Background

The purpose of this exploratory study was to develop theoretical understandings about doctors’ transitions, particularly in relation to their links with medical performance, and to develop and pilot a research methodology by which to investigate transition processes. The project was commissioned as part of the third phase of the ESRC research programme *Public Services: Quality, Performance, Delivery* (PSP) which is concerned with the quality and performance of public service provision. The purpose of this phase was to investigate the relationships between medical regulation and performance: transitions were of particular interest because they had been associated with an increased risk of adverse outcomes in previous studies but there is limited research in medicine about such risks (Donaldson, 2006). This project contributes towards the PSP’s third analytic theme - the relationship between public service performance and institutional or management factors - and addresses a perceived gap in current research.

Performance is a contested concept and is understood differently within different disciplines. In medicine, although performance is not usually explicitly defined, it is generally implicitly understood as practice. Most of the relevant literature deals with assessment of performance and is based on Miller’s (1990) suggestions about assessment which were reformulated by Rethans et al (2002) to make explicit that assessment of performance is assessment of actual practice. Whilst there are many interesting aspects to this literature, the key point here is that performance is understood as action or practice in medicine.

There is a relatively limited literature directly concerned with the links between transitions and medical performance. Doctors’ transitions from one level of responsibility to another are usually seen to be a problem because those making the transition do not perform immediately at established levels of competence (eg Lapointe and Jollis 2003). Doctors are often thought ‘under-prepared’ for transitions, especially the move from medical student to beginning clinical practitioner (Lempp et al 2004, 2005; Illing et al 2008; Nikendi et al 2008). The problem with research which concentrates on ‘preparedness’ is that it is based on the notion of learning transfer; however other research has consistently failed to find empirical evidence of learning transfer (Bransford and Schwartz, 1999; Haskell, 2001; Colliver, 2004; Norman et al, 2005).

In our original application, we argued that the significance of learning and learning cultures in transitions were obvious but hitherto ignored aspects influencing doctors’ performance; the metaphor of learning transfer failed to recognise ongoing learning and the influence of learning cultures. The basis for our position was a theoretical tradition in which learning is understood as situated, and entailing participation in a community and/or activities (Lave and Wenger, 1991; Engeström, 2001). From this perspective, researchers emphasise the ways in which medical staff learn to fit in with the culture and working practices of their new location or role, thus moving the focus towards socially derived understandings of learning within the work environment (eg Bleakley, 2002; Dornan, 2005) and away from transfer.
Work, performance and learning practices involve specific activities determined by patients, divisions of labour, clinical protocols, ward culture, culture of each speciality, institutional and organisational cultures and so on. This recognition of learning in practice is critical. Hodkinson, Biesta and James (2008) call this the ‘learning culture’ of the workplace - the social practices through which people learn (see also Lave and Wenger, 1991). Learning cultures are neither contexts nor sites for the application of pre-existing or separate knowledge. Instead, together with their histories, artefacts and institutions, ‘cultures are constituted by actions, dispositions and interpretations and exist in and through interaction and communication’ (Hodkinson et al, 2008, p 34). This entails a two-way process of individuals being (re)produced by culture and cultures being (re)produced by individuals. This is not to deny the relevance of individuals’ pre-existing knowledge, values and skills. But we argue that what they already know is only a part of what is needed for effective performance as a new professional and/or in a new location. In the terms of Dreyfus and Dreyfus (1986, 2005), how do such professionals learn expertise in a new situation? We need to understand such learning, so that it becomes possible to identify ways in which the transition process can be influenced to enhance learning and to analyse the links with performance.

Objectives

In our original proposal, we sought to understand the links between transitions and medical performance both empirically and conceptually. We suggested that transitions were learning processes and set out to test whether this analysis offered a useful way of conceptualising transitions.

Our objectives were to:

a) develop conceptual understandings about transitions in medicine and their links to performance;
b) investigate how specific learning cultures support transitions;
c) investigate how transitions make a positive contribution to medical performance;
d) develop a methodology to map transition processes;
e) identify implications for improving medical performance.

