

## What factors explain differences in learning climates?

A multi-method study of medical student and trainee perceptions across different clinical environments in Aberdeen Royal Infirmary.

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### Clinical Learning Environment (CLE)

The CLE is the sum of the internal and external circumstances and influences surrounding and affecting a person's learning and working:

- Physical surroundings
- Systems and structures
- Organisational climate/culture (e.g. relationships between staff, patients and students/trainees)
- Attitudes, norms "how we do things here"
- The learner – how s/he perceives the above, interacts with the environment and its opportunities



*The clinical learning environment = the clinical working environment*

### Mixed Methods Approach

- **Questionnaire**
  - Modified Undergraduate Clinical Education Environment Measure (Strand et al. Medical Teacher. 2013)
  - Perceptions of final year medical students experiences in four different departments
- **Interviewed key stakeholders**
  - Two departments: **General Surgery**, and **Obstetrics and Gynaecology**
  - Maximal variation sampling including consultants, management, trainees, other healthcare professionals and students
  - Semi-structured interview schedule based on wider literature and local reports e.g. *How would you describe the CLE in X? Relationships between trainees and consultants?*
  - **24/30** interviews were conducted and equally drawn from each speciality.
  - Analysed using thematic analysis (Nvivo 11) to identify key themes
  - Snapshot into the departments in the **process** of changing

### Preliminary Interview Analysis

Key Theme	Illustrative Quotes
Working Conditions (e.g. workload, physical working environment, staffing)	<ul style="list-style-type: none"> <li>• "You need something in the middle, where you've got things to discuss but you're not overwhelmed with work."</li> <li>• "If we all had a little more time, I think that would work very well."</li> </ul>
Consultant attitudes and behaviours (e.g. value of training, approachability)	<ul style="list-style-type: none"> <li>• "So some consultants are more keen than others for teaching and give more just teaching on the ward rounds and stuff like that."</li> <li>• "And one particular trainee came to me; I'd like to come to your list because I like the way you behave with us, you know."</li> </ul>
Culture of the CLE (e.g. interpersonal relationships between the clinical team)	<ul style="list-style-type: none"> <li>• "My designated supervisors and staff have all been quite supportive, and they've always been nice to me."</li> <li>• "And I think as consultants we very much trust each other with our patients and I think that does actually rub off on trainees."</li> </ul>
Role Modelling (e.g. can change learner's attitudes and behaviours)	<ul style="list-style-type: none"> <li>• "The last doctor I worked with, a consultant, she was also my mentor to the extent that even now I can speak to her very freely and ask her advice."</li> <li>• "I guess as a junior you will chose who you will work well with, you'll have a good relationship with and who you will, I guess emulate."</li> </ul>
Learner Characteristics (e.g. enthusiasm, actively seeking tasks, persistence)	<ul style="list-style-type: none"> <li>• "I think enthusiasm is actually by far the most important one, and that goes for the medical students as well as the post-graduate trainees."</li> <li>• "They could help themselves a lot if they seek out opportunities for help."</li> </ul>
Tension between service provision and training	<ul style="list-style-type: none"> <li>• "I think that viewpoint is detrimental to training is, it's either service or it's training. And actually, you can't separate them."</li> </ul>

### Relevance of the CLE

**Significant associations between learners' perceptions of the CLE and:**

- optimal learning <sup>1, 2, 3</sup>
- the development of professionalism <sup>2</sup>
- achievement <sup>1, 3</sup>
- burnout and well-being <sup>4, 5</sup>
- career choice e.g., <sup>6</sup>



National and local reports such as the **Health Improvement Scotland (HIS)** review of Aberdeen Royal Infirmary Royal, **General Medical Council National Training Survey (2014)** and **Royal College of Surgeons (England)** review, identify issues with the CLE:

- Poor role modelling
- Inappropriate consultant behaviours
- training arrangements failing to meet national standards
- Training not being prioritised
- Suggested that perceptions of the CLE differ across groups of learners

1. Genn. Medical Teacher 2001; 23:445-54. 2. Gracey et al. Academic Medicine 2005; 80: 21-8. 3. Lucas et al. Academic Medicine 1993; 68: 811-2.  
4. Dyrbye et al. Medical Education 2009; 43: 274-282. 5. Williams & Deci. Annals of Internal Medicine 1998; 129: 303-8.  
6. College of Emergency Medicine. London 2012.

### Study Aim

(1) Qualitatively identify which factors determine the quality of the CLE for medical students and trainees in two clinical departments, and (2) examine the factors that can explain different perceptions/experiences of the same CLE. (3) Inform changes and improvements to the CLE.

### Conclusions

- The study has identified the key factors that contribute to the CLE but further analysis is required to understand how the people and systems factors interact.
- Improvement requires: visible support from senior management and external stakeholders (e.g. NHSG, Deanery); Prioritisation of training; changes in attitudes (consultants); time (teaching sessions) and resources; transparency of training opportunities; active engagement and involvement with trainees in change