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Lessons Learned in Health Professions Education from the COVID-19 Pandemic:
Part 2 of a Virtual Workshop Series of the Global Forum on Innovation in Health Professional Education

April 22, 2021
11:00 am – 1:00 pm

Welcome!

Workshop Co-Chairs

Jody Frost, National Academies of Practice

Miguel Paniagua, National Board of Medical Examiners

For assistance during the workshop:

Hannah Goodtree Hgoodtree@nas.edu

WORKSHOP PLANNING COMMITTEE

- **Jody Frost, PT, DPT, PhD, FNAP (Co-Chair) –** Education Consultant and Facilitator

- **Miguel Paniagua, MD, FACP, FAAHPM (Co-Chair) –** Medical Advisor for Test Development Services, National Board of Medical Examiners

- **Richard Berman, MBA, MPH –** Associate Vice President for Strategic Initiatives and Research, University of South Florida

- **JaNeen E. Cross, DSW, MSW, MBA –** Social Work HEALS Policy Fellow, National Association of Social Workers

- **Dawn M. Mancuso, MAM, CAE, FASAE-** Executive Director, Association of Schools and Colleges of Optometry

- **Suzanne Miyamoto, PhD, RN, FAAN-** CEO, American Academy of Nursing

- **Loretta M. Nunez, MA, AuD, CCC-A/SLP-** Director of Academic Affairs and Research Education for the American Speech-Language-Hearing Association

- **Toyese Oyeyemi, MPH, MCHES-** Executive Director, Beyond Flexner Alliance

- **Edward Salsberg, MPA-** Professor, George Washington University School of Public Health and Health Services

- **Sabrina Salvant, EdD, MPH, OTR/L –** Vice President, Education and Professional Affairs, American Occupational Therapy Association
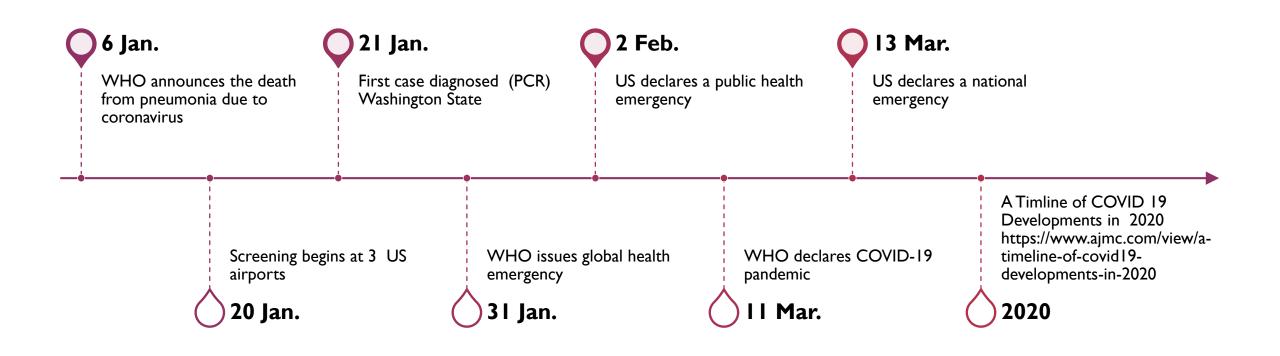
WORKSHOP PLANNING COMMITTEE CONSULTANTS

- **Mary Jo Bondy-** CEO, Physician Assistant Education Association

- **Mary Lynn McPherson, Pharm D, MA, MDE, BCPS, CPE-** Professor of Pharmacy Practice and Science, University of Maryland

- **Sylvia Trent-Adams, PhD, RN, FAAN, FNAP-** Executive Vice President and Chief Strategy Officer, University of North Texas Health Science Center

- **Clese Erikson, MPAff-** Deputy Director, Health Workforce Research Center on Health Equity in Health Professions Education, George Washington University

LESSONS LEARNED FROM COVID REFLECTIONS ON THE DEC 2020 WORKSHOP

MARY JO BONDY- PHYSICIAN ASSISTANT EDUCATION ASSOCIATION

COVID BEGINS

6 Jan.
WHO announces the death from pneumonia due to coronavirus

21 Jan.
First case diagnosed (PCR) Washington State

2 Feb.
US declares a public health emergency

13 Mar.
US declares a national emergency

Screening begins at 3 US airports
20 Jan.

