



# The value of mentorship in medical education

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Some new doctors continue to struggle with increased responsibilities

## SUMMARY

**Background:** The transition from senior medical student to working safely and effectively as a new junior doctor is one of the biggest challenges that a new graduate will face. In 2014 the General Medical Council published *The state of medical education and practice in the UK*, reporting that some new doctors continue to struggle with increased responsibilities. We classify these instances as a ‘performance gap’, describing occasions in clinical practice where an individual exceeds their performance capacity. The Medical Mentorship Programme addressed identified

performance gaps through a structured curriculum of simulation-based education and facilitated clinical practice.

**Methods:** Programme content was based on the experiences of the authors and their peers in graduating from their undergraduate training programme and becoming junior doctors. A questionnaire was disseminated to junior doctors in their first clinical rotation. The questionnaire asked doctors to describe instances where they experienced a performance gap. These data informed the development of the Medical Mentorship Programme. The effect of this programme was

then evaluated via focus group discussion.

**Results:** The Medical Mentorship Programme has been shown to be an effective conduit for supporting the transfer of learning needed to address performance gaps in students. The programme increased the confidence of students in preparation for clinical practice and allowed junior doctors to reflect on their professional development. The programme combined complementary teaching techniques – mentorship, simulation and direct clinical experience – to aid the professional development of both students and mentors.

## INTRODUCTION

The transition from senior medical student to working safely and effectively as a newly qualified junior doctor (JD) is one of the biggest challenges that a graduate will face.<sup>1</sup> Within the literature there is an acknowledged performance gap that students experience when transiting from academia to practice.<sup>2,3</sup> Currently the foundation programme, a 2-year generic training programme in the UK, is designed to support the early years professional development of JDs prior to specialty training. The General Medical Council (GMC) has identified that newly qualified JDs continue to struggle with increased responsibilities, such as time management, prescribing, clinical procedures, reporting risks to patient safety, coping in emergency situations, resilience, professionalism and complex communication tasks.<sup>2</sup>

We classify these instances as a 'performance gap' to describe occasions in clinical practice where an individual exceeds their performance capacity. Circumstances that can perpetuate a performance gap are the relevance of the undergraduate training programme to clinical practice, the transition to becoming a JD and personal resilience.<sup>1,3,4</sup>

## CONTEXT

The Medical Mentorship Programme (MMP) responded to challenges identified by the authors (assigned to NHS Tayside) and their peers in graduating from their undergraduate training programme and becoming JDs. These JDs described incidences in their practice where they exceeded their performance capacity.

Mentorship was first developed in America in the 1970s to support junior business staff.<sup>4</sup> Mentorship is a dynamic relationship that has been shown to

significantly enhance professional development in the early stages of a career.<sup>5,6</sup> Within health care, mentorship has been successfully used within nursing and the allied health professions.<sup>7,8</sup> Despite the potential benefits of mentorship there are only a few publications that cite the benefits of mentorship within the medical profession.<sup>4</sup>

The MMP, which comprised of a structured curriculum of simulation-based education and facilitated clinical practice, was developed to identify the effect that a programme of formal mentorship had on the professional development of senior-year medical students and JDs.

## METHODOLOGY

This article presents the results in two stages. Stage 1 describes the development of content for the MMP. Stage 2 reports outcomes from the pilot study.

### Stage 1

Performance gaps were explored via a short questionnaire circulated to all JDs within NHS Tayside. The questionnaire was tested prior to dissemination to ensure that the questions were not open to misinterpretation. The questionnaire reflected the

outcomes of the Foundation Programme.<sup>9</sup> Questions explored how prepared JDs felt for clinical practice (Table 1), and asked them to describe incidences in clinical practice where they felt that they had exceeded their performance capacity. All responses were anonymised prior to content analysis.<sup>10</sup> This informed the content of the simulation activity.

### Stage 2

A pilot study of MMP was delivered over 6 weeks (Figure 1). Students and JDs were invited by e-mail to participate in the MMP. The recruitment of JDs was in agreement with their clinical supervisor. A mentorship team was created with one JD being allocated three students. This proportion gave a high mentor : student ratio that fostered close working relationships. Initial training was provided to the mentors in the 'Preparing to be a mentor' session. The mentorship teams worked through two simulation-based workshops: 'Improving your clinical practice' and 'Becoming an effective practitioner'. In between workshops contextualised learning was facilitated within the mentor's clinical setting. The MMP consisted of three workshops, the content of which is described in Box 1.

