



University of California
San Francisco

UCSF and Kern National Network for
Caring and Character in Medicine

Developing Medical Educators of the 21st Century

San Francisco Feb 13-15, 2023

<https://meded21.ucsf.edu/>

#UCSFMedEd21
@UCSFMedEd21



Course Leadership



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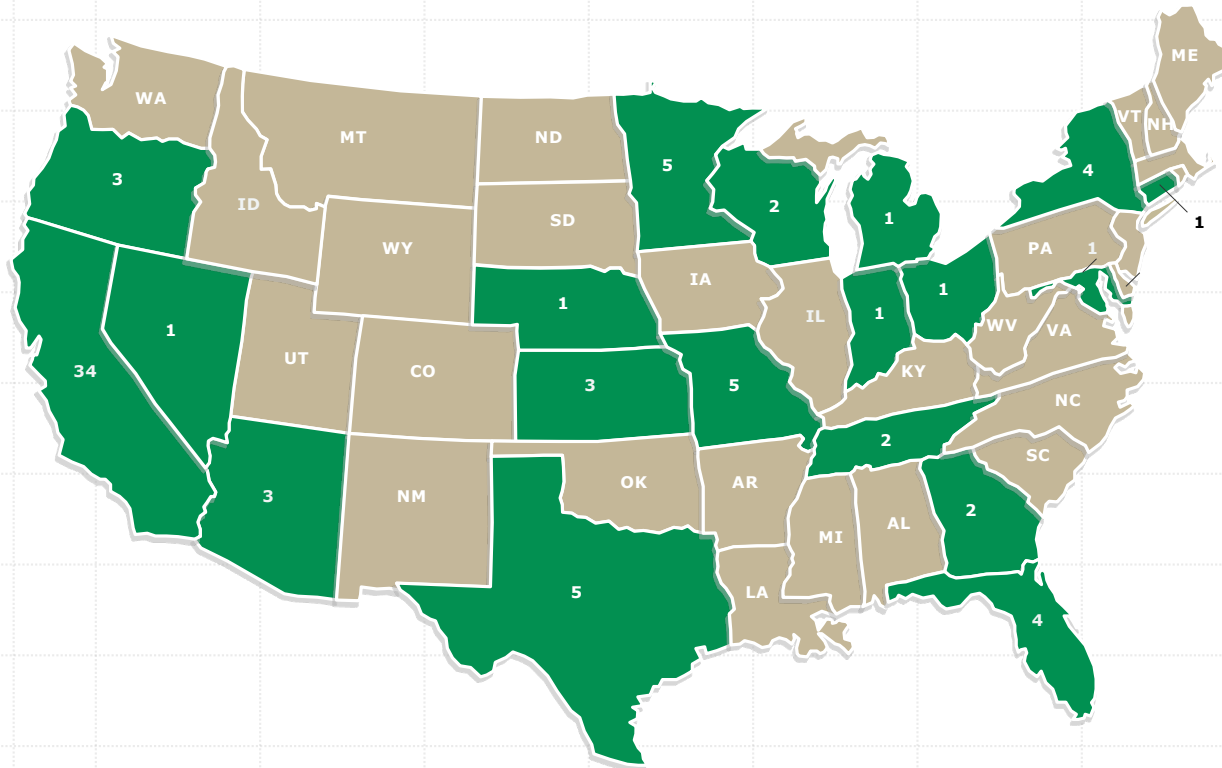


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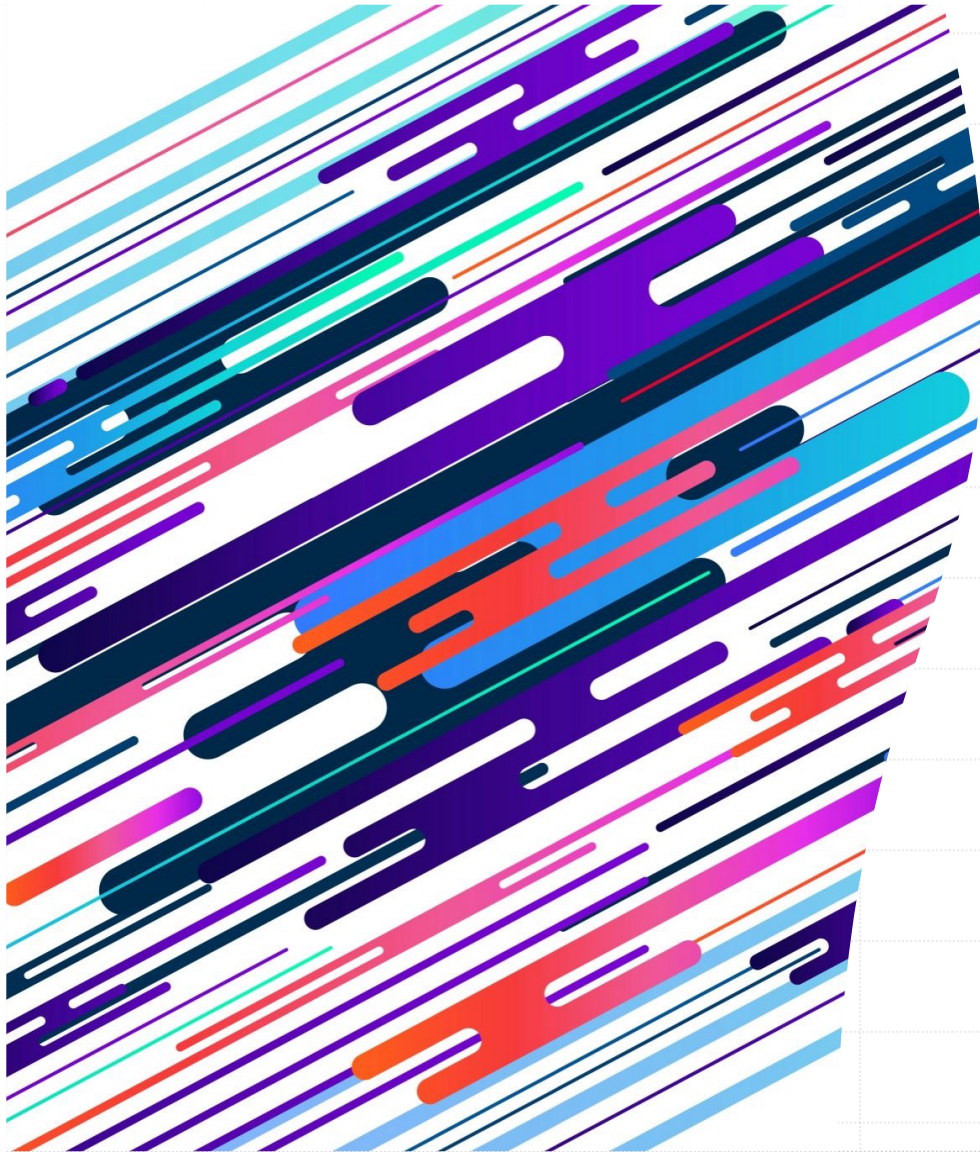
Participants: 72 total pre-registered



Plus 3 from Puerto Rico

Group sign-ups:

- Morehouse
- Texas A&M University
- UC Davis



Engineering Equity in Health Professions Education

- Catherine Lucey MD MACP
- Executive Vice Chancellor and Provost
- UCSF
- February 13, 2023



Disclosures

Internist

Oldest of 5 siblings and mother of 2 sons

Lived experience of sexism

Privileged by virtue of race, ethnicity, socioeconomic upbringing

Privileged to work with incredible faculty, students and staff who have taught me much of what I know about the imperative and challenge of advancing equity in our institutions.



