Outpatient learning perspectives at a UK hospital

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SUMMARY

Background: Undergraduate students spend much of their training in the clinical workplace, increasingly in hospital outpatient settings; however, they report that this does not always yield the educational value that they expect. This study investigates ways in which outpatient learning can be enhanced from the perspectives of students and teachers, exploring which approaches may be most appropriate in different circumstances.

Methods: We conducted 14 semi-structured interviews with medical students from one UK medical school and consultants (specialists) at a single teaching hospital. We explored their experiences and perceptions of clinical teaching and learning in this outpatient setting. Transcripts were analysed through a consensual qualitative research approach. An evaluation of established frameworks for outpatient teaching was conducted and strategies were matched to stakeholder needs.

Findings: A total of 24 core ideas were identified, which were categorised into: individual factors (student, doctor and patient), interpersonal factors, team factors and organisational factors. Teaching strategies that address stakeholder needs included: student-led clinics, case-based discussions, one-minute preceptor, the SNAPPs tool (summarise, narrow differential, analyse, probe preceptor, plan and select issues for self-learning), advanced organisers and supplementing.

Discussion: There is a complex interplay between personal, interpersonal, team and organisational factors that contribute to the effectiveness of the outpatient setting as a learning environment. Strategies at the personal and interpersonal levels are unlikely to be successful or sustained without organisational resourcing and support. Further research is needed to implement and evaluate these suggested strategies.
INTRODUCTION

Rising care complexity and pressurised ward-based environments are increasingly pushing undergraduate hospital-based learning towards ambulatory outpatient clinics, e.g. where specialist assessment or care is undertaken.\(^1\) The variety of patient needs encountered can create valuable educational experiences.\(^2\) Outpatient exposure can enhance students’ application of theory to practical situations and broaden their views regarding the determinants of health.\(^4\)

This setting presents educational challenges, however, including a lack of patient continuity, a lack of predictable learning opportunities and difficulty in actively participating in patient care.\(^1\) Both students and teachers express concerns about the lack of opportunities for feedback from clinicians and the limited time spent alone with patients.\(^2\) Clinical teachers worry about the impact of student presence on clinic flow and quality of patient care.\(^1\) As clinicians prioritise patient care, the time invested in teaching often falls below student expectations.\(^2\) The lack of clear educational criteria when employing teaching clinicians, the lack of employer support and the lack of perceived benefits for clinicians who teach are also highlighted as barriers to high-quality outpatient-based education.\(^3\)

There is a maturing literature on teaching methods in inpatient settings; however, research regarding effective outpatient learning is limited. The aforementioned learning barriers are discussed at length, but often in the absence of any clear solution. The limited literature on learners’ perspectives indicates a preference for collaborative experiential learning.\(^5\) The existing literature on teaching strategies offers limited evidence of efficacy, theoretical underpinnings or transferability.\(^1\) There is a gap in the literature for research exploring stakeholder viewpoints on which educational strategies might work in the outpatient learning environment, in which contexts and why.

METHODS

Methodology

We undertook this research within a social constructivist paradigm, adopting a consensual qualitative research approach to coding, described further below.\(^9\) The interview topic guide (Appendix S1) was informed by our literature review. It was tested and refined through discussion with peer clinical teaching fellows.

Recruitment

A total of 28 teaching consultants at Hillingdon Hospital were approached via e-mail; 14 replied and seven participated. Reasons for non-participation included time and convenience. All 50 Imperial College medical students, undertaking a 6-year Bachelor of Medicine and Bachelor of Surgery (MBBS) programme, on clinical rotation at Hillingdon Hospital, were approached via lecture announcements and posters; seven replied and all were interviewed. All students had experience of outpatient learning.

Ethical considerations

Research ethics were overseen by Hillingdon Hospital’s Research and Development Department (IRAS 258653) and Imperial College’s Medical Education Ethics Committee (MEEC1819-131). Participants could withdraw their data up to the point of analysis. Transcription was funded by Imperial College Medical Education Research Unit.

Data generation

Interviews were conducted between January and April 2019 by PH, who was not involved in outpatient education at Hillingdon. Interviews lasted between 9 and 38 minutes and were recorded, professionally transcribed and checked for accuracy. All potentially identifying information was redacted prior to analysis.

