

# How good is your learning environment?

Measuring UK medical students' perceptions of different clinical learning environments

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## **Objectives:**

- 1. Examine the Clinical Learning Environment (CLE)
- 2. Why relevant?
- 3. Measuring the CLE the UCEEM
- 4. Study adapted UCEEM for four UK depts.
- 5. Key findings and applications
- 6. Take away what can you do?





## Clinical Learning Environment (CLE)

- The CLE is the sum of the internal and external circumstances and factors surrounding and affecting a person's learning and working:
  - Physical surroundings
  - Systems and structures
  - Organisational culture (e.g. relationships between staff, patients and students/trainees; shared values, norms and behaviours)
  - Attitudes, norms "how we do things here"
  - The learner how s/he perceives the climate, interacts with the environment and its opportunities
- Important for learner satisfaction (1), achieving competencies
  (2), and how they practice after training (3)





Genn JM. AMEE Medication Education Guide No. 23 (Part 2): curriculum, environment, climate, quality and change in medical education – a unifying perspective. Medical Teacher 2001; 23:445–54.
 Mitchell et al. Factors affecting resident performance: development of a theoretical model and a focused literature review. Academic Medicine. 2005; 80(4):376-89.
 Hoff et al. Creating a learning environment to produce competent residents: the roles of culture and context. Academic Medicine. 2004;79(6):532-40.





## Why look at the CLE?

Council



Working with doctors Working for patients

Promoting excellence: standards for medical education and training Promoting escalarce: standards for medical education and training The ten standards THEME 1 Learning environment and culture 511 The learning environment is sale for patients and supportive for learners and educators. The culture is caring, comparationate and provides a good standard of care and experience for patients, prevs and families. THEME 2 Educational governance \$1.2 The learning environment and organizational culture and leadership value and support education and training so that learners are able to demonstrate what is expected in Good medical practice and to achieve the learning 523 The educational governance system continuously outcomes required by their curriculum." improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability, and responding when standards are not being met. THEME 5 52.2 The educational and clinical governance systems are integrated, allowing organizations to address concerns. Developing and about patient selety, the standard of care, and the Implementing curricula standard of education and training. and assessments 52.3 The educational governance system makes sure that 05 education and training is fair and is based on principles. 55.1 Medical school curricula and assessments of equality and dwanity. are developed and implemented so that medical students are able to achieve the learning outcomes required for graduates. \$2.2 Postgraduate carricula and assessments are implemented so that doctors in training are able to demonstrate what is expected in Good medical practice and to achieve the learning outcomes Supporting learners required by their curriculum. 523 Learners receive educational and pastoral support to be able to demonstrate what is expected in THEME 4 Good medical practice and to achieve the learning outcomes Supporting educators required by their curriculum. 343 Educators are selected, inducted, trained, and approximed to reflect their education 04 and training responsibilities. 54.2 Educators receive the support, resources For undergraduate education, the learning outcomes for graduates (Fornarcer's Doctors)<sup>2</sup> and for and time to meet their education and postgraduate training, the curriculum approved by the General Medical Council. training responsibilities. **96 | General Medical Council General Medical Council | 07** 



## Measuring the CLE

- Wide range of tools to measure learners' perceptions of the learning environment
- Most measurement tools approach the CLE as an educational environment rather than a working environment (4)
- Many popular tools have also been criticised on their apparent lack of theoretical basis (5)



4. Soemantri et al. Measuring the educational environment in health professions studies: A systematic review. Medical Teacher. 2010;32(12):947-52.

5. Billett S. Workplace participatory practices: conceptualising workplaces as learning environments. Journal of Workplace Learning. 2004;16(6):312–324.



## Undergraduate Clinical Education Environment Measure (UCEEM) – Strand et al.

- Developed to measure UG medical students' perceptions of the learning environment
  - Developed in Sweden (6)
  - Based in workplace learning theory (7) with qualitative data (focus groups, interviews plus a pilot)
  - Examines multiple organisational qualities that focus on social inclusiveness and experiential learning (i.e. the social, emotional and cognitive dimensions of the CLE)
  - Validated, robust measure (8)

#### **UCEEM Dimensions and sub-scales**

#### **1. Experiential learning:**

1A. Opportunities to learn in and through work & quality of supervision

1B. Preparedness for student entry

#### 2. Social participation

2.A Workplace interaction patterns & social inclusion

#### 2.B Equal treatment

6. Strand P et al. Development and psychometric evaluation of the Undergraduate Clinical Education Environment Measure (UCEEM). Medical Teacher 2013; 35:1014-1026.
 7. Billett S. Workplace participatory practices: conceptualising workplaces as learning environments. Journal of Workplace Learning. 2004;16(6):312–324.
 8. Strand et al. Development and psychometric evaluation of the Undergraduate Clinical Education Environment Measure (UCEEM). Medical Teacher 2013; 35:1014-1026.