WHO issues global health emergency
31 Jan.

WHO declares COVID-19 pandemic
11 Mar.

A Timline of COVID 19 Developments in 2020 https://www.ajmc.com/view/a-timeline-of-covid19-developments-in-2020
2020

COVID RESPONSE

State shutdowns begin as cases spread (WA, CA, NY)

- Health Disparity and Loss due to COVID -19 in vulnerable, diverse populations
- Lack of coordinated response at the federal level causes confusion

Move to virtual for those who had access- digital divide became evident

- Work
- Learning
- Healthcare delivery

COVID IMPACTS

Science, shared knowledge advanced quickly

Academic and Practice Community Partnerships

State and Federal public health preparedness response and mobilization barriers identified

Health Professions re-examined the role of the student during crisis

Faculty innovated- online learning, clinical education, simulation, competency-based education

Admissions changed- Pass/Fail, virtual interviews

Testing was delayed, canceled, made virtual

LESSONS LEARNED

Leadership is Essential	We are stronger together	We need to be prepared
We need to invest and close the health equity and digital divide gaps	Health literacy is needed	Burnout is real

ALTERING EDUCATIONAL STRUCTURES

What was the impact of COVID on HPE and how might things be handled differently in the future?

Moderator: Zohray Talib, California University of Science and Medicine (forum co-chair)

What were some opportunities uncovered in the CLE/experiential learning stemming from the pandemic?

- Are they sustainable?

- How might they be sustained?

Pam Jeffries PhD, RN, FAAN
George Washington University School of Nursing

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Lessons Learned from COVID: Clinical Learning Environments and Experiential Learning

What are opportunities uncovered for CLE and Experiential Learning stemming from the pandemic?

Is it sustainable?

How might it be sustained?

Opportunities for Clinical Learning Environments (CLE)/Experiential Learning	Sustainable?	How might the CLE/experiential learning be sustained?
1. New clinical learning methods via virtual platforms (telehealth/simulations)	**Yes –** each is sustainable if we do not simply revert to pre-COVID practices	**Embrace and preserve** virtual and hybrid approaches to clinical learning • Enhance faculty development in these areas • Need for policy changes in accreditation standards, certification, at state board levels to sustain • Alignment needed for state licensure • Evaluate impact of these clinical learning strategies and determine best practices for implementation • Explore clinical models used during COVID- evaluate what worked and didn't work
2. Need to develop emergency pandemic plans for another CRISIS		**Create a Coalition/group (IP) to respond and coordinate/share information in times of crisis and plan/prepare before a crisis.**
3. More emphasis on SDH/health equity/access/health disparities in our clinical learning environments		**Integrate knowledge, skills, abilities, and resources to health disparities/health equity/SDH in the curriculum across all health profession programs** **Secure funding for new program development and integration of curriculum concepts/infrastructure changes**

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What were some opportunities uncovered in assessment/ high-stakes testing stemming from the pandemic?

- Are they sustainable?

- How might they be sustained?

Senthil Kumar Rajasekaran, Wayne State University School of Medicine

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Opportunity	Is it sustainable?	How might it be sustained?
Improving remote and on-site testing/proctoring	Yes	Invest in technology, ensure equal access to technology and internet, align financial aid with student needs
Implementing truly holistic admission process not requiring entry exams (e.g., MCAT)	Yes, many undergraduate institutions are already demonstrating success in doing this	Testing has to reflect today's access to information
Aligning HSAs with authentic professional competencies (i.e., information retrieval and applications, reasoning, and EQ rather than memorization)	Yes	Shifts in HSAs → shifts in curricula
Design and implement programmatic assessment with longitudinal low-stakes assessments leading up to a dichotomous decision HSA (licensing exam)	Yes, there is strong learning science behind the value in following this approach	HSA developers (e.g., NBME) developing resources and guidelines in this area and assisting institutions to align their assessments with HSAs

Should a similar emergency ever occur again, to provide alternative pathways to licensure – whether that be use of alternative testing methodologies or temporary alternatives for graduates to be able to enter the workforce.

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What were some opportunities uncovered for **communication** stemming from the pandemic?

- Is it sustainable?
- How might it be sustained?

