NESTED DOMAINS

Exploring a Novel Conceptual Model of the Clinical Learning & Working Environment

Christina R. Bergin, MD, FHM Clinical Assistant Professor, Department of Medicine University of Arizona College of Medicine - Phoenix



LEARNING OBJECTIVES

- 1. Identify how the clinical Learning & Working Environment (LWE) is a complex system
- 2. Define and explain a novel conceptual model of the LWE
- 3. Examine three use-cases for the LWE conceptual model
- 4. Apply the conceptual model to an example LWE challenge

No financial disclosures Volunteer member of the AAIM Collaborative on the Learning & Working Environment

WHY ARE WE TALKING ABOUT THIS?

- Clinical learning is foundational to medical education
- The clinical learning & working environment impacts:
 - Patient outcomes
 - Learning outcomes
 - Learner & faculty wellbeing

Crosscut. ९ •••

OPINION

80-hour weeks, bad pay, exhaustion: Here's why UW medical residents are walking out

In hospitals across Seattle, doctors-in-training are taking a "unity" break to protest low wages and punishing schedules.

by Dr. Kisha Clune & Dr. Brandon Peplinski / September 25, 2019



University of Washington medical residents at a rally outside UW Medical Center. These doctors-in-training are locked in contract negotiations with the university, fighting for increased wages,

CLER Pathways to Excellence

Clinical Learning Environment Review (CLER)

> ys ce

Expectations for an optimal clinical learning environment to achieve safe and high quality patient care it's important to out government

