

Pass/Fail Step 1: Implications for a Foundational Sciences Department

Douglas Gould, PhD
Professor and Chair

Department of Foundational Medical Studies
Oakland University William Beaumont School of Medicine



No Disclosures

Agenda

1. Step 1

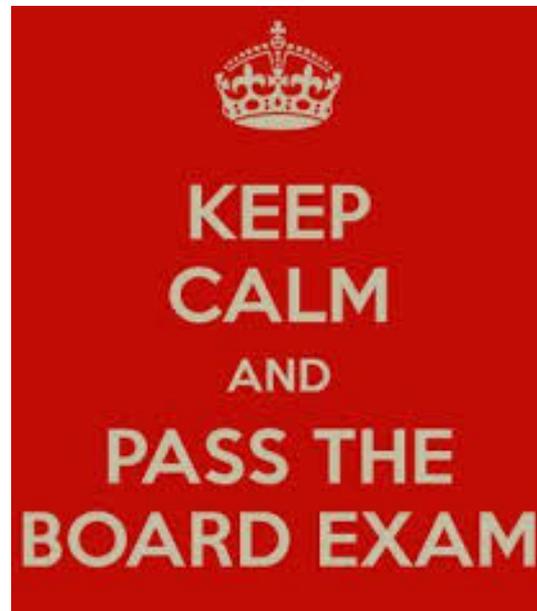
- Define/change;
- Potential impact;
- Challenges, addressing impact.

2. OUWB – Foundational Sciences

- Background;
- Research.
- COVID
- Change continues

Pass/Fail Step 1

- 3/2019 AAMC, AMA, ECFMG, FSMB and NBME met during the Invitational Conference on USMLE Scoring (InCUS) to examine pros/cons of USMLE Step 1 scoring
- Topics:
 - Consider recommendations specific to USMLE score reporting
 - System of transition from UME to GME – first step toward more holistic and reliable assessment of physicians and trainees



Step 1



- Required USMLE licensure exams
 - Step 2 (CK) and Step 3 will continue with 3 digit scoring mechanism
 - Step 1 scores (1-300; 194 pass; 229 ± 20 mean)
 - Step 2 (CS) will remain Pass/Fail
- Step 1
 - Began in 1992 – 3 digit scoring system
 - 8-hours, up to 280 questions
 - Typically taken after 2nd year of medical school
 - Tests foundational material, e.g. biochemistry and physiology

Pass/Fail Step 1

Results of InCUS:

- Current transition system is flawed:
 - ‘Step 1 Mania’: stressful, hypercompetitive – too much emphasis;
 - marginally relevant (lack of clinical focus);
 - far from original goal;
 - secondary score use (residency programs).

Mental health issues (50% of medical students experience symptoms of burnout)

Survey results (<https://pubmed.ncbi.nlm.nih.gov/29065026/>)

- Study during pre-clinical curriculum (skip lectures and classes), ramp up to 11 hours/day
- Rely on 3rd party board prep materials (ancillary curricula)

Beginning in 2022, Step 1 will be scored as Pass/Fail –no numeric score will be reported



All specialties
 % of Programs citing each factor and mean importance rating in
 selecting applicants to interview for residency

factor	%	ave
1. Step 1	94	4.1
2. Letters of Ref (3)	86	4.2
3. MSPE	81	4
4. Step 2 (CK) (1)	80	4
5. Personal statement	78	3.7
6. Grades in req. clerkships (2)	76	4.1
7. Failed USMLE attempts	70	4.5
14. AOA membership	60	3.9
16. 'other' life experience	58	3.8
17. Step 2 (CS)	56	4.2
26. Involvement in Research	41	3.7

National Resident Matching Program – Program Director Survey Results, 2018



Pass/Fail Step 1

Potential Outcomes

- Curricula:
 - Change to P/F too;
 - Re-orient to better prepare for Step 2 (CK);
 - Further de-emphasis on basic science education.
- Residency Program Directors use residents' scores to develop remediation plans to help residents pass certification exam – may be lost;
- Increased focus on 'other' scores - MCAT, Step 2 (CK), undergraduate;
- Increase effect of unconscious biases: international students, women, underrepresented minorities (higher scores = decreased diversity);
- Effect on new and lesser known medical schools:
 - student debt – pressure to attend top-ranked programs;
 - residency applications already skyrocketing: costly – benefits wealthy and those willing to incur more debt;
- Increased challenge to objectively produce required rank-order list.
- Holistic review.