We developed a number of research questions from these objectives (see original submission). Subsequently, we received feedback suggesting that, in order to align better with the PSP third call focus on medical regulation and performance, we needed to reduce and reorient our research questions. Through negotiation, we agreed four new research questions:

i) How are transitions in the study sites regulated, managed and monitored?
ii) Does observable and reported practice differ from the formal frameworks?
iii) How is performance in relation to markers of responsibility understood by trainees and healthcare professionals?
iv) How is performance in relation to markers of responsibility understood by employers and regulatory bodies?

We retained our original objectives, but recognised that, in order to match the overall theme of medical regulation and performance, Objectives (a) and (e) were
primary: that is, developing conceptual understandings about transitions in medicine and their links to performance, and identifying implications for improving medical performance. Our research shows that, in relation to Objectives (b) and (c), doctors’ transitions are critically intense learning periods (see Results below). Objective (d) (developing a methodology for mapping transition processes) is progressing, but given the limited time and restricted methodology for this project, we seek to address this beyond the life of the project. Outcomes for Objective (e) (identifying implications for improving medical performance) are outlined below.

Methods

We drew on Stake (2005) to develop a ‘collective’ case study of doctors in order to focus on the interrelationships between individual professionals and complex work settings and take into account the layers of complexity and diversity. We analysed relevant regulatory and policy requirements in order to understand the case study contexts. In order to build on the theoretical understandings outlined above, we investigated aspects of transition at all four regulatory levels - the individual, their clinical team (and the site in which they were located), their employer and the regulatory and policy context. We used a combination of desk-based research, interviews and observations.

Sampling

Participants

We focused on two main points of transition:

a) From medical student to foundation training (F1) - beginning clinical practice.

b) From SHO (F2) to Specialist Trainees (ST) - generalist to specialist clinical practice.

In addition we conducted supplementary interviews with other health care professionals (see data collection below). Interview schedules are reproduced in Annex 1.

Speciality

We examined elderly medicine because it involves complex patient care pathways and decision making and facilitated exploration of the significance of differing individuals and differing local working practices, within broadly similar overall contexts. This maximised the strengths of the case study approach.

Sites

NHS operational and training requirements meant that suitable participants were actually based in six hospitals (two university teaching hospitals and four general hospitals), rather than the four hospitals originally planned.
Access, recruitment and informed consent.

Ethical approval was obtained from Leeds East REC (07/H1306/102) and the necessary R and D approvals were obtained from six NHS trusts (trust approval processes took from two weeks to four months). All participants gave informed consent. Recruitment was facilitated through our pre-existing links with clinicians but initial recruitment had to be delayed until January 2008 because of norovirus outbreaks in the relevant hospitals. This had a ‘knock-on’ effect on our timescales because we had to wait for participants, once recruited, to make their next transition so that we could undertake their second interviews. We therefore requested and received a three-month no-cost extension.

Data collection

Desk based research

This included national and local training requirements, protocols, policies and an interdisciplinary literature review. We also sought material about induction from 31 individuals and sections in the six study hospitals.

Focused interviews (37)

Ten F1 doctors (9 women, 1 man) and 11 STs (7 women, 4 men) were interviewed once near the point of transition; all were invited for a second interview two to three months later, although not all responded, or were able to participate (Table 1). One F1 and one ST first trained in India. Interviews were audio recorded and transcribed fully.

Observations (11 half days)

Observations were conducted at each site. We observed 10 STs and one F1 for a minimum of four hours each. Whilst F1 doctors were willing to be interviewed, they were reluctant to be observed in practice possibly because they lacked confidence in having their performance/work scrutinised and/or because of a desire not to be identified by colleagues as being part of a study which might reflect badly on them. In contrast, most specialist trainees were willing to be observed. Because STs frequently work with F1 doctors we were able to make some indirect observations of F1s.

