Challenges around workload and rota design leave over a fifth of trainers and trainees short of sleep at work at least weekly.

Where staff treat each other with respect, and focus on teamwork and building confidence, trainers and trainees are more positive and feel their concerns will be addressed.

Since 2016 the proportion of trainees who report working beyond their rostered hours every day has halved from 18% to 9%.

Doctors who pause their training after foundation year 2 reported a lower risk of burnout compared to those who did not.

82% of trainees rate the quality of their training experience as good or excellent.

92% of trainers enjoy their role as a trainer.

A greater proportion of doctors who felt unprepared for their first foundation post reported higher risk of burnout.
Introduction

In this chapter we look at current trends in the UK medical training pathway (figure 15) and in doctors’ perceptions of training environments. While we focus on postgraduate experiences, drawing on our national training surveys and wider education data, we also highlight the significance of the step-up from medical school to work-based learning.

The overall standard of postgraduate education and training across the UK has remained at a consistent level for several years. Most trainers enjoy their role. And most doctors in training recognise and appreciate the high quality of teaching, clinical supervision and experience they receive.

However, the environments in which training takes place can be challenging. Working and learning every day in these pressurised settings can have a short- and long-term impact on doctors’ health and wellbeing, as well as on the quality of patient care.

Heavy workloads and poor rota design are showing some welcome signs of improvement; however we have a long way to go to fully tackle the causes and effects of these issues.

In this challenging climate, what choices are trainees making?

More trainees than ever before are choosing to pause their training after foundation year two (F2) – especially those who plan to go on to join programmes in the most pressurised specialties. Since 2016, over half of all F2 trainees have made this decision. It’s important to note that most doctors continue to work in the NHS during this pause, and the majority (around 85%) return to training within three years.

Proportionally, foundation trainees report higher risk levels of burnout, compared with trainees in core or specialty programmes. And our analysis shows that doctors in their first year of core or specialty training who took a pause were, on average, less burnt out than those coming directly from F2.

We’re working with medical schools, training providers and employers to better understand and improve foundation trainees’ experiences. A good start is key.

As the analysis in this chapter shows, preparedness at foundation level is associated with positive measures of health and wellbeing throughout postgraduate training. Medical schools need to better prepare undergraduates for work in the NHS. And employers need to provide good inductions and supportive environments for all trainees. We’ll continue to share best practice to help achieve this and, where necessary, we’ll step in where our standards are not being met.

This chapter first discusses what we know about training environments, and the trend over time in the reported quality of training and experiences.
of doctors in training posts. After this, we look at: how the environment around the doctor affects their training; how doctors are changing their patterns of training; and how a feeling of unpreparedness can affect a trainee.

Figure 15: The training pathway and current population

- Medical students*: 42,190†
  - 4–6 years

- Foundation years 1 and 2: 14,911‡
  - 2 years

- Core training programmes§: 7,918‡
  - 2 years

- GP training: 12,148‡
  - 3 years

- Specialty training: 27,985‡
  - 5–8 years

Doctors on GP register only: 61,015**

Doctors on specialist register only: 77,683**

* Not all medical students and doctors in training will continue to the next stage – they may pause their training, leave the profession or change their training programme. Doctors who are on both the GP and the Specialist registers are not counted in this figure.

† The chart includes information derived from that collected by the Higher Education Statistics Agency Limited (‘HESA’) and provided to the GMC (‘HESA Data’). Source: HESA Student Record 2018/2019. Copyright Higher Education Statistics Agency Limited. HESA makes no warranty as to the accuracy of the HESA Data and cannot accept responsibility for any inferences or conclusions derived by third parties from data or other information supplied by it.

‡ Census data, 2019 national training survey.

§ Core training programmes include acute care common stem, broad based training, and other core training programmes.

^ Certificate of completion of training (CCT).

The UK medical training pathway

Students in the UK spend between four and six years of undergraduate study at medical school, before applying to enter postgraduate training. This training begins with a two-year foundation programme, often known as F1 and F2.

On completion of foundation training, doctors can apply to enter a specialty or GP training programme (ST1–7). Some specialty training programmes are separated into two stages: core training (CT1, 2 and sometimes 3) and higher specialty training (ST3–7).