Analysis

All 14 transcripts were double coded into core ideas by PH and JF; discrepancies were resolved through discussion and the coding was audited by DH. Discussion allowed for iterative changes to themes and categorisations, which were re-tested against the underlying data. No new major themes arose after six interviews and no new core ideas arose after eight interviews.

FINDINGS

We identified 24 core ideas, which were categorised into: individual, interpersonal, team and organisational factors. Themes are summarised in Table 1, with illustrative quotes.

Individual factors

Student

Students articulated a preference for direct involvement in patient assessment and care, which they felt enhanced both learning and enjoyment. Active participation in care and clinical skills was highlighted by students and clinicians as a motivating factor, being relevant to their future practice. Attending a clinic more than once allowed teachers to entrust students with incrementally harder tasks. Teachers expressed concern over student passivity, preferring them to arrive with an agenda for learning.

Some consultants found punctuality and attendance a barrier to student learning. One clinician commented that learning conversations often take place at the beginning or end of a clinic to maintain patient flow:
### Table 1. Core ideas with illustrative quotes

| Category                        | Core ideas                                                                 | Illustrative quotes from participant interviews |
|---------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------|
| Individual factors              | Student Active participation                                                | I think [students] like going to see [patients] by themselves ... [they] see the patient first ... and come up with a differential diagnosis ... [then they] come and talk to me about it. FC1 |
|                                 |                                                                            | If we could alternate ... talk to patients when the doctors are talking to another patient ... and then present [the case] ... would be really helpful. FS1_Y3 |
|                                 |                                                                            | The most useful [thing] is ... the opportunity to do a history and ideally an examination ... then be able to present it ... you [are] asked what your differential is and you’re told if it’s sensible or not. MS5_Y3 |
| Sequential learning             | You get to integrate your knowledge from [preclinical] years one and two and build upon that. MS1_Y3 | [In] the first clinic they watch and listen ... [in] the second one we let them see patients. MC4 |
| Preparing for practice          | It’s very useful to know what you’re looking for ... and how it’s going to be used in the future. MS1_Y3 | |
| Student agenda                  | If [students] come ... and wait for opportunities with learning material to arise, [they] might not learn anything. FC2 | |
| Attendance                      | Students may turn up late ... want to leave early ... I would quite like to interact with the student at the end of the clinic ... we wouldn’t [always] have the time to do that between patients. MC1 | |
| Involvement in patient care     | [It] would be nice [for consultants] to teach us how to examine ... we could maybe try to take the history or do the examination. FS1_Y3 | You are somewhat involved in the health care of each patient. MS1_Y3 |
| Doctor                          | Standardised guidance on teaching in clinic                                  | [If there were a] standardised way [of teaching] out there, that you actually feel ... would enhance a student learning experience. MC1 |
|                                 |                                                                            | I don’t think there’s any advice [about teaching], I mean I don’t really know what my colleagues do. MC2 |
| Importance of engaging students | If your consultant isn’t saying anything to you ... you’re just in a corner ... you don’t feel like you can ask questions. FS2_Y3 | In one placement I did feel ignored by the consultant ... [he] would just redirect [me] to someone else. MS1_Y3 |
| Learner needs assessment        | My consultant has no idea what my level of ... knowledge is because he hasn’t asked me. MS5_Y3 | Are [students] looking for teaching, are they looking for their own experiences ... it depends on what their expectations are and what they want to get out of [clinical]. FC1 |
| Teacher enthusiasm              | [Clinic value] very much depends on the consultant ... if they’re happy to teach ... if they ... have the passion to teach. FS1_Y3 | One doctor ... was intent on teaching us ... she didn’t teach in much breadth but there were a couple of things that came up that she drilled into us, which was very useful. MS3_Y3 |
|                                 |                                                                            | If the person you’re with is open to teaching you then they’ll find [learning opportunities] ... you can tell who’s interested ... you feel like they’re actually engaged in your learning rather than you being a burden. MS5_Y3 |
| Role modelling                  | [In one case] it wasn’t just about making the patient medically well ... [the consultant] must have been in with the patient for about 45 minutes discussing a new cancer diagnosis ... I was very impressed. MS3_Y3 | I think [students are] happy with some sort of the [consultation] skills I pass on. MC2 |

(Continues)

As clinicians prioritise patient care, the time invested in teaching often falls below student expectations.
absent students, and students arriving late or leaving early impeded such opportunities. Students remarked that the perceived lack of learning opportunities in clinics led them to spend time in other environments, such as wards or theatres.