Carole Tucker, University of Texas Medical Branch

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Opportunities for communication	Are these communication opportunities sustainable?	How might communication be sustained?
1. Continue to strengthen inter-institutional collaborations to provide consistent and synergistic leadership through crises when there is limited clarity nationally	**Yes -** because the basic technological mechanisms and processes for technology adoption systems are in place	Consider strategic mechanisms to foster deeper inter-institutional leadership when national/international "science" is not prominent or stated strongly.
2. Continue using technological resources to communicate; focus on enhanced engagement of stakeholders	**Yes** - notable benefits with increased use of virtual "office hours" and "drop-in" times; there is a need for additional technology for impromptu communication and rules governing "off times"	Assess breadth and depth of technological reach with respect to DEI, social determinants (internet and tech access) and diverse learner needs and stakeholders.
3. Leverage opportunities for less structured faculty/student/leader interactions and culture (e.g., face-to-face, "water cooler" brainstorming, informal or impromptu discussions)	**Maybe** – infrastructure to address communication technology across diverse regions/populations has national attention	One size does not fit all. Design flexible solutions.

Lessons Learned from COVID: Faculty Development

What are opportunities uncovered for **faculty development** stemming from the pandemic?

Is it sustainable?

How might it be sustained?

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Reflections on impact of pandemic for faculty, students, institutions, patients & families

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Opportunities for faculty development (FD)	Sustainable?	How might the FD be sustained?
1. Greater connection and collaboration among faculty nationally and globally 2. Increased interprofessional education and digital solutions to student collaboration 3. More focus on faculty and student stress & burnout with implications for self-care and wellness 4. Nimbler curricular reviews and revision with increased sharing across institutions 5. Amplified need for training in difficult conversations and action around DE&I, and safe learning environments, and equity	Yes – each is sustainable if we do not simply revert to pre-COVID practices	Retain virtual and hybrid approaches to learning and spirit of collaboration across institutions Gather evidence of what is working well (and what is not effective) Measure impact of faculty development on preparedness of learners, resilience, wellbeing, etc. Codify knowledge, skills, abilities, and institutional resources within institutional/accreditation standards Disseminate models for curricular review and enrichment & structures for career development Empower Leadership to prioritize critical area and integrate into institutional culture

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EXPLORING A VALUE PROPOSITION

What is the value proposition for competency-based, time-flexible structures and financial arrangements?

Moderators: Jody Frost and Miguel Paniagua (Workshop Co-chairs)

Why change?

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DESIRED LEARNING OUTCOMES
(COMPETENCY)
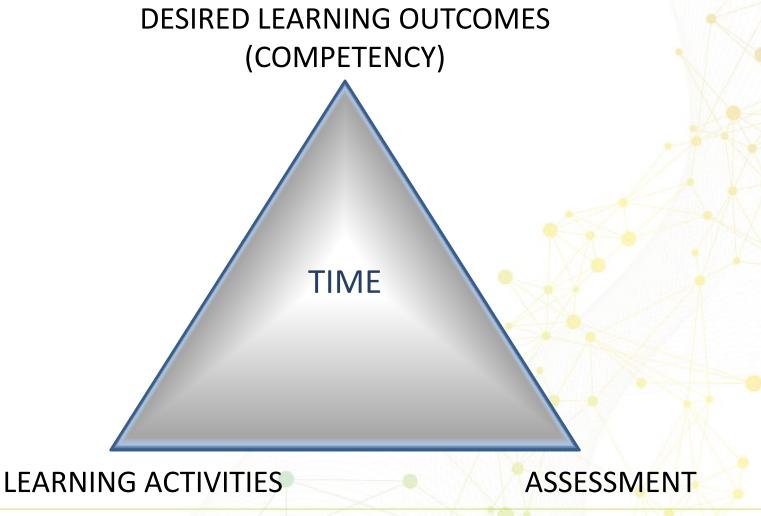
Competency-based Time-variable Medical Education