<table>
<thead>
<tr>
<th></th>
<th>Initial responses to invitation</th>
<th>First interview</th>
<th>Observation of practice</th>
<th>Second interview</th>
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<tbody>
<tr>
<td>F1 doctors</td>
<td>14</td>
<td>10</td>
<td>1</td>
<td>7</td>
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<tr>
<td>ST doctors</td>
<td>19</td>
<td>11</td>
<td>10</td>
<td>9</td>
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Table 1 Interviews and observations of doctors in transition

Supplementary interviews (13)

These were undertaken with professionals in elderly care working with F1s and STs (Table 2) in the study sites.
We used an interpretative approach (Moustakas, 1990; Hodkinson et al, 2005; Rabinow and Sullivan, 1979; Smith, 1989). The research design involved an iterative process of description, then analysis and finally interpretation (Wolcott, 1994) for each stage. The phases of analysis included developing rich descriptions of individuals and sites; a more focused synthesis of markers of performance using the exemplars of managing urinary and chest infections; presenting emerging findings at practitioner and stakeholder seminars and an overall synthesis to identify generalities, broad principles, issues and outstanding questions (summarised below).

Results

We set out to test whether conceptualising transitions as learning processes enabled us to understand doctors’ performance. As a result of our data collection and analysis, we go further to suggest that transitions are critically intense learning periods (CILPs). We use the term ‘critical’ in the sense of ‘critical period’, a term derived from developmental psychology which refers to a limited time in which some event can occur, usually resulting in some kind of transformation; by ‘intense’ we mean the immediacy invoked by the immediate requirement to deliver patient care; and ‘learning’ is ‘an integral part of generative social practice in the lived-in world’ (Lave and Wenger, 1991, p 35). The extent to which the specific learning cultures of the clinical workplace (at ward and at institutional levels) recognise transitions as CILPs contributes to or inhibits the performance of new doctors. This has important implications for the regulation and management of doctors’ performance as they move from one ward to another, from one hospital to another, and from one level of responsibility to another.

Although our study looked at two levels of doctor (F1s and STs), for brevity, this report focuses mostly on issues in common. The differences will be explicated in future publications.

1. How are transitions in the study sites regulated, managed and monitored?

   i) Regulatory context

   Currently, the General Medical Council (GMC) is responsible for the first year of Foundation Training (F1) and the Post Graduate Medical Education and Training Board (PMETB) is responsible for the subsequent years. The Modernising Medical Careers (MMC) Board set core principles and national standards for training. PMETB sets criteria and standards for training, including approving curricula. Each Royal College (for example Royal College of Physicians for elderly medicine) determines the curriculum for

<table>
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<tr>
<td>Consultant</td>
<td>5</td>
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<tr>
<td>Sister/ward nurse</td>
<td>3</td>
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<tr>
<td>Pharmacist</td>
<td>4</td>
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<tr>
<td>Occupational therapist</td>
<td>1</td>
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Table 2 Supplementary interviews
its speciality training. Therefore trainee doctors’ work is regulated by the GMC, PMETB, Department of Health through MMC and the relevant Royal College. Whilst none set particular regulations about transitions, all regulate (in different ways) doctors’ performance.

ii) Management

The overall management and delivery of post graduate education and training is the responsibility of the fourteen Deaneries in England; Scotland, Wales and N. Ireland each have their own national body. Doctors are employed by the NHS Trust within which they work. Doctors are recruited and selected onto training programmes by the Deaneries, who allocate training posts to Trusts. Deaneries and Royal Colleges inspect the ST training posts and certain specialties will approve ST posts. The GMC inspects foundation posts using the Quality Assurance of the Foundation Programme system (QAFP). Foundation Training Schools and Deaneries organise induction into training programmes; the content and location of these varies as does their perceived usefulness. Trusts organise employer-specific induction.