**Doctor**

Teacher enthusiasm was reported as impacting on enjoyment and learning. Students reported feeling like a ‘burden’ or being ‘ignored’ by doctors, reducing their inclination to ask questions. Students were frustrated by teacher-led approaches without eliciting their prior knowledge. Others adopted more collaborative, hands-on experiential approaches. Consultants acknowledged the importance of role modelling and making the learning environment feel ‘safe’ for students, for example by welcoming students and remaining approachable. Students expressed admiration for patient-centred and learner-centred clinicians. Consultants articulated a desire for guidance or consensus on how to teach in this setting, and to see how their peers taught.

### Table 1. (Continued)

| Category                | Core ideas                                      | Illustrative quotes from participant interviews                                                                 |
|-------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| **Patient**             | **Patient acceptability**                       | I think [your teaching approach] depends on where the student is in their training and what you know about them ... they could spend a whole hour with patients and then you still have to repeat it all. I don't think that's fair on patients. FC1 [Sometimes] the examination is very intimate for patients ... doctors don't usually want [us] to do that. FS1_Y3 |
| **Variety of patients seen** | [I] think with clinics you need breadth ... it is just really good to be able to see a condition in real life. MS4_Y3 I'd love to go to different clinics ... you have a spectrum of ... presentations ... then you're going to go and read about them. FS1_Y3 |
| **Giving clinical context to underlying theory** | It does help when you've seen a patient with a condition and then you go and learn about it. I think it sticks more. MS3_Y3 [A chance to] see a lot of presentations and they just stick in your mind ... learning about [something] is one thing ... but seeing a patient with [it] is another thing ... [it is] nicer to have that correlation in your mind. FS1_Y3 |
| **Interpersonal factors** | **Doctors asking students questions as a teaching method** | If someone asks me a question and I don't know the answer, I get really frustrated and want to go and look it up. FS2_Y3 [Consultants] ask me questions and when I get things wrong ... [I] look [it] up [and] come back next time ... then we'll talk about it a bit more. MS4_Y3 |
| **Case-based discussion** | Sometimes we'll [discuss] clinical scenarios ... it's probably the teaching aspect they find best. FC1 We would see ... one of the patients at the same time as the [doctor saw another] ... and then we [would] present once their patient [had] left ... I think you get more out of it. MS5_Y3 |
| **Doctor–student relationship** | If I know the doctor ... that will obviously affect [my decision to go to clinic]. MS2_Y6 It depends what the clinician’s attitude to the student is ... I would ... like students who are interactive ... courteous ... great with the family ... students who inquire and ask questions. MC1 |
| **Feedback for learners** | You'll only learn by being with the consultant, [them] telling you where your mistakes are so that you never make them again. MS1_Y3 The best clinics I've been to ... you'd see new patients ... you'd have your own room ... and then you'd go present what you found to the [doctor] ... then you get immediate feedback on how well you're doing. MS2_Y6 |
| **Matching student-teacher expectations** | You can match [students'] expectations to what happens, rather than just telling them what you think they know and what you think their gaps are. FC2 |
Patient
The importance of patient care and the delicate balance between clinical and teaching commitments were acknowledged. Clinicians expressed concern that patients may be delayed if assessed by students; students acknowledged that the intimate nature of some consultations might make their presence unwelcome. Nonetheless, students valued the breadth of patients in outpatient settings, which stimulated their desire to learn and gave context to their learning.

Interpersonal factors
Students felt that some consultants pitched their teaching incorrectly. They felt that teaching strategies should vary depending on students’ prior understanding and the time available. Several students remarked on the value of having expert consultants fill in the ‘gaps’ in their knowledge. One clinician reported using a one-to-one ‘lecture’-style approach, where time allowed. Some teachers discussed ‘advanced organisers’ to keep students active during a consultation. One highlighted that such prescriptive approaches may blinker students to unplanned experiential learning opportunities. Participants described a variety of facilitative strategies, including questioning, case-based discussions, relationship building, feedback and agreeing expectations. These are expanded on in our discussion.

