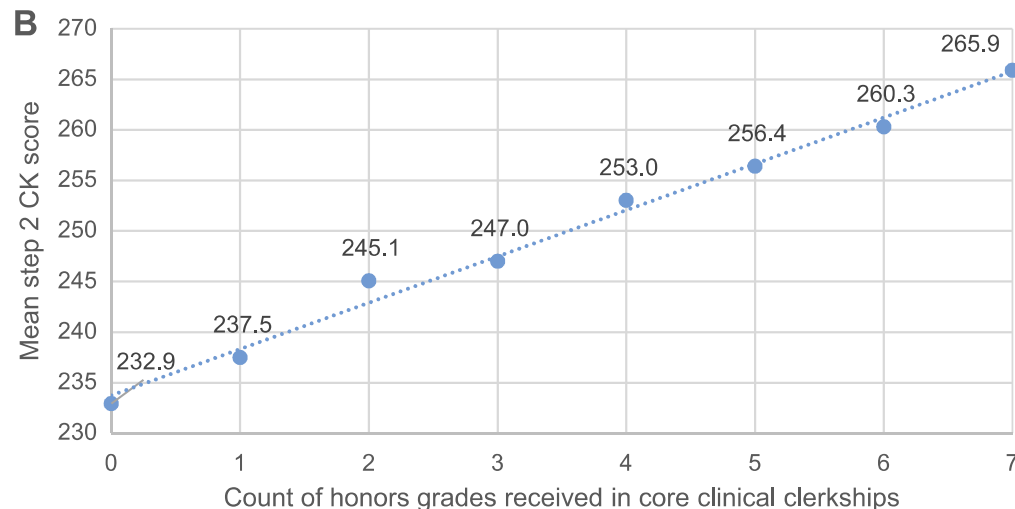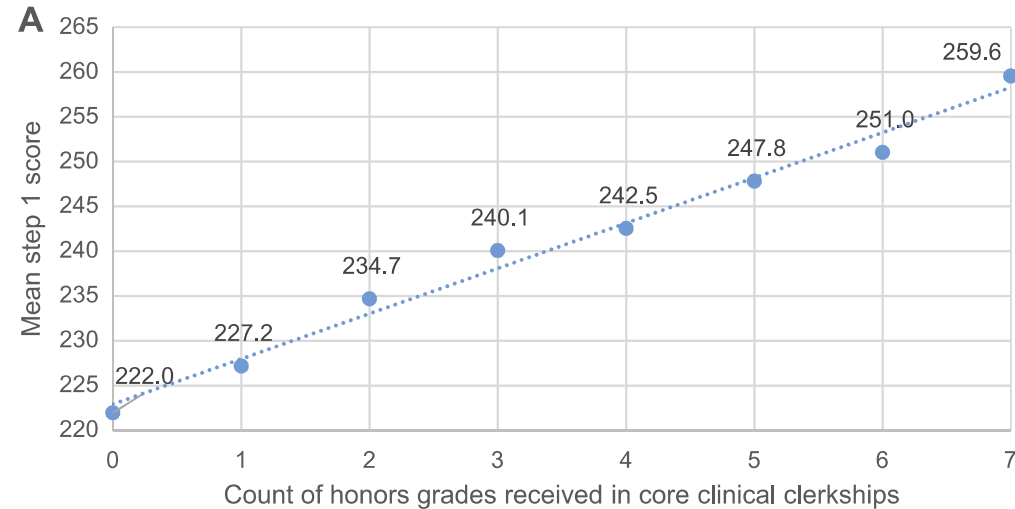