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Supporting transitions in the professional development of doctors:

linking theory and research with practice

Overview of lecture

- Medical transitions and preparation for practice
- Research on preparedness for practice in the UK
- Impact: student assistantships, follow up work on preparedness for practice, trends in preparedness for practice
- Theory – communities of practice – learning from authentic practice
- Workplace based assessments
- The clinical environment: supervision, the team, feedback, bullying

Medical transitions and preparation for practice

School leaver → Medical Student

Medical graduate → Intern/Junior Doctor

Junior Doctor → Speciality Trainee

Speciality Trainee → Consultant

International medical graduate (IMG) Intern → Specialty Trainee/Career Grade

All transitions have challenges

- Research to show patients are more at risk in August or when interns start
  (Jen et al.,2009, Early in-hospital mortality following trainee doctors' first day at work. PLoS One 4)
- 30% interns in Ireland reported that their previous medical education and training did not prepare them well for intern training (Your training counts, IMC, 2014)
- New Consultants are at risk (National Patient Safety Agency , 2009, NCAS Casework, the first eight years London, NPSA, Listening to complaints IMC 2015)
- IMGs are over represented in fitness to practice hearings (Humphrey, BMJ,2011) and more likely to be investigated within the first two years of joining the UK register (The State of Medical Education, GMC, 2012)

All involve a change in the context of practice and change in expectations from the health service

Setting out the outcomes for the intern year

Outcomes for provisionally registered doctors with a licence to practise (The Trainee Doctor) July 2015 GMC

The outcomes are the same as for *The Trainee Doctor* (2011)

- Good clinical care
- Maintaining good medical practice
- Teaching and training, appraising and assessing
- Relationships with patients
- Working with colleagues
- Probity
- Health
- List of core clinical procedural skills

Being unprepared!

Believe it or not, medical school largely keeps you away from properly sick patients. So I'm thinking, am I really up to this? Hello, is there anyone around who can help me? "We're just a bleep away, you won't be alone in a situation for long" they reassure us in our induction week. A few days in, and that's exactly what happens. With zero experience, I'm suddenly dealing with acutely ill people, out of hours and on my own. I'd like to think I could rely on other doctors, but I can't – I often find them arrogant and abrupt. Instead the nurses are my allies. I wonder if the patients realise I'm new to the job. I think they'd be shocked if they knew; I had to spend almost an hour on my own in a frightening situation with a very ill young patient. I thought she was going to die on me. I begged two other doctors to help but they were busy with other sick patients. It was OK in the end and the patient survived, but it's not an experience I'm ever going to forget. And I know it will happen again, too soon.

(Anonymous,
The Guardian Newspaper, 21 September 2012)

Not being listened to!

"People didn't appreciate the urgency in the handover and as a result time went by when the patient could have been treated.

There was a golden hour

when that patient could

have been treated and

instead they died of something that should not have killed them" (Foundation, doctor)

(Morrow et al, 2012 p32. The Impact of the Working Time Regulations on medical education and training: Final report on primary research. Report to the GMC)

Research on preparedness for practice in the UK

Concerned following national survey (Goldacre et al 2003)

Reporting over 40% of medical graduates did not feel fully prepared to start work as a doctor.

The study also reported that the level of preparedness varied between medical schools.

Multi-centre prospective study

Aim to examine preparedness for practice

- Involved 3different types of medical school
- Collected student data at 3 time points: end of medical school and at 4 and 12 months as an intern
- Triangulation student data with different sources: tutors, clinical supervisors, members of the clinical team
- Triangulated interview data with other methods: surveys and assessment data

Illing et al (2008) How prepared are medical graduates to begin practice? A comparison of three diverse UK medical schools. Final report to GMC

Illing et al (2008). How prepared are medical graduates to begin practice? Final summary and conclusions for the GMC Education Committee

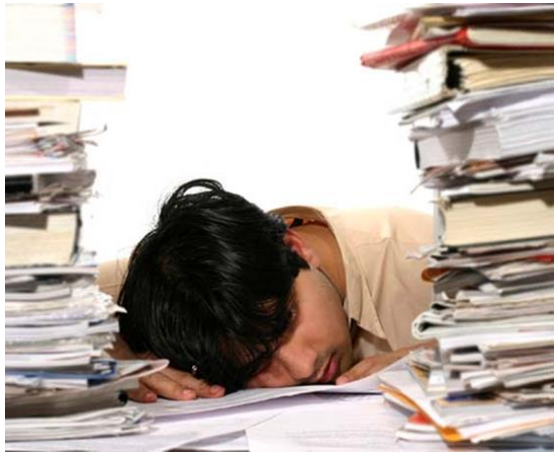
Findings: prepared for

- Communication skills (not complex)
- History taking
- Clinical and practical skills
- Team working