TIME

LEARNING ACTIVITIES

ASSESSMENT

Anderson, *Theory into Practice,* 2002

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Comparing competency-based to traditional approaches

|	Traditional	Competency-based
Goal	Knowledge acquisition	Knowledge application
Focus	Teacher-focused	Learner-focused
Approach to learning	Hierarchical (Teacher → student)	Non-hierarchical (Teacher ↔ student)
Responsibility	Teacher	Student and Teacher
Typical assessment tool	Single subject measure	Multiple objective measures
Assessment tool	Proxy/Indirect	Authentic - Mimics real tasks of profession
Setting for evaluation	Removed	Direct observation
Evaluation	Norm-referenced	Criterion-referenced
Timing of assessment	Emphasis on summative	Emphasis on formative
Program completion	Fixed time	Variable time

Caraccio, et al. 2002

Assessment in context
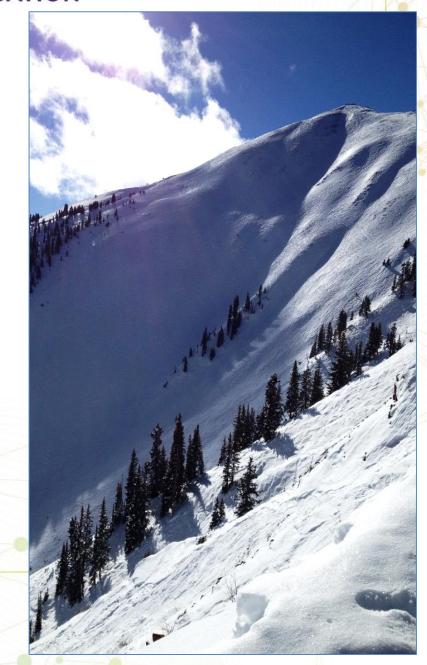
Supervision is an expression of assessment

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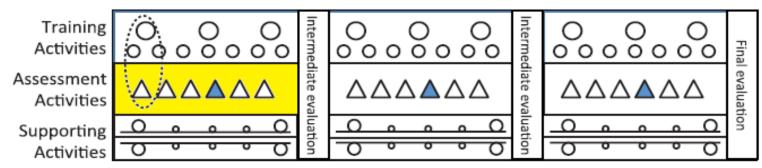ASSOCIATION

Importance of Context

- Avoids pitfall of reductionism
- Articulates typical developmental stages
- Escalating level of difficulty over training
- Temporary regression in new settings
- Mastery orientation throughout career
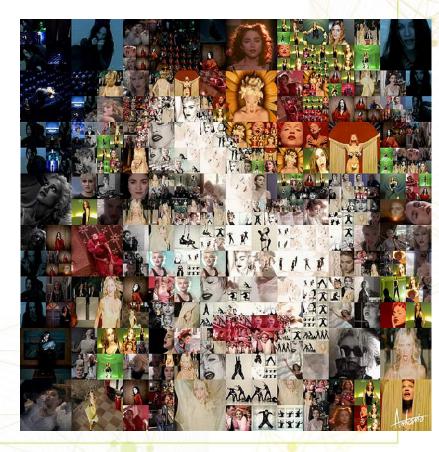
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Portfolios: monitor trends in performance

- Multiple assessments using a variety of methods
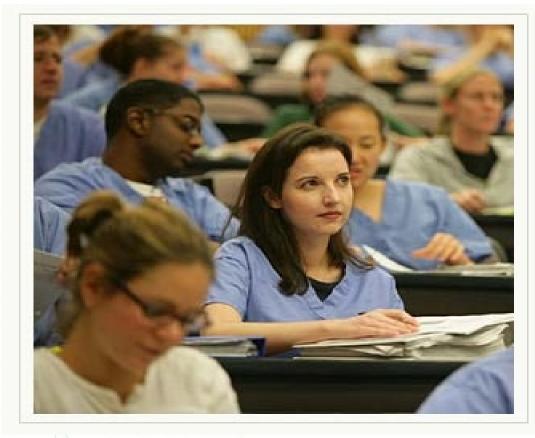
- Digital portfolio provides longitudinal view

Van Der Vleuten, *Medical Teacher,* 34:205-214, 2012

- Blurring the lines of "formative" and "summative"

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Student experience

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Competency based Medical Education (CBME)