We contacted all six hospitals in the study requesting induction material provided to new doctors at the start of their rotations within the hospital. We wrote to and emailed named individuals and human resources departments (31 different contacts), following up with phone calls where we had a name, but received little back. We also asked interviewees about inductions. We interpreted both the lack of response to our enquiries and interviewees’ responses as suggesting that induction processes are not systematic, and sometimes disorganised (or not organised at all).

iii) Monitoring of transitions

We were unable to find any trusts/employers with a policy of monitoring transitions. Health professionals and clinical teams do monitor each other’s performance (for example, a senior nurse may tell a junior or new doctor ‘we do (not) usually do that here’) although this is not systematic and is subject to many situational variables. Each trainee should have a clinical and an educational supervisor and all the regulatory bodies have some requirements about supervision. In practice supervision varies widely. Some supervisors do monitor transitions - in very different ways - whilst others may be largely absent and/or distant. Furthermore, because trainees may start a transitional period working on days or on nights or by being on call, monitoring will depend on who is around and how much responsibility they take in this respect.

The overall regulatory, management and employment context is complex but there are some explicit, identifiable, formal expectations about performance and levels at which trainees should work, activities they should (not) undertake and so on. Furthermore, all doctors have to complete work-based assessments (different for F1s and STs) which convey implicit expectations about performance. However, the extent to which the formal requirements and expectations operate in practice is not at all uniform.
2. Does observable and reported practice differ from the formal frameworks?

Doctors’ reports of practice were sometimes at considerable variance from the practice suggested by formal frameworks, implying a mismatch between the rhetoric of orderly progression in levels of responsibility from rotation to rotation, year to year, and the actual practice of non-linear surges and steps backwards. Observable and reported practice was dependent on setting, Trust, time of day or night, composition of the team and whether those other members of the team were present. Consequently, an individual’s responsibility - and therefore practice - might oscillate. Furthermore, our participants reported that there had been times when they were expected to undertake tasks which they considered were not their responsibility; frequently participants had responsibilities beyond those expected at their grade.

Whilst it was recognised that doctors, particularly F1s, are training as well as working, there appeared to be little cognisance of doctors’ transitionary status in allocating rotas. Doctors could begin their new rotations on days working with consultants and other colleagues, and familiarising themselves with the culture and practices of the workplace, but this was not guaranteed. F14, for example, on only her second rotation as an F1, began work when both consultants and the registrar were off, and the SHOs were ill; she and a locum SHO were the only doctors on the ward, and when the SHO left later in the day, despite the formal frameworks, F14 felt responsible for an entire ward of patients, with little recourse to support or help.

Practice also varies because of others’ perceptions of the individual trainee. Although allowances were initially made for new doctors, their performance was quickly judged by others and any requests made and support offered determined by a view of the trainee’s capability. Thus the extent to which doctors were able to demonstrate their ability to perform appropriately was reliant on the affordances they were given. If they were viewed positively, they were likely both to have more opportunities for developing their practice and to receive support from nurses and fellow doctors when they needed help. Observable and reported practice was therefore mainly dependent on situational and contextual factors rather than the formal frameworks.

3. How is performance in relation to markers of responsibility understood by trainees and healthcare professionals?

In order to elucidate the relationships between performance and transition, we focused on critical aspects of performance for which the trainees were newly responsible – markers of responsibility. These were prescribing for F1s and patient management for STs. We selected two exemplars - urinary tract and chest infections - because all participants would treat patients with these conditions and be expected to have certain levels of competence to do so at the beginning of a transition.

Prescribing

There have been a number of reports and concerns about F1 doctors’ prescribing. In this study, we found that, overall, drug protocols (particularly for antibiotics) and close working with pharmacists and microbiologists seem to be mitigating many difficulties.

Prescribing was still perceived as a challenge by F1s, especially at first. They frequently needed to seek advice from pharmacists and nurses as well as other doctors but generally felt such advice was accessible and available. Doctors learnt about
prescribing through practice (‘I know the drug doses of most common drugs now because I kind of come across the same ones again and again …’). Healthcare workers also noted the challenge of prescribing, but many believed that F1s would ask if they were unsure and were more likely to do so now than in the past. Nurses recognised their role in helping doctors learn to prescribe and the delicate negotiation often required in this respect - ‘I think we teach them what drugs we like to use in our areas … we just kind of say well we normally use this but we can go with that one if you like and they’ll go “oh no it’s alright we’ll do this one” …’ (Senior Sister).