National training survey key findings

- Satisfaction with teaching and supervision remains high, but trainees and trainers experience longstanding challenges around workload and rota design.

- In fully supportive work environments, trainers and trainees are more positive about their experiences and more confident that their concerns will be addressed. A lack of a supportive environment is linked to frustration and higher risk of burnout.

- Compared with trainees in core or specialty programmes, a higher proportion of foundation trainees report feeling burnt out, short of sleep at work, and forced to cope with work beyond their clinical competence.

- Pausing training after the foundation years is now the norm. But most doctors who pause their training continue to work in healthcare in some capacity, and around 85% return to training within three years.

- It’s rare for doctors to return to training after a pause of longer than three years. Based on F2s in 2012–2014, only around 5% who paused went on to leave the register or work abroad.

- A pause in training after F2 is associated with a lower risk of burnout on returning to core or specialist training.

- Most doctors feel prepared for their first postgraduate training post, but each year this is declining gradually.

- Preparedness at F1 may signal long-term trends in doctors’ perception of training. A greater proportion of doctors who felt unprepared for their first foundation post held long-term negative views of their training environment and reported higher risk of burnout.
## Training environments and experiences

**Figure 16: Issues affecting trainees and trainers: headline findings, national training surveys 2019**

<table>
<thead>
<tr>
<th></th>
<th>Trainee</th>
<th>Trainer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workload</strong></td>
<td><strong>45%</strong> work beyond their rostered/contracted hours on at least a weekly basis</td>
<td><strong>72%</strong> work beyond their rostered/contracted hours on at least a weekly basis</td>
</tr>
<tr>
<td></td>
<td>59% and 58% in surgery and medicine posts said this</td>
<td>88% of GP trainers said this</td>
</tr>
<tr>
<td></td>
<td><strong>39%</strong> rated the intensity of their work, by day, as heavy or very heavy</td>
<td><strong>68%</strong> rated the intensity of their work, by day, as heavy or very heavy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>81% of GP trainers said this</td>
</tr>
<tr>
<td></td>
<td><strong>21%</strong> felt short of sleep at work on at least a weekly basis</td>
<td><strong>23%</strong> felt short of sleep at work on at least a weekly basis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>39% of emergency medicine trainers said this</td>
</tr>
<tr>
<td><strong>Workload (out of hours)</strong></td>
<td><strong>45%</strong> described the intensity of their work by night as heavy</td>
<td><strong>27%</strong> described the intensity of their work by night as heavy</td>
</tr>
<tr>
<td></td>
<td>83% in emergency medicine posts said this</td>
<td></td>
</tr>
<tr>
<td><strong>Rota design</strong></td>
<td><strong>29%</strong> said it wasn’t rare to lose training opportunities due to rota gaps</td>
<td><strong>27%</strong> said it wasn’t rare for their trainees to lose training opportunities due to rota gaps</td>
</tr>
<tr>
<td></td>
<td><strong>17%</strong> said there weren’t always enough staff to make sure all patients were treated by someone with the appropriate clinical experience</td>
<td><strong>18%</strong> said there weren’t always enough staff to make sure all patients were treated by someone with the appropriate clinical experience</td>
</tr>
<tr>
<td><strong>Reporting concerns</strong></td>
<td><strong>80%</strong> said, in their post, there was a culture of positively reporting patient safety concerns and of lessons being learned</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>10%</strong> weren’t confident a concern about education and training would be addressed</td>
<td><strong>12%</strong> of those working in primary care weren’t confident their trust/board would act effectively in response to education concerns</td>
</tr>
</tbody>
</table>
## Chapter 3: The state of medical education

### Handover

<table>
<thead>
<tr>
<th>Trainee</th>
<th>84% said handover arrangements always guaranteed continuity of care for patients between shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>82% said handover arrangements always guaranteed continuity of care for patients between shifts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trainee</th>
<th>15% said that handover arrangements between departments did not always ensure continuity of care for patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>15% said handovers weren’t always used as a learning opportunity for trainees</td>
</tr>
</tbody>
</table>

A greater proportion of those in medicine, psychiatry and surgery posts felt this way.