Pass/Fail Step 1

Holistic Review - Dossier

- Community involvement
- Leadership
- Humanistic attributes
- Professionalism scores
- Interpersonal skills scores
- AOA

- Students focus on more clinical skills and pursue more *soft skills*;

- Personal statements and recommendation letters.

- Focus on Research.



OUWB



- Established in 2008;
- Fully accredited in 2015.

OUWB is a collaborative, diverse, inclusive and technologically advanced learning community, dedicated to enabling students to become skillful, ethical, and compassionate physicians, inquisitive scientists who are invested in the scholarship of discovery, and dynamic and effective medical educators.

Compassion

Partnership, Collaboration and Teamwork

Innovation

Professionalism

Quest for Excellence



Department of Foundational Medical Studies

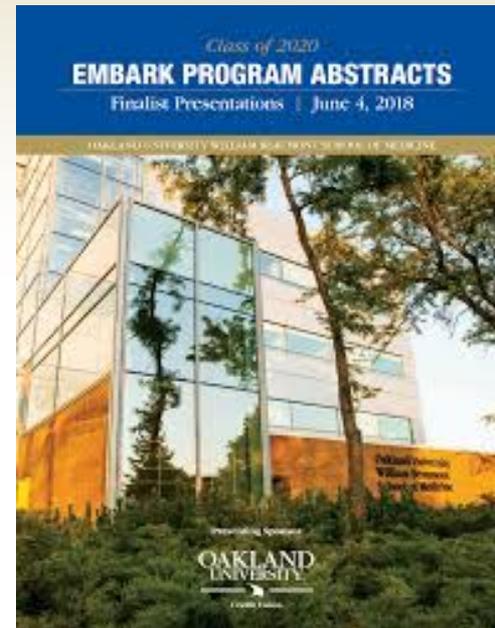
- 40 faculty members;
- Basic science, medical humanities, community/public health, traditional (bench) research and medical librarians
- Scholarly Interest Groups.

FMS, the keystone of OUWB, is a collaborative, diverse and passionate team of experts dedicated to advancing healthcare and medical education through innovative teaching, research and service.

Scholarly pursuits

Embark

Embark is a required scholarly concentration program of Oakland University William Beaumont School of Medicine that provides a mentored introduction to research and scholarship. The four-year longitudinal curriculum consists of structured coursework in research design and implementation, compliance training, research communication, and scholarly presentation, with protected time to develop mentored projects in a wide-range of community and health-related settings.