However, it became clear from both doctors’ and healthcare professionals’ accounts that doctors also have to learn about particular consultants’ preferences. For example, F2 explained how she made a difficult prescribing decision based on her knowledge about therapeutics and was satisfied it was correct. But she then said ‘Yeah, whereas if it had been the other consultant I would probably have started antibiotics…. Because he is for antibiotics so it just depends on who the consultant is, you have to know who you are working for.’ In other words, despite the rhetoric about evidence-based medicine, and the existence of prescribing protocols, doctors’ performance was sometimes dependent on responding to a particular consultant, rather than formal regulation.

Patient management

Patient management is a marker of responsibility for new STs. Such management requires an overview of the patient, not just one aspect of their care (eg prescribing for an infection) and involves working with other professionals to decide on a course of action. This varies between settings; in some cases there were no multidisciplinary team meetings despite the fact that these are considered essential for effective care of the elderly. Professional responsibility for different activities also varied between settings and this was not always clear. For example, one ST did not know whether pharmacists or doctors were responsible for warfarin prescribing and monitoring in that hospital.

Furthermore, scope for patient management is dependent on the particular approach taken by individual consultants who have a significant effect on the level of responsibility STs are given. For example, S3, said ‘… I feel more junior than I perhaps would have been used to being and I’ve put off making decisions sometimes because of that’. The extent to which STs manage cases depends also on factors such as whether or not they are on call: for example S7, suggested: ‘When you are on call you need to assess which patients can be admitted, which patients can be sent home, who can be transferred to which ward. You need to manage beds as well …’ In his view, these responsibilities can often begin earlier in one’s career, simply because nobody else is available (particularly in smaller hospitals). Again, expectations of performance are determined as much by circumstance and the availability of others as by level and specialty.

The consultants we interviewed expected STs to manage patients but reserved the right to oversee their decisions. Some consultants were explicit about their reliance on senior nurses’ perceptions of the trainees. Senior nurses’ judgements were often based on their perceptions of the doctor’s organisation of their work and their availability and willingness to respond to their requests. Other healthcare professionals based their judgements on their perceptions of the doctor’s performance and were not necessarily aware of the level of the trainee with whom they were dealing; neither were they aware of doctors’ transitions nor when they were going to happen.
4. How is performance in relation to markers of responsibility understood by employers and regulatory bodies?

Performance is implicitly understood to be practice by employers and regulatory bodies. Broad statements about expected performance are contained in relevant GMC, PMETB and speciality training guidance, assessments and documentation. Job descriptions indicate expectations for particular posts. Other requirements about confidentiality, including the Caldicott guidelines (1997) and Data Protection Act (1998), contain injunctions not to share security passes and computer passwords. Prescribing protocols and care pathways also give indications about expectations of performance.

At the employers’ level, organisational issues meant that trainees often had to ignore formal requirements. In this study, doctors’ routine work was frequently hampered because they had not yet been provided with computer passwords or security passes and, in order to operate at all, they had to ‘borrow’ colleagues’ passes to gain access to wards when on call, and colleagues’ passwords to gain access to test results. Such infractions of formal guidance were very common. Sometimes it seemed as if Trusts were actively impeding efficient working when doctors were unable to function effectively because of relatively trivial systemic failures. As we noted above, Trust induction may be variable and does not always happen, particularly for STs who may make transitions at different times to other doctors. Staffing and rotas do not always meet the regulatory requirement that ‘The duties, working hours and supervision of trainees must be consistent with the delivery of high quality safe patient care.’ (GMC/PMETB 2007). It was not unusual for trainees to begin a rotation in a new hospital on nights with little experienced supervision available. The over-riding expectation appears to be that trainees will - and should - manage and do what is necessary even when this is not in line with formal expectations for their level of training.