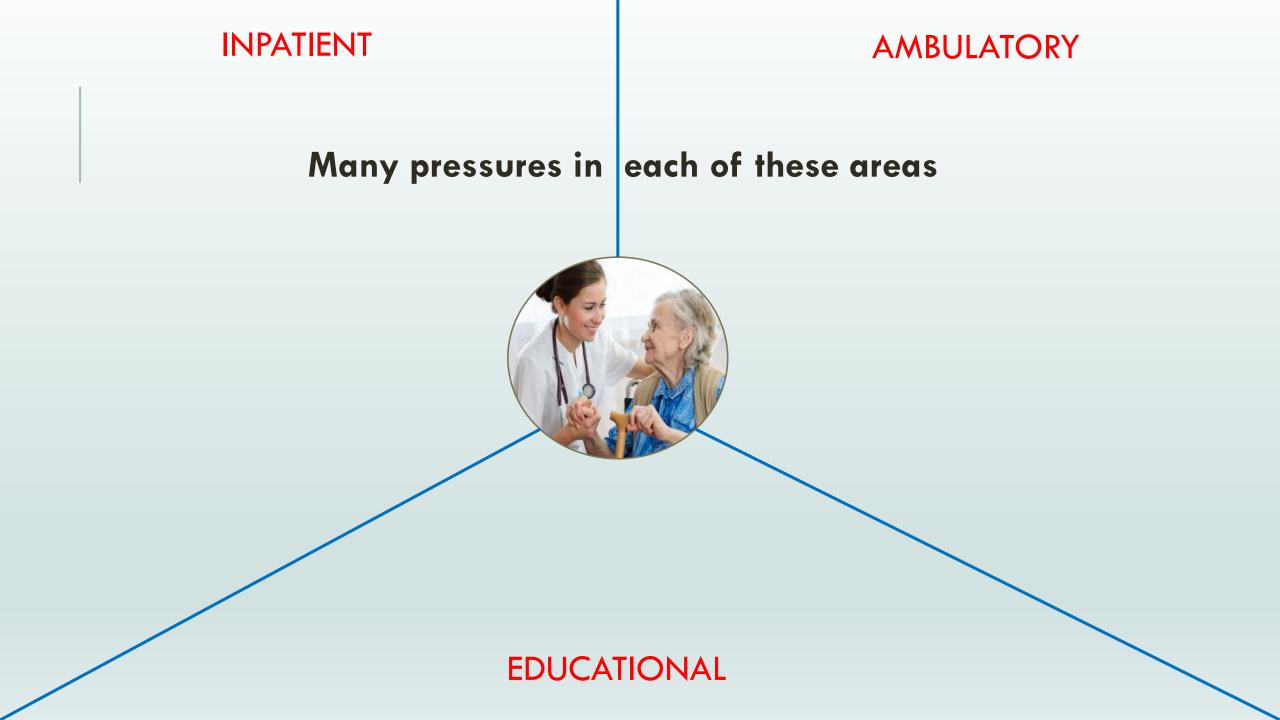
bodies

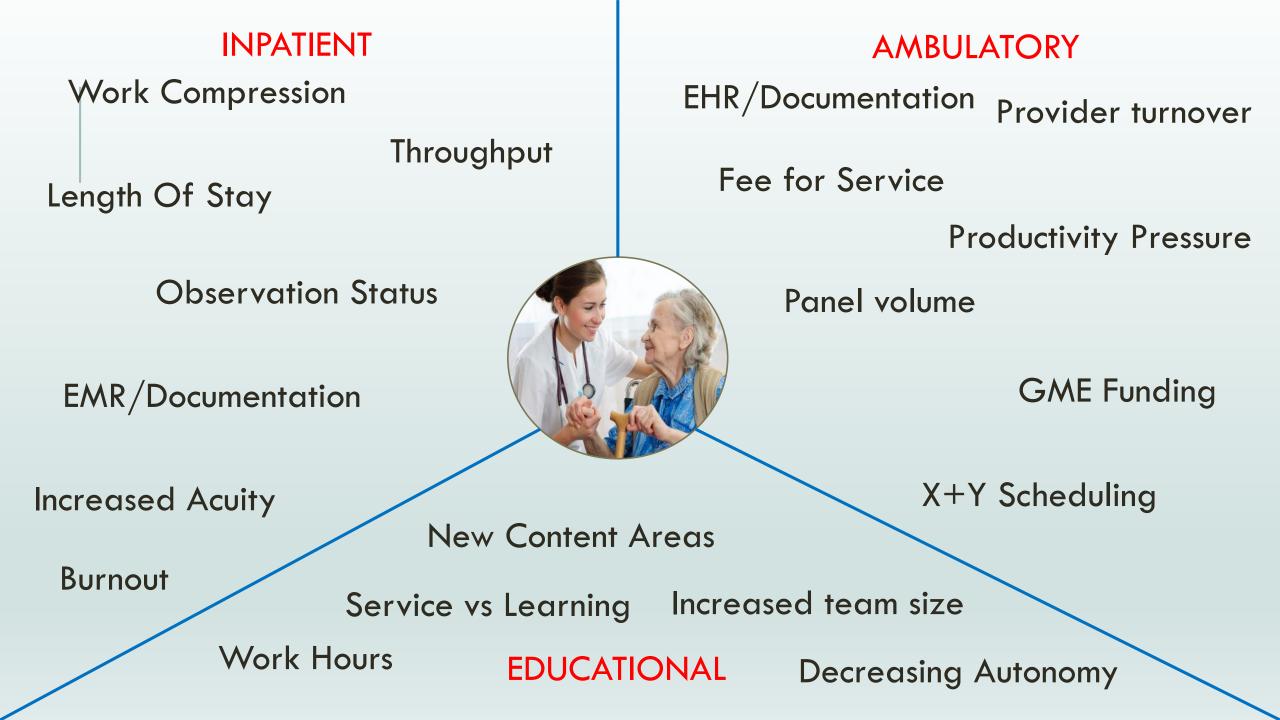
MEMBERS OF AAIM COLLABORATIVE WORKGROUP

- Christina Bergin, MD
- Emily Fondahn MD
- Beth Gentilesco, MD
- Susan Glod, MD
- Karen Hamad, MD
- Rebecca Jaffe, MD
- Lawrence Loo, MD
- Alyssa McManamon, MD
- Simran Singh, MD
- Brian Uthlaut, MD
- Sara Wallach, MD
- Katherine Walsh MD

University of Arizona College of Medicine - Phoenix Washington University School of Medicine Warren Alpert Medical School of Brown University Penn State College of Medicine Florida State University College of Medicine Thomas Jefferson University INTERNAL MEDICINE Loma Linda University School of Medicine Uniformed Services University of the Health Sciences Case Western Reserve University School of Medicine University of Virginia School of Medicine Hackensack Meridian School of Medicine at Seton Hall Univ Ohio State University School of Medicine







OPTIMIZING THE CLINICAL LWE

What is there to optimize?

| Supervision | Fatigue management | Direct observation | Evaluations |
|--------------------------------|---------------------|---------------------------|--------------------|
| Clinical knowledge acquisition | Mentoring | Continuity clinic | Staffing |
| Handoffs/transitions | Professionalism | Geographic admitting | Admitting caps |
| Clinical integration of EHR | Safety culture | Teamwork | Teaching to teach |
| Workload limits | Assessment | Simulation | Identity formation |
| Interprofessional practice | Cultural Competency | Workspaces | Implicit bias |
| Event reporting | Empathy | Faculty development | SI leadership |
| Clinical reasoning | Scholarship | Accreditation | Feedback |
| Wellness | Informatics | Bedside rounding | Autonomy |
| Health Equity | Hidden curriculum | Quality improvement teams | Procedural skill |

OPTIMIZING THE CLINICAL LWE

What is there to optimize?

Better questions:

What IS the Clinical LWE? What are its core elements?

How does one optimize the LWE in a systematic fashion?

THE LEARNING & WORKING ENVIRONMENT (LWE)

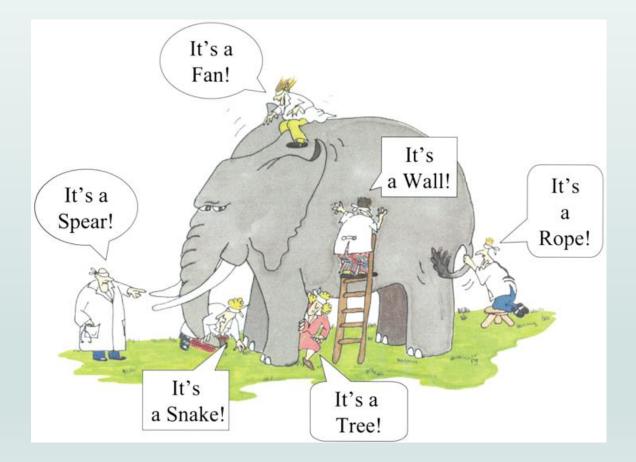
Aka ...

The Clinical Learning Environment (CLE)

What <u>IS</u> it? Can you define the clinical learning & working environment? What are its core elements?

Pair & share

THE LEARNING & WORKING ENVIRONMENT (LWE)



THE CLINICAL LWE IS A SYSTEM



Definition: A system is a collection of interacting & interdependent parts forming a complex unified whole.

Implication: The whole (system) is more than the sum of its individual parts. Interaction of all the elements is necessary for function.

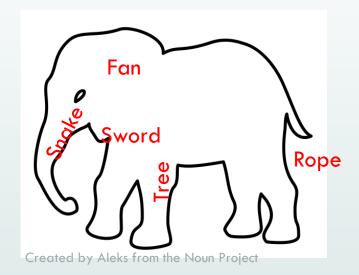
"In any system, when one improves the performance of the parts taken separately, the performance of the the whole does not necessarily improve, and frequently gets worse."

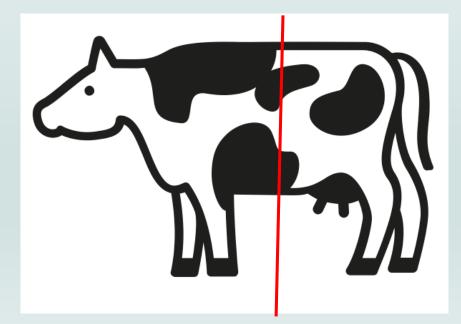
- Russell Ackoff

THE CLINICAL LWE IS A SYSTEM









THE CLINICAL LWE IS A SYSTEM

Understanding the Clinical LWE as a system requires a map/model

| Definition | Model |
|------------------------------------|---|
| "A statement of the exact meaning" | "The concepts used to help people know, understand, or simulate a system" |
| Simplified | Acknowledges complexity |
| Usually verbal | Often multimedia (verbal, visual, physical) |
| Intended to be rigid | Intended to expand |

So ... Isn't there already a conceptual model?