### Supportive environment

<table>
<thead>
<tr>
<th>Trainee</th>
<th>82% said their working environment was fully supportive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>75% of trainers in secondary care specialties said their working environment in their trust/board was fully supportive</td>
</tr>
</tbody>
</table>

97% of GP trainers said the working environment in their practice was fully supportive.

<table>
<thead>
<tr>
<th>Trainee</th>
<th>73% said their working environment fully supported doctors’ confidence building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>69% said their working environment fully supported doctors’ confidence building</td>
</tr>
</tbody>
</table>

### Overall satisfaction

<table>
<thead>
<tr>
<th>Trainee</th>
<th>82% rated the quality of their experience as good or excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>92% said they enjoyed their role as a trainer</td>
</tr>
</tbody>
</table>

74% in secondary care specialties were satisfied with the training opportunities offered to them as a trainer.

<table>
<thead>
<tr>
<th>Trainee</th>
<th>89% believed their post would be useful for their future career</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>87% of GP trainers can access learning and development opportunities when they need to</td>
</tr>
</tbody>
</table>

### Supervision

<table>
<thead>
<tr>
<th>Trainee</th>
<th>88% rated the quality of their clinical supervision as good or very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer</td>
<td>16% said they felt forced to cope with clinical problems beyond their competence or experience on at least a monthly basis</td>
</tr>
</tbody>
</table>

40% of trainees in their first year of foundation training posts said this.

---

n = 53,477 (trainees); 21,812 (trainers, of which 3,074 are primary care/GP trainers). N/A responses excluded for ‘Workload (out of hours)’ questions. Trainees in non-secondary care specialty posts (n = 5,917), GP trainers (n = 3,074) and N/A responses excluded from handover and rota design questions.
Satisfaction with teaching and supervision remains high, but doctors in training and trainers experience challenges around workload and rota design

As figure 16 shows, in 2019, trainees and trainers were positive about many aspects of their experiences. As we've found in previous national training surveys, most doctors in training are especially satisfied with the quality of teaching and supervision they receive. And they're confident that they are developing the skills and competences they need for their future careers.

However, trainees and trainers face longstanding challenges around workload and rota design. Both groups experience intense workloads and regularly work beyond their rostered, contracted or agreed hours. These working patterns leave over a fifth of trainees and trainers feeling short of sleep while at work on at least a weekly basis.

Gaps in rotas disrupt training, and many doctors are concerned that hospitals and general surgeries may not have enough staff to make sure patients are always treated by someone with an appropriate level of clinical experience.

Poor rota design is often reported in training environments where doctors register low levels of health and wellbeing. Comparing trainees who reported that rota design in their current post did not help optimise their education and development with those who felt it did, over twice as many (41% to 17%) said they felt burnt out because of their work.

In short, the national training survey results showed that trainees in 2019 receive high-quality education and supervision from their trainers. However, pressures associated with training shape trainees’ experiences, and, at worst, disrupt their training and compromise patient care.

Heavy workloads and poor rota design in training environments are longstanding challenges, but there are some welcome signs of sustained improvement

Comparing national training survey results over time provides us with a high-level overview of how training experiences are changing for trainees and trainers in the UK.

Overall, most measures show little change over several years, as figure 17 shows. Doctors’ perceptions of supportive environments, of clinical supervision and of their overall experience have remained stable since at least 2017.
But some measures are showing signs of improvement (figures 18 and 19).

Since 2016, the proportion of trainees who reported working beyond their rostered hours daily has halved (from 18% to 9%). And the proportion of both trainees and trainers who described the intensity of their work, by day, as heavy or very heavy has also been slowly falling, with a further drop of one to two percentage points since 2018.

Similarly, since we first asked doctors how common it was for educational and training opportunities to be lost due to rota gaps in 2017, trainers and trainees have reported year-on-year improvements of two to three percentage points.

While we welcome the progress made in these areas, there’s still some way to go to further reduce the pressures placed on doctors, by addressing their heavy workloads and rota gaps.

45% of trainees and 72% of trainers said they were working beyond their rostered/contracted hours on at least a weekly basis. This is a general problem for doctors, with 90% of GPs and 75% of specialists working beyond rostered hours on at least a weekly basis (see chapter 2) – but the added cost for trainees is the loss of learning opportunities. Over a quarter of trainees and trainers said that it wasn’t rare for training opportunities to be lost due to rota gaps.