We found that the increased regulation of clinical activity through protocols and care pathways helps trainees’ performance whilst the less regulated aspects of work such as rotas, induction and multiple transitions within rotations makes this much more difficult. Despite critiques of protocols as limiting professional autonomy, prescribing protocols in particular appear to be supporting professional practice and are accepted as part of practice. These protocols ensure that trainees are encouraged and enabled to ask for help from a whole range of professionals; furthermore their performance is monitored and they get feedback from others.

Summary

1. Every transition involves a critically intense learning period (CILP) in which doctors engage with the particularities of the setting and establish working relationships with doctors and other professionals. Therefore doctors can never be fully prepared in advance of a transition because learning, practice and performance are inseparable.

2. Because the focus of learning during the transition is explicitly patient-centred, other aspects of learning including, for example, relationships with others, work processes and practical issues are minimised and/or ignored. Sometimes this impedes doctors’ performance unnecessarily.

3. Trainee doctors in transition recognise that they are learning and expect to underperform at the beginning. Other professionals may recognise this; however,
employers and regulatory bodies do not recognise and/or accommodate CILPs in their expectations of trainee doctors’ performance.

4. In medicine, performance is interpreted as practice. But practice, and therefore performance, is situated and cannot be understood as an independent attribute of the individual. It is relational - performance can only occur in the interface between the doctor and the work itself in a specific setting.

5. Levels of responsibility, and therefore performance, do not increase incrementally across transitions or even remain stable within each transition; the specific demands made on doctors depend on all kinds of factors (time, specialty, hospital rotas, trust policies, etc).

6. Although transitions in the study sites were regulated, there was patchy management of those transitions and virtually no monitoring, apart from the non-systematic monitoring from co-workers. When this informal monitoring works well, it is extremely effective; when co-workers are absent or trainees are marginalised, for whatever reason, performance is under-monitored and learning under-supported with potential danger for patients.

7. Doctors’ performance is sometimes impeded by aspects of the clinical workplace such as staffing and rotas which can appear chaotic.

8. Doctors make transitions within transitions, sometimes moving wards every week within a rotation. If each transition is understood as a CILP, the frequency and speed of these changes may not afford doctors enough opportunity to develop effective performance.

We make the following interim suggestions for improving performance which are necessarily condensed here. They will be presented for discussion and development at two practitioner and stakeholder seminars in June.

**Individual**

Whilst trainees know that effective transitions are crucial for their future, and they try to make a good impression through performance, they do not always recognise that the transition itself is a CILP with implications for performance. We recommend that trainees are supported to be more systematic in their approach to transitions. Trainee doctors also need to be more systematic about handing over to their successors in order to facilitate better transitions for others.

**Team**

All professionals need to understand better that transitions are CILPs and that it is expedient (and imperative) for established colleagues to develop more systematic approaches to supporting new colleagues’ transitions.

**Employer**

Given that transitions are CILPs and the significance of the workplace learning culture in transitions, Trusts need to develop more reliable organisational practices in the management of transitions. Foundation training schools and deaneries need to review the number of transitions trainees make (particularly to reduce transitions within rotations where possible).
Regulatory bodies

Whilst regulatory bodies do not have responsibility for inspecting Trusts (although they do inspect deaneries through the QAFP mentioned above), together with the foundation training schools and deaneries, they need to attend to the systematic provision at Trust level for supporting doctors’ transitions.

Activities

Full details are in Annex 2. In summary:

- One national seminar for participants and stakeholders; two more regional seminars for participants will be held in June (these could not be held earlier due to the structure of the Deanery’s training programme).
- Five seminars already given to academic audiences - one international (Denmark); two national and two local.
- Four future invited seminars (three international – Australia - and one national) and one keynote speech.

We have also developed two international collaborations:
3. We are working with a team at the University of Utrecht which has a leading role in the current reforms of medical training in the Netherlands. One member of that team worked with us during the winter and will return in June. We plan to develop further joint research.
4. A team from the University of Melbourne and Monash University (Melbourne) have submitted a collaborative research proposal to the Australian Research Council based on our work. Two members of our team are included as co-researchers.

