Supplemental digital content for Hauer KE, Williams PM, Byerley JS, Swails JL, Barone MA. Blue Skies with Clouds: Envisioning the Future Ideal State and Identifying Ongoing Tensions in the UME-GME Transition. Acad Med.

Supplemental Digital Appendix 1

Polarity map illustrating tensions in the use of assessment for learning and growth versus for ranking and sorting.

Greater purpose statement (GPS): Assessment should beneveraged to promote interioring and providers PM, Propaging JS, Swail M, Barone MA. Blue Skies with Clouds: Envisioning the Future path to mastery. Ideal State and Identifying Ongoing Tensions in the UME GOODALLY N. Maod.

Action Steps

How will we gain or maintain the positive results from focusing on this left pole? What? Who? By When? Measures?

- · Develop a common framework of expected competencies to inform the UME-GME transition
- Transition medical education from a process-oriented to outcome-oriented approach of competency-based medical education (CBME). This approach will reassure program directors of the general readiness of all trainees
- · Promote the value of assessment for the purpose of feedback and corrective action (assessment for learning)

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this left pole.

- Increasing fail rate or score declines on medical licensing exams
- Growing concerns from program directors about resident unpreparedness or inability to handle high stakes situations
- · Increasing fail rates or score declines on American Board of Medical Specialties (ABMS) initial certification exams

GPS: Why leverage this polarity? Values = positive results of focus on the left pole

Greater purpose: learning

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- · Promotes growth-mindset and master adaptive learner, which are skills and approaches that the public expects of its physicians
- Supports student wellness
- Students able to focus on the development • of many competencies vs narrow or excessive focus on testing and medical knowledge assessments
- Allows for the use of time as a resource for the development of competence vs time as a constraint to education
- Promotes diversity and inclusion

Assessment for Learning and Growth

- Standards are lowered or perceived to be lowered
- · Students do not undergo requisite stress to build coping mechanism necessary for their careers
- Drive to achieve excellence may be • dampened; schools or learners may settle for mediocrity

Fears = negative results of over-focus on the left pole to the neglect of the right pole

Deeper Fear = Loss of GPS

Assessment becomes viewed by learners as a weapon and not a tool for improvement

Deeper fear: relaxed standards

Fears = negative results of over-focus on the right pole to the neglect of the left pole

Values = positive results of focus

Allows for the demonstration of excellence

Provides essential stakeholders with

Provides program directors with

administrative approach to manage

Stress of preparing for high stakes

Assessment for

Ranking and Sorting

Student wellness is sacrificed in pursuit of

Stakeholders make incorrect inferences

based on small, insignificant variances in

performance – which are reflected in the

ultimate ranking and sorting

assessments prepares physicians for

potentially relevant data

excessive applications

stressful careers

performance

on the right pole

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Action Steps

How will we gain or maintain the positive results from focusing on this right pole? What? Who? By When? Measures?

- · Recognize strengths of some assessment formats to provide measurable construct-relevant variance
- Position certain high-stakes assessments as appropriately weighted inputs to holistic decisions in GME applicant selection

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this right pole.

- · Static or declining diversity and inclusion in GME
- · Decline in programs committing to holistic review
- · Continued increase in spending (time and resources) on learner test preparation

Deeper fears:

Perceived "dumbing down" of medicine or relaxing of standards of excellence

Perceived lack of preparation of trainees for the stress of a career in medicine www.PotalityPlartnerships.com s prohibited. Learner disengagement from breadth of medical education in favor of focus on score maximization

Supplemental digital content for Hauer KE, Williams PM, Byerley JS, Swails JL, Barone MA. Blue Skies with Clouds: Envisioning the Future Ideal State and Identifying Ongoing Tensions in the UME-GME Transition. Acad Med.

Supplemental Digital Appendix 2

Polarity map illustrating tensions in the role of residents as learners versus residents as workers.

Greater purpose statement (GPS):

Residents are learners developing speciality specific knowledge, skills and ms PM, Brechty JS, Swail M., Bar@ne MA. Blue Skies with Clouds: Envisioning the Future attitudes while also providing needed patient care guring this phase of their JME GROBALLYN. Maped. training

Action Steps

How will we gain or maintain the positive results from focusing on this left pole? What? Who? By When? Measures?

- Design residency curricula by mapping learning experiences to desired outcomes
- Use assessment tools designed to promote assessment for learning and provide frequent feedback

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this left pole.

- Residents have gaps in their learning related to lack of experience conducting patient care without direct supervision (lack of depth of responsibility)
- Residents do not take responsibility for their own patients
- Residents require high levels of supervision in final years of residency training
- Residents are not ready for the responsibility level expected during additional training (fellowship) or choose to pursue additional training because they feel unprepared for independent practice

GPS: Why leverage this polarity? Greater purpose: Residency is for
Values = positive results of focus on the left pole Iteration of focus Values = positive results of focus on the right pole
 Residents develop competence needed for unsupervised clinical care through practice, coaching and feedback Residents are satisfied with their training programs' focus on their learning Residents develop strong relationships with their teachers Residents develop a growth mindset, learn how to learn, and take these skills into their post-training careers Residents as learners And Residents ad maximal value to the healthcare system Residents develop independence Healthcare systems want to host residency programs Accountability for patient care fosters residents' professional identity formation
 Residents' time spent on learning activities makes them unavailable to provide needed service within the healthcare system Excessive learning activities isolate residents from interprofessional care team and inhibit team-based skill development and trust-building Residents as workers Residents engage in service activities that do not add value for their learning, such as repetitive activities that could be completed by other health care providers Residents frequently exceed work hours requirements
Fears = negative results of over-focus on the left pole Fears = negative results of over-focus on the right pole to the neglect of the right pole Deeper fear:
Deeper Fear = Loss of GPS Workforce loss ©2020 Barry Johnson and Polarity Partnerships, LLC. All rights reserved. Commercial use encouraged with permission.