The impact on doctors’ health and wellbeing – and potential consequences for patient safety – make it essential for those responsible for the workforce to take action. By this, we mean understanding, acknowledging, and striving to alleviate the longer-term effects of working under these conditions.
Figure 18: Percentage point change in trainees’ responses for questions on workload and rota design, national trainer surveys from 2017 to 2019

Figure 19: Percentage point change in trainers’ responses for questions on workload and rota design, national training surveys from 2017 to 2019
Where working environments are fully supportive, trainers and trainees are more positive about their experiences, and more confident their concerns will be addressed

The presence or absence of a supportive working environment also has an impact on other aspects of the training experience.

- Trainees who felt their working environment was fully supportive were, on average, more satisfied with their training experience, clinical supervision and teaching (figure 20). *

- In supportive working environments, doctors have more confidence in the cultures and systems for reporting and acting on educational concerns (figure 21).

- Trainees often reported a lack of a supportive working environment alongside rota design issues (figure 22).

Lack of a supportive environment is linked to frustration and higher risk of burnout

The national training survey results 2018 showed an association between risk of burnout and the level of support provided to doctors. This trend continues in the 2019 data. 13

We compared doctors in training who said they felt burnt out to a high degree because of their work with those who felt burnt out to a low degree: †

Figure 20: Relationship between supportive environment and satisfaction with practical experience, teaching and supervision, national training survey 2019

<table>
<thead>
<tr>
<th></th>
<th>Trainees who reported a fully supportive working environment</th>
<th>Trainees who reported a lack of fully supportive working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated the quality of their experience as excellent/good</td>
<td>90% vs 28%</td>
<td></td>
</tr>
<tr>
<td>Rated the practical experience they were receiving as excellent/good</td>
<td>84% vs 35%</td>
<td></td>
</tr>
<tr>
<td>Rated their clinical supervision as good or very good</td>
<td>95% vs 40%</td>
<td></td>
</tr>
<tr>
<td>Rated their teaching (informal and formal) as good or very good</td>
<td>82% vs 29%</td>
<td></td>
</tr>
<tr>
<td>Confident the post would help them acquire the competences they needed</td>
<td>92% vs 43%</td>
<td></td>
</tr>
</tbody>
</table>

n = 53,477.

* Doctors in training were asked to agree or disagree with the statement, ‘The working environment (in my post) is a fully supportive one.’ Trainers were asked the same question but relating to their trust/board, rather than their post.

† Both trainers and trainees were asked if they felt burnt out because of their work to a high/very high degree, somewhat, or to a low/very low degree.
Chapter 3: The state of medical education

Figure 21: Relationship between supportive environments and satisfaction with cultures and systems for reporting and acting on educational concerns, national training survey 2019

<table>
<thead>
<tr>
<th></th>
<th>Doctors who reported a fully supportive working environment</th>
<th>Doctors who reported a lack of fully supportive working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trainees</strong> reported a culture of proactively reporting concerns in their post</td>
<td>86%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>Trainees</strong> were confident that any concerns they raised about education and training would be addressed</td>
<td>75%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Secondary care trainers</strong> reported a culture of proactively reporting concerns about education within their trust/board</td>
<td>73%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Secondary care trainers</strong> were confident that their trust/board would act effectively if concerns about education were raised</td>
<td>75%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Secondary care trainers</strong> felt their trust/board was effective in making changes to improve the provision of education</td>
<td>68%</td>
<td>12%</td>
</tr>
</tbody>
</table>

*n = 53,477 (trainees); 18,738 (secondary specialty trainers).

Figure 22: Relationship between supportive environment and rota design, national training survey 2019

<table>
<thead>
<tr>
<th></th>
<th>Trainees who reported a fully supportive working environment</th>
<th>Trainees who reported a lack of fully supportive working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not rare for educational/training opportunities to be lost due to gaps in the rota</td>
<td>24%</td>
<td>64%</td>
</tr>
<tr>
<td>Gaps in the rota not always dealt with appropriately to protect training</td>
<td>20%</td>
<td>68%</td>
</tr>
<tr>
<td>There were not always enough staff to ensure that patients were always treated by someone with an appropriate level of clinical experience</td>
<td>11%</td>
<td>57%</td>
</tr>
</tbody>
</table>

*n = 47,520. Trainees in primary specialty posts and N/A responses excluded.