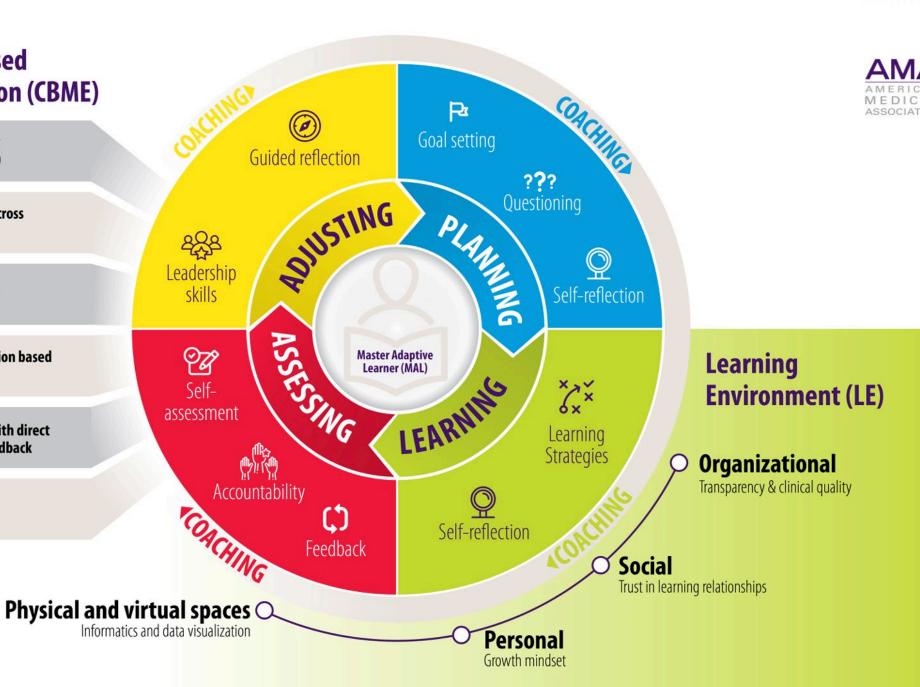Competency outcomes clearly articulated (milestones, EPAs)

Developmental sequencing across med ed continuum

Tailored learning experiences in authentic roles

Competency-focused instruction based on performance evidence

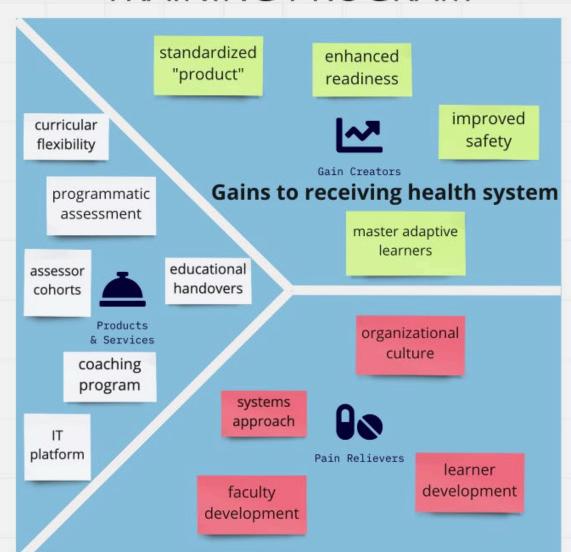Programmatic assessment, with direct observation and frequent feedback

Time as a resource

Learning Environment (LE)

Organizational
Transparency & clinical quality

Social
Trust in learning relationships

Personal
Growth mindset

Physical and virtual spaces
Informatics and data visualization

COACHING

ADJUSTING
Guided reflection
Leadership skills

PLANNING
Goal setting
??? Questioning
Self-reflection

ASSESSING
Self-assessment
Accountability
Feedback

LEARNING
Learning Strategies
Self-reflection

Master Adaptive Learner (MAL)
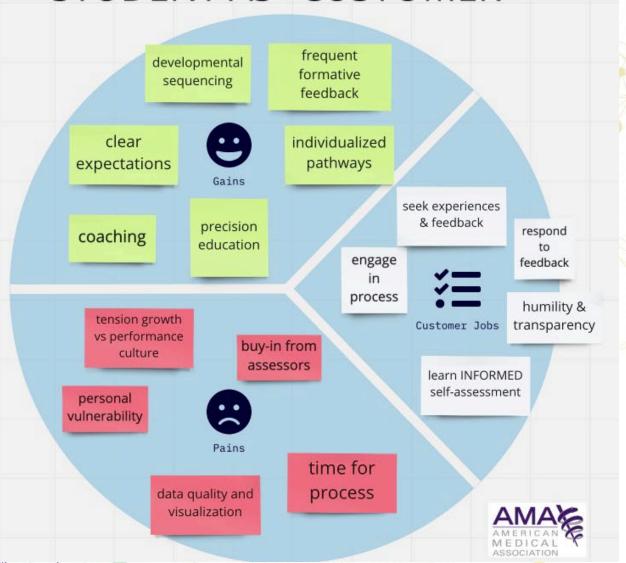
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Value Proposition of CBME