Action Steps

How will we gain or maintain the positive results from focusing on this right pole? What? Who? By When? Measures?

- Design resident roles to add value to patients and the healthcare system
- Maximize learning opportunities that occur through patient care experiences in the healthcare system

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this right pole.

- Residents frequently exceed duty hours requirements
- Residents have gaps in their learning due to excessive time spent on repetitive service activities
- Residents are routinely performing activities that are within ancillary providers' skillsets
- Residents are burned out due to
 excessive service responsibilities
- Residents do not attend educational sessions

Deeper fears:

Hospitals and clinics will lose a needed workforce prohibited.

Residents will be so busy providing service activities that they do not

learn what is needed to prepare them for unsupervised practice

Supplemental digital content for Hauer KE, Williams PM, Byerley JS, Swails JL, Barone MA. Blue Skies with Clouds: Envisioning the Future Ideal State and Identifying Ongoing Tensions in the UME-GME Transition. Acad Med.

Supplemental Digital Appendix 3

Polarity map illustrating tensions in individual preferences versus the needs of the profession and public.

Greater purpose statement (GPS):

Individual trainees and physicians maintain personal choice about their career M, Bort Siswai Ma Barone MA. Blue Skies with Clouds: Envisioning the Future path and also contribute to health careineeds of patients and populationse UME BORALLY. Maped.

Action Steps

How will we gain or maintain the positive results from focusing on this left pole? What? Who? By When? Measures?

- Conceptualize "good fit" into a residency program as trainee's capacity to provide unique contribution, achieve educational goals, and support program mission
- · Provide trainees with career and residency match advising that focuses on their preferences

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this left pole.

- · High competition with large numbers of applications for certain programs and specialties
- · Focus on matching into desirable position rather than 'good fit' between student and program
- · Unfilled positions in certain specialties, programs, and locations
- Student focus on activities that will help them achieve preferred match at expense of other learning activities
- · Increasing disparities in workforce distribution

GPS: Why leverage this polarity? Values = positive results of focus

on the left pole

- System accommodates personal preferences
- Applicants deserve complete choice re: career (e.g., academic, community practice), specialty, lifestyle
- Medical school graduates are guaranteed GME positions
- Some applicant groups (US MD and DO graduates) are prioritized for positions in the United States

Individual Preferences

- Student choices lead to imbalance in types of (physicians and practice locations that patients need
- · Students are disappointed with match results
- · High competition for most desirable residency programs and specialties
- Students and residents may develop a sense of entitlement
- Impaired professional identity formation results from focus on the self instead of patients' needs

Fears = negative results of over-focus on the left pole to the neglect of the right pole

Deeper Fear = Loss of GPS

Greater purpose: Physician career choice Values = positive results of focus serves the public

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Deeper fear:

Loss of individual choice

System are driven by the needs of the public, i.e., burden of disease, workforce maldistribution

on the right pole

- Public funding of GME drives outcomes focus
- GME positions are viewed as a privilege earned through education and training
- Applicant groups are considered equal (US MD graduate vs US DO graduate vs IMG), and focus is on individual's unique potential to contribute

Needs of the Profession and Public

- Trainee dissatisfaction with their residency training program or specialty choice
- Students do not match into their desired programs
- · Trainees are forced into lower paying specialties
- Residency programs match learners who do not want to be in the program, specialty or location
- Trainees without choice develop resentment and leave training and/or the practice of medicine

Fears = negative results of over-focus on the right pole to the neglect of the left pole

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Action Steps

How will we gain or maintain the positive results from focusing on this right pole? What? Who? By When? Measures?

- · Engage educators in participating in and responding to workforce analyses
- · Elevate the guality of all residency programs to limit fear of missing out
- Advocate for closer links between the goals of the educational system and the goals of the healthcare workforce
- Provide incentives to individuals or programs who commit to addressing high priority healthcare needs
- · Provide trainees with career and residency match advising that focuses on needs of the public

Early Warnings

Measurable indicators (things you can count) that will let you know that you are getting into the downside of this right pole.

- Trainees report dissatisfaction with their specialty choice or switch career fields
- · Residency programs report that their residents do not want to be in the program, are unmotivated and/or resign from training
- · Programs lose accreditation due to low resident morale and increased resident attrition

Deeper fears:

Loss of individual choice Loss of individual choice by the Association of American Media WWW. Polarity Partnerships. Comis prohibited. Failure to meet the health care needs of the public Loss of prestige and respect for physician careers