- Four times as many trainees who felt burnt out to a high degree felt their working environment didn’t fully support the confidence building of doctors (23% to 5%).
- Four times as many trainees who felt burnt out to a high degree felt that staff were not always treated fairly (24% to 6%).
Almost three times as many trainees who felt burnt out to a high degree felt their working environment was not fully supportive (55% to 20%). A greater proportion of trainees who didn’t experience a supportive environment also reported characteristics of burnout, such as frequent tiredness and frustration at work, compared with those who experienced a supportive environment (figure 23).

Figure 23: Relationship between supportive environment and selected burnout questions, national training survey 2019

<table>
<thead>
<tr>
<th></th>
<th>Trainees who reported a fully supportive working environment</th>
<th>Trainees who reported a lack of fully supportive working environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always or often felt exhausted at the thought of another day</td>
<td>26%</td>
<td>63%</td>
</tr>
<tr>
<td>Every working hour was tiring for them</td>
<td>10%</td>
<td>36%</td>
</tr>
<tr>
<td>Felt short of sleep at work on at least a weekly basis</td>
<td>17%</td>
<td>48%</td>
</tr>
<tr>
<td>Felt frustrated by work to a high degree</td>
<td>18%</td>
<td>65%</td>
</tr>
</tbody>
</table>

Professional behaviour and working relationships between colleagues are also important factors. Almost three times as many trainees who felt staff didn’t always treat each other with respect felt frustrated with their work (54%), compared with those who felt staff treated each other with respect (18%).

Summary

Postgraduate education and training bodies continue to provide a high standard of teaching and training, and trainers are highly regarded by their trainees. These findings are testament to the ability, hard work and dedication of doctors working in training environments.

However, crucially, the day-to-day experiences of trainees and those who train them are marked by working pressures and demands. The healthcare system needs to think about the impact this has on doctors while still in training, and its potential legacy and resonance throughout their working lives. This is something we have covered in depth in our recent independent health and wellbeing review, led by Professor Michael West, as discussed in chapter 2.

A supportive working environment – one in which staff are treated and treat one another with respect, and where the focus is on teamwork and building the confidence of trainees – is key to alleviating the effects of system pressures and improving doctors’ health and wellbeing.
We’re responsible for assuring the quality of education and training and identifying where our standards are not being met.

To do this, our primary evidence-gathering tool is the national training surveys – annual surveys for all trainees and trainers in the UK. Their views on training environments and experiences help us check that all doctors have access to high-quality training in a safe and effective clinical environment, and that trainers are well supported in their roles.

Each year, we share the survey results with those responsible for training environments – including postgraduate deans, royal colleges and faculties, and employers – so improvements can be made where local concerns have been raised. It’s also an opportunity to explore and learn from examples of good practice.

Enhanced monitoring

When deaneries and local offices are concerned about training, they work with trusts and health boards to make improvements. If the situation doesn’t improve, they tell us. We then work with all the organisations involved to improve the quality of training through enhanced monitoring.

Through enhanced monitoring we closely monitor and support medical training organisations with concerns about the quality and safety of training. Issues that require enhanced monitoring are those that could affect patient safety, or training progression or quality.

We require more frequent progress updates from those responsible for managing these concerns. We take part in locally led visits to investigate a concern or check on progress, and we share this information with other healthcare regulators where appropriate. We publish information on enhanced monitoring cases on our website.

From 1 December 2018 to 14 October 2019, there were between 40 and 44 enhanced monitoring cases open at any one time. In this period, two cases were closed, and eight cases were resolved. We continue to monitor the 43 cases that are currently still open – a higher proportion of which relate to obstetrics and gynaecology (14%) and general internal medicine (12%) departments.

Case study: How do we use data from national training surveys to quality assure training?