Collaborative investigated candidates:

- Educational theory
- Stakeholder organizations
- Many descriptions of LWE offered
- Some definitions existed
- Emerging consensus that conceptual clarity is needed















Improving Environments for Learning in the Health Professions

Recommendations from the Macy Foundation Conference

Josiah Macy Jr. Foundation | 44 East 64th Street, New York, NY 10065 | www.macyfoundation.org

" 'Learning environment,' as it has appeared in the health professions education literature, is a complex theoretical construct **that has lacked a unified definition**."

EDUCATIONAL THEORY & SOCIAL SCIENCE

6 Dimensions are at play in any setting in which humans live, work, & learn Grouped into **3 Domains**:

1. Personal development or goal direction dimensions \rightarrow learning objectives, content

2. Relationship ("relational") dimensions \rightarrow communication, support, cohesion

3. System maintenance and system change dimensions \rightarrow extent to which environment is orderly & clear in expectations, maintains control, responds to change

Moos RH. Conceptualizations of human environments. Am Psychol 1973;28(8):652-65.

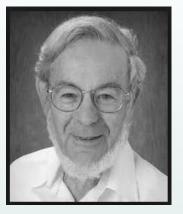
Adv in Health Sci Educ (2012) 17:727–742 DOI 10.1007/s10459-011-9346-8

Key elements in assessing the educational environment: where is the theory?

Johanna Schönrock-Adema · Tineke Bouwkamp-Timmer · Elisabeth A. van Hell · Janke Cohen-Schotanus

94% of items from medical learning environment assessment instruments were successfully matched to Moos' domains

Schönrock-Adema J, Bouwkamp-Timmer T, VanHell EA, Cohen-Schotanus J. Key elements in assessing the educational environment: where is the theory? Adv Health Sci Educ 2012;17:727-42.



Rudolph H. Moos

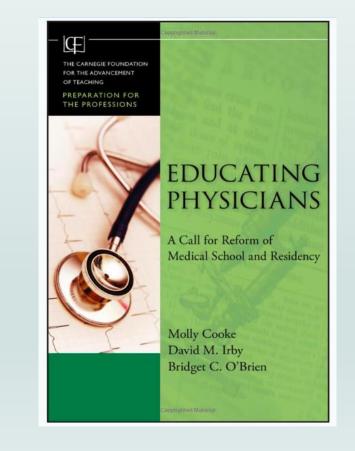
Adv in Health Sci Educ (2012) 17:727–742 DOI 10.1007/s10459-011-9346-8

Key elements in assessing the educational environment: where is the theory?

Johanna Schönrock-Adema · Tineke Bouwkamp-Timmer · Elisabeth A. van Hell · Janke Cohen-Schotanus

"Essential aspects of the educational environment include goal orientation, relationships, and organization/regulation"

Schönrock-Adema J, Bouwkamp-Timmer T, VanHell EA, Cohen-Schotanus J. Key elements in assessing the educational environment: where is the theory? Adv Health Sci Educ 2012;17:727-42.



"The learning environment encompasses the educational, physical, social, and psychological context in which trainees are immersed." Assess the LWE and set standards for institutions through:

- CLER Pathways to Excellence
- Common Program Requirements

6 CLER Focus Areas:

- Patient Safety
- Health Care Quality
- Care Transitions
- Supervision
- Wellbeing
- Professionalism

Summary of 1st round of CLER visits identified the following as "important components:"

- Culture
- Setting
- People
- Values
- Sense of dedication to team and

community

Wagner R, Patow C, Newton R, Casey BR, Koh NJ, Weiss KB; CLER Program. The overview of the CLER Program: CLER National Report of Findings 2016. J Grad Med Educ . 2016;8(2 suppl 1):11-13. doi:10.4300/1949-8349.8.2s1.11



AAMC Statement on the Learning Environment

We believe that the learning environment for medical education shapes the patient care environment. The highest quality of safe and effective care for patients and the highest quality of effective and appropriate education are rooted in human dignity.

We embrace our responsibility to create, support, and facilitate the learning environment shared by our patients, learners, and teachers. In this environment, our patients witness, experience, and expect a pervasive sense of **respect**, **collegiality**, **kindness**, and **cooperation** among health care team members. This includes all professionals, administrators, staff, and beginning and advanced learners from all health professions. This includes research as well as patient care environments.

We affirm our responsibility to create, support, and facilitate a learning environment that fosters **resilience** in all participants. It is our responsibility to create an atmosphere in which our learners and teachers are willing to engage with learning processes that can be inherently uncomfortable and challenging.

We affirm our commitment to shaping a culture of teaching and learning that is rooted in respect for all. Fostering resilience, **excellence**, **compassion**, and **integrity** allows us to create patient care, research, and learning environments that are built upon constructive **collaboration**, mutual respect, and human dignity.

For more information and to view a library of resources, visit **aamc.org/learningenvironment**.



Association of American Medical Colleges REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 4-A-11

Progress in Transforming the Medical Education Learning Environment Subject:

Presented by: Baretta R. Casey, MD, MPH, Chair

Paragraph 4 of Policy D-295.324 (AMA Policy Database), "Transforming the Medical Education 1 Learning Environment," asks that our American Medical Association (AMA) report back to the House of Delegates at its 2011 Annual Meeting on the outcomes of efforts to bring about learning environment change.

This informational report will summarize the activities of the Liaison Committee on Medical 6 Education (LCME) and the AMA related to the medical education learning environment during the past several years.