HP Education' Social Contract

Educate the health professions and life sciences workforce that our patients, communities, states and nation needs;

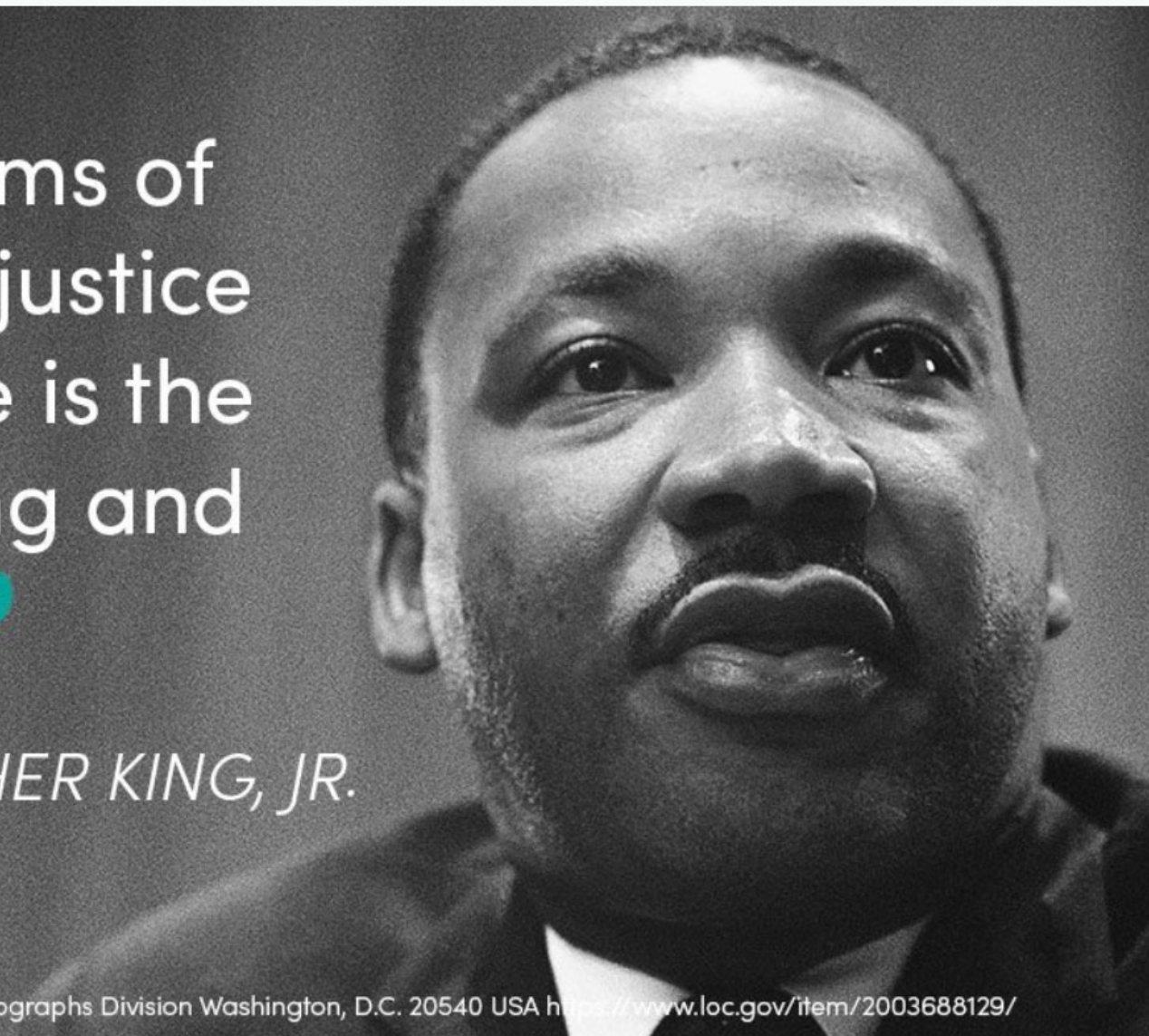
Prepare informed citizens to advocate for a society designed to advance the health, wellbeing, and contributions of all, regardless of power or privilege.

Fulfilling
this
commitment
requires us
to answer
three
questions

What problems in healthcare and life science will this generation be called upon to solve?

What new roles will they need to prepare for to address these problems

Who do we need them to be as human beings?

A black and white close-up portrait of Dr. Martin Luther King, Jr. He is looking slightly upwards and to the right with a serious expression. The background is dark and out of focus.

“ Of all the forms of inequality, injustice in healthcare is the most shocking and inhumane. ”

DR. MARTIN LUTHER KING, JR.

To eliminate health care injustice, we must first rethink HP Education


- To benefit all, design for the most vulnerable
- Teamwork, coupled with new translational roles will be necessary for success
- Diversity, equity, belonging and antiracism are essential for education and healthcare
- Education can drive change in all aspects of our care delivery and professions





**"the arc of the
moral universe is
long, but it bends
toward justice."**

Martin Luther King Jr.