The Value Proposition Canvas was initially developed by Dr Alexander Osterwalder as a framework to **ensure that there is a fit between the product and market.**

TRAINING PROGRAM

- standardized "product"
- enhanced readiness
- improved safety

Gain Creators

Gains to receiving health system

- curricular flexibility
- programmatic assessment
- master adaptive learners
- assessor cohorts
- educational handovers

Products & Services

- coaching program
- IT platform
- organizational culture
- systems approach

Pain Relievers

- learner development
- faculty development

STUDENT AS "CUSTOMER"

- developmental sequencing
- frequent formative feedback
- clear expectations
- individualized pathways

Gains

- coaching
- precision education
- seek experiences & feedback
- respond to feedback
- engage in process

Customer Jobs

- humility & transparency
- learn INFORMED self-assessment
- tension growth vs performance culture
- buy-in from assessors
- personal vulnerability

Pains

- data quality and visualization
- time for process

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Is CBME worth the investment?

$$value = \frac{\overset{\text{QUALITY}}{(outcomes + safety + service)}}{total\ cost}$$

▶ Transparency of expectations, plus focused, individualized assessment enhances trainee readiness for duties

▶ *Current cost of unpreparedness is unknown*

▶ In times of disruption, a competency approach affords greater agility & precision

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#CHANGERESED

FACILITATING HPE: TIME-FLEXIBLE EDUCATIONAL ADAPTATIONS & UNIQUE FINANCIAL ARRANGEMENTS

RICHARD BERMAN, UNIVERSITY OF SOUTH FLORIDA

VISION

- ALL POPULATIONS WILL BE SERVED

- THE HEALTH PROFESSIONS (HP) WILL BE AN IMAGE OF THE POPULATION SERVED

- ALL POPULATIONS WILL FEEL INCLUDED WITHIN HP EDUCATION AND PRACTICE

- HP EDUCATION AND CLINICAL PRACTICE SETTINGS WILL WORK COLLABORATIVELY WITH COMMUNITIES IN ATTACKING THE COMMUNITY-IDENTIFIED PROBLEMS

SOME OF THE PROBLEMS

COSTS

- APPLICATION AND TUITION

- LIVING EXPENSES

- ALL COST UP FRONT

- COST DISPROPORTIONATE TO ANTICIPATED INCOME

- CAN'T AFFORD TO GIVE UP JOBS AND INCOME WHILE GOING TO SCHOOL.

ACCESS

- LOCATION – URBAN/RURAL, TRANSPORTATION

- TIME …TOO LONG A PROGRAM FROM HIGH SCHOOL TILL CERTIFIED/CREDENTIALIZED

- TIME …CAN'T ATTEND IN DAYS BECAUSE OF WORK OR CHILD RESPONSIBILITIES

- LANGUAGE …"BILINGUAL"

- CULTURE …RELIGIOUS RESTRICTIONS (TIME, TRAVEL) ETC.

VALUE PROPOSITION = SOLVES PROBLEMS

VALUE PROPOSITION

- Need to develop a platform that responds to problems
- That changes upfront costs to students while providing revenue to colleges
- That responds to access issues

CBE, interprofessional learning, & technology allows more flexibility but must modify " delivery platform" to meet attack problems for significant change

EXAMPLE: COMMUNITY COLLEGES

- **COST**
  - Less expensive than 4-year colleges

- **ACCESS**
  - More widespread geographically
  - Student population a more diverse source of recruitment for HPE
  - Time …more offerings at nights and on weekends

- **SERVICE**
  - Serves a broader, more diverse population
  - Can make clinical settings out of student health services, day care centers, athletic and recreation programs

A Closer Look at Community Colleges
April 8, 2021
Clese Erikson, M.P.Aff.