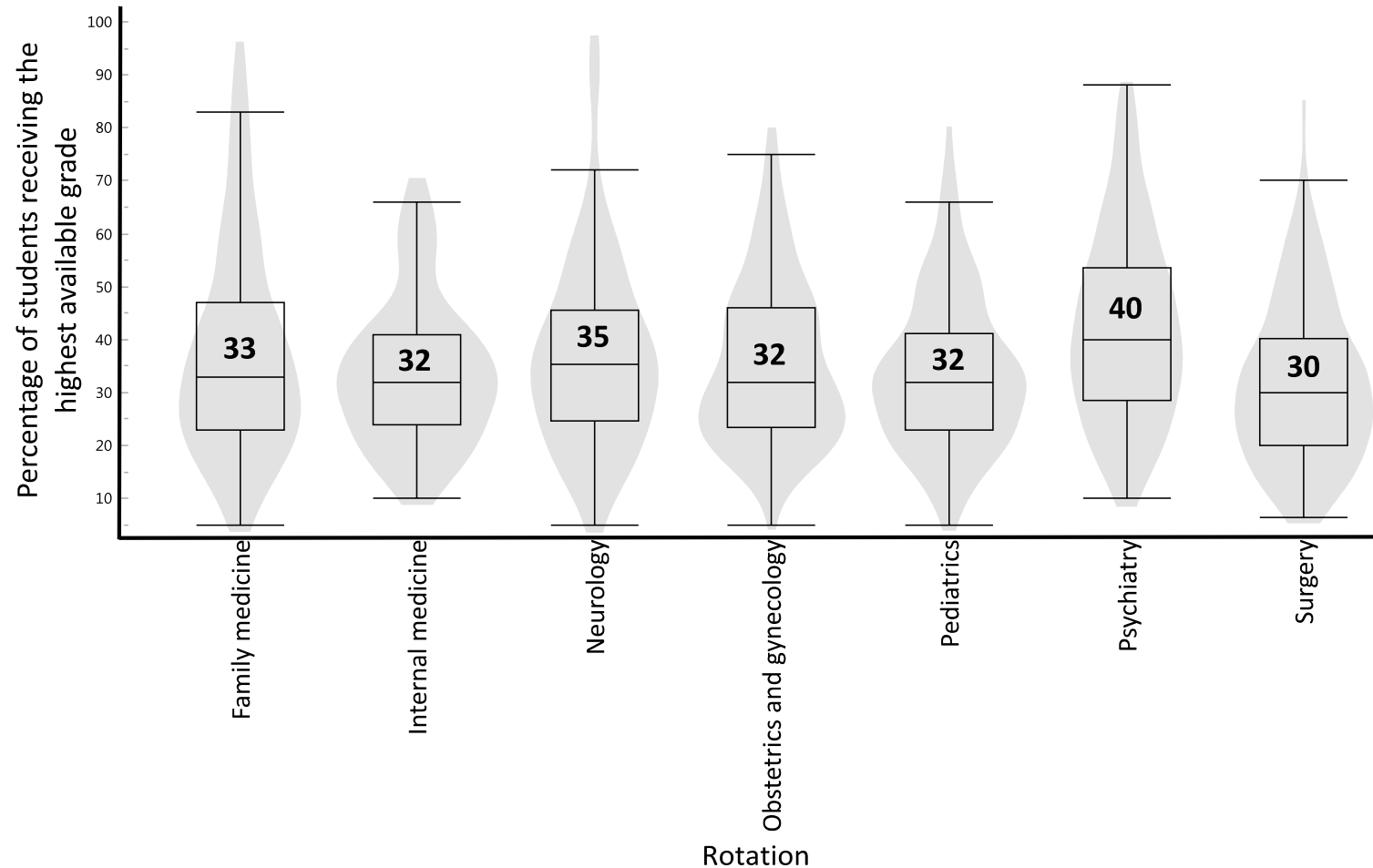
# USMLE Transition: Resident Assessment and Selection