Illing, J, Morrow G, Rothwell CR, Burford BC, Baldauf BK, Davies C L, Peile EB, Spencer JA, Johnson N, Allen M and Morrison J (2013). Perceptions of UK medical graduates' preparedness for practice: A multi-centre qualitative study reflecting the importance of learning on the job. BMC Medical Education.2013, 13:3

Findings: not prepared for

- Prescribing
- Managing acutely ill patients
- Complex procedures
- Complex communication
- On-call and working nights
- Prioritising patients and managing time
- Hospital procedures and paperwork
- Knowledge of NHS
- Legal and Ethical



Findings: unprepared for prescribing

- Prescribing was singularly the weakest area of practice
- Lack of preparedness in areas ranging from pharmacology knowledge to calculating drug doses
- Area where most mistakes were made

Dornan EQUIP study (2010), GMC

The error rate was:

8·4% for foundation year 1,

10·3% for foundation year 2 doctors,

8·3% for those in fixed-term specialty training posts,

5·9% for consultants.

1·7% of errors were potentially lethal.

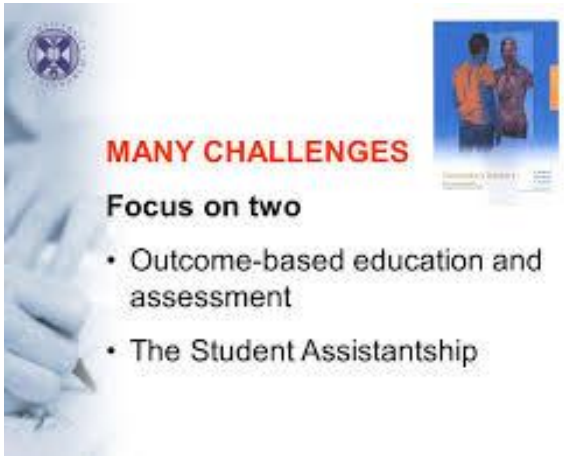
The need for learning on the job

"Gaining access to patients was not always easy and, since they could be signed off as competent performing certain procedures on mannequins or simulators, this reduced the necessity to perform the procedure on real patients."

(Illing et al (2008) How prepared are medical graduates to begin practice? A comparison of three diverse UK medical schools. Final report to GMC)

Recommendations

- More structured placements that involve the student in authentic workplace practice as part of the team
- Graduates to have a role in the team
- Prescribing – there needs to be more applied learning
- Improvements to shadowing
- Consider moving final exams back in time



Impact: student assistantships follow up work on preparedness for practice, and trends

Review of 31 studies on preparedness:

" *Mostly unprepared for prescribing safely and legally, clinical reasoning and making diagnoses and the early management of patients with emergency conditions"* (Monrouxe et al. 2014)

Impact: GMC introduced student assistantships

"The majority of medical students feel well prepared for starting work after completing the student assistantship" (Braniff, Belfast 2012)

"In terms of transition interventions: assistantships were found to be valuable and efficacious for proactive students as team members, shadowing is effective when undertaken close to employment/setting of F1 post and induction is generally effective but of inconsistent quality" (Monrouxe et al. p 2, 2014)

Trends

GMC trainee survey report preparedness for practice has improved (The state of Medical Education, GMC, 2014)

Student assistantships

"In terms of effectiveness, assistantships were seen as being pro-active forums, essential for students' learning of how things work on the ward, for seeking out practice of practical skills…Some F1 participants commented on how they felt that there was only a 'slight jump' from assistantship to their F1 year in terms of responsibility.

(Monrouxe et al. p 82, 2014 UK Medical Graduates Preparedness for Practice: Report to GMC)

Lack of preparedness for prescribing

"Even when they had good underpinning knowledge, some F1s found prescribing difficult due to limited 'in situ' prescribing experiences and support on the wards"

(Monrouxe et al. p 134, 2014 UK Medical Graduates Preparedness for Practice: Report to GMC)

Acute patients are still a concern

"F1 doctors were well prepared for simple diagnosis and treatment planning, but less well prepared for complex cases or immediate care of acutely unwell patients"

(Monrouxe et al. p 111, 2014 UK Medical Graduates Preparedness for Practice: Report to GMC)

Should interns be prepared for acute patients?