Bending our social path towards justice is an engineering problem



Right Goal



Problem
Definition



Strategic Plan



Correct Tools

1

Embrace the Right Goal



2

Understand the Nature of the Problem

Engineering
Equity is a Wicked
Problem

Marked by Controversy

Shape Shifting- Context Dependent

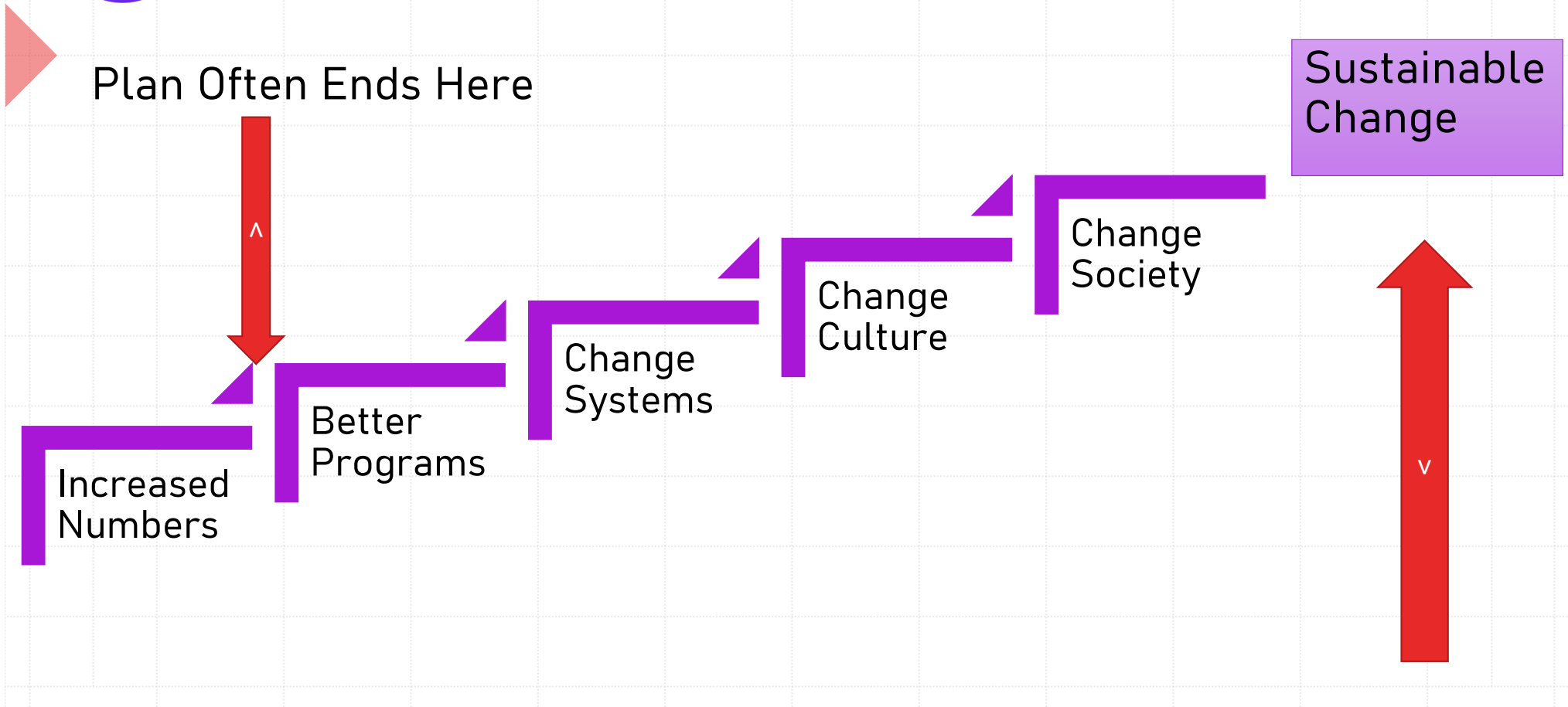
Multi-Factorial Elements

No One Solution

No Permanent Solution

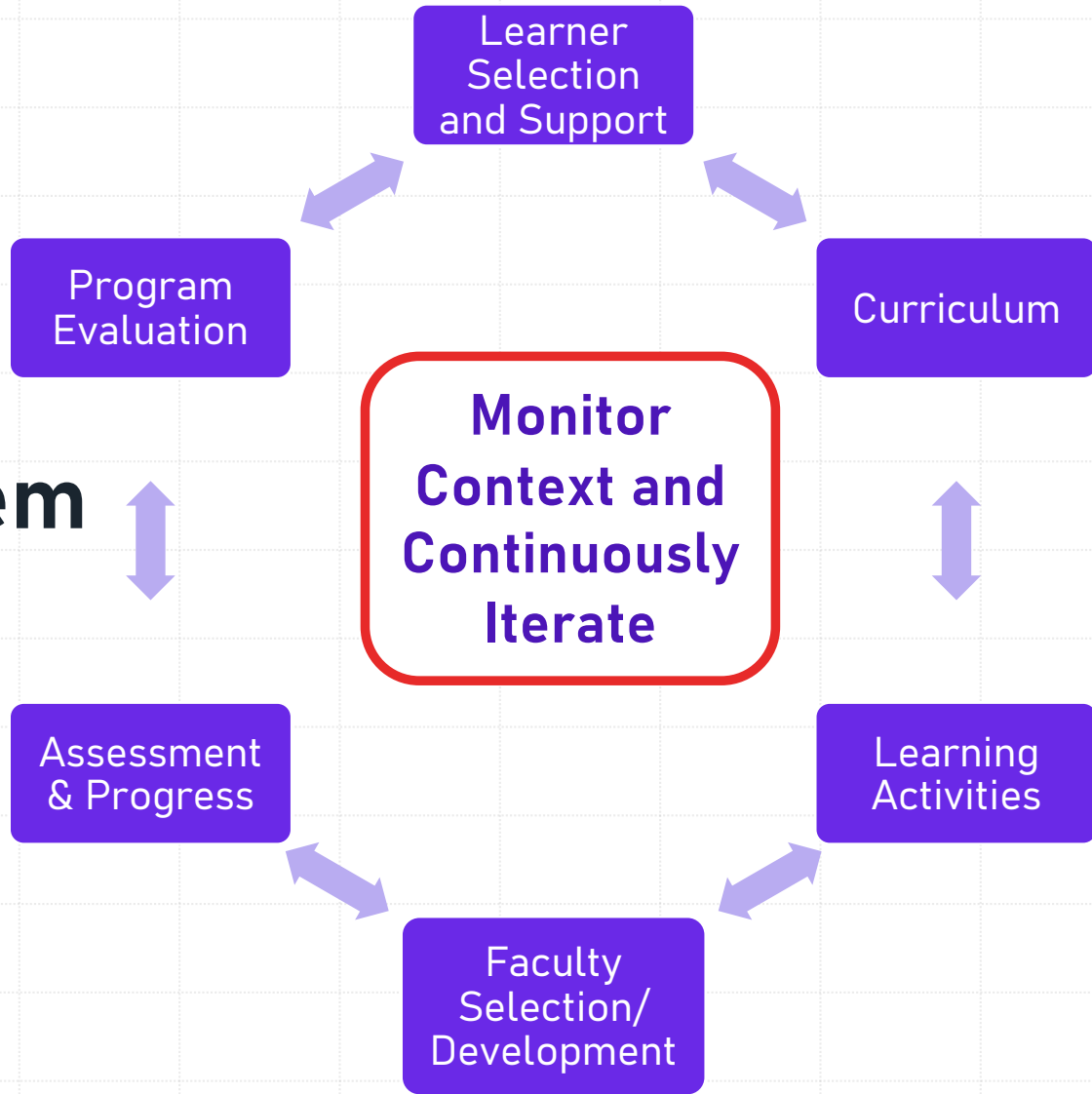
3

Devise a Sustainable Strategic Plan



3

Leave no System Unturned



4

Use the Right Leadership Tools



Agitation



Investigation



Innovation



Orchestration

*All Require Cultivating and Disseminating a
Mindset Change*



Mindset Change Tools

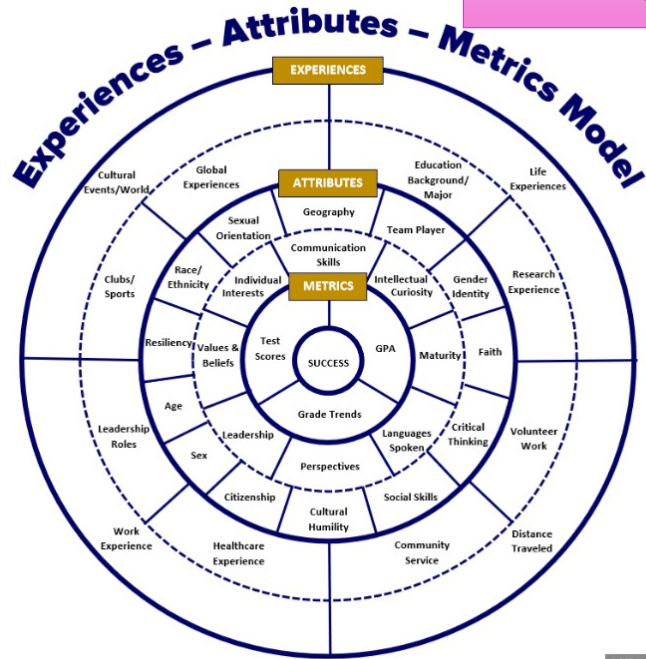
- Facts that Challenge Existing Assumptions
- Key Questions: “What if” and “How Might”
- Models/Tools from other Industries
- Sensemaking with historical and contemporary narratives
- Divergent rather than convergent thinking