**Evaluation of Medical School Grading Variability in the United States: Are All Honors the Same?**

Mary E. Westerman, MD, Chelsea Boe, MD, Raevti Bole, MD, Norman S. Turner, MD, Steven H. Rose, MD, Matthew T. Gettman, MD, and R. Houston Thompson, MD

**Figure 1** Box plot and contour representation showing grade distributions by rotation for students at 137 U.S. MD-granting medical schools, from a study of medical school grading variability in residency applications to a single institution, 2016–2017. Medians and interquartile ranges are denoted by the boxes, and median value is included. Shaded area represents the distribution of grades. *P* value < .001, Kruskal-Wallis test.

## Evaluation of Medical School Grading Variability in the United States: Are All Honors the Same?

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Table 3

**Adjectives Used by 61 Schools to Rank Students in the Top 5 Ranks, From a Study of Medical School Grading Variability in Residency Applications to a Single Institution, 2016–2017[a]**

| | No. (%) rank 1 (n = 61) | No. (%) rank 2 (n = 61) | No. (%) rank 3 (n = 61) | No. (%) rank 4 (n = 60) | No. (%) rank 5 (n = 32) |
|---|---|---|---|---|---|
| **Rank 1** | | | | | |
| Distinguished | 3 (4.9) | — | — | — | — |
| Distinction | 1 (1.6) | — | — | — | — |
| Enthusiastically recommend | 2 (3.3) | — | — | — | — |
| Exceptional | 12 (19.7) | — | — | — | — |
| Exemplary | 2 (3.3) | 1 (1.7) | — | — | — |
| Highest recommendation | 1 (1.6) | — | — | — | — |
| Outstanding | 35 (57.4) | 16 (26) | 1 (1.7) | — | — |
| Superior | 5 (8.2) | 4 (6.6) | 1 (1.7) | — | — |
| **Rank 2** | | | | | |
| Excellent | — | 32 (52.5) | 16 (26.2) | 1 (1.7) | — |
| Excellent/outstanding | — | 3 (4.9) | — | — | — |
| Highly recommend | — | 2 (3.2) | — | — | — |
| Strongly recommend | — | 2 (4.4) | — | — | — |
| Very good | — | 1 (1.7) | 33 (54.1) | 15 (25.0) | 3 (9.4) |
| **Rank 3** | | | | | |
| Good | — | — | 3 (4.9) | 30 (50.0) | 12 (37.5) |
| Meritorious recommendation | — | — | 1 (1.7) | — | — |
| Recommend with confidence | — | — | 2 (3.3) | — | — |
| Recommend without reservation | — | — | 1 (1.7) | — | — |
| Top of excellent | — | — | 1 (1.7) | — | — |
| Very strong | — | — | 2 (3.3) | — | — |

# USMLE Transition: Resident Assessment and Selection

## Does Residency Selection Criteria Predict Performance in Orthopaedic Surgery Residency?

Tina Raman MD, Rami George Alrabaa BS, Amit Sood MD,
Paul Maloof MD, Joseph Benevenia MD, Wayne Berberian MD

**Table 1.** Preresidency criteria and their correlations with American Board of Orthopaedic Surgery Part I scores

| Preresidency criteria | Correlation coefficient (r) | p value* |
|---|---|---|
| USMLE Step 2 score | 0.55 | **< 0.001** |
| Number of honors in clerkships | 0.45 | **< 0.001** |
| MCAT score | 0.36 | **0.008** |
| USMLE Step 1 score | 0.13 | 0.37 |
| AOA membership | 0.078 | 0.57 |
| Rotation at our institution | −0.14 | 0.06 |
| Number of away rotations | 0.083 | 0.53 |
| Number of letters of recommendation | −0.023 | 0.86 |
| Number of publications | −0.004 | 0.98 |

\* The bold p values are < 0.05; USMLE = United States Medical Licensing Examination; MCAT = Medical College Admission Test; AOA = Alpha Omega Alpha.

**Table 2.** Preresidency criteria and their correlations with Orthopaedic In-Training Exam scores

| Preresidency criteria | Correlation coefficient (r) | p value* |
|---|---|---|
| USMLE Step 2 score | 0.29 | **0.02** |
| Number of honors in clerkships | 0.35 | **0.009** |
| MCAT score | 0.04 | 0.78 |
| USMLE Step 1 score | 0.10 | 0.43 |
| AOA membership | 0.19 | 0.16 |
| Rotation at our institution | −0.25 | 0.06 |
| Number of away rotations | 0.10 | 0.45 |
| Number of letters of recommendation | 0.23 | 0.08 |
| Number of publications | 0.09 | 0.49 |

\* The bold p values are < 0.05; USMLE = United States Medical Licensing Examination; MCAT = Medical College Admission Test; AOA = Alpha Omega Alpha.

# USMLE Transition: Resident Assessment and Selection

## Impact on Diversity in Recruitment: USMLE and URiM

**TABLE 1**    Characteristics of residency applicants by self-reported race/ethnicity

| | Race/ethnicity | | | | | | |
|---|---|---|---|---|---|---|---|
| | **All** | **White** | **Black** | **Hispanic** | **Asian** | **Other** | **P-value[a]** |
| Mean USMLE step 1 (SD) | 222.1 (19.4) | 225.1 (19.9) | 212.7 (16.0) | 216.3 (19.1) | 222.9 (19.1) | 220.0 (19.3) | <.01 |
| LEP (%) | 7.4% | 7.9% | 9.0% | 6.4% | 7.2% | 7.8% | .24 |
| Male (%) | 50.2 | 52.6 | 39.4 | 46.6 | 49.4 | 59.7 | <.01 |
| Median age | 27 | 27 | 29 | 28 | 27 | 28 | <.01 |
| International medical school (%) | 67.6 | 51.8 | 61.0 | 66.3 | 75.7 | 74.9 | <.01 |
| AOA (%) | 2.4 | 5.8 | 0.1 | 1.8 | 1.3 | 1.5 | <.01 |