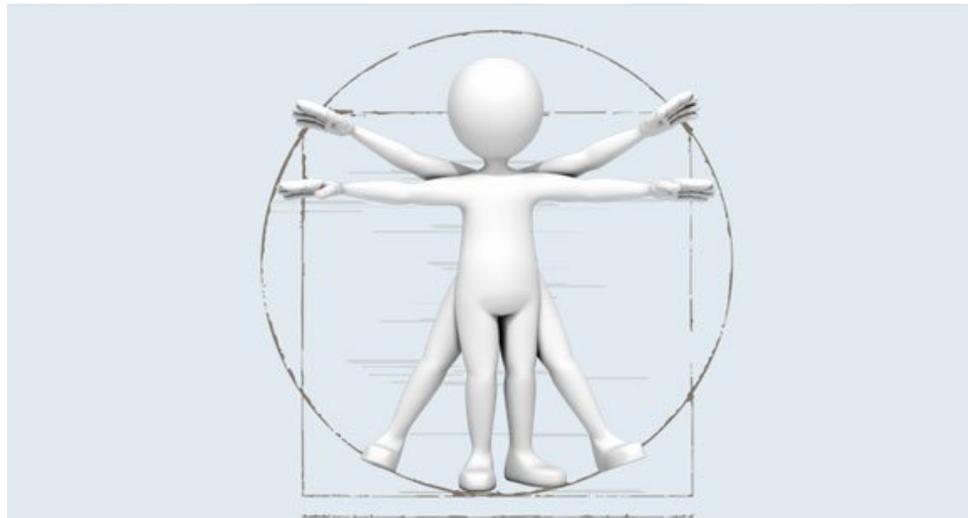


the number of publications a student has in a particular specialty – a quantifiable #

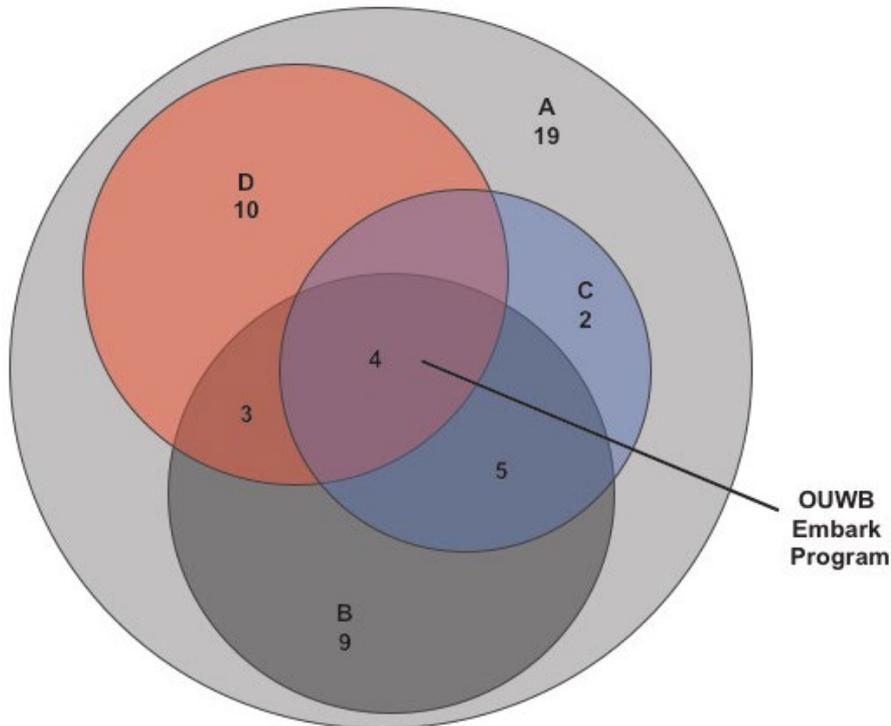
Scholarly pursuits

Embark

	Clinical Translational	Global/ Community	Health Systems	Lab/Bench	Med Ed
2019	52	22	24	11	18
2020	47	19	25	8	18
2021	43	27	19	11	18
2022	58	21	20	10	22
2023	56	27	10	8	25



Medical schools with scholarly concentration opportunities



Kara Sawarynski, PhD 2017

The number of LCME accredited medical schools with scholarly concentration opportunities as identified by current self-reporting.

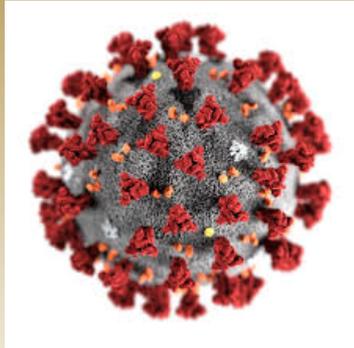
A) Medical schools on the LCME Accredited list (147) that are described on their school curriculum website as having required research/thesis (total 55).