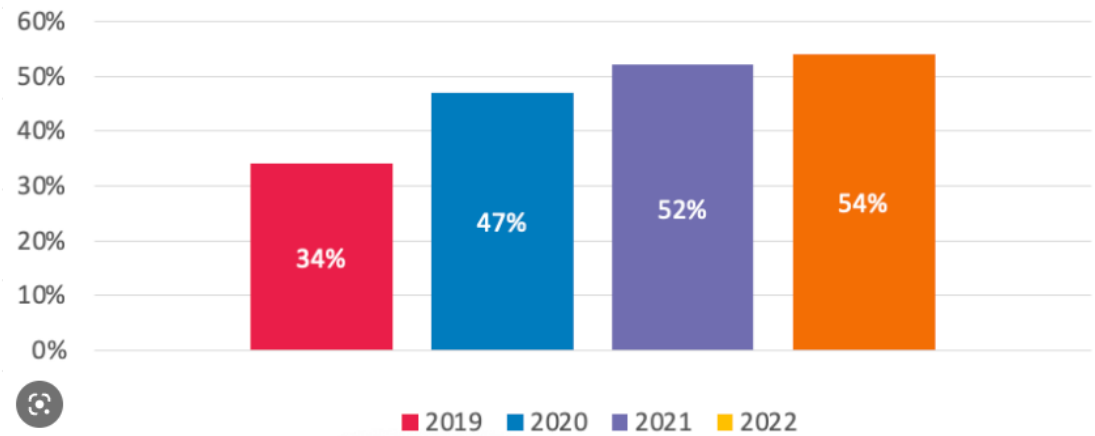
Use a Case Study To
Understand the Complex
Work of Engineering Equity

UCSF School of
Medicine

Case Study Part 1




% of entering students who are UIM



From 2000-2018, % UIM 10%-24%

In 2005, UCSF SoM Began to Use Holistic Review with an intention of Diversifying Its Medical Graduates

While Medical Student Diversity Increased Dramatically, Resident Diversity was slower to change, and Faculty Diversity remained low



Historical Mindset in Medical School Residency Admissions: Tolerating Diversity


Meritocracy, performance-based admissions are 'color blind'

Exceptionalism mindset: only academically most gifted are suitable; soft skills can be learned

MCAT and USMLE are aptitude tests that predicts who will be good doctors

Achieving diversity may be morally right but requires us to lower standards

We should be prepared for increasing failures from students with lower MCAT scores.



Using Facts to Lead a Mindset Change to Embrace Diversity

Lucey, Saguill, Teregino, Hanson,
Clinchot and others:

Academic Medicine Mar 2020
supplement

Diversity in students is critical to achieving our goal of educating the workforce our nation needs

MCAT is intrinsically equitable but contextually and instrumentally inequitable

MCAT is better viewed as a point in time achievement test rather than an aptitude tests.

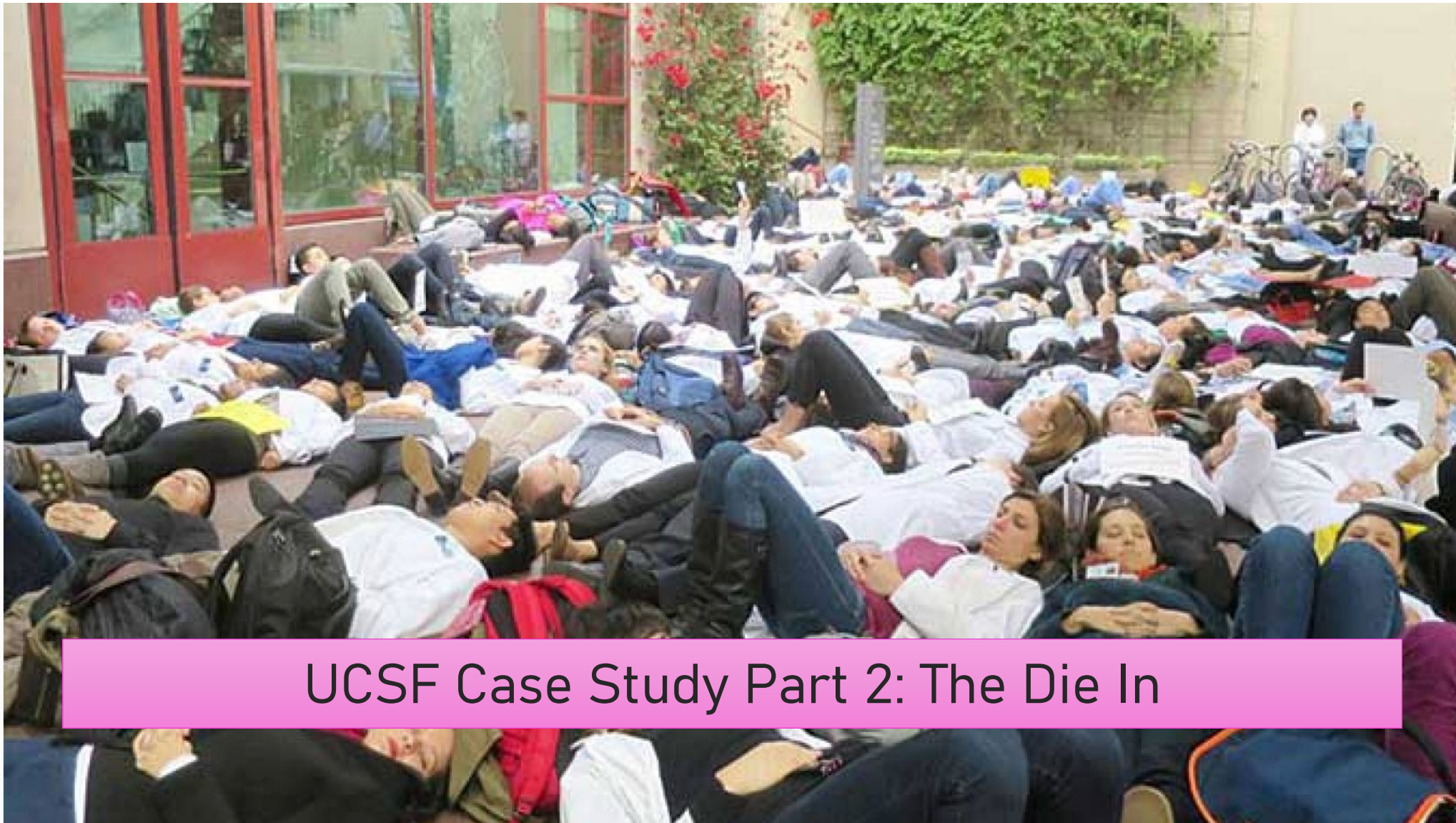
Even those with mid-range MCATs are overwhelmingly likely to succeed and some with the highest range MCATs will fail

Using a comprehensive data set, including qualitative and quantitative measures supports better decision making.



**What Other Opinions are Often Stated as Fact
regarding Minoritized Students and
Residency/Faculty Careers?**

Short answers in the chat!