**There is an acknowledged performance gap that students experience when transiting from academia to practice**

**Table 1. The core areas of practice described in the Foundation Curriculum that junior doctors were asked to rank as requiring further training**

- Clinical decision making
- Clinical skills
- Communication skills with patients
- Communication skills with staff
- Complaints
- Consent
- Delegating to junior colleagues
- End-of-life care
- Ethical and legal issues
- Interpersonal skills
- Interpretation of investigations
- Management of acutely sick patients
- Managing long-term conditions
- Medical record keeping
- Pain management
- Prescribing skills
- Prioritisation
- Professionalism
- Recognition of acutely sick patients
- Resuscitation
- Referring to senior colleagues
- Managing long-term conditions

Content analysis of all free-text responses were independently reviewed to validate the subject matter

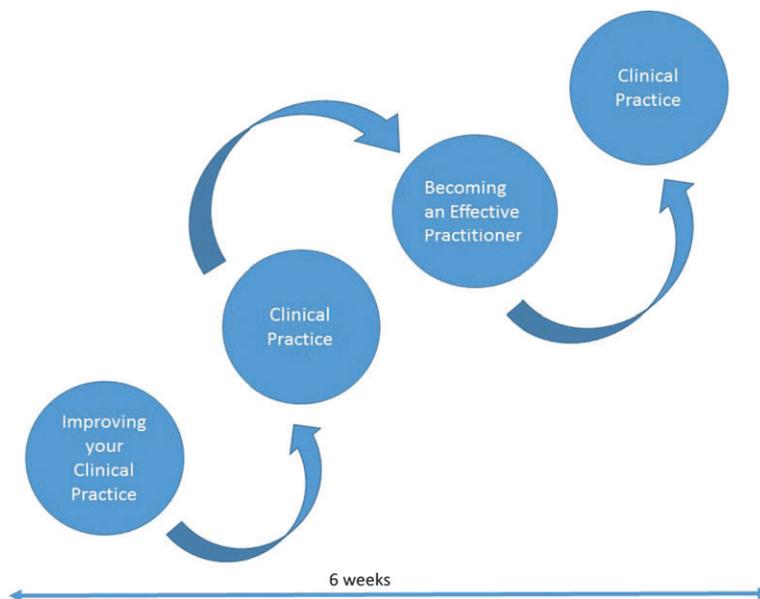


Figure 1. The timeline for the delivery of the Medical Mentorship Programme

### Box 1. Description of the Medical Mentorship Programme (MMP) simulation workshops

Preparing to be a mentor (for junior doctors only)  
Duration: 2 hours

Junior doctors (JDs) shared instances from their own clinical practice where they had experienced a performance gap. The JDs identified the characteristics of an effective mentor that would have mitigated the impact of this performance gap. The JDs wrote a mentor's 'job description' that was based on relevant journal articles and their own clinical experience.

Improving your clinical practice  
Duration: 3 hours

The initial 45 minutes allowed mentorship teams to develop learning plans. The simulation activities replicated the working day of a JD. An objective structured clinical examination (OSCE) framework was used and teams rotated around six stations over 2 hours (effective handovers, managing the acutely unwell patient, safe prescribing, reviewing investigations – two stations, and the management of a patient approaching the end of life and communication in that situation).<sup>13</sup> The session concluded with a facilitated debriefing conducted by the authors.

Becoming an effective practitioner  
Duration: 3 hours

The session commenced with teams reviewing their learning plans. Human factors methodology and an OSCE framework were used to structure the simulation activities.<sup>14</sup> Teams rotated around four stations over 2 hours (clinical decision making, prioritisation, team communication and situational awareness). The session concluded with a facilitated debriefing session.

Mentorship teams developed learning plans that they worked towards achieving during simulation activities and facilitated clinical practice. Learning plans were designed to support

the transfer of learning by using the learning outcomes from the simulation workshop to inform clinical practice. Learning plans focused on rounding off core skills, such as the interpretation

of investigations, medicines reconciliation and conducting an effective patient handover.

Following the pilot study, all participants were invited to attend a focus group session. Separate focus group sessions were arranged for students and JDs to examine which aspects of MMP supported professional development and whether any improvements were required. Content analysis of focus group transcriptions were reviewed independently by the authors to identify core themes from the data.<sup>11,12</sup>

### Population

Ethical approval was granted by the University of Dundee Research and Ethics Committee (UREC no. 14076). The opportunity to participate in this pilot study was offered to all fourth- and fifth-year medical students and all JDs in their first year of postgraduate practice. Participants could withdraw from the pilot study at any time without explanation and without penalty.