| | Race/ethnicity category | | | | | |
|---|---|---|---|---|---|---|
| | **White** | **Black** | **Hispanic** | **Asian** | **Other** | **P-value†** |
| IM site 1 Mean (SD) | 229.1 (20.0) n = 801 | 215.1 (16.3) n = 178 | 218.8 (19.2) n = 224 | 226.4 (18.6) n = 1624 | 221.8 (18.7) n = 165 | <.01 |
| IM site 2 mean (SD) | 230.1 (18.9) n = 868 | 218.1 (15.9) n = 171 | 222.8 (19.1) n = 248 | 228.3 (17.8) n = 1831 | 226.6 (18.1) n = 201 | <.01 |
| OB/GYN mean (SD) | 218.0 (18.0) n = 325 | 210.5 (14.6) n = 162 | 209.3 (15.4) n = 111 | 215.0 (17.7) n = 229 | 209.8 (17.5) n = 59 | <.01 |
| Pediatrics mean (SD) | 222.0 (18.7) n = 427 | 209.7 (15.8) n = 112 | 211.4 (18.3) n = 142 | 217.3 (17.5) n = 615 | 216.7 (19.8) n = 61 | <.01 |
| Psychiatry mean (SD) | 212.0 (16.8) n = 286 | 205.9 (14.2) n = 99 | 208.2 (16.3) n = 80 | 208.6 (15.5) n = 707 | 209.4 (16.9) n = 76 | .01 |

**The impact of United States Medical Licensing Exam (USMLE) step 1 cutoff scores on recruitment of underrepresented minorities in medicine: A retrospective cross-sectional study**

*Health Sci Rep.* 2020;**3**:e2161.

# USMLE Transition: Resident Assessment and Selection

Impact on Diversity in Recruitment: USMLE and URiM

**TABLE 4** Percentage of applicants with USMLE step 1 score above the cutoff score

| Cutoff Score | All | White | Black | Hispanic | Asian | Other | *P*-value† |
|---|---|---|---|---|---|---|---|
| 205 | 78.1 | 81.0 | 66.3 | 68.0 | 80.1 | 75.1 | <.01 |
| 210 | 70.5 | 74.5 | 54.9 | 58.4 | 72.5 | 68.2 | <.01 |
| 215 | 62.8 | 68.1 | 40.9 | 48.9 | 65.9 | 57.8 | <.01 |
| 220 | 54.5 | 60.3 | 31.4 | 40.4 | 57.6 | 49.5 | <.01 |
| 225 | 46.1 | 53.5 | 22.7 | 31.9 | 48.4 | 41.6 | <.01 |
| 230 | 37.2 | 44.4 | 15.7 | 25.2 | 38.6 | 33.1 | <.01 |
| 235 | 28.5 | 35.0 | 10.1 | 19.3 | 29.3 | 25.3 | <.01 |

**The impact of United States Medical Licensing Exam (USMLE) step 1 cutoff scores on recruitment of underrepresented minorities in medicine: A retrospective cross-sectional study** *Health Sci Rep.* 2020;**3**:e2161.

# USMLE Transition: Resident Assessment and Selection

Challenges to the PD:

Notwithstanding MSPE and other evaluation tools, critical factors such as professionalism, accountability, social responsibility, team performance, peer interactions, and technical skills cannot be adequately assessed from an electronic application.

For many candidates, the most important determinants of future resident performance are observed during clinical rotations in the chosen subspecialty, either at the home school or as away rotations. Unfortunately, most students are faced with the challenge of a limited number of clinical elective rotations, and hence exposure to potential residency programs.

# USMLE Transition: Resident Assessment and Selection

**Poll Everywhere:**

Question 1

With the transition of Step 1 to P/F, what assessment tool(s) will you now primarily rely on for resident selection:

1. Step 2
2. Letters of reference
3. Personal Statement
4. Preclinical grades
5. Clinical grades
6. MSPE
7. AOA status

# USMLE Transition: Resident Assessment and Selection

Additional Tools for Assessment:

Clinical skills assessments based on specialty

> e.g. Spatial coordination, technical skill assessment for surgical specialties

Crowdsourcing of clinical skills, mock patient encounters, technical skills

Nontraditional assessments:

> Jefferson Empathy Scale
>
> Grit Scale (Duckworth)
>
> Emotional Intelligence and Situational Judgment assessments
>
> Predictors of Self Control, Wellness, and Conscientiousness

# USMLE Transition: Resident Assessment and Selection

Objective Predictors of Grit, Self-Control, and Conscientiousness in Orthopaedic Surgery Residency Applicants  Camp et al.