UCSF Case Study Part 2: The Die In

The Importance of a Critical Mass of Agitators

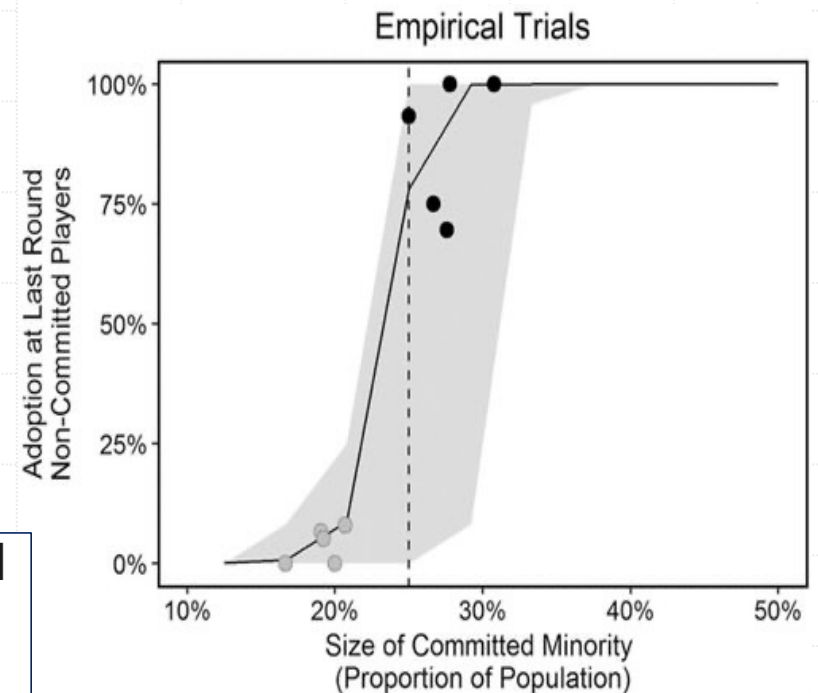
- Draw attention to an alternate reality
- Add emotions to facts to capture “hearts and minds”
- Instill confidence to overcome gaslighting or imposter syndrome
- Courage in Numbers



25% of a Population Can Tip the Majority into Social Change

Recent empiric studies show that > 25% in favor of a new approach can sway the majority of people in populations up to 100,000.

- *This, in itself, is a mindset change!*



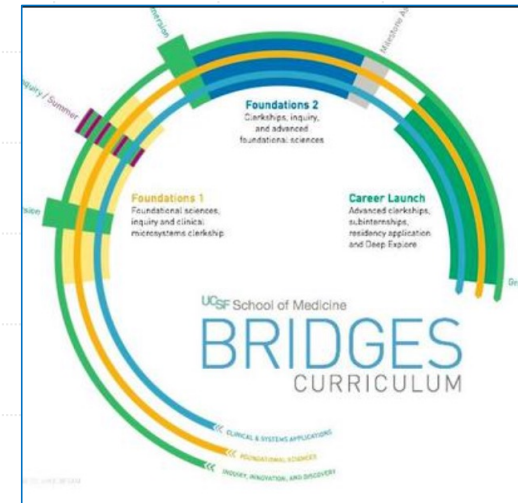
Experimental evidence for tipping points in social convention

DAMON CENTOLA , JOSHUA BECKER , DEVON BRACKBILL , AND ANDREA BARONCHELLI  [Authors Info & Affiliations](#)

SCIENCE • 8 Jun 2018 • Vol 360, Issue 6393 • pp. 1116-1119 • DOI: 10.1126/science.aas8827

Agitation Alone Does Not Change Systems; Innovation and Orchestration are Necessary

Institutional Response:
Innovating and Orchestrating System Change in All Mission Areas



Leaders' Response to Agitators: Investigation that leads to Innovation

Perspective

How Small Differences in Assessed Clinical Performance Amplify to Large Differences in Grades and Awards: A Cascade With Serious Consequences for Students Underrepresented in Medicine

Arianne Teherani, PhD, Karen E. Hauer, MD, PhD, Alicia Fernandez, MD, Talmadge E. King Jr, MD, and Catherine Lucey, MD

- Insignificant differences in clinical performance, exacerbated by
- UCSF Normative Criteria for Honors grades (top 25%) exacerbated by
- National Normative Criteria for AOA selection (top 16%) leads to
- Not-URIM students 7X as likely to be AOA recipients.



Robert Neubecker



Historical Mindset in Student Assessment

**Color Blind, Performance Based,
Exceptionalism-Focused**



Mindset Change Questions in Assessment Investigation: Is our system fair?

What if the students are right or wrong?

How might racism/oppresion/bias be operating here?

Is the context of assessment for all students the same?

What is known about historical advancement of women and other minoritized groups in medicine?

Is the data "clinically" significant or just statistically significant?

Are observed differences in assessment important clinically or educationally?

