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WEB PAPER

Engagement and opportunity in clinical learning: Findings from a case study in primary care

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Abstract

Background: This article explores in a primary care setting how clinical learning occurs across a range of professional groups and levels of learner experience, both undergraduate and postgraduate.

Aim: To explore how clinical learning occurs in a primary care workplace from a socio-cultural perspective.

Method: A single case study approach using interview data from 33 participants and strengthened through direct and indirect observations and documentary evidence.

Results: Clinical learning occurs through engagement and opportunity. Engagement in learning appeared to be developed through four elements: recognition, respect, relevance and emotion. Opportunity includes the availability of patient encounters (made meaningful through the immediacy of hearing patient narratives *de novo* and the authenticity arising from the social context of illness) and the ability to learn with peers and professional colleagues.

Conclusion: These findings support and develop existing literature on learning in other clinical settings. They are consistent with socio-cultural theories of learning, but develop this literature within the context of clinical education. Engagement and learning occurred in transient learners in the absence of prolonged participation, belonging or a clear trajectory of learning. The study offers evidence from multiple learner perspectives as to how the learning environment might be enhanced in all educational settings.

Introduction

This research explores clinical learning within professional groups using a case study approach. It includes transient learners on short-term placements (medical students); vocational learners (nurses, nurse practitioners and general practitioners in training) and embedded learners (established clinicians involved with their continuing professional development). Much research has been conducted on workplace based and situated learning. This article seeks to build on existing literature within the context of learning in primary care, an important setting within medical education. Where health professionals understand how learning occurs within specific settings they may be able to better design educational interventions.

Practice points

- Clinical learning occurs through engagement, across all professional groups and levels of experience.
- Engagement appears to arise from recognition and respect for learners, relevance in education and emotion (often challenge).
- Learning was enhanced through meaningful encounter with patients, with immediacy and authenticity prominent in this setting.
- Learning was encouraged by the supportive learning environment, especially through peer or professional support.

Theories of learning

There is a wide ranging literature related to perspectives on workplace and practice-based learning. In research terms, learning can be explored on several levels: individuals, learning in groups, learning in communities and learning of organisations and inter-organisational networks (Tynjala 2008).

Socio-cultural learning theory suggests individual transformation occurs through social interaction within organisations, teams or groups (Vygotsky 1978). Lave and Wenger (1991) suggested that learning occurs within a trajectory, with learners gaining new ideas or skills through meaningful engagement in activity and *legitimate peripheral participation* within a *community of practice* (Wenger 1998). Communities of practice have attracted wide ranging discussion from academics and practitioners exploring the role of situated practice in the process of learning (Amin & Roberts 2008). They provide a potentially useful practice-based framework for constructing work-based collaborative learning (Andrew et al. 2008). Thus, learning is situated within a cultural and social context and research on learning focuses on not the individual but a social community (Tynjala 2008).

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Clinical learning

Supported participation is central to effective clinical learning; encouraged through being welcomed into a clinical team, and appropriate challenge (Dornan et al. 2007). Medical students value active learning (asking questions, being involved) and active teaching (seeing interesting cases, being challenged, given autonomy) (Fernald et al. 2001). Participation involves institutional factors (encouragement) and student factors (willingness to engage) (Boor et al. 2008). Clinical learning may be inhibited through lack of encouragement, support or organisation (Boor et al. 2008; Dolmans et al. 2008).

Primary care offers an increasingly important context for clinical learning, especially within undergraduate medical education. Whilst there are many studies of learners' experiences within primary care, few have explored the nature of clinical learning from a practice perspective or across a range of learners. Grant and Robling (2006) conducted action research with a practice taking undergraduate medical students, and suggested the positive supportive climate-supported learning. Quince et al. (2007) explored the learning environment across undergraduate teaching practices, suggesting a practice benefit in having students (in terms of variety and interest). Research amongst fifth-year medical students in Holland offers a more in-depth analysis of learning, suggesting general practice placements can offer 'development space' which appears to arise from a combination of contextual space (including organisational support, length of placement, quality of learning space and supervision arrangements) and socio-emotional space (mainly concerned with being valued as an individual and learner) (van der Zwet et al. 2010).