Foundation trainees in trauma and orthopaedic surgery and general surgery posts at Leeds General Infirmary and in general surgery at St James’s University Hospital faced many challenges around clinical supervision and poor access to education. We intervened with enhanced monitoring to help Health Education Yorkshire and Humber work with the hospitals to make improvements. In 2019, national
training survey results supported the positive findings on visits, and we were able to bring enhanced monitoring to a close.

In December 2012, Health Education Yorkshire and Humber found that foundation trainees in general surgery posts and trauma and orthopaedic surgery posts at Leeds General Infirmary (LGI), and doctors in foundation training in general surgery posts at St James’s University Hospital (SJUH), faced several challenges around clinical supervision and poor access to education.

Visits to the trust in 2014 showed they had made significant progress in addressing the issues. However, visits in 2015 and 2016 found that there remained ongoing concerns around support for foundation year one trainees.

In the 2018 national training surveys results, there was good feedback from foundation trainees in general surgery at SJUH. But some concerns remained based on the feedback from foundation trainees in trauma and orthopaedic surgery at LGI. Again, lack of support and supervision alongside isolation were recurring themes.

A Monitoring Learning Environment (MLE) meeting was held in January 2019. This meeting highlighted significant progress – rotas had been revised, four locums had been appointed to fill rota gaps, and handover was now registrar led.

At an MLE visit in July, we met with the senior management team as well as with trainees. They told us about a series of changes, which had been put in place to address the concerns. These included initiatives like ‘registrar of the week’, the appointment of intermediate grade doctors to enable trainees to attend teaching, and the recruitment of physician associates to share the workload. We also learnt about the support orthogeriatricians gave to trainees, an initiative that was highly praised by all. The department had made successful progress and all trainees reported an improved experience.

Our 2019 national training surveys results showed considerable improvement for the trauma and orthopaedic department. This included significant improvements in workload, rota design and study leave. We closed the enhanced monitoring case in July and will continue to follow this case routinely.

**Case study:**

**How do other organisations use our data to improve training?**

From 2014 to 2017, higher anaesthetic trainees in Kent, Surrey and Sussex (KSS) rated regional teaching as significantly lower than the average in the national training survey. In response, the deanery surveyed their trainees and designed a new regional teaching programme, which has been running for the past 20 months. The new programme has received significantly improved feedback in the latest national training survey.

To understand why regional teaching in KSS was rated lower than average, and to get suggestions for what an improved programme could offer, the deanery surveyed higher
anaesthetic trainees (ST4–7) and their college tutors. They also reviewed methods used in other successful deaneries, including North West and Oxford, to see what transferable good practice there might be.

KSS covers a large geographical area, so training days were perceived as difficult to coordinate, advertise and attend. Furthermore, anaesthesia final exams are taken in ST4, so alternative topics were required for subsequent training, to maintain trainee interest and avoid repetition. Using this feedback, a Higher Training Day (HTD) programme was designed and established, offering a varied and comprehensively relevant schedule covering all higher domains of the curriculum while preparing trainees for CCT and beyond.

All trusts in the deanery were invited to participate and lead a day according to a flexible timetable, coordinated by a central trainee committee. Alternating locations monthly between Kent, Surrey and Sussex increased attendance, as did incorporating travel time into the study day. Alternate days of the week were used to increase attendance from trainees working less than full-time. The aim was also to think beyond traditional lectures and promote alternative styles to information sharing (for example, a Skype Q&A with American professors, a debate, a trip to an air ambulance base, external mediation training). This HTD project aims to provide a biennial rolling programme with topics that are current and relevant to all higher trainees, regardless of sub-specialty.

The national training survey results for 2018 and 2019 (figure 24) showed a significant improvement in how KSS higher anaesthesia trainees rated regional teaching – which was mirrored in evaluation feedback the deanery received on the new programme, which attracts over 90% satisfaction rates.