Team factors
Students felt that the workplace culture impacted on their learning; they appreciated settings where they felt included as part of the wider clinical team, which was a motivator for engagement and attendance. Attitudes and approaches towards medical students from the wider team were described as variable.

Organisational factors
Time and space were described as significant limiting factors for outpatient learning. Teachers felt that although adaptations were...
possible, organisations must also protect time and space for education. One consultant described feeling ‘buried between teaching and service’. Suggestions for organisations included: clinics with a lower patient load; settings with more rooms for students to consult independently; double appointments; and blocked-out appointments for debriefing.

**DISCUSSION**

The outpatient clinic presents multiple advantages as an undergraduate educational setting, including rich learning opportunities related to clinical presentations, clinical reasoning and consultation skills, which all enhance student learning. Our analysis, however, confirms that their educational value remains variable. Students expressed a desire for more active involvement, tailored to their level of understanding, with feedback on performance, and clinical teachers expressed a desire for commitment from learners and guidance on effective educational strategies that maintain patient satisfaction and flow in their clinic.

For improvements to happen, our analysis suggests that support for education must be facilitated at multiple levels of an organisation as well as between individual learners and teachers. Our findings support other research suggesting that workplace factors, such as attitudes to the presence of medical students and the prioritisation of resources, including protected time and space, need to be addressed alongside effective teaching strategies. There are calls for teaching clinics to be structured and supported differently to normal outpatient clinics.

Student-led clinics (SLCs) are one such strategy, reported to increase students’ stimulation and responsibility to learn, as well as increasing their sense of responsibility for patient care and perceived level of competence. Reassuringly, when patients are appropriately chosen, consented and reviewed, research demonstrates that SLCs do not adversely affect patient care or satisfaction.

Several participants highlighted the value of case-based discussions and questioning. According to the literature, appropriate questioning can support the activation of prior knowledge and identify learners’ needs, eliciting students’ own strategies for approaching a clinical scenario. The one-minute preceptor is recommended as a tool that encourages students to commit to an answer and articulate their reasoning prior to feedback and more generalisable learning. This strategy mitigates time concerns, meets teachers’ desire for a framework and facilitates the provision of personalised feedback, which was a frequent request from students.

The SNAPPERS tool similarly encourages learners to summarise, narrow the differential, analyse the possibilities, probe the preceptor, and plan for the patient’s problem and their own self-directed study needs. This tool supports teachers’ articulated desire for structure and encourages students to be active participants.

Where time is less restricted and learners have a good knowledge base, research suggests that ‘supplementing’ may be effective. This involves students leading all or part of a consultation, with the clinician supporting and concluding as necessary. This addresses students’ preference to be more active whilst allowing the clinician to maintain flexible control over clinic flow.

‘Advance organisers’ involve the teacher identifying key topics for learners to focus on during the clinic, e.g. a concept map of respiratory failure, and may be used to guide subsequent learning conversations. This strategy drives the active participation of students in their own learning whilst maintaining effectively normal flow and patient experience. Advance organisers may be balanced with teacher responsiveness to unplanned learning opportunities, such as role modelling how a consultant handles a difficult conversation, for example.

Strategies that address the educational preferences of teachers and learners in outpatient settings are summarised in Figure 1.

**Limitations**

The number of participants is small and from a single institution, but the saturation of themes was achieved within this context. The findings may be applicable to teachers and learners in similar settings; however, this will need to be evaluated locally.

**CONCLUSION**

There is a complex interplay between personal, interpersonal, team and organisational factors that contribute to the effectiveness of the outpatient clinic as a learning environment. Examining the perspectives of learners and teachers enables us to deconstruct how and why certain educational strategies work in this context. Teachers and learners can take steps to enhance the value of outpatient clinics by modifying their approaches and adapting to individual circumstances. For sustainable changes to be seen, however, organisations need to take an active role in disseminating effective educational strategies, creating a supportive workplace culture, and protecting time and space for learners. Further translational research is needed to establish the
Students felt that some consultants pitched their teaching incorrectly.

**Figure 1.** Decision tree for selecting appropriate educational strategies for undergraduate outpatient learning.

Effectiveness of these strategies in different outpatient contexts.

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