10 ACTIVITIES OF THE LCME

2

3

4 5

7

8

9

11 12 The LCME approved a new accreditation standard on the medical education learning environment 13 that went into effect in July 2009 (see the Attachment for the wording of standard MS-31-A and its explanatory annotation). In summary, the intent of the standard is for a medical school to: 14 15

- 16 1) Define the professional attributes that medical students are expected to develop;
- 17 2) Include education and student assessment related to these attributes as part of the 18 educational program;
- 19 Evaluate the learning environment to identify positive and negative influences; and
- 20 Work with its partners to mitigate negative influences on medical students' development of 21 the desired professional attributes. 22

23 To assist medical schools in identifying approaches to achieve compliance with this standard, the 24 LCME sponsored a session during the 2009 Annual Meeting of the Association of American Medical Colleges (AAMC). Attended by about 250 medical school faculty members and 25 26 administrators, the session included presentations by several medical schools that had successfully 27 addressed the expectations in the standard. 28 29 The LCME has had an additional standard that expects medical schools to define and publicize the

- standards for the teacher-learner relationship and to develop written policies for addressing 30
- violations (see the Attachment for the wording of standard MS-32 and its annotation). The LCME 31
- 32 monitors compliance with this standard in part through responses to the AAMC Annual Medical
- School Graduation Questionnaire (AAMC GQ), which is completed by fourth-year medical 33

American Medical Association. Report of the Council on Medical Education: progress in transforming the medical education learning environment. https://www.amaassn.org/sites/default/files/media-browser/public/about-

ama/councils/Council%20Reports/council-on-medical-education/all-cme-progresstransforming-med-education-learning-environment.pdf. CME Report 4-A-11. Published 2011. Accessed May 2, 2018.



"A social system that includes the learner (including the external relationships and other factors affecting the learner), the **individuals** with whom the learner interacts, the setting(s) and purpose(s) of the interaction, and the formal and informal rules/policies/norms governing the

interaction."



Definition of "Learning Environment"

Learning environment refers to the social interactions, organizational cultures and structures, and physical and virtual spaces that surround and shape participants' experiences, perceptions, and learning.

Definition of "Learners"

In a continuously learning and improving health system, every participant is both a learner and a teacher. Participants include undergraduate and graduate health professions students, trainees, and researchers enrolled in formal educational programs as well as practitioners, educators, administrators, staff, patients, families, and community members.

07/09/18

| Study | Culture | Physical Space | Curricula | Relationships (Interaction) | Psychological (Personal) | Regulatory | CLER Focus Areas |
|---|---------|-------------------|-----------|--------------------------------|-----------------------------|------------|---------------------|
| Schönrock-Adema et al ¹² | | | | X | х | х | |
| Moos ¹³ | | Х | | Х | Х | | |
| Josiah Macy Jr. Foundation ¹⁴ | Х | X | | Х | Х | х | |
| Flott and Linden ¹⁵ | Х | Х | Х | Х | | | |
| ACGME ¹⁶ | х | Х | | Х | Х | | х |
| AMA ¹⁷ | х | Х | Х | Х | Х | Х | |
| AAMC ¹⁸ | Х | | | Х | Х | | |

Table 1 Existing Models and Definitions Identified by the Collaborative and Breakdown of Their Component Areas

AAMC = Association of American Medical Colleges; ACGME = Accreditation Council for Graduate Medical Education; AMA = American Medical Association.

Are there any elements missing? Any outstanding questions?

A COMPREHENSIVE CONCEPTUAL MODEL

Areas identified for development to achieve a deeper understanding:

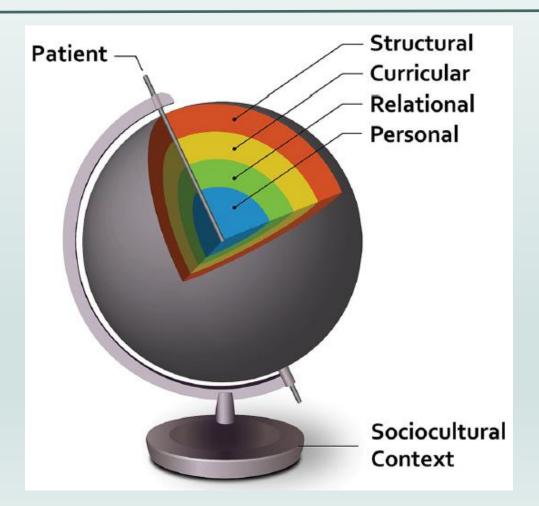
- •What is the role of the patient and patient care?
- How do LWE component areas interact?
- What is the role of factors/pressures external to the LWE?
- How do learners differ in their needs, and how does the LWE as a system accommodate these differences?
- How can a conceptual model be practically applied on the "front lines"?

A COMPREHENSIVE CONCEPTUAL MODEL

What should a successful model "look like"?

- Allow for nuanced understanding of local environments
- Link improvement strategies to the specific needs of programs
- Apply uniquely to clinical settings; account for the role of patient care
- Demonstrate utility across a diverse range of program/learner types
- Meaningful to end users

"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

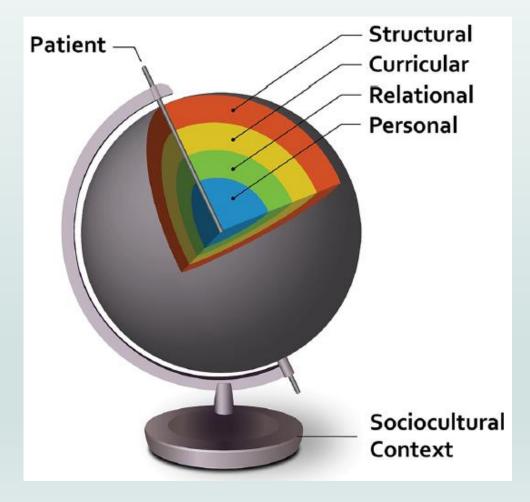


"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

Patient as Axis:

Without the patient and patient care, there is no clinical LWE

False dichotomy of education vs. service

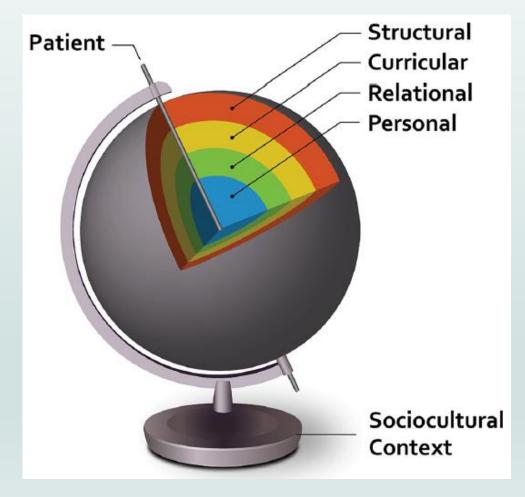


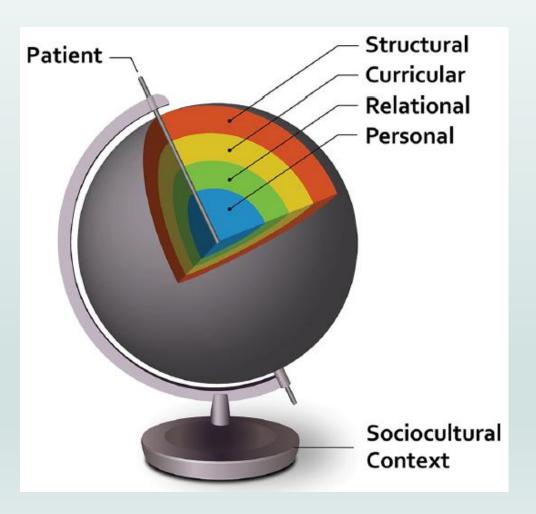
"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

