Medical students need experience not just competence

Competence does not guarantee capability. The need for medical students to have sufficient clinical experience

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Anticipating a serious workforce shortage, the World Health Organisation advocates a paradigm shift in how we prepare clinicians for practice. (1) This editorial is a critical review of medical student education, which supports that recommendation. Curricula vary internationally: students are health workers in some countries and observers in others; they progress from medical school to hospital generalist training in some countries and direct to specialties in others. We acknowledge that variability so far as a limited evidence-base dominated by anglophone publications allows.

Britain is the main source of evidence about preparedness for practice. This may be because UK students, with little experience of contributing to practice, shoulder heavy clinical responsibilities as foundation trainees (FTs). Despite this inexperience, FTs' supervision may be 'arms-length' when, for example, a hospital specialist delegates patients' generalist care to them. This baptism of fire may explain why an increasing proportion of UK trainees deviate from the intended training pathway. Two thirds of FTs delay entry to specialties, some taking career breaks out of medicine.(2) The staffing gaps that result make patient care discontinuous, impersonal, and potentially unsafe, and incur eye-watering locum costs. Paradoxically, UK trainees break their training to become better trained. Taking a break from training relieves them from work pressures, unsupportive learning environments, unsatisfactory education, disrupted personal lives, and poor psychological health. Some, also, want longer to choose a specialty.(3)

These factors, though, are an insufficient explanation for the UK's retention problem. Only 10% of trainees (interns and residents) in the US, Netherlands, and New Zealand take career breaks (4–6) despite negative psychosocial experiences.(7,8) The relative immaturity of UK trainees cannot explain their career breaks because students enter medicine direct from high school in the Netherlands and New Zealand too. Trainees leave when a final negative experience 'brings down the tower of blocks'.(9) Negative experiences start in medical school (3) and intensify when students become trainees.(10) Trainees with the least developed coping strategies are worst affected.(11) Those in the UK certainly need coping strategies because the National Health Service, whilst affording excellent training opportunities, operates under formidable pressure. Promises of ever 'safer' healthcare whilst ever less is spent on public services have resulted in expertise being so thin on the ground that work is often shared out rather than supervised. Students need to be very well prepared for work.

The competency movement has strongly influenced global reforms in medical education.(12) This new paradigm has shifted the arbiter of being ready for work from having accrued sufficient experience to having demonstrated competence, off-the job, in standardised tests. By that objective definition, 100% of UK students are ready to practise 'safely', yet practice is not demonstrably safer. The General Medical Council's survey of UK graduates' experiences of starting work shows that a progressively falling proportion (66% in 2019, compared with 90% or more in the US) find themselves, subjectively, prepared.(13,14) Subjective unpreparedness might be dismissed as 'soft evidence' but this predicts dissatisfaction with training, poor wellbeing, and burnout for up to seven years after qualification.(13)

The stressors that test medical graduates' preparedness include feeling incapable of managing a heavy workload against the clock, on unfamiliar wards, on call, and lonely; facing criticism and conflict; and managing very sick patients who deteriorate despite treatment. Trainees who have only learned part-tasks (eg writing a simulated prescription) find themselves incapable of performing the whole task (treating a sick patient). Unpreparedness is 'knowing what' but not 'knowing how'. It is having such a fragile professional identity that you cannot admit uncertainty.(15–17) Competent but incapable graduates are sitting ducks for psychosocial harm.

There is observational evidence that students can be better prepared by gaining experience in real practice contexts, not just simulation; having longer, better supported experiential attachments; having a placement in a hospital where they will soon work; having generalist rather than specialist experience; and not having constant exam pressures.(18) Narrative evidence suggests that North American students, despite also being in competence-based programmes, have more such experience than UK students. The importance of ensuring that students have had enough experience applies to any job, be it hairdressing, coal-mining, or healthcare. Students become capable trainees by immersing themselves in work, observing and listening, role-modelling, interacting with workers, participating in work practices, being coached, asking and answering questions, reading workplace documents, and writing in them.(19)

This cautionary tale leads us to propose that medical education does not so much need a paradigm change as a stronger implementation of the World Federation for Medical Education's paradigmatic standards. These advocate early, progressively increasing involvement in patient care and experience of taking responsibility.(20) Off-the-job training, observing practice, and a relentless diet of assessments cannot substitute for experience. On the job learning, alone, can actualise students' and trainees' intrinsic motivation to care well for patients.

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Tim Dornan wrote the editorial and headed the team of authors. Hannah Gillespie and Dakota Armour searched information sources to provide the evidence-base for it. Helen Reid and Deirdre Bennett contributed to the drafting and revision of the editorial. All authors approved all drafts, including the final submitted version.

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