**Table 1**

**Comparison of Grit Scores Based on Different Applicant Characteristics**

| Variable | N | % | Mean | SD | Range | Median | MD | 95% CI | P Value |
|---|---|---|---|---|---|---|---|---|---|
| Overall | 455 | 100.0 | 4.12 | ±0.38 | 2.50-4.92 | 4.17 | — | — | — |
| Sex | | | | | | | | | |
| Female | 92 | 20.2 | 4.20 | ±0.35 | 3.33-4.83 | 4.25 | 0.09 | 0.01 to 0.18 | *0.044* |
| Male | 363 | 79.8 | 4.11 | ±0.39 | 2.50-4.92 | 4.17 | — | — | — |
| Varsity college sports | | | | | | | | | <*0.001* |
| Yes | 171 | 37.6 | 4.21 | ±0.39 | 2.67-4.92 | 4.25 | 0.13 | 0.06 to 0.20 | — |
| No | 284 | 62.4 | 4.08 | ±0.37 | 2.50-4.83 | 4.17 | — | — | — |
| AOA status | | | | | | | | | 0.166 |
| Yes | 167 | 40.5 | 4.09 | ±0.39 | 2.58-4.92 | 4.17 | 0.05 | −0.02 to 0.13 | — |
| No | 245 | 59.5 | 4.14 | ±0.38 | 2.50-4.92 | 4.17 | — | — | — |
| Military experience | | | | | | | | | 0.957 |
| Yes | 17 | 3.7 | 4.12 | ±0.50 | 3.00-4.83 | 4.25 | 0.01 | −0.17 to 0.19 | — |
| No | 438 | 96.3 | 4.13 | ±0.37 | 2.50-4.92 | 4.17 | — | — | — |

# USMLE Transition: Resident Assessment and Selection

Objective Predictors of Grit, Self-Control, and Conscientiousness in Orthopaedic Surgery Residency Applicants

**Results:** Alpha Omega Alpha status, additional degrees, and number of publications did not predict any of the studied attributes. Grit increased with age ($P < 0.001$) but decreased with increasing board scores ($P = 0.004$). Former collegiate athletes demonstrated greater grit ($P < 0.001$), consistency of interest ($P = 0.007$), perseverance ($P = 0.006$), and self-control ($P = 0.019$). Female applicants demonstrated more grit ($P = 0.044$), consistency of interest ($P = 0.003$), and conscientiousness ($P = 0.029$) than males.

# USMLE Transition: Resident Assessment and Selection

**Poll Everywhere:**

Question 2.

What positive changes could result from Step 1 transitioning to P/F:

1. More applications from a diverse candidate pool
2. More focus on holistic evaluation
3. Less medical student anxiety about a high stakes exam, focus on more competency-based learning
4. Improved medical school curriculum
5. Improved patient care

# USMLE Transition: Resident Assessment and Selection

COVID-19

The transition to P/F comes on the heels of a pandemic when in person rotations have been cancelled and evaluations of outside students rendered by participation in virtual rotations and conferences.

PDs often use USMLE part 1 as a surrogate of clinical performance for students that have not rotated with them.

As a result it is likely that in the last year, PD reliance on Step 1 score as an assessment tool has been magnified.

# USMLE Transition: Resident Assessment and Selection

**Poll Everywhere:**

Question 3:

What is the greatest challenge you have faced for residency selection during the pandemic:

1. Absence of in person rotations
2. Absence in person interviews
3. Assessing letters of reference from virtual rotations
4. Interviewing candidates by Zoom

# USMLE Transition: Resident Assessment and Selection

Challenges for the PD: Potential Solutions for Group Discussion

Standardized Candidate Assessment Tools

Standardized MSPE, Rotation Evaluations, Grades, LOR, and Transcripts

Increased Med School transparency on applicant strengths, professionalism, performance

PDs develop mission-based holistic criteria for application review

ERAS modification to permit extraction of information for holistic review

Early application cycle to demonstrate program interest

# THANK YOU and HAPPY NEW YEAR