" The house officer will be the first port of call… If you get out of your depth with a patient you bleep your senior [but] sometimes the senior may be looking after a sick patient elsewhere…"

(Morrow et al, 2012 p44. The Impact of the Working Time Regulations on medical education and training: Final report on primary research. Report to the GMC)

Acutely ill patients are not just a matter for interns

"All doctors must be able to manage acutely ill patients with multiple co-morbidities within their broad specialty areas, and most doctors will continue to maintain these skills in their future careers"

(The Shape of Training, Greenway 2013)

A range of theories support medical education

Learning as an individual activity, reacting to the environment, but learning occurs at the individual level e.g. putting in a venflon.

These theories emphasis individual learning and fit with the view of an autonomous doctor

Behaviourists shape behaviour through both positive and negative reinforcement.
An example would be feedback, e.g. MSF

Cognitive psychology contributed to the understanding how knowledge is organised, how memory functions, and how individuals create meaning from their experiences.
e.g. clinical decision making and Problem Based Learning.

Metaphors for learning may be helpful in reframing.

Acquisition – is seen as the acquisition of knowledge, skills, values and competencies, in the sense in which one acquires goods.

- Acquisition reinforces learning as an individual process.
- Implies that learning can be transferred across situations.

Participation – involves learning from participation not acquisition).

- As participation is ongoing, so is learning.
- Learning is inextricably linked to the context and embedded in the social process there.

Sfard (1998) cautions, it is not in learners best interest to adopt just one metaphor. Instead pedagogical approaches which support the appropriate use of both are needed.

Perspectives that recognise both individual and social aspects of learning

Socio–cultural theory

learning is inextricably tied to its context and to the social relations and practices there. It is a transformative process that occurs through participation in the activities of the community

Vygotsky, an early exponent,
describes learning as occurring through activity,
mediated both by others and by cultural artefacts

Situated learning and communities of practice (Lave and Wenger)

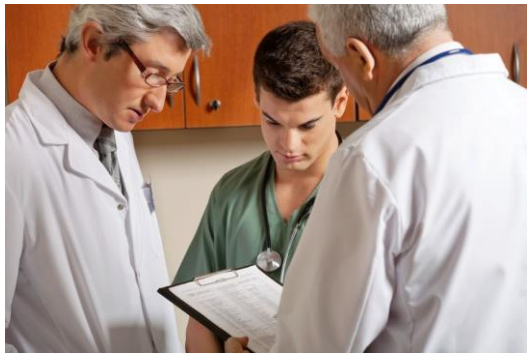
- Novice - legitimate peripheral participation
- Novices begin at the periphery of a community by observing and performing basic tasks.
- Through participation, active engagement and assuming increasing responsibility the individual assumes and acquires the roles and skills of the community.

(Lave & Wenger Situated Learning: Legitimate Peripheral Participation. Cambridge Press 1991)

Perspectives that recognise both individual and social aspects of learning

Social cognitive theory

- Learner brings their own level of knowledge, skills and attributes, learning and interacting with others in a range of contexts
- Through experience and observing others the individual acquires a sense of self efficacy to perform tasks and achieve goals



- Feedback on performance is essential to support practice and acquiring competence.

The clinical environment: supervision, the team, feedback and bullying

- Compared to their supervisors, medical students have a reduced opportunity to learn on the job. There is a greater focus on patient safety, increased in simulation and competition from other students/trainees
- Teams (firms) that were stable are more transient and fragmented, resulting in students and juniors being unknown and opportunities to develop are missed
- Feedback has become formalised, demanding time and has reduced in value
- Bullying remains a major concern affecting 20% of NHS staff (Carter et al. 2013, BMJ Open)

- Interns who felt less well prepared for intern training reported a poorer experience of the clinical learning environment (Your Training Counts, IMC, 2014)

Good medical education placements

Longitudinal integrated clerkship

- Highlight the benefits of having a longitudinal relationship with a known supervisor (BEME Review, Thistlethwaite)
- Participation in authentic practice combined with feedback drives learning

  (Crampton 2015)
- Patient centeredness (Hirsh, Med Ed 2014)

" *Doctors must have opportunities to support and follow patients through their entire care pathway, both during medical school and in the Foundation Programme*"

(The Shape of Training, Greenaway Report 2013)

The learning environment and support (continuity of location)

Students found that being in the same learning and clinical environment (i.e. the same team, rather than geographical location) for a prolonged period made them feel comfortable as well as useful, describing the environment as nurturing

(Thistlethwaite et al 2013, A Review of Longitudinal Community and Hospital Placements in Medical Education. www.bemecollaboration.org)

How do longitudinal placements promote learning?