Interconnected Domains:

Nested & intrinsically synergistic: each influences the other.

Fluidity in the balance of domains



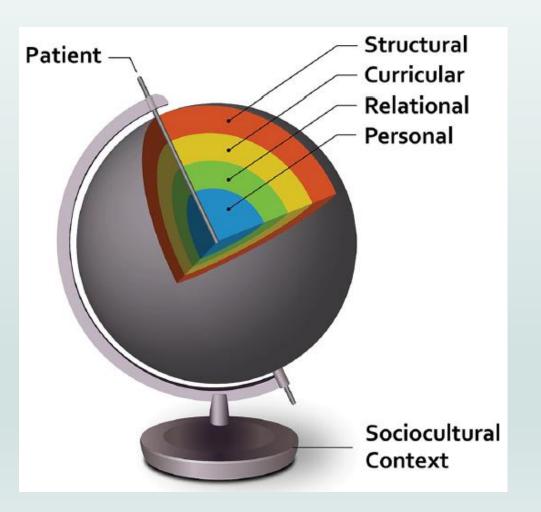


Personal

The lens through which an individual experiences the LWE and the set of intrinsic qualities the individual adds to the LWE. Includes the individual's self-identification and the attitudes, biases, skills, experiences and vulnerabilities they possess.

Examples of areas for inquiry:

- What is the learning style of a learner or group of learners?
- What is the teaching style of an attending?
- How skilled is this learner with kinesthetic tasks?
- What is a learner's personal and cultural comfort with autonomy?
- What is an attending's attitude towards learner autonomy?

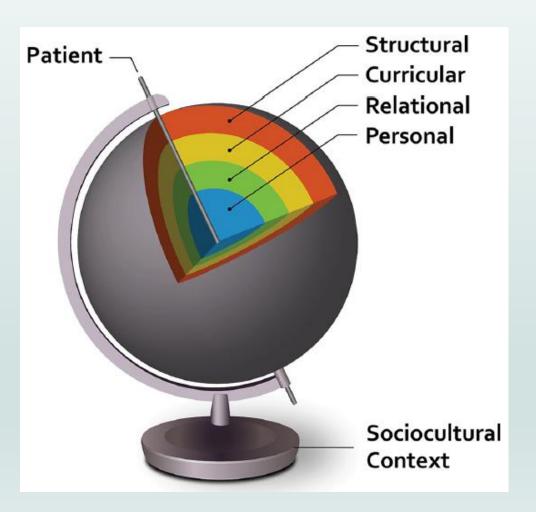


Relational

The ways in which individuals or groups interact and the impact of these interactions upon learners and the LWE as a system. Interactions between peers, staff, patients, supervisors, mentors, educators, and personal relationships (e.g., friends, family) are to be considered. This domain encompasses unique relationships as well as LWE culture and behavioral norms.

Examples of areas for inquiry :

- Do educators create a safe environment for learners to ask for help?
- Is the learner's role on the team clear to patients and providers?
- Is social isolation prevalent for a learner or group of learners?

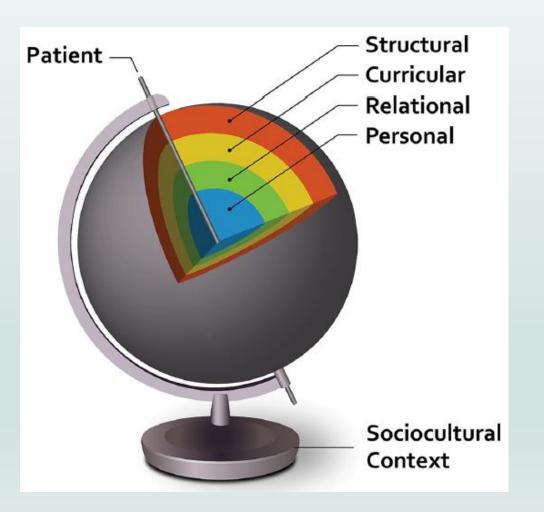


Curricular

Factors relating to formal and informal educational experiences consisting of at least one learning objective and a process of learner assessment and feedback, even if not overtly stated. The hidden curriculum is also part of this domain, though overlaps significantly with the other three domains.

Examples of areas for inquiry:

- Does didactic content match the needs of learners and patients?
- Are efforts made to create interprofessional learning experiences?
- Are ample faculty development opportunities available for educators?



Structural

The organizational, programmatic and physical context within which clinical learning occurs. Components may be specific to the local LWE – such as workspace, the EHR, staffing levels, team structures, and institutional policies – or may be externally defined – such as work hours, admitting caps, or licensure requirements.

Examples of areas for inquiry :

- Are work areas in proximity to patient care areas?
- Is the ambulatory schedule conducive to patient panel continuity?
- Is there sufficient infrastructure to minimize nonphysician tasks?