### RESULTS

#### Stage 1

A total of 23 JDs completed the questionnaire (46% response rate) in Ninewells Hospital, Dundee. The questionnaire asked JDs to rank areas of their practice that they felt required further training. A median was calculated of all responses, which produced a midline of 19.55 per cent; 11 areas of practice exceeded the median and were considered significant, and were then included as course content for the MMP (Table 2). Content analysis of all free-text responses were independently reviewed to validate the subject matter.<sup>11,12</sup>

#### Stage 2

A total of 17 medical students participated in the MMP. Seven JDs were recruited as

**Table 2. The 11 subject topics included as course content for the Medical Mentorship Programme (MMP)**

Area of practice	Ranking, based on all responses (%)
Clinical decision making	52
End-of-life care	47
Referring to seniors	39
Consent	34
Complaints	34
Prescribing	26
Record keeping	21
Interpreting results	21
Management of the acutely unwell patient	21

mentors. Owing to geographical location two JDs shared one mentoring group, giving a total of six mentorship teams. Following the delivery of the MMP all participants were invited to attend focus group sessions.

Content analysis of all focus group transcripts identified the following themes.

### **Benchmarking professional development**

The MMP allowed JDs to gauge their professional development as they approached the end of their first year of postgraduate practice.

It was close to our end of year assessment. It has given us the confidence to know that we have done quite a lot. Although on paper you don't think it's been that much...It was nice to see a bit of faith in us and what we were able to do. **Mentor 2**

Simulation activity and facilitated clinical practice allowed students to determine their performance capacity.

It is hard to be aware of your own skill level and you don't ask the people on wards. I never know whether the feedback is being too harsh. Whereas if you have almost a peer... because their similar ages, you feel more comfortable. **Student 1**

### **The personal value of the mentor-mentee relationship**

Mentors identified value in supporting the professional development of their mentorship group.

I used a meeting for letting them self-evaluate. So I could see what aspects of foundation year they were worried about the most. Depending on workload... we would set objectives... they would be small objectives, snippets. Get the message across to this patient. Or make a plan and see what the registrars think... **Mentor 3**

Students reported that having a mentor provided them with

emotional support and reassurance.

I quite liked having a mentor who is the same person who you saw each time. You kind of got to know them and you just talk about their experiences and how they found it...and feel a bit like you have much more to learn but you are on your way. **Student 6**

### **Addressing the performance gap**

Mentors identified that the simulation workshops reflected the clinical reality of the situations encountered by JDs. This authenticity combined with effective mentoring facilitated the transference of learning.

A lot of the things you do as an JD are not things that are taught at medical school. And are not things that can be necessarily taught by faculty at lectures...I think that is something that we never got much of other than our shadowing blocks. We have had time to go through that and use simulation to bridge that gap and do both. **Mentor 2**

Students identified that having a close working relationship with their mentor facilitated the transfer of learning and the ability to round-off core skills.

Because I am going to start working soon, I thought it would be a good way of figuring out from people who have recently graduated and had to sort out issues between being a student and working, what they had picked up. Like insider

**Students identified that having a close relationship with their mentor facilitated the transfer of learning**

The MMP has demonstrated impact in improving personal confidence and capabilities

information so to speak.  
Student 3

## DISCUSSION

The unique design of the MMP, being underpinned by the lived experience of JDs and being modular in delivery, has been shown to have a positive effect on the professional development of medical students and JDs. In this study, personal learning plans and formal mentorship have been shown to be an effective conduit to support the transference of learning to address the issue of a performance gap. The results align with previous literature describing the key benefits of mentoring.<sup>1,4-6</sup> This resonates with the model described by Kneebone *et al.*, which discusses the synergistic relationship between simulation and clinical practice.<sup>13</sup> Simulation recreates some of the challenges of clinical practice and can isolate specific skills or environments effectively. To reach its full potential as a tool in education, simulation must be used alongside clinical practice and delivered in context.

## CONCLUSION

The role of mentorship within medical education requires further exploration. Limitations in this pilot study principally

relate to the small number of participants. Despite this, the study has demonstrated that mentorship in medical education is beneficial in supporting individualistic learning and in preparing students for the realities of clinical practice. The MMP has demonstrated impact in improving personal confidence and capabilities. These findings are encouraging; however, we would argue that more research is required to determine the true value of simulation activity and formal mentorship as a teaching technique within medical education. We are currently conducting a larger feasibility study in conjunction with NHS Education for Scotland and NHS Tayside.

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