Amongst postgraduate learners in primary care, the key elements supporting learning were a happy practice environment, feeling part of the team and being able to ask questions; a supportive, well-organised trainer; knowledgeable and good at feedback; and a well-organised practice offering protected time for learning (Smith 2004; Mulrooney 2005; Smith & Wiener-Ogilvie 2009).

The lack of multiple perspectives of clinical learning in primary care suggested an area for further investigation. Health professional educators who can better understand how learning occurs within a specific context may be more able to design enhanced learning opportunities. This study aims to explore the nature of clinical learning and teaching within primary care (exploring multiple perspectives of clinical learning across a range of professional groups and of varying experience).

Methods

Case study allows an in-depth exploration of clinical learning using multiple sources of evidence (interviews, observation and documents). Sunnybank Medical Centre, Bradford, UK, was chosen for its wide range of clinical learners, across professional groups. The practice population of approximately 11000 patients is mainly white, of average age profile and slightly below average deprivation. The practice has 16 GPs (11 whole time equivalent staff) and 11 nurses/health care assistants (6 whole time equivalent staff). Clinical learners include medical students from second to final year on individual and group placements; GP specialist registrars; postgraduate nurse learners, and established clinicians involved with continuing professional development.

Box 1. Outline of topic guide.

Experiences of clinical learning within primary care.
Learner experience within the identified practice.
Learning from clinical experience/event within the practice (individual – group learning).
Professional identity – role development.
Learning climate.
Formal/informal teaching and learning.
Sources of learning.

Case study included 26 individual interviews and 2 focus group interviews (7 participants; preferred for more junior medical students), each approximately 45 min duration, conducted over a single academic year (2008–2009). Interviews were audio-recorded and transcribed verbatim. Interviewees were purposively sampled to ensure a spread across learner and clinical groups. The interviewer was chosen to be independent from the participants' own educational pathway (BL for medical students and established GPs; DP for other staff). Interviewers followed a semi-structured topic guide based on the literature, ideas from observation and documents, and modified as the research progressed (Box 1).

Observation helped refine interview questions and provided additional data. It included non-participant observation of the practice environment (e.g. interactions amongst clinical learners) and direct non-participant observation of meetings. Internal and external documents relating to education (timetables, curricula, teaching contracts, feedback) helped refine questions used in interviews and observations.

Research ethical and governance approval was obtained from Bradford NHS Research Ethics Committee, University of Leeds and NHS Bradford and Airedale, respectively.

Transcribed interview data were analysed using open and axial coding, techniques developed from grounded theory (Strauss & Corbin 2008), supported by qualitative data software (N Vivo Version 8). Observational and documentary data were used to help triangulate and support emerging themes, but was not formally analysed. Data collection, transcription and analysis occurred concurrently, allowing questions to be modified as findings emerged. 'Open' and 'axial'" coding helped develop categories; further explored alongside ideas from observation and documents into themes and a central narrative (Ezzy 2002; Strauss & Corbin 2008).

Trustworthiness was enhanced through interpreters independent of the practice; independent transcription and coding of interview data; software to enhance transparent data handling; multiple sources of data (triangulation); peer discussion and respondent validation (Ezzy 2002).

Results

The findings are presented in the categories within two overarching themes emerging from the analysis: engagement with learning and opportunity for learning.

Engagement with learning

Clinical learning occurred through *engagement* in the clinical setting and within four main categories identified as *recognition, respect, relevance and emotion*.