Continued Investigation: Use of Tools from QI to continue Mindset Change

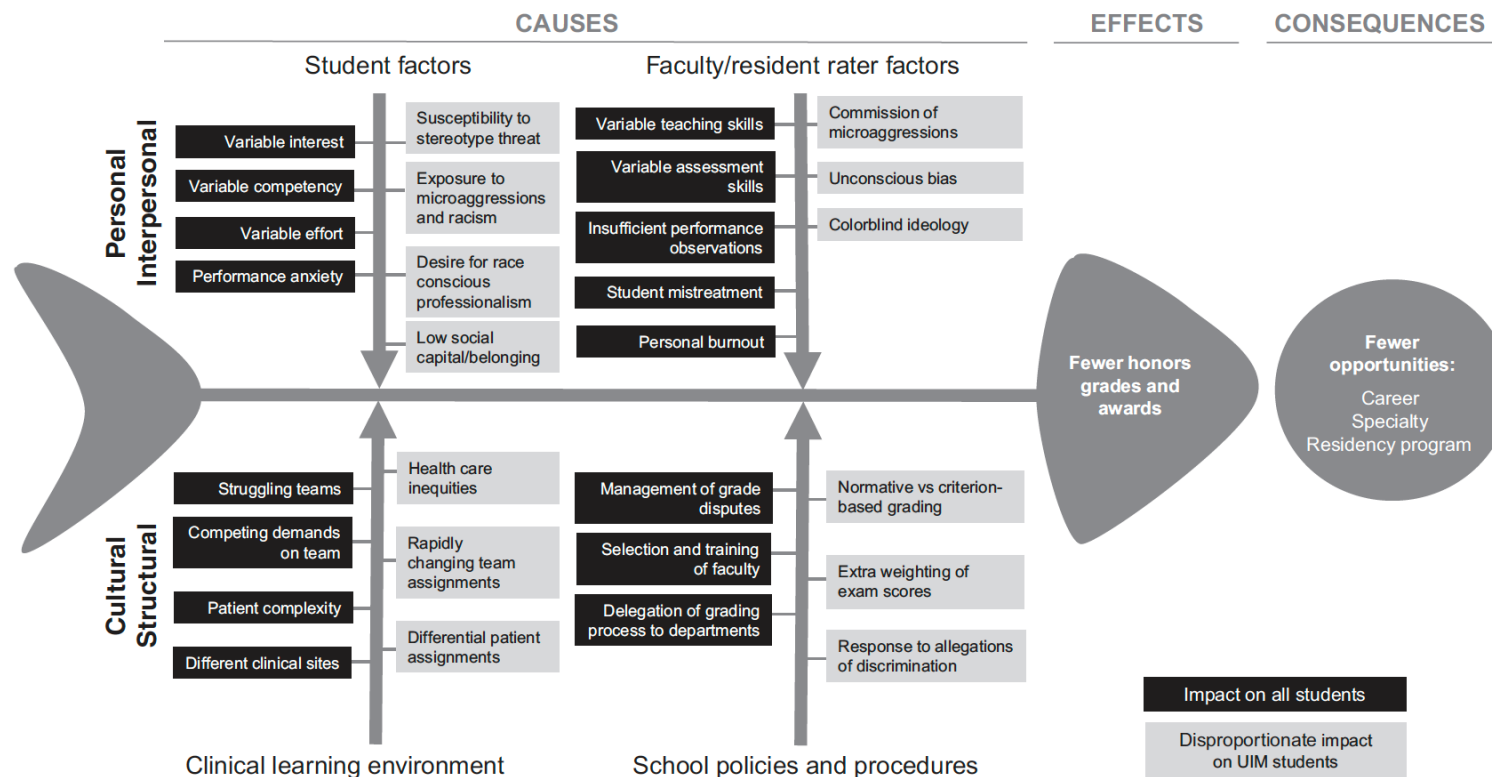


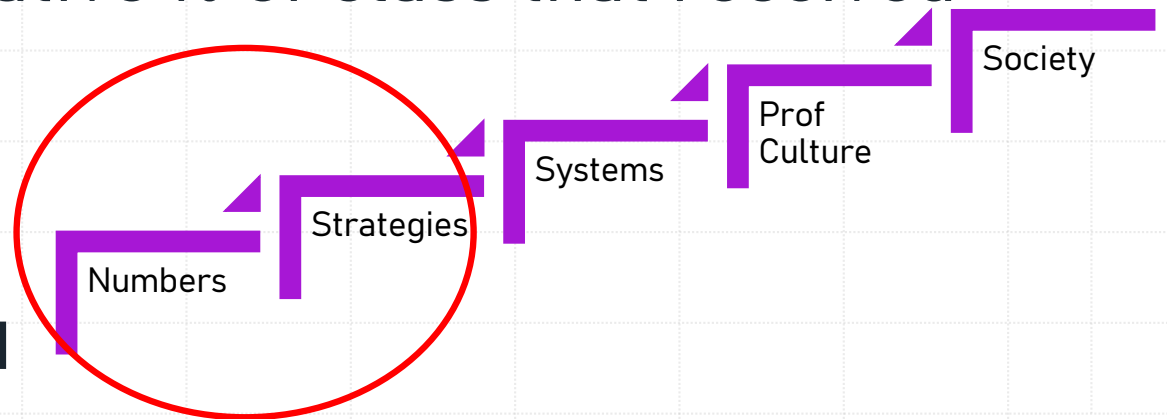
Figure 1 Fishbone diagram illustrating the causes, effects, and consequences of lower assessed performance in underrepresented in medicine (UIM) students compared with all students.

Innovating to Change our Local Strategies with Convergent Thinking

- Standardized grading committees
- Regulated the contribution of shelf exams
- Increased the normative % of class that received honors




- **Differences Remained**



Society	<ul style="list-style-type: none"> National policy and legal decisions governing economics, education, criminal justice, housing, and health
National educational practices	<ul style="list-style-type: none"> Design of national application systems that support ranking of learners using metrics known to disadvantage UIM learners Accreditation policies and procedures that neglect issues of equity Collective acceptance (explicit or tacit) of use of assessment data for reasons that they were not designed for (i.e., institutional rankings)
Institutional care delivery and educational practices	<ul style="list-style-type: none"> Institutional promotion and tenure decisions that do not reward faculty contributions to equity, inclusion, or excellence in teaching and assessment Policy decisions about faculty work assignments and compensation strategies that disincentivize teaching and relationship building with learners Institutional policies that lead to provision of unequal care to minority patients (i.e., insufficient number of certified interpreters or social workers) Policies and procedures on management of racism in the workplace Policies and procedures on assignment of grades that place greater emphasis on knowledge than other competencies and on performance rather than growth Resource decisions about student support that do not take equity into consideration
Relationships: Learner – supervisor learner – team	<ul style="list-style-type: none"> Policies and procedures regarding preparation of faculty for work with diverse populations of learners Team dynamics and strategies that intentionally or unintentionally exclude populations of learners Team assignments to learners that differ based on the race/ethnicity/gender/SOGI status of the learner
Learner	<ul style="list-style-type: none"> Learner preparation for learning experience Learner susceptibility to stereotype threat and microaggressions

Figure 2 The socioecological model applied to medical education: Examples of decisions at multiple social system levels that impact equity in assessment. Abbreviations: UIM, underrepresented in medicine; SOGI, sexual orientation and gender identity.

Wicked
Problems
Often
Require
Divergent
Thinking:
Innovating
with a New
Model



Orchestration: Crafting a Narrative that Justifies System Change and Socializing Internally and Externally



Our grades are being used contextually for career impacting decisions with more precision than they deserved



Since we could not change the use of Honors grades for these decisions and we could not prove that honors students were clearly better than non-honors students, we should stop awarding Honors in the Clerkship year.



Change of Clerkship year to Formative to allow for all to reach a level playing field



Retained Honors in Senior Year to support residency application

Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners

Catherine R. Lucey, MD, Karen E. Hauer, MD, PhD, Dowin Boatright, MD, and Alicia Fernandez, MD

List 1

Achieving Equity in Assessment: A Model Based on the Shingo Model of Organizational Excellence

Guiding principles:

- The purpose of medical education is to prepare a physician workforce capable of and committed to providing high-quality, safe, and equitable care to our increasingly diverse patients and communities.
- The purpose of assessment in medical education is to ensure that medical education fulfills our social contract by ensuring that all who graduate from a school or training program have the competencies needed to provide excellent and equitable care to all patients.

A culture committed to equity in assessment values:

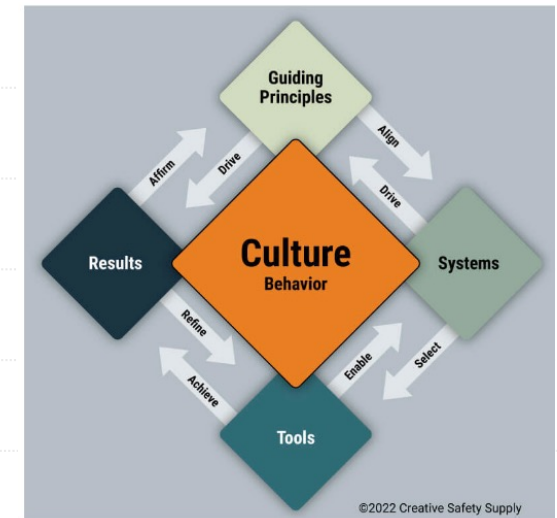
- Diversity, equity, and inclusion as drivers of a high-quality health care system.
- Equity as an essential characteristic of high-functioning learning and assessment systems.
- Excellence in all individuals and teams as defined by achievements in the comprehensive set of competencies that are required to provide high-quality patient care.
- A commitment to growth and improvement as an essential requirement for sustained excellence over the course of a career.