"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

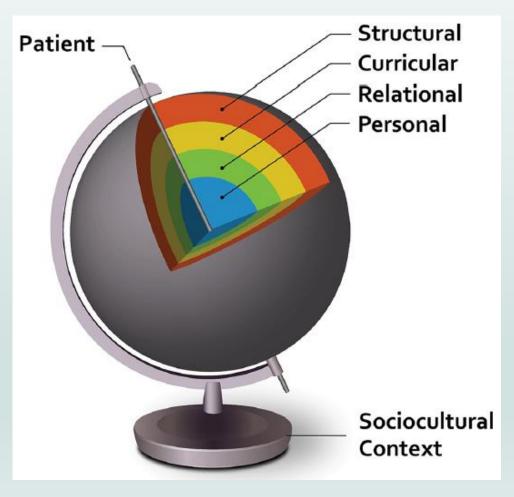
Multiple Learners: broad definition

"In a continuously learning & improving health system, every participant is both a learner & a teacher"

- Macy Foundation Conference Recommendations on Improving Environments for Learning in the Health Professions

Learners are both influenced by & exert influence on the LWE

Impermanence. Fluidity in balance of domains

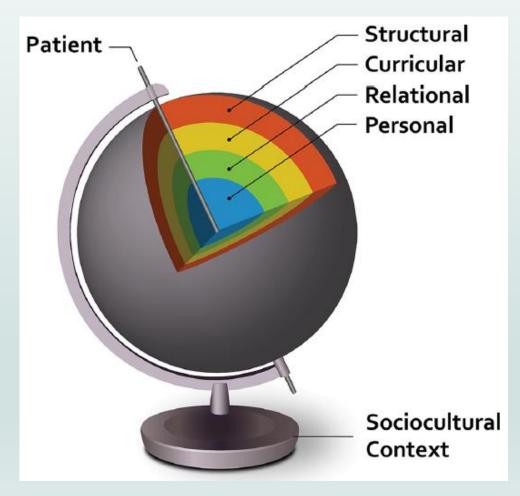


"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

Sociocultural context:

Outside the LWE yet shapes & supports (or hinders) it

Beyond immediate locus of control &/or function does not predominantly pertain to the care of patients or education of learners



"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

Personal

The lens through which a learner experiences the LWE and the set of intrinsic qualities the learner adds to the LWE. Includes the learner's self-identification and the attitudes, biases, skills, experiences and vulnerabilities they possess.

Examples of areas for inquiry:

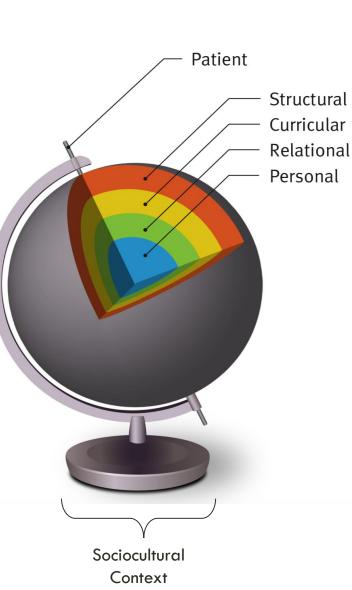
- What is the learning style of a learner or group of learners?
- How skilled is this learner with kinesthetic tasks?
- What is a learner's personal and cultural comfort with autonomy?

Curricular

Factors relating to formal and informal educational experiences consisting of at least one learning objective and a process of learner assessment and feedback, even if not overtly stated. The hidden curriculum is also part of this domain, though overlaps significantly with the other three domains.

Examples of areas for inquiry:

- Does didactic content match the needs of learners and patients?
- Are efforts made to create interprofessional learning experiences?
- Are ample faculty development opportunities available for educators?



Relational

The ways in which individuals or groups interact and the impact of these interactions upon learners and the LWE as a system. Interactions between peers, staff, patients, supervisors, mentors, educators, and personal relationships (e.g., friends, family) are to be considered. This domain encompasses unique relationships as well as LWE culture and behavioral norms.

Examples of areas for inquiry :

- Do educators create a safe environment for learners to ask for help?
- Is the learner's role on the team clear to patients and providers?
- Is social isolation prevalent for a learner or group of learners?

Structural

The organizational, programmatic and physical context within which clinical learning occurs. Components may be specific to the local LWE - such as workspace, the EHR, staffing levels, team structures , and institutional policies – or may be externally defined – such as work hours, admitting caps, or licensure requirements.

Examples of areas for inquiry :

- Are work areas in proximity to patient care areas?
- Is the ambulatory schedule conducive to patient panel continuity?
- Is there sufficient infrastructure to minimize non-physician tasks?

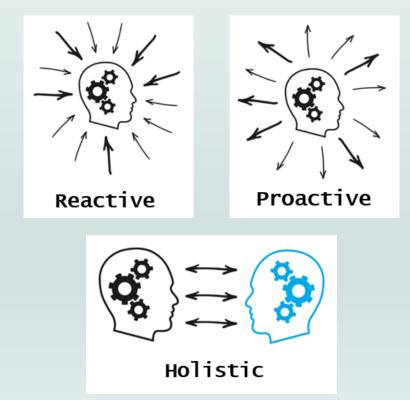
SO ... NOW WHAT? HOW IS THIS USEFUL?

Designed to empower frontline clinician educators, leaders, and learners to improve their local LWE by:

- Creating a shared mental model
- Applying systems thinking

Three Use-Cases to Facilitate Application:

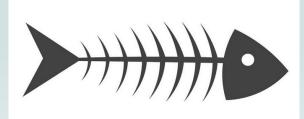
- Reactive
- Proactive
- Holistic



HOW TO APPLY THE CONCEPTUAL MODEL

Reactive

- Purpose: Understand and analyze a recent event or deficit in the current state, and possible mitigation strategies
- Product: Comprehensive understanding of all the factors contributing to the current state of the local LWE.
- Ex: clinical event, poor survey result

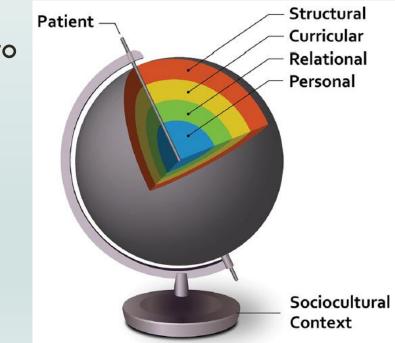


Reactive Application

 Example: A resident does not involve their attending overnight when a patient with presumptive dx of cellulitis clinically deteriorates. In AM, it's clear that necrotizing fasciitis was missed. Eval the LWE to see what contributed to this happening.

What are potential contributing factors in each of the domains?