Figure 24: Mean scores for ‘regional teaching’ indicator, national training surveys from 2016 to 2019

<table>
<thead>
<tr>
<th>Year</th>
<th>KSS trainees (ST5–7 in anaesthesia)</th>
<th>Non-KSS trainees (ST5–7 in anaesthesia)</th>
<th>National average all trainees in all specialties</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>50</td>
<td>61</td>
<td>68</td>
</tr>
<tr>
<td>2017</td>
<td>49</td>
<td>60</td>
<td>68</td>
</tr>
<tr>
<td>2018</td>
<td>65</td>
<td>65</td>
<td>71</td>
</tr>
<tr>
<td>2019</td>
<td>68</td>
<td>62</td>
<td>69</td>
</tr>
</tbody>
</table>
More doctors are pausing their training as they progress through a system under pressure

The 2019 national training surveys showed the continuing trend of more doctors pausing their training after the foundation year two (F2). While this will be driven by a variety of factors, there’s some evidence to suggest that doctors may be responding to system pressures and pursuing a better work-life balance.

Over the last decade, more doctors have chosen to take pauses in their training, typically after the completion of F2. We know that, typically, around 85% of doctors who pause after F2 return to training within three years. Most doctors use this time away from training to gain additional experience working in different roles within the NHS.

The increase in the proportion taking a pause in training may be a response to the pressure of working in difficult conditions. National training survey data showed foundation years doctors reported higher levels of burnout compared with those in core and specialty training. And the decision to pause training after F2 is more commonly taken by doctors planning to go into specialty areas associated with higher risk of burnout, such as emergency medicine and surgery.

As they progress through postgraduate training in a health service that is modernising and operating under pressure, many doctors are looking for greater flexibility in their training – as well as opportunities for personal and professional development beyond established training and career pathways. The decision to pause may also be driven by opportunities to develop skills and knowledge outside a training setting, or so a doctor can prioritise staying in or moving to a preferred location.

Doctors pausing their training after their F2 year is now the norm

An increasing proportion of trainees are choosing to pause their training after F2 (figure 25). This trend has been emerging since at least 2012, but 2016 marked the first year where over half of all F2 trainees did not progress straight to core or specialty training the following year. Of the 2018 cohort, three out of five (63%) F2 doctors had paused their training in 2019.

* National training survey census data 2018–19 showed 63% of 2018’s F2 doctors paused their training in 2019. Around 40% of doctors paused their training after their final year of core training (CT2 or CT3) – but this group represents a smaller number of doctors than those in their foundation years. For all other postgraduate training levels, less than 3% of doctors paused their training.
There’s some evidence to suggest the rate of
increase of this trend may be slowing. Previous
years have seen a relatively stable increase of
around 5% of F2 doctors pausing their training.
Whereas in 2019, there was around a 3%
increase. However, at this stage it would be
premature to suggest the trend is approaching a
plateau.

The prevalence of pauses at this point now
represents an important and enduring change to
the training pathway, with potential implications
for workforce planning and doctors’ wellbeing. It’s
crucial that employers and education providers
recognise pauses as a typical or established step
in most doctors’ training experience.

We’re aware that recent changes to the
UK shortage occupation list might increase
competition for posts typically held by specialty
trainees. And this might have an impact on
future F2 doctors’ decision to pause their training.
We’ll continue to monitor our data on this
closely with a view to understanding if and how
this policy change affects doctors.

**Most doctors who take a pause
after F2 return to training within
three years**

As figure 25 shows, from 2012–2015, around 90%
of trainees who had paused their training had
returned within three years. Only around 1% of
each cohort paused their training for longer than
three years before returning.

However, the 2019 data showed that just 84% of
the 2016 cohort have since returned to training
(within three years). This may be an indication
that the pattern is changing, with more trainees
either taking longer pauses or leaving the
profession permanently.
It’s rare for doctors who paused after F2 to return to training after pauses of longer than three years

Focussing on doctors who decided to pause after F2 from 2012 to 2014, most of those who haven’t returned to training no longer hold a licence or, as of August 2019, are not listed on the medical register (figure 26). We know that it’s rare for doctors who have given up their licence or left the register to return to practice or training. So it’s fair to assume that the approximately 5% of doctors who paused training after F2 and have not, as of 2019, returned to training, have indeed left the profession or are working/training in another country.*

Figure 26: Professional status of doctors who paused training at F2 and have not returned to training as of 2019, national training surveys from 2012 to 2014 and 2019

* This ~5% predominantly consists of UK nationality doctors. 2012–2014 cohort: UK = 68% (n = 1,100); European = 12% (n = 200); International = 18% (n = 286); Unspecified = 1% (24).
A pause in training after F2 does not necessarily – or usually – mean a break from working in medicine

Most trainees continue to work in UK or overseas health services during their pause in training, often as locums or locally employed doctors. This can be an opportunity to gain valuable experience.