Recognition acknowledged the importance placed on being seen as an individual, and included feeling welcomed, known by name, listened to and accepted as part of a team. It was noted even amongst transient learners:

> They all know us by face, by name and we can sort of stop them in the corridors anytime for a chat or any issues and we have been made aware about that, if there are any issues or anything that we want to sort of pick up on or learn we can always find a doctor.
> (Fourth-year medical student, Interview 1)

Vocational and established learners also appeared to value recognition by others as becoming part of the practice, and important to learning:

> Everybody is so friendly . . . you can talk to anybody . . . everybody knows who we all are . . . in fact only last week I was walking past the corridor and there is a big like . . . collage of the photographs and my picture was up there! I was really impressed because I didn't know it was there . . . [that] made me feel quite good about myself . . . oh that is me!
> (Nurse, Interview 24)

> The logistical side helps a lot, having your own rooms whereas the GP partners might be moving around in different rooms, I think that does say something. It really makes you feel welcome, you have one set place, and one set room.
> (GPStR, Interview 11)

Respect reflected a clear sense that learners understood and appreciated the high quality of educational and clinical provision observed within the practice (and *respect* appeared to arise from this commitment to quality of provision rather than from being in a position of authority):

> the learning has been absolutely fantastic, definitely. [My GP mentor], . . . he is so good at teaching, he has got a mind field of information . . . if he doesn't know something, if I have asked him a question and he has said 'oh I don't really know that' he will look it up or he will say 'what do you think it will be?' and then we will both look it up.
> (Nurse, Interview 24)

Perhaps, this lack of hierarchy helps build respect:

> One of the things I always found really encouraging was being listened to and being acknowledged. I noticed in meetings that the senior partners would always participate as team members listening very carefully to, and appreciating, even the most junior staff members' contributions. Their active participation in the learning activities has I believe been a key factor in creating an atmosphere of team work and learning in the practice.
> (GPStR, Feedback 2009)

Respect also appeared to arise from being involved, trusted and valued:

> [The GP] trusted me to do the blood pressure which I did do; I gave most of the history which he wrote on the back of the sheet for the hospital so . . . yes I did feel part of that whole experience which was really good . . .
>
> . . . even sometimes in the doctors consultations I chip in and say something . . . its like 'oh you should have told me that before . . . that was a really good idea to manage this patient' so you feel part of that . . . here they respect your opinions and stuff.
> (Fourth-year medical student, Interview 25)

Clinical learners also respect the quality of the clinical environment, and quality within clinical encounters. Both appeared to strengthen engagement:

> There are in-house protocols, . . . for example, every doctor, every partner and the registrars they take up one topic every 6 months go through the NICE guidelines, the SIGN guidelines, all the guidelines, the latest evidence and research, put them together as a form of a protocol so you are all doing the same sort of things.
> (GPStR, Interview 11)

> . . . you really do get a really good chance to observe doctors handing over to patients, extracting information or even dealing with difficult situations you know, that really helps you to kind of copy it or mimic but it helps you learn what is good to do, what is bad to do, what helps and I think that helps to develop your professional attitude and behaviour.
> (Fifth-year medical student, Interview 8)

Relevance refers to teaching which learners considered was closely aligned with the educational curriculum and their expectations:

> The doctors that we are involved with have a very clear idea about what we are expected to gain from this . . . in terms of the level that we are at academically and in terms of the assessments that we have to do and facilitating that for us.
> (Fifth-year medical student, Interview 19)

> They sort of know from our level of experience where to pitch the information, how much responsibility and support we require (GPStR, Interview 11)

This relevance in learning does not happen by chance; it appeared to reflect the care and commitment of the educators:

> [The GPs] will say you need to know that, go away and read that and it is nice because you do not often get that. People just go 'you should know this'. Well there is a lot of things that I should know but to actually be given a title and certain key things to go away and learn is extraordinarily helpful.
> (Fifth-year medical student, Interview 9)

Emotion links a variety of ideas where clinical learners appeared stimulated to engage with learning through an emotional response to encounters with tutors, patients or both. Challenge may be uncomfortable, but allows learning to occur:

> The partners that are involved in the teaching . . . you know, rather than spoon feeding you . . . do try and make you think for yourself and not necessarily give you the information but tell you where you can find it.
> (GPStR, Interview 15)

> He obviously gave us information in the first week, he gave us like a history taking sheet and everything . . . but then he just lets us get on with it, sort of threw us in at the deep end . . . which I think is good because you all learn by doing that.
> (Second-year medical student, Interview 23)

Sometimes challenge arose from the clinical encounter, rather than the relationship with the tutors:

> I thought I would be comfortable with a lot of situations but some of them . . . you are not as comfortable when you are actually in them. Someone crying their eyes out at you . . . you know, you learn stuff about yourself.
> (Fourth-year medical student, Interview 25)

Clinical learning was also stimulated by enthusiasm amongst teachers, especially where the quality of education exceeded expectations:

> When you come here you really get the impression that everybody is really on board to teach so I guess you have got that community there that everybody wants to share their information, their knowledge, their expertise with other people and in that kind of way also encourages your learning.
> (Fifth-year medical student, Interview 8)

There was a consensus across professional groups and ranges of experience that being engaged with the practice and tutors helped encourage clinical learning, and it was encouraged through these categories of respect, relevance, recognition and emotion. An increased understanding of how learning occurs may allow educators to maximise engagement and enhance the clinical learning environment.

Opportunity and learning

The second overarching theme from the findings was the importance of opportunity for meaningful interaction with patients, peers or professional colleagues.

Learning from patients

Encounters with patients were central to clinical learning, across professional groups and ranges of experience, within three categories identified as *availability, immediacy* and *authenticity.*

Availability includes having enough patients to see. This is perhaps self-evident, but it appeared that the opportunities for learning provided by the volume of clinical encounters was sometimes as important as the quality of each encounter.

> I learn something every day. I usually learn something in every consultation . . . , I probably learn more from the negative experiences than I do the positive ones.
> (GP, Interview 5)

In two cases, medical students suggested that patient contact availability could be enhanced:

> We have definitely learned a lot from it that will be useful in our final exams and beyond. The downside of being here . . . it would be nice to have a little bit more clinical experience on our own, rather than just sitting in with the GPs.
> (Fifth-year medical student, Interview 19)

Learning was also triggered though the quality of patient encounters, particularly the stimulation of challenging cases or of seeing patients with multiple problems.

> Here there are interactions between conditions which is something new that we have not sort of covered before at medical school, which is popping up now at this stage so that what interests me and what pushes me to read up myself
> (Fourth-year medical student, Interview 1)

> When you first start off you are seeing you know, people coming in with problems and a lot of the time it is like 'oh my gosh I haven't got the foggiest what is going on with you, I don't know about this'. Just seeing the problems makes you think about identifying learning needs and where you need to sort of try and, you know, improve on.
> (GPStR, Interview 13)

Immediacy in patient encounters appears to increase their educational impact. Unrehearsed stories in patients who had not had multiple clinical encounters or investigations were a powerful trigger to learning, especially for medical students used to seeing patients previously filtered and interviewed by several clinicians.

> The idea that a patient comes in, actually you are the first person that they see, you gather all the relevant details and it is important that you get those because the GPs are then going to come in and ask one or two questions of anything that you have missed and then being asked to decide 'well, what would be the management?'
> (Fourth-year medical student, Interview 2)

> Obviously things don't tend to present in a textbook way all of the time . . . I think this is the difference between this and the hospital . . . in hospitals they pick out the textbook presentations and the textbook cases whereas [here] you get a patients take on it without the doctor having seen them first . . .
> (Fourth-year medical student, Interview 26)

Authenticity refers to seeing patients' problems in the context of their lives, and gaining insight into living with painful, debilitating or chronic conditions. The power of these encounters in learning comes from the narrative linking the story and context:

> They keep telling us . . . 'check how much the disease affects someone's life' but you don't really think about it until you are actually in that situation, that is the most important point, you need to be part of that consultation or part of that patient's life to see how much it impacts them. Just asking . . . going and visiting someone and saying 'Oh yes, has this impacted your life?' you are not going to get the full benefit but when someone comes in like devastated, crying . . . you can see the extent . . . you know, the strain on the family.
> (Fourth-year medical student, Interview 25)

> What you learn is their perspective on their disease and more than that, their outlook and how it has affected them because you can read books on diseases that will tell you what you need to know but they won't tell you how it affects somebody. How that person copes, what they do, how their life has changed as a result.
> (Fifth-year medical student, Interview 8)

Learning from peers or professional colleagues

Peers and professional colleagues were variously a source of support, stimulation and shared ideas. Informal peer learning appeared strongest amongst the vocational or more experienced learners:

> [Tutorials] with the other two registrars which works really well because it means you get to compare your level of knowledge with your peers and also . . . you know, you can teach them and they can teach you as well . . .
> (GPStR, Interview 15)

> I learn from feedback from consultants or colleagues within the practice. We all feel that we can approach each other if something has come up that potentially could have been done in a different way or could have been done better.
> (GP, Interview 5)

Learning from colleagues was important within, and across, professions:

> . . . practice nurse meetings as well, once a month. We leave a section for us to look at something that we are not sure about and the nurse practitioners will run through it with the healthcare assistants and the practice nurses . . . so that is good.
> (Nurse, Interview 12)

> Across the board, it is the nurse practitioners, it is the practice nurses, the GPs . . . you know we are all equal. We are all managing the type of conditions and therefore we tend to identify where our needs lie and share it out, agree what we are going to do, bring it back having done it, share our experiences and alter our protocols and guidelines for it.
> (GP, Interview 4)

Summary of findings

Engagement allows learning to occur where there is an opportunity for meaningful patient encounters and a supportive environment. Figure 1 offers a visual summary of these two overarching themes and their associated categories.

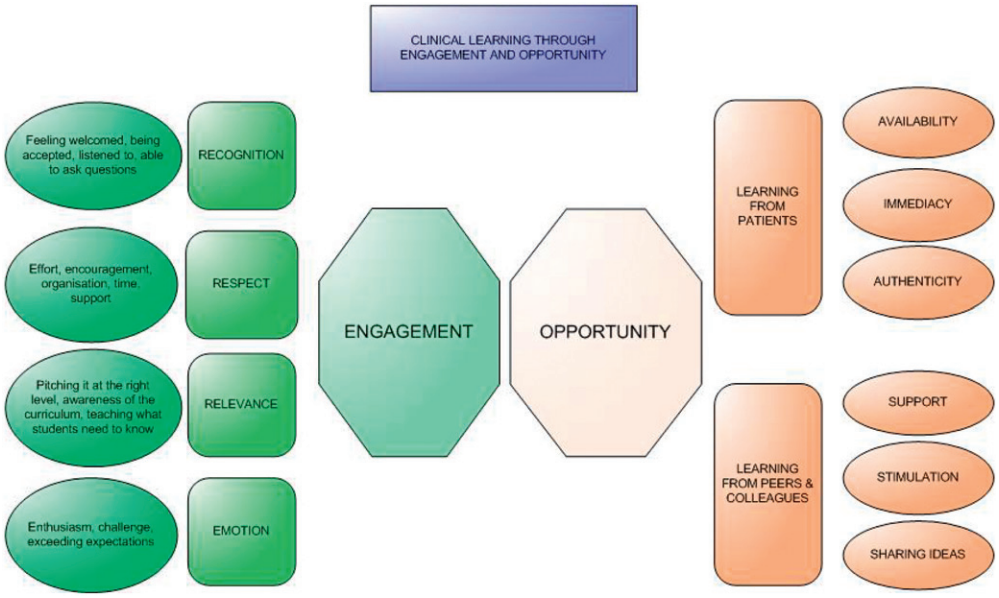

Figure 1. Clinical learning through engagement and opportunity.