- Personal
- Relational
- Curricular
- Structural



Reactive Application - Example: Missed necrotizing fasciitis.

Table 2 Reactive Use of the Conceptual Model of the Learning and Working Environment as Applied to Supervision*

DOMAIN CASE 1 EXEMPLAR FACTORS

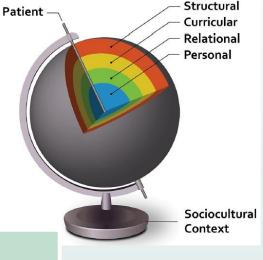
- Personal GME Learner: Medical knowledge; Clinical reasoning and judgement; Insight into own skills; Management of competing priorities; Threshold to ask for help; Fatigue Attending: Understanding of supervisory role; Attitude towards learner autonomy; Receptiveness to calls at night; Balance of burnout and engagement
- Relational Clarity of expectations regarding overnight calls; Handoff between day and night team; Collegiality between

departments; Resident-patient interaction

- Curricular Didactic content; Explicit clinical reasoning curricula; Faculty development in medical education; Team training; Hidden curriculum rewarding independence
- Structural Admitting caps; Shift length; Overnight staffing; Policies, bylaws, rules regarding supervision; Geographic distribution of patients; Implementation of work hours

GME = graduate medical education.

* Exemplar factors within the 4 domains contributing to the situation described in case 1. This list is not exhaustive nor are domain assignments absolute. The table demonstrates the range of contributing factors that could be targeted when optimizing the learning and working environment in a reactive fashion.



Proactive

- Purpose: Design new program or a new improvement strategy
- Product: Program plan that incorporates an understanding of current state of factors in each of the LWE domains + the changes needed in each domain for full implementation
- Ex: redesign rounds, improve procedural supervision, optimize the LWE in the face of a new sociocultural impact

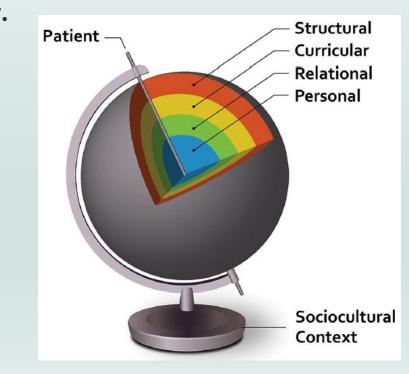


Proactive Application

 Example: An institution just had its CLER visit, and an area identified to work on is improving the safety of bedside procedures by introducing more interprofessional involvement.

What factors in each of the domains should be considered when designing a pilot program? What resources are needed in each domain to ensure success?

- Personal
- Relational
- Curricular
- Structural



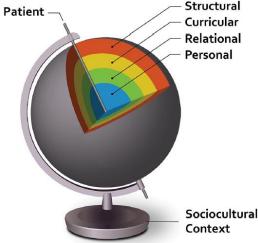
Proactive Application - Example: Designing a program to improve procedural supervision.

 Table 4
 Proactive Use of the Conceptual Model of the Learning and Working Environment as Applied to Supervision

DOMAIN CASE 3 EXEMPLAR FACTORS

a proactive fashion.

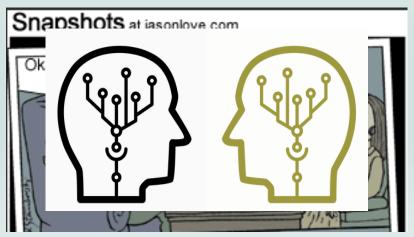
| _ | |
|----------|--|
| Person | |
| | Medical knowledge; Procedural skill; Attitudes towards IPE ²⁰ ; Understanding the skills and responsibilities of team members; Receptiveness to feedback; Empathy; Regard for patient safety principles |
| | Other Health Professionals |
| | Work experience; Procedural experience; Perceptions of hierarchies; Comfort with speaking up; Ability to manage competing responsibilities and workload; Knowledge of institutional policies |
| | SI Leadership |
| | Commitment to education |
| Relation | nal Culture of respect across professions; Dynamic between professions at the bedside; Staff/learner report with supervisors; Shared understanding of roles pertaining to invasive procedures; Faculty/staff modeling of teamwork behaviors; Effectiveness of collaboration between professions at leadership level |
| Curricu | Iar Procedural skills training program; Hidden curriculum pertaining to IPE; Integration of SI policies into curricula; Explicit team training; Unit onboarding process; Establishment of learning objectives pertaining to invasive bedside procedures; Incorporation of validated teamwork assessment strategies ²¹ ; Curricular integration at the point of care |
| Structu | ral Nurse/patient ratios; Documentation burden; Size and layout of patient rooms; Location of workspaces and proximity to patient care areas; Integration of procedure tracking portal; SI clinical reference guide; Number of point-of-care ultrasounds; Availability of simulation facilities |
| Ex | = interprofessional practice and education; SI = sponsoring institution. emplar factors within the 4 domains contributing to the situation described in case 3. This is not an exhaustive list, nor are domain gnments absolute. The table demonstrates the range of contributing factors that could be targeted when optimizing the LWE in |



Holistic

- Purpose: Align stakeholders and achieve a shared mental model
- <u>Product</u>: Understanding and appreciation of competing priorities; Improved communication.
- Ex: bringing new clinical site into established model or curriculum.

Aka, couples therapy

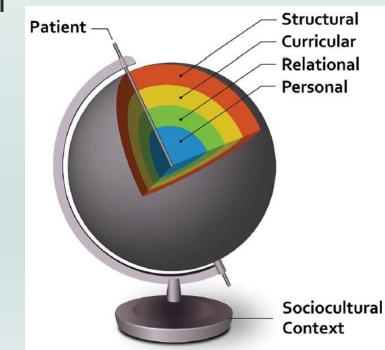


Holistic Application

 Example: An ambulatory site gets poor evals from students. The Clerkship Director and the clinic's CMO have competing priorities regarding physician productivity and the educational experience.

Improved understanding of factors in each domain can lead to better collaboration to achieve both goals:

- Personal
- Relational
- Curricular
- Structural



Holistic Application - Example: Clinic with poor learner evals.