Fitzhugh Mullan
Institute for Health
Workforce Equity
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Community College Pathways: Improving the U.S. Physician Workforce Pipeline

Efrain Talamantes, MD, MBA, Carol M. Mangione, MD, MSPH, Karla Gonzalez, Alejandro Jimenez, MD, Fabio Gonzalez, MA, and Gerardo Moreno, MD, MSHS

Abstract

Purpose

To examine the association between participation in a community college (CC) pathway, medical school admission, and intentions to practice in underserved communities or work with minority populations.

Method

The authors performed cross-sectional analyses of the 2012 Association of American Medical Colleges matriculant and applicant files and the Matriculating Student Questionnaire to assess associations between student characteristics and participation in a CC pathway. They used logistic regression to estimate the association

among CC pathway and acceptance to medical school, intention to practice in underserved areas, or intention to work with minority populations.

Results

There were 40,491 applicants and 17,518 matriculants to U.S. MD-granting schools; about one-third used a CC. A higher proportion of underrepresented minority (URM) matriculants used CC pathways compared with whites. Applicants who attended a CC after high school and before a four-year university (First-CC) had lower odds of acceptance into medical school (adjusted odds ratio [AOR] = 0.68; 95% CI 0.61–0.75; $P <$ .05). Compared with medical students

who never attended a CC, First-CC matriculants were more likely to have parents without a college education (304/895 [34%] versus 1,683/12,598 [13%], $P <$ .001) and higher odds of intentions to practice in underserved communities (AOR = 1.26; 95% CI 1.04–1.53; $P <$ .05), after adjusting for covariates.

Conclusions

There is both high representation of URM students and higher prevalence of intention to work with underserved communities among CC pathway participants. These findings may be of interest to those seeking to enhance diversity in the physician workforce.

Important entry point to higher ed

- Approximately half of **Black and Hispanic** students begin their college education at a CC, compared to 36% of White students,[7]

- Approximately half of **rural students** begin their college education at a CC.[8]

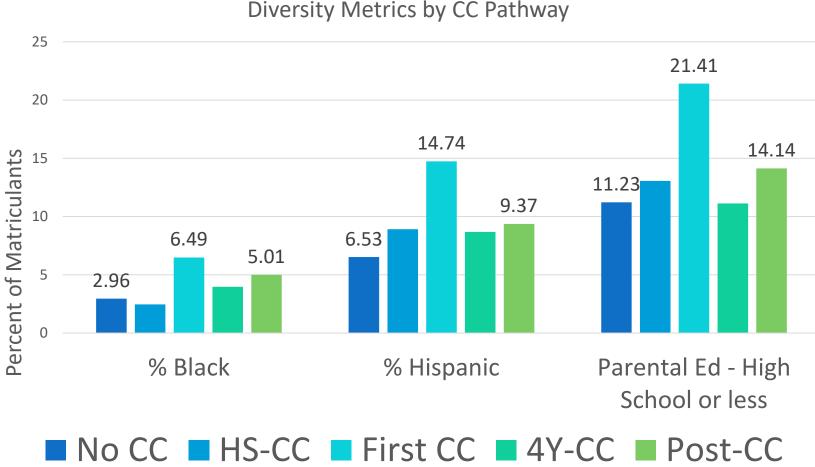- Half of CC students have a **family income of less than $50,000**.[9]

7. Shapiro D, Dundar A, Yuan X, Harrell AT, Wakhungu PK. Completing College: A National View of Student Attainment Rates--Fall 2008 Cohort (Signature Report No. 8). 2014. https://www.semanticscholar.org/paper/Completing-College%3A-A-National-View-of-Student-2008-Shapiro-Dundar/47d28d8938257a779fe9394404eb0b7fb488d94f?p2df. Accessed November 3, 2020.

8. Koricich A. The Effects of Rurality on College Access and Choice. Talk presented at the American Education Research Association Annual Meeting; April 4, 2014; Philadelphia, PA. http://www.aera.net/Portals/38/Newsroom%20-%20Recent%20Research/The%20Effects%20of%20Rurality%20on%20College%20Access%20and%20Choice.pdf?ver=2014-04-04-074023-417. Accessed November 3, 2020.