We have also been approached recently by two representatives of the Medical Council of Ireland to explore possible collaborative activities.

Outputs

Full details are in Annex 2. In summary:

- Three conference papers (two international and one national) presented
- Forthcoming paper at an international conference in Denmark
- One further abstract submitted to an international conference (outcome awaited).

PSP working paper is in preparation and the final version will be submitted for Special Issue of Journal of Health Organisation and Management based on PSP third call projects.

Three other papers are in preparation.

Further outputs are expected once all the practitioner and stakeholder seminars have been completed.
The ethical approval for our project included a number of caveats about confidentiality and access to our datasets. Therefore the Acquisition Review Committee of the UK Data Archive has decided it is unable to accept our data.

Impact

The project findings have significance for the GMC, Deaneries, Trusts and Royal Colleges, and some of their representatives have already expressed interest in the project outcomes. We organised a national one-day meeting to present our emerging findings for critical scrutiny and to explore stakeholders’ perceptions of the implications of those findings. It was well attended by representatives from the GMC, Deaneries, NHS Trusts, senior clinicians and junior doctors as well as education researchers. We were subsequently asked to provide further information by the GMC and a Trust representative. We are working with the GMC to prepare a summary report of the project, which they will distribute.

The project has already achieved academic impact through conference presentations and networking which has so far generated 5 invitations to present seminars and the development of international research collaborations, outlined above.

Future research priorities

1. Our original intention in this study was to use exemplars to develop an appropriate methodology for mapping transitions; we have thus established the basis for a larger study which needs to be conducted over a longer period, and to cover multiple transitions and different environments.

2. In relation to the relevant PSP analytical theme a particular question is apparent: Given how well prescribing protocols have worked, are there other areas which could benefit from such an approach? We anticipate that this will be an important priority for research.

3. Now that CILPs have been identified, future research will need to explore the attributes of CILPs in more detail, including examining more senior transitions (eg to consultant).
References


Lempp, H., Seabrook, M., Cochrane M. and Rees J. (2005) The transition from medical student to doctor: perceptions of final year students and preregistration house


Annex 1. Semi-structured Interview schedules

**F1. First interview questions**

1. Training and career as a doctor to date – where, when, what …
2. Have you worked at this hospital before?
3. Where else have you worked? Find out about placements
4. Current role - background – first in rotation? If not, where else? When did it start? What teams are you part of (day, night, weekend)
5. Details of activities – shifts, educational and clinical supervision, formal and informal education requirements and opportunities, line management (both up and down)? Grand rounds, for example? Other prompts - research meetings, audit, journal clubs, deanery)
6. Who would you ask for help (day, night, circumstances)? Do you ever ask anybody else for help? How do you get help?
7. Do you remember your first day here? Best thing and worst thing? Why?
8. Did you do anything to prepare for this role (ring up, visit beforehand)?
9. What’s the most useful piece of information you were given when you started this job?
10. Just thinking about yesterday morning (eg), you’ll have asked lots of people lots of questions – can you think of some examples of different types of questions to different people? (Patients, other professionals, doctors, cleaners, patients’ relatives) etc. What else do you do when you’re not sure about something? So who and what do you learn from when you’re on the job?
11. Prescribing – How did you learn to prescribe? (Prompts – who, what, practices in the workplace?) What’s been the most useful in helping you to prescribe? Has anything made it more difficult? Are you ever unsure? What happens when you’re not sure of anything?
12. Can you think of someone with a UTI where you feel pleased with the way in which you prescribed? (Supplementaries – more details – patient etc. How did you know it went well? what was it that went well? How did you know what to prescribe? Had you prescribed in this way before? How much help did you have with it?)
13. Can you think of another case where the prescribing was difficult? What made it difficult? (explore supplementaries above)
14. Chest infections - as above
15. What do you know about the role of others? If you have a question about your role in the team, who do you speak to?
16. Check for any official guidance or documentation re induction, prescribing etc?
17. Is there anything else you want to tell us about what’s helped or hindered you in this change in your work? Especially about learning to take more responsibility?