- The placements appeared to promote learning through engaged participatory learning, with a greater range and variety of clinical experiences
- Teaching tended to be learner-centred
- Students reported better feedback and were observed more often performing clinical skills than on traditional placements

- Students were expected to be self-directed learners, seek opportunities for education, and engage in self-reflection
  - this increased their confidence and trust in their ability
- Students began to assume a more doctor-like role

Workplace-based assessments

- In the UK valid and reliable workplace-based assessments were introduced from 2003 with the use of portfolios to record training experience and progress.
- Prior to this assessment was informal and non-standardised giving rise to concern over standards and patient safety.

The main assessments used are:

- Mini Clinical Evaluation Exercise: Mini-CEX,
- Direct Observation of Procedurals Skills: DOPS and
- Case-Based Discussion: CBD), and
- Multi-source feedback tools (MSF)

- We know there is better evidence to support change following multi-source feedback than other workplace based assessments (Miller & Archer, BMJ, 2010)

- We know that students and trainees respond to feedback from seniors who know them (Sargeant et al.2010)

Assessments: Summative vs. Formative

We know that each foundation doctor was completing about 30 assessments per year and these assessment were seen as "excessive, onerous and not valued"
(Collins 2010, Foundation for Excellence. An Evaluation of the Foundation Programme, MEE)

In 2012, the GMC introduced supervised learning events (SLEs).
Replacing summative assessments with formative ones

"Our findings provide tentative support for the shift to formative learning with the introduction of SLEs"

"Trainees often wanted formative feedback to help improve their performance (i.e., feedforward) rather than ticks (i.e., feedback)"
(Rees et al, BMJ Open, 2014)

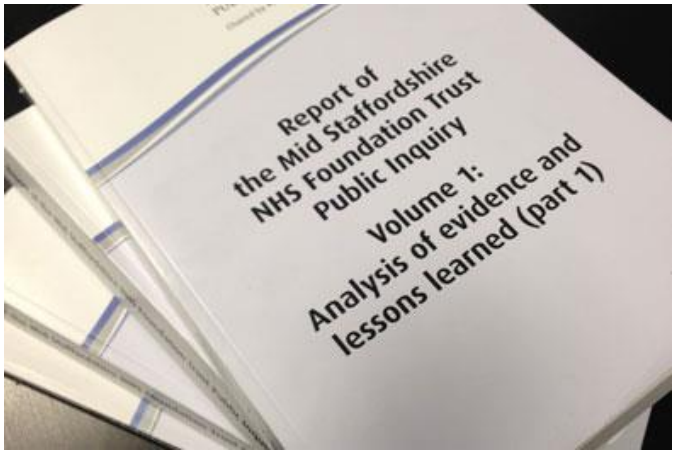
Professionalism:
as constrained by the organisation

- The role of management and organisational influences in determining professionalism was not identified in the literature reviewed in 2011
- There is now an increased awareness of the importance of the role of the organisation for professional practice
- All groups felt the demands of the health service impacted on their professionalism
- Working under pressure with poor resources increased the pressure on the profession to cut corners and risk practice that was unprofessional or close to it

(Morrow et al, 2010 Professionalism in healthcare professions, Report for the HCPC)

Hospital crisis: negative cultures

- Mid-Staffordshire – driven by acquisition of status, cuts to staffing to achieve this, management condoned bullying and a negative culture



- Colchester

  "patients being inappropriately restrained and sedated without consent"

  Guardian News paper Saturday 15 November 2014

- Management driven by targets and putting patients at risk

  E.g. moving patients at risk of another heart attack from A&E and onto wards to avoid breaching 4 hour rule

Workplace bullying

•30% trainees reported personal experience of bullying and undermining behaviour
(Your training counts, IMC, 2014)

•Research findings have linked
leadership style to workplace bullying

•Leadership which focused on task only
- increased bullying
•Leadership which also focused on staff health
and wellbeing had reduced bullying (Raynor and McIvor, 2008)

•Interventions aimed at reducing workplace bullying were more likely to succeed if the senior leadership (CEO) was committed to reducing workplace bullying (Illing et al 2013, NIHR Report)

Conclusions 1

Supporting transitions in the professional development of doctors: linking theory and research with practice

- Theory suggests learning involves both the individual learning and learning via participation with practice
- Our study on preparedness for practice indicated insufficient participation – a lack of learning on the job, which increased a lack of preparedness

Conclusions 2

- Juniors doctors continue to lack preparedness for acutely ill patients and prescribing
- Longitudinal placements both in hospital and in the community have many strengths supporting preparedness for practice
- Formative assessments have been found to be of value - feed forward
- The work environment is important to develop skills and professionalism

Thank You !

Questions?

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