Table 3 Holistic Use of the Conceptual Model of the Learning and Working Environment as Applied to Supervision*

DOMAIN CASE 2 EXEMPLAR FACTORS

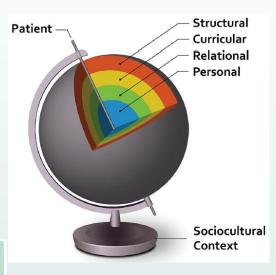
- Personal Clinical/Educational Leadership: Ability to appreciate competing priorities; Leadership skills; Receptiveness to feedback.
 - Clinic Attendings: Desire for joy in practice; Role clarity; Mastery of effective teaching strategies; Interest in teaching; Management of competing priorities; Wellness/burnout.

UME Learners: Desire for joy in learning; Role clarity; Attitudes towards autonomy; Clinical knowledge/skills

- Relational Shared expectations between clerkship director and stakeholders; Openness of communication between site director and clerkship director; Clinic team composition and culture; Trust between patients, providers, and students; Provider receptiveness to student questions
- Curricular Development of achievable competencies mapped to rotation; Availability of faculty development addressing medical education proficiencies; Quality of clinic orientation; Expectations/formats for self-directed learning; Preclinical courses building value-added skills (Motivational interviewing, Vital sign measurement)
- Structural Ratios of clinical and administrative staff; Site resources including workstations, conference rooms, number of patient rooms; Student EHR access; Provider-Patient schedule; Patient rooming workflows

UME = undergraduate medical education; EHR = electronic health record.

* Exemplar factors within the 4 domains contributing to the situation described in case 2. This is not an exhaustive list, nor are domain assignments absolute. The table demonstrates the range of contributing factors that could be targeted when optimizing the Learning and Working Environment in a holistic fashion.



"The Learning and Working Environment is the nesting of personal, relational, curricular, and structural domains as traversed by multiple learners, centered on the needs of individual or populations of patients, and influenced by the sociocultural context."

Personal

The lens through which a learner experiences the LWE and the set of intrinsic qualities the learner adds to the LWE. Includes the learner's self-identification and the attitudes, biases, skills, experiences and vulnerabilities they possess.

Examples of areas for inquiry:

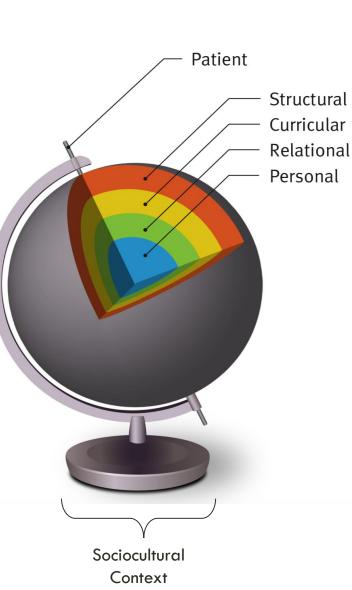
- What is the learning style of a learner or group of learners?
- How skilled is this learner with kinesthetic tasks?
- What is a learner's personal and cultural comfort with autonomy?

Curricular

Factors relating to formal and informal educational experiences consisting of at least one learning objective and a process of learner assessment and feedback, even if not overtly stated. The hidden curriculum is also part of this domain, though overlaps significantly with the other three domains.

Examples of areas for inquiry:

- Does didactic content match the needs of learners and patients?
- Are efforts made to create interprofessional learning experiences?
- Are ample faculty development opportunities available for educators?



Relational

The ways in which individuals or groups interact and the impact of these interactions upon learners and the LWE as a system. Interactions between peers, staff, patients, supervisors, mentors, educators, and personal relationships (e.g., friends, family) are to be considered. This domain encompasses unique relationships as well as LWE culture and behavioral norms.

Examples of areas for inquiry :

- Do educators create a safe environment for learners to ask for help?
- Is the learner's role on the team clear to patients and providers?
- Is social isolation prevalent for a learner or group of learners?

Structural

The organizational, programmatic and physical context within which clinical learning occurs. Components may be specific to the local LWE - such as workspace, the EHR, staffing levels, team structures , and institutional policies – or may be externally defined – such as work hours, admitting caps, or licensure requirements.

Examples of areas for inquiry :

- Are work areas in proximity to patient care areas?
- Is the ambulatory schedule conducive to patient panel continuity?
- Is there sufficient infrastructure to minimize non-physician tasks?

CONCLUSIONS

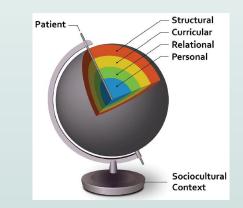
The Clinical LWE a complex system, and must remain the heart of medical education

Improving the conceptual clarity around the clinical LWE will allow educators to adapt optimization strategies to local clinical/educational microsystems with sufficient safeguards to ensure learner & faculty wellness and to promote better patient & learning outcomes.

CONCLUSIONS

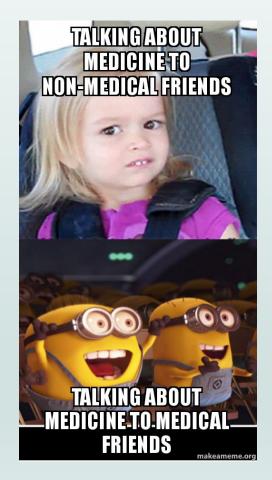
This conceptual model of the LWE is a novel and useful tool for frontline educators and learners who are working to optimize the LWE

- Accounts for the role of the patient and patient care
- Explains interactions & interconnectedness of factors
- Considers the role of multiple learners/individuals
- Allows for the influence of sociocultural context
- Facilitates communication & shared understanding
- Provides a reference point for change



The model can be utilized in Reactive, Proactive and Holistic fashions

THANK YOU!





IT'S OK TO ASK For Help

CALL 1.800.273.8255 24-hr National Suicide

TEXT HOME TO 741741 Crisis Text Line

4-hr National Suicide Prevention Lifeline

Crisis lext L

BREAKOUT

Let's use the LWE Conceptual Model in a **<u>Reactive</u>** direction

• Understand and analyze the current state of the learning and working environment

In pairs, perform a reactive assessment of a learning environment challenge related to supervision

Use the conceptual model to structure your analysis of the case

REPORT BACK

Identify the most important contributing factors from each of the four domains.

Are there any action items your group identified?