9. Radwin D, Conzelmann JG, Nunnery A, et al. 2015-16 National Postsecondary Student Aid Study (NPSAS: 16): Student Financial Aid Estimates for 2015-16. Washington, DC: National Center for Education Statistics; 2018.

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Three out of four PA matriculants attended CC

Contribute to Diversity

Diversity Metrics by CC Pathway

Legend: No CC, HS-CC, First CC, 4Y-CC, Post-CC

% Black: 2.96, (HS-CC), 6.49, (4Y-CC), 5.01

% Hispanic: 6.53, (HS-CC), 14.74, (4Y-CC), 9.37

Parental Ed - High School or less: 11.23, 13.0, 21.41, 11.1, 14.14

Y-axis: Percent of Matriculants

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Formal Program Example

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Pathway Programs | Resources | Medical Students | Reside...

Medical School Preparatory Education Program (MSPEP)

The Medical School Preparatory Enhancement Program (MSPEP) is a collabo... of California Davis School of Medicine's Office of Student and Resident Dive... University, Sacramento aimed to increase opportunities for socio-economica... students to pursue careers in medicine.

Program Overview

Part I: During the spring semester, students will participate in a 1 credit seminar course led by distinguished UC Davis SOM faculty, staff, and current medical students. Typically, our seminar course is held every Friday from 1:00-3:00 pm.

Part II: During the summer, students will enroll in an intensive MCAT preparatory course Participants are provided a $1,500 stipend for their involvement in the program.

*All students must participate in Part I and II. We discourage program participants from taking summer school classes or working during MCAT prep course.

Eligibility

Must be a junior, senior, or recent graduate of California State University Sacramento or the University of California, Davis.
Minimum overall & BCPM GPA of 3.2

"Being in MSPEP gave me the confidence to continue pursuing my dream. The faculty and mentors guided me throughout the entire process and gave me resources to become a successful applicant and land exactly where I wanted to be."

Erik Terriquez
MSPEP Class of 2019
UC Davis School of Medicine, MD
Candidate...

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https://health.ucdavis.edu/diversity/undergraduate.html

CC Strategies

Community College Students

- Often first in family to attend college
- Single parents
- Care takers
- Working their way through college
- High drop out rate

Strategy: Consider engaging more with students at local CCs

- Brown bag lunches
- Guest lecture
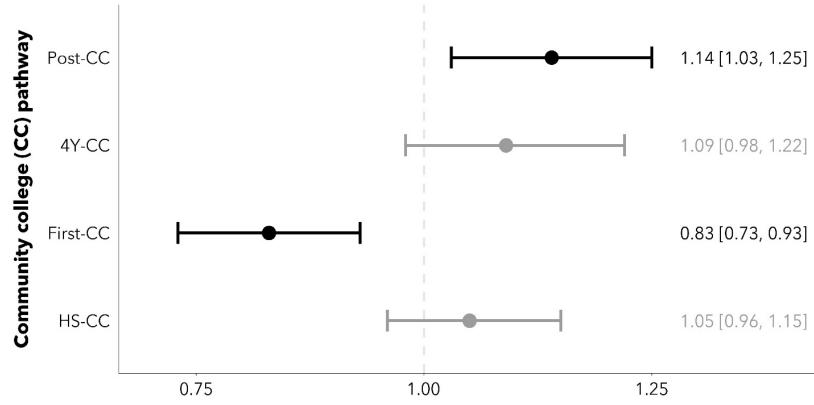- Networking
- Mentoring
- Job opportunities

Benefits:

- Inspire
- Strong understanding of how to be a successful applicant
- Strengthen/enhance qualifications

STRATEGY - Review application process for unintended barriers

- holistic review process

- consistent requirements across programs

- lower application fees

Lower odds of matriculating

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PREPARING NOW FOR THE FUTURE

Conversation with Former Deputy and Acting Surgeon General

Co-Discussants: Sabrina Salvant and Suzanne Miyamoto

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Next Steps

Join the Forum on April 28 at 11amEDT

The closing session of our workshop series on lessons we are learning in health professions education during COVID

Your homework

Send us questions we did not answer or areas you felt we did not address so we can try to incorporate those ideas into our closing session.

Send in questions & sign-up for the workshop:
Email questions to: pcuff@nas.edu

Global Forum on Innovation in
Health Professional Education

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