Discussion

The nature of case study research suggests that the findings are credible for the setting chosen; their transferability dependent on the readers' own judgement from the information offered. The authors have purposefully chosen the practice as typical of other UK teaching practices. We offer here our interpretation of the significance of the research, but accept that other interpretations are valid. Additional research across more practices and in other settings would be of value.

Clinical learning through engagement

Our case study supports and reinforces previous findings from both primary care and other settings. From Dewey onwards, educators have suggested that meaningful engagement is essential for learning (Dewey 1938; Rogers 1967; Schon 1983; Kolb 1984). Our findings reinforce the idea that active learning encourages engagement (Kolb 1984), and experiences are meaningful when directly relevant to the learner (e.g. Mezirow 1991; Baxter Magolda 1999). The importance of recognition mirrors work on 'validating the student' (Baxter Magolda 1999), and 'teaching responsively' (Brookfield 1980). We support van der Zwet's observation that socio-emotional space to learn can be provided from students having a close supportive relationship with their supervisor, other team members and patients (van der Zwet et al. 2010). Steps to welcome and recognise learners will be rewarded through engagement, something supported from a secondary care study in whose 'expansive' workplace environments students felt wanted, involved and encouraged to participate (Boor et al. 2008). In contrast, learners who do not feel 'recognised' may become less inclined to participate (Dornan et al. 2007).

Engagement develops from respect; from high quality teaching, high quality clinical environment or witnessing respect modelled within doctor–patient, clinician–clinician and clinician–staff relationships. Such observed respect encourages positive inter-professional behaviour and closer partnerships with patients, both important goals of government and professional bodies (Department of Health 2006, 2008; General Medical Council 2009; RCGP 2009). Medical students became de-motivated where doctors cancel or interrupt teaching (Dornan et al. 2007). Learning is also adversely affected by poor organisation, negative staff attitudes and insufficient supervision (Dolmans et al. 2008). Nurses value a close mentoring relationship, and 'being respected' (Gopee et al. 2004). Our case study findings suggest developing respect in short placements is possible; others suggest that longitudinal placements allow greater trust, student autonomy and active learning (Fernald et al. 2001). Opportunity within longer placements to develop respect may help facilitate more meaningful or transformative learning.

Significant learning occurs where experiences provided are aligned with learners' previous experiences (Rogers 1967), and the taught curriculum (Benner 1984). Our findings suggest clinical learners value the care taken to ensure relevance in educational encounters, and reinforce studies showing such alignment is appreciated (Oswald et al. 2001; Silverstone et al. 2001; Worley et al. 2004; Lucas & Pearson 2005; Gormley & Collins 2007).

Emotion within learner–teacher encounters, specifically challenge, can be an important trigger for learning. This reinforces existing theory regarding adult learning (Brookfield 1980; Boud et al. 1985; Boud & Miller 1996) and transformative learning (Mezirow 1991; Cranton 1994). Undergraduate and postgraduate medical learners learn through challenge (Fernald et al. 2001; Dornan et al. 2007; Smith & Wiener-Ogilvie 2009) and enthusiasm (Lucas & Pearson 2005; Mulrooney 2005). Our findings suggest that learning is enhanced where challenge occurs alongside recognition, respect and other positive elements of a learning environment which promote engagement.

Finally, as Wenger (1998) has suggested, membership of a community of practice will automatically engage the individual through active participation within both professional and social dimensions. The act of engagement forms networks, and provides the building blocks of professional identity. This theoretical framework was relevant to explain much of the learning in the case study.

Clinical learners, especially junior and vocational learners, saw themselves on a trajectory of professional learning. Learning appeared to occur through tension at the boundaries of (professional) groupings, especially between senior nurses and doctors. However, learning for junior transient learners (e.g. medical students) occurred outside any acknowledgement of their being part of the practice, or even the profession. They appeared more stimulated to learn from the external curriculum, peer pressure or sometimes patient encounters than through engagement within a trajectory of learning. Whilst Wenger's (1998) work has relevance to vocational or embedded clinical learners, it does not easily explain all learning in this setting.