### Study aim:

Apply the UCEEM to the new context of a UK setting, to assess and examine the perceptions of senior medical students of a number of different CLEs

- Support departments improve their own learning environments





## Methods – questionnaire

- Cross-sectional questionnaire study
- 5<sup>th</sup> year medical students, at the end-of-year session
- Context: four departments that had received mixed reviews from students and were in the process of making changes/improvements
- Asked to completed questionnaire for two memorable LEs/rotations from the four identified (length =8 weeks)
- UCEEM consists of 25 items scored on a five-point Likert scale (Fully disagree to fully agree)
- Approximately 80% took part (n=132)

#### Example UCEEM Survey Items

1. I received useful induction to this placement.

2. My supervisors were expecting me when I arrived.

3. My (work) tasks are relevant to the learning objectives.

4. I am sufficiently occupied with meaningful (work) tasks.

5. My tasks are suitably challenging for my level of knowledge and skills.

I am encouraged to participate actively in the work here.

7. I have adequate access to computers.

8. There is sufficient physical space for the number of medical students on placement here.





Results							Overall Dept. 4 rated poorest	
UCEEM Scales, Subscales & Example Items *		Department 1 Median (L-UQ	opportunities to learn in ent and through work <sup>L-UC</sup>			ent 3 L-UQ )	Бера	rtment 4 Median (I-uo)
Number of students who rated each department		87	exp	experience				Dept. 4
Scale1: Experiential Learning			-	4.4)	Dep	t. 3 mos	st	poorest for
1:A: Opportunities to learn in and through work & Quality of supervision		Depts, 1, 2 & 3 reported as <sup>4.6</sup>			pre	prepared for		feedback
5. My tasks are suitably challenging for my level of knowledge and skills.		inclusiveness and social		5.0)	student entry		rv	
13. I receive useful feedback from my supervisors.		-5.0)			Student entry		Ŷ	3.0 (3.0-4.0)
1:B: Preparedness for student entry		participation 40		-17)		3.50 (2.6-4.0)		
1. I received useful induction to this placement.		Depts. 2 & 3 st		student	s	3.4 (2.0-5.0)		
2. My supervisors were expecting me when I arrived.				Juacht		3.4 (3.0-4.0)		
Scale 2: Social Participation All dept	s. scored	4.2 (3.5-4.7)	4.0 (3.5-	repor	eported feeling a		rt	3.8 (3.2-4.4)
2:C: Workplace interaction patterns & student induction	orequal	3.8 (3.2-4.5)	3.9 (3.1-4		of the te	eam		3.3 (2.5-4.2)
20. I feel included in the team of people who work here	or equal	3.4 (2.0-4.0)	3.6 (3.0-5	0.07	ט.כן ט.כ	-4.0)		3.3 (2.0-4.0)
22. Communication between those working here is goo trea	tment	3.3 (2.0-4.0)	3.7 (3.0-5.0)		3.7 (3.0-5.0)			3.3 (2.0-4.0)
2:D: Equal treatment		4.5 (4.0-5.0)	5.0 (4.0-5.0)		4.5 (4.0	-5.0)		4.0 (3.0-5.0)
23. Everyone is treated equally here regardless of cultural background.		5.0 (4.0-5.0)	5.0 (4.0-5.0)		4.0 (4.0-5.0)			4.0 (3.0-5.0)
24. Everyone is treated equally here regardless of gender.		4.0 (4.0-5.0)	5.0 (4.0-5.0)		5.0 (4.0	-5.0)		4.0 (3.0-5.0)





## Discussion

- Results valuable for directing improvements:
  - Fed unit specific data back to individual clinical depts. to initiate and direct improvements (e.g. tailored discussions and workshops around optimising their LEs for medical students)
- Applies UCEEM to new context:
  - Reflects prior research (e.g. welcome introductions, sense of belonging, studentcentred supervision and team work) (9)
  - Requires further evaluation in other contexts and settings
  - Valuable for directing further in-depth qualitative research (e.g. role of belonging and tensions between service and training)

9. Liljedahl et al. What students really learn: contrasting medical and nursing students' experiences of the clinical learning environment. Advances in Health Sciences Education. 2015;20(3):765-79.





## **Concluding Remarks**

- What it adds:
  - UCEEM is a useful tool for evaluating medical student perceptions of CLEs
  - Theoretically robust, it is straight-forward to administer and score
  - Used to collect baseline and comparative data for evaluation and improvement purposes
- <u>Areas to consider</u>:
  - Think about your own unit's educational ethos how might learners perceive this (UCEEM)?
  - What are the expectations of students and trainers in terms of tasks and interactions are these different?
    - How are student induction and learning opportunities organised?
  - How are students made to feel welcome and part of the clinical team
    - Consider impact of teacher/trainer behaviour on learner perceptions?
  - Learner tasks planned and evaluated?
  - Think about the impact that you have on your own LEs you all are important parts of the LE!





## Questions? Thank you for listening!

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