Supplemental digital content for Hamstra SJ, Cuddy MM, Jurich D, et al. Exploring the association between USMLE scores and ACGME milestone ratings: A validity study using national data from emergency medicine. Acad Med.

Supplemental Digital Appendix 3

Detailed Instructions for the Subject Matter Experts in the Rating Process

Correlation Matrix for Emergency Medicine (EM) Milestones Sub-Competencies and the United States Medical Licensing Examination (USMLE) Content

Purpose:

We are asking experts with content knowledge of EM Milestones and USMLE to provide your opinion about substantive associations between the content included in EM Milestones and USMLE exams. To help us explore this in more depth, please complete the attached Excel spreadsheet as follows.

Task:

To determine *a priori* predictions about which specific EM Milestones sub-competencies might substantively relate to the content covered in USMLE Step 1, Step 2 Clinical Knowledge (CK), and Step 2 Clinical Science (CS).

EM Milestones and USMLE Steps:

1. EM Milestones sub-competencies
2. USMLE Step 1
3. USMLE Step 2 CK
4. USMLE Step 2 CS (overall and subscales)

Instructions:

1. Please open the attached Excel spreadsheet, which should open automatically on the "Expected Correlations" worksheet. This sheet includes the EM Milestones sub-competencies in column A and the USMLE components in rows B-H listed across the top.
2. In each cell, enter a value ranging from 0 to 3 to indicate your opinion about how strongly you think each Milestones sub-competency is associated with each USMLE component.
   a. If you think there *is no* association, enter a 0.
   b. If you think there *is* an association, indicate its strength with a 1, 2, or 3, where,
      - 1 represents a slight correlation,
      - 2 represents a moderate correlation, and
      - 3 represents a strong correlation.
3. Please click on the "Sample" tab at the bottom of the Excel spreadsheet for an example including made-up data in the first column.

Thank you for your participation in this activity. With the information you provide, we will be able to significantly enhance the interpretations we can make in our research looking into the transition from UME to GME. Your name will be included in the Acknowledgments section of any publication resulting from this work.

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Let me know if you have any questions

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Supplemental Digital Appendix 4

Mean Subject Matter Experts' (SMEs) Expected Strength of Association Between USMLE Step Examinations and EM Milestone Ratings for All EM Sub-competencies, End of PGY-1

Rows are rank-ordered from highest to lowest in terms of SME ratings.

EM Sub-Competency	Expected Strength of Association (0-3 scale)[a]	
	Step 1	Step 2 CK
MK-01	2.14	2.43
PC-05	1.43	2.00
PC-04	1.00	1.57
PBLI-01	0.86	1.00
PC-02	0.71	1.00
SBP-01	0.71	0.86
PC-07	0.57	0.86
PC-11	0.57	0.57
PC-14	0.57	0.57
ICS-02	0.57	0.29
PC-01	0.43	1.43
PC-12	0.43	0.57
PC-10	0.43	0.43
PC-13	0.43	0.43
SBP-03	0.43	0.43
PROF-02	0.43	0.29
PC-06	0.29	0.43
PROF-01	0.29	0.43
PC-08	0.29	0.29
PC-09	0.29	0.29
SBP-02	0.29	0.29
ICS-01	0.29	0.29

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[a]SMEs were asked to use a scale of 0 to 3 to judge the expected strength of association for each combination of Step examination and EM Milestone sub-competency, with 0 representing "no expected correlation," 1 representing a "slight correlation," 2 representing a "moderate correlation," and 3 representing a "strong correlation". The grouping into the "strong" and "weak" expected associations was established by selecting the top and bottom 3 sub-competencies in terms of expected strength of association; since there were 6 sub-competencies tied for the weakest expected association, all of them were included in the "weakest" group. Note: PC-03 was excluded because of changes in the Milestones wording during the course of the study.