B) School specific websites listing required research course (pre-clerkship years).

C) School specific websites listing required research course (semester long/year long, not clerkship).

D) School specific websites listing clerkship research block/rotation.

All school specific websites were reviewed for research program/course descriptions - July 2017.



COVID

- AMCAS – applications are up this year: 7,500 additional applicants nationwide [application inflation] – holistic review harder to do, 30-page long files + thousands of applications
- Typical increase – 3%, this year 17% increase
- 23% increase since 2010 in med school matriculants without corresponding increase in federally funded residency positions
- Step 2 CS going virtual



Changes for Foundational Science

- 5 traditional basic science departments:
 - anatomy, biochemistry, microbiology, physiology and pharmacology;
 - steady from 1980-1993
 - declined steadily from 1994-present, due to name changes (48%) and combining with other Depts.
 - overall basic science increased in number:
 - 94 new basic science Depts over 25 years, 33% in past 5 years.
- Remain core component of most curricula, according to the AAMC:
 - 1998 – 14,047 faculty members in FS Depts.
 - 2018 – 18,601 faculty members in FS Depts.
 - 2018 - 21% of medical school faculty have a PhD.
- Change Continues

Changes for Foundational Science

Medical Schools - their curricula, faculty composition and Dept structure will continue to evolve – accelerated by COVID and in response to Step changes outlined here.

- Evolution continues:
 - Graduate vs. medical educator
 - FS researcher vs. medical educator



Continued growth of and investment in Medical Educators as a defined, promotable and tenurable group of faculty experts.

Change as a journey not a destination

- *We are never completely finished revising curricula, introducing new forms of pedagogy, exploring different approaches in research, structuring committees, and responding to the need for change.*
Buller, 2015
- Ongoing curricular change and dedicated medical educators may have made change for virtual education fast and effective and will likely respond similarly to necessary curricular innovation for changes to the USMLE.
- Hundreds of publications:
 - Virtual learning
 - Online assessment
 - Telemedicine
 - New normal medical education
 - Basic science online education
 - Virtual mentoring
 - Changing pedagogy
 - Evaluation of online learning
 - Video case vignettes
 - Online lectures
 - Webcasting
 - Virtual simulation
 - Online/virtual office hours
 - Online chat rooms
 - Newly developed clerkships
 - Online small group learning

Summary

- Changes to the Step-system will necessitate new methods for sorting, vetting, ranking and evaluating residency applications;
- Medical schools will respond by continuing to innovate curricula, research efforts, faculty development and resource allocation.
- Foundational Science Departments will continue to evolve and respond to change as they have in response to the pandemic.

“The price of doing the same old thing is far higher than the price of change.”

President Bill Clinton

References

- American Medical College Application Service (AMCAS), 2020 data.
- Association of American Medical Colleges, 2018 US Medical School Faculty Report; <https://www.aamc.org/data-reports/faculty-institutions/interactive-data/2018-us-medical-school-faculty>
- Buller, J.L. Change Leadership in Higher Education. Josey-Bass, 2015.
- Bunton, S.A. 2006 Recent trends in basic science department reorganizations. *AAMC Analysis In Brief* 6: 1.
- Dominguez, I. and Zumwalt, A.C. 2019 Integrating the basic sciences in medical curricula: focus on the basic scientists. *Adv Physiol Educ* 44: 119-123.
- Mallon, et. al. 2003 The reorganization of basic science departments in U.S. Medical Schools, 1980-1999. *Acad Med* 78: 3, 302-306.
- Nolen, L.T. Why Pass/Fail Step 1 is Really Only Step 1. The Harvard Crimson. 2/2020.
- United States Medical Licensing Examination. 2019; <https://www.usmle.org/incus/>

Thanks for your Attention



Questions?