Opportunity in clinical learning

Our findings suggest that clinical learning requires the opportunity for meaningful patient encounters alongside interaction with peers and other professional groups.

Meaningful patient encounters are enhanced through availability (of sufficient patients), immediacy (seeing patients early in their interactions with health professionals) and authenticity (seeing patients where the context of illness to their lives is made apparent). Our findings emphasise the potential richness of clinical learning in primary care, but highlight the problem ensuring the availability of sufficient patient encounters given the pressure on appointments and access. Some medical students in our study suggested learning was at times too theoretical, echoing our previous research (Lucas & Pearson 2005). Other studies suggest students enjoy *more* patient contact in this setting (Worley et al. 2004).

Our findings suggest the *immediacy* of 'getting the story first' makes them educationally significant. Similarly, *authenticity* within patient encounters supported learning where common, accessible and important problems highlight the social context of illness. Whilst learning occurs from obscure or more serious illnesses in other settings, our findings reflect the suggestion from educational literature that minimising the gap

between prior experience, theory and current experience may enhance clinical education (see for example Benner 1984; Wenger 1998; Baxter Magolda 1999). Ensuring learning occurs in the context of a patient's social background is an important goal of the UK medical curriculum (General Medical Council 2009). Our findings reinforce the potential for primary care settings in providing such learning opportunities.

Finally, our findings suggest clinical learners value the opportunity to learn with and from their peers, and from professional colleagues at different stages of learning. Amongst postgraduate GP learners, peer learning stimulates a positive practice learning environment (Buchanan & Lane 2008). Vertical integration of teaching and learning has been suggested to enhance the learning experience of medical students (Dick et al. 2007). Potential advantages of vertical integration include enhancement of the learning environment, greater collegiality between junior learners and increased satisfaction of teachers through involvement in a continuum of the educational process (Glasgow & Trumble 2003). With the expansion in medical student, foundation year and postgraduate medical training; and new undergraduate and postgraduate nursing placements, the primary care clinical learning environment is developing rapidly. Our research suggests opportunities for peer learning, vertical integration of learning and inter-professional learning will be welcomed by clinical learners and will enhance the future learning environment.

Conclusions

Our case study suggests that clinical learning occurs through engagement. Engagement appeared to develop, even amongst transient learners, from what we defined as recognition, respect, relevance and emotion. These findings were consistent across all professions and all levels of experience. Engagement in clinical learning required sufficient meaningful patient encounters and a supportive learning environment (enhanced both by peers and a range of professional colleagues).

The strength of our findings lies in their reinforcement of educational theory and research from previous studies in the clinical environment. Those involved with clinical learning may reflect on the importance of the various elements of engagement; consider improving recognition of learners (from induction, involvement, feedback and support as these appear to encourage engagement and learning); and re-examine the relevance of their teaching to the curriculum. Those developing teaching placements may concentrate on respect: for example, the importance of choosing high quality clinical environments and assess them where possible for markers of respect within and across professional groups. These messages are valuable for clinical educators across healthcare settings; opportunities for engagement are often lost through not heeding simple lessons.

Our findings reinforce previous work which emphasise the importance of seeing real patients in real clinical encounters. Patient encounters can be made meaningful through the immediacy of hearing patient narratives *de novo* and the authenticity afforded by a clinical setting which makes obvious the social context of illness. Neither is unique to primary care; both are strengths of education in this setting.

Finally, our findings emphasise the value placed by learners on the opportunity to learn with peers, across professions and within vertical trajectories. Such opportunity increasingly exists in primary care. Having strong educational and clinical practices with a range of learners across experiences and professions is an opportunity for all to improve clinical learning.

Declaration of interest: The authors report no conflict of interest. The authors alone are responsible for the content and writing of the article.

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