THANKS - OBSERVATIONS, NEXT INTERVIEW, TRANSCRIPTION.
STs. First interview questions

1. Training and career as a doctor to date – where, when, what …
2. Have you worked at this hospital before?
3. Where else have you worked? Find out about placements
4. Current role - background – first in rotation? If not, where else? When did it start? What teams are you part of (day, night, weekend)
5. Details of activities – shifts, educational and clinical supervision, formal and informal education requirements and opportunities, line management (both up and down)? Grand rounds, for example? Other prompts - research meetings, audit, journal clubs, deanery)
6. Who would you ask for help (day, night, circumstances)? Do you ever ask anybody else for help? How do you get help?
7. Do you remember your first day here? Best thing and worst thing? Why?
8. Did you do anything to prepare for this role (ring up, visit beforehand)?
9. What was the most useful piece of information when you started this job?
10. What was it like moving to this job and how does this compare to the move from student to F1 doctor?
11. Take this morning for eg, you’ll have asked lots of people lots of questions – can you think of some examples of different types of questions to different people? (Patients, other professionals, doctors, cleaners, patients’ relatives) etc. What else do you do when you’re not sure about something? So who and what do you learn from when you’re on the job?
12. How did you learn about patient management? (Prompts – who, what, practices in the workplace?) What’s been the most useful? Has anything made it more difficult? Are you ever unsure? What happens do you do then? Thinking about patients with UTIs and chest infections, what’s your role? What do you know about the role of others? If you have a question about your role in the team, who do you speak to?
13. Can you think of someone with a UTI where you feel pleased with the way in which you managed their care? (Supplementaries – more details – patient etc. How did you know it went well? what was it that went well? How did you know what to do? Had you worked in this way before? How much help did you have with it?)
14. Can you think of another case where the management was difficult? What made it difficult? (explore supplementaries above)
15. Chest infections - as above
16. Check for any official guidance/ documentation re induction, prescribing, management etc?
17. Is there anything else you want to tell us about what’s helped or hindered you in this change in your work? Especially about learning to take more responsibility?

THANKS - OBSERVATIONS, NEXT INTERVIEW, TRANSCRIPTION.
F1s and STs Second interview questions

Each interview was individualised using the following four categories:

1. What’s happened since you last met – changes, career planning, learning, ‘settling in’/ready to move etc etc

2. Observation – clarify, discuss what happened during observation. Was it a typical session or not? Why? (Only relevant if observation has taken place)

3. 1st interview – revisit all relevant points (prepare questions before the 2nd interview!)

4. Future plans and expectations

THANKS - TRANSCRIPTION. RESEARCH WORKSHOPS AND FINDINGS CHECK CONTACT DETAILS IF THEY WANT INFO SENDING THEM
Supplementary interviews guide

1. How long have you worked here? What is your current role? Contact and involvement with F1s and STs
2. Where else have you worked? Find out about role and their involvement with F1s and STs
3. Who asks and when are you asked for help (day, night, circumstances)? What sort of questions/help needed? How else do you think F1s and STs get help?
4. How are F1s and STs prepared for their roles here? In your opinion, what’s the most useful piece of information they need?
5. Just thinking about the last week. How many F1s and STs asked you questions? What type of question?
6. From your perspective how do F1s learn to prescribe? Specifically for urinary infections; chest infections. Try and get examples and some details about successes and problems.
7. From your perspective – how do STs learn to manage patients? Specifically for urinary infections; chest infections. Try and get examples and some details about successes and problems.
8. What is your role in relation to F1s and STs? (How) do you support their transitions?
9. Check about any official guidance or documentation re induction, prescribing etc.
10. Do you think doctors’ transitions could be done differently/ any changes needed?
11. Anything else you want to say?

THANKS - TRANSCRIPTION. AVAILABILITY OF FINDINGS IF THEY’RE INTERESTED
Annex 2. Detailed list of activities and outputs

a) Seminars for participants and stakeholders

Forthcoming:


b) Other seminars


Forthcoming:


Outputs


Forthcoming