Equitable systems and programs of learning and assessment:

- Are centrally designed and continuously monitored for evidence of equity, using contemporary theories of assessment and learning.
- Focus on structures and processes that optimize intrinsic equity by mitigating the impact of unconscious bias by individuals and groups in assessment for learning, including:
 - explicit criteria by which achievements are assessed, rather than relying on normative criteria
 - a diversity of assessment strategies and metrics to validly assess the breadth of competencies needed for physicians to provide excellent care and desired competency attainment criteria
 - preparation of all supervisors who assess learners and the learners themselves to have a clear understanding of assessment procedures and desired competency attainment criteria
 - strategies that ensure that all students receive frequent, actionable, formative assessment before summative, high-stakes decisions are made

And more....

Orchestration
requires
principled
decision making,
dissemination,
and agitation





A Quick Recap of Learning Points




- Engineering Equity in HP education meets all criteria of a 'Wicked' Problem
- Like other wicked problems, solutions are likely to develop in phases, from numbers to strategy, systems and culture change.
- Stopping with numbers guarantees failure
- All phases require MINDSET changes in all stakeholders; use of tools from other industries and divergent thinking can help
- Leaders who can agitate, innovate, and orchestrate will be needed

Case Study Part 3: Agitation Returns

- In 2021, six years after the launch of organizational system change, grading and assessment changes UCSF recruited a class that was 54% students from HEG and 58% women.
- In Nov 2021, Black/AA students protested a course on structural racism, specifically raising concerns about:
 - Focus of class: non-URIM or URIM students
 - Selection of instructional methodology
 - Selection and preparation of faculty small group facilitators
 - Complaints that same concerns had been previously provided and had been ignored.

The design of the course, including instructional methodologies, was felt to be similar to other courses.

- **Goals and objectives:** understand the role that racism plays in mental and physical illness.
- **Content covered:** examples of interpersonal racism using a series of literature-based stories involving discrimination of people HEG.
- **Small group assignment:** all groups were constructed to be diverse with regard to multiple identities.
- **Assessment :** all students received participation grades for their contributions to the small groups.
- **Small group facilitator training:** facilitators were volunteers from clinical faculty; the majority identified as non-URIM; like other courses, they received a facilitator guide, and participated in a short preparation conversation pre-small group



Mindset Change Questions Again Are Valid

What if they are right?

Was this course really taught the way other courses were taught?

How could group participation cause trauma?

How did we miss signals that students in previous years felt they were harmed by a class designed to teach about structural racism?

Was there something different about the context of this class?



Innovation: Reevaluation of All Strategies and Systems.

Program evaluation
redesign: shifting
away from
positivist approach

Faculty facilitator
recruitment redesign
to favor URIM faculty
and racism experts

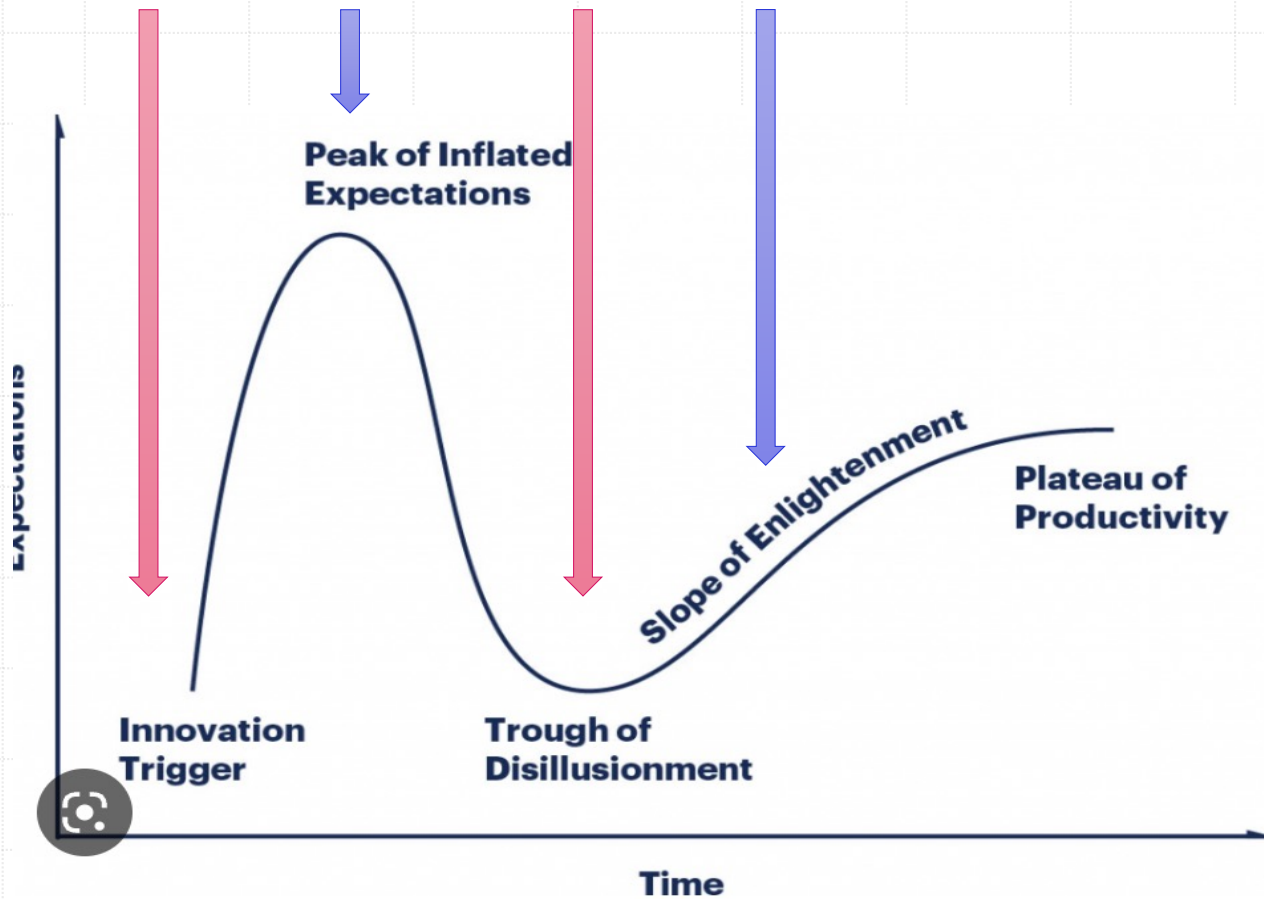
Faculty development
redesign: content,
methods, target
audiences

Curricular content:
anti-oppressive
charter work

Faculty leaders:
accelerated increase
in URIM in course
director roles

Promotion criteria
redesign: holistic
review of teaching

Agitation. Innovation Agitation Orchestration



Critical Parts
of
Orchestration:
Addressing
Discomfort,
Normalizing
Non-linear
Progress,
Sensemaking

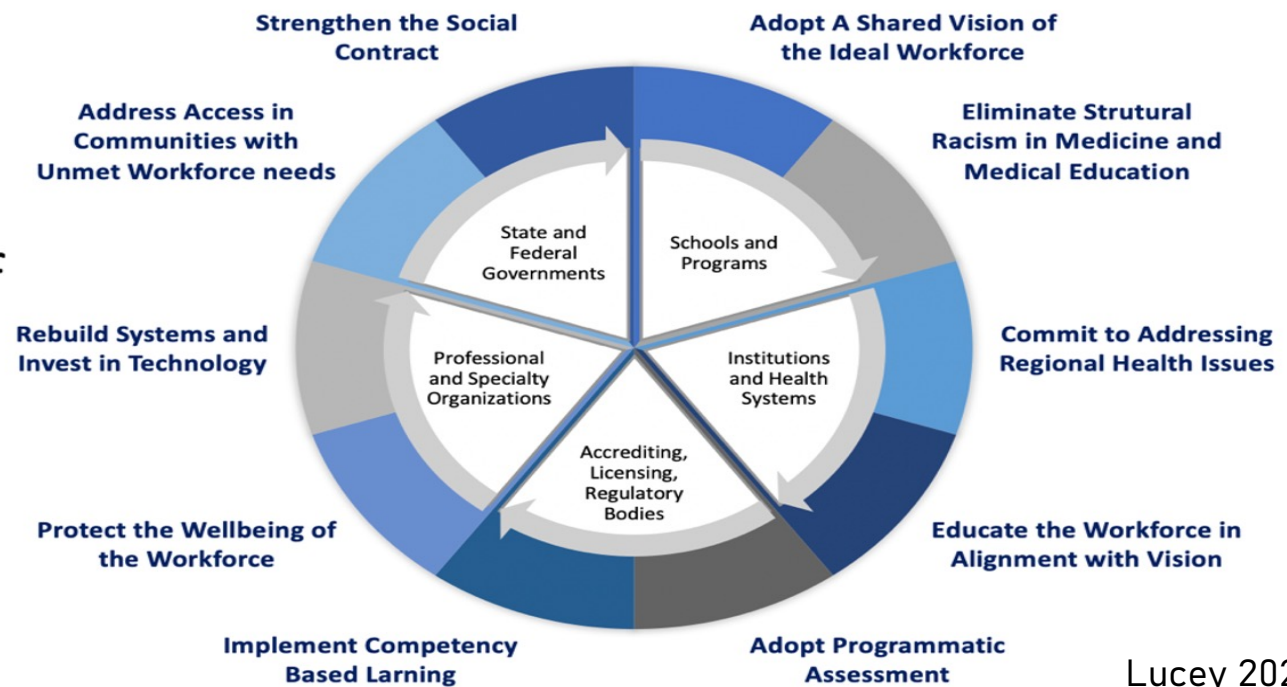
Case Study Part 3 Illustrates Important Points

- **Agitation is a gift, although a painful one at times**
- **Continuous vigilance, adaptation, and improvement are essential**
 - Wicked problems are never solved– just optimally managed for the environment at the time.
- **All Evidence is Contextual**
 - “Evidence-Based” tools, theories, and strategies that worked for homogeneous and majority populations may not be evidenced base for heterogenous populations inclusive of minoritized groups
- **Leaders and Scholars must be willing to unlearn and relearn for the contemporary ecosystem**
- **Emotional support and sensemaking support for all is an essential part of orchestration**

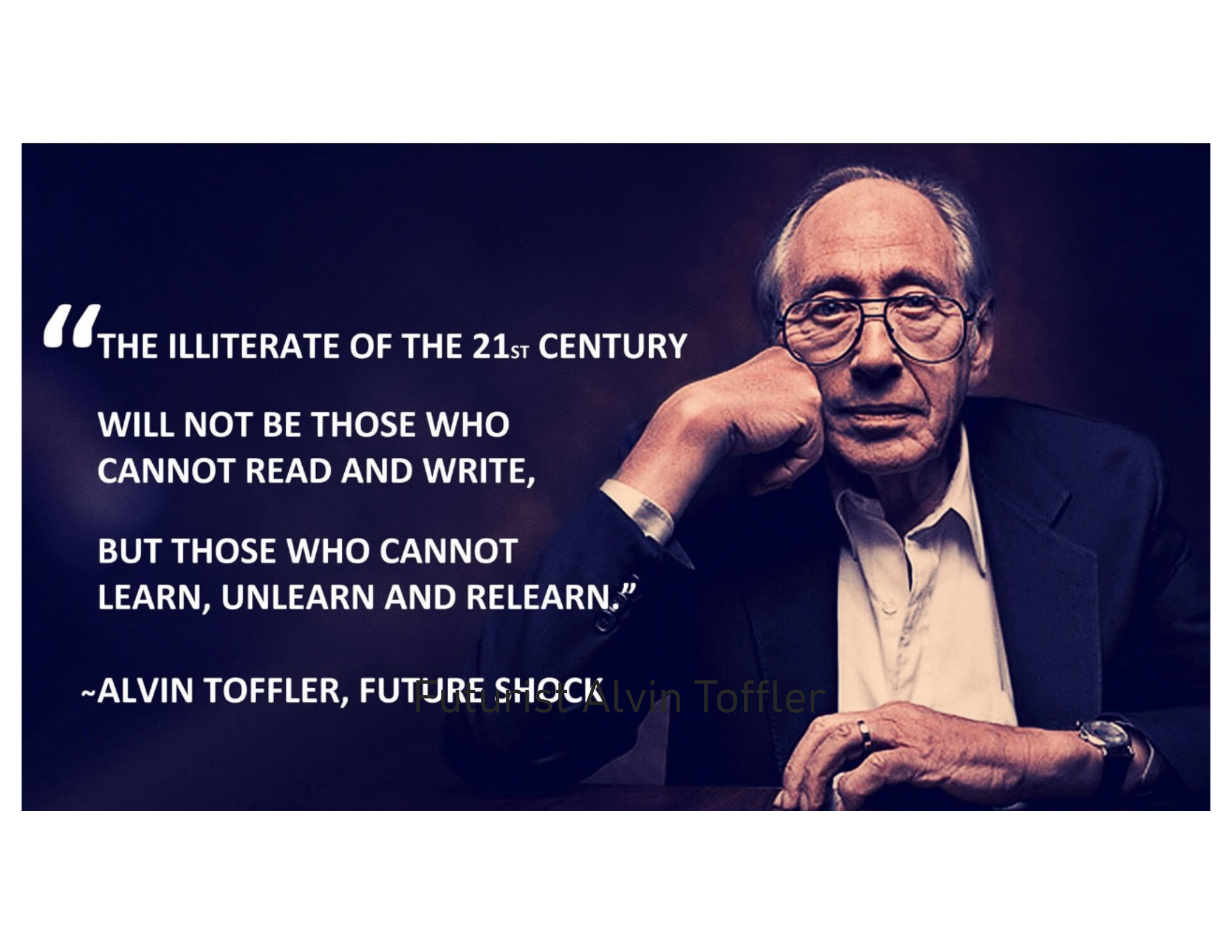


Comprehensive Change for our Countries Requires Work Across Schools, Institutions, Communities

Agenda for Action Across the Continuum of Medical Education:
Accountable Actors



Lucey 20200
Acad Med

A portrait of Alvin Toffler, an elderly man with glasses, resting his chin on his hand. He is wearing a dark suit jacket over a light-colored shirt. The background is dark and moody.

**“THE ILLITERATE OF THE 21ST CENTURY
WILL NOT BE THOSE WHO
CANNOT READ AND WRITE,
BUT THOSE WHO CANNOT
LEARN, UNLEARN AND RELEARN.”**

~ALVIN TOFFLER, FUTURE SHOCK

Futurist Alvin Toffler

Thank you!

Best wishes for....

- A day of learning and unlearning
- The courage to pursue big dreams for our patients, our learners, and ourselves;
- The wisdom to surround ourselves with colleagues who can support, debate, create, and collaborate with us;
- The gift of constructive conflict;
- Wellbeing that allows you to thrive as you do this important work