Over 1,000 doctors told us what they did during their pause in training in our 2018 research, "Training pathways 2: why do doctors take breaks from their training?" Of this group of doctors, many gave multiple answers, including:

- around three-fifths continued to work in the NHS
- a third worked or volunteered abroad
- a fifth had carried out further study or research.

Figure 27: What 2019 F2 doctors see themselves doing in 2020, compared with the average for all doctors in training, national training survey 2019

<table>
<thead>
<tr>
<th>Activity</th>
<th>F2s</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing my training or working as a consultant/GP</td>
<td>28.6%</td>
<td>72.2%</td>
</tr>
<tr>
<td>Working as a locum</td>
<td>5.5%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Obtaining a service post (ie working as a doctor but not in a training programme)</td>
<td>4.2%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Working as a doctor outside the UK (temporarily)</td>
<td>9.3%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Taking a career break</td>
<td>7.1%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Continuing my training or working as a consultant/GP but changing specialties</td>
<td>6.9%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Undecided</td>
<td>4.5%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Other</td>
<td>1.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Working as a doctor outside the UK (permanently)</td>
<td>1.6%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Leaving medicine permanently</td>
<td>0.8%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Working as a doctor outside the NHS (ie in private practice)</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

n = 6,901 (F2 trainees); 52,972 (all trainees)
Trainees in academic posts, pharmaceutical and public health training programmes were not asked this question.
In the 2019 national training surveys, when asked what they saw themselves doing one year from now (figure 27), around half of F2s thought they would be working as a locum, obtaining a service post, or working as a doctor temporarily outside the UK. The intention or preference to work as a locum or obtain a service post has been steadily increasing among F2 doctors for the past three years (figure 28).

Figure 28: What F2 doctors saw and see themselves doing the year after their F2 training, national training survey from 2017 to 2019

<table>
<thead>
<tr>
<th>Category</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing my training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obtaining a service post</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working as a locum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working in private practice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working outside the UK (permanently)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working outside the UK (temporarily)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taking a career break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaving medicine permanently</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n = 6,901 (2019); 6,968 (2018); 7,300 (2017).
There are several factors influencing doctors’ decisions to pause training

The most common reasons for pausing after the second foundation year can broadly be grouped as push and pull factors.16

Our research found there are a series of push factors relating to dissatisfaction with the training environment and uncertainty about specialty choice or career direction.

A pause after foundation training is the first, and perhaps only, opportunity for trainees to pause their training – this option is not always available at other points in the pathway.

Some doctors decide to pause because they haven’t been accepted by their preferred specialty or location, and so they want to gain more experience before reapplying again in the following year(s).

But many trainees also feel that pressure to deliver the service has a negative impact on their training. The need to prevent or recover from burnout before progressing into specialty/GP training was often given as a key driver for a pause. For these trainees, a pause has helped them create what they feel is a more effective learning environment than the one they have experienced within a UK training programme.

By pausing a formal training programme to work autonomously, trainees feel they have greater control and flexibility over their hours, can have a break from completing their training portfolio, and can develop stronger working relationships with senior colleagues.

Some doctors we spoke to also thought that the foundation programme didn’t always provide the space for trainees to fully explore different specialties. For many, the application timetable for specialty training comes too soon in their postgraduate career, and they feel under pressure to commit to a long training programme. So a pause from training – while continuing to work in a healthcare environment – can give them the space to think about their career and recharge, as well as giving them experiences of decision-making powers and autonomy for the first time in their career.

Our 2018 research also identified pull factors centred around the personal and professional opportunities that a pause in training can bring about.

Creating a different work-life balance via a pause in training also creates the opportunity for trainees to explore their potential specialty or future career outside the confines of a training programme. It’s also being used by some to develop broader professional skills (not just clinical) that will support a long-term career in medicine.

Trainees report a range of positive personal and professional outcomes because of their pause in training, including improvements in:

- specific clinical skills
- greater confidence in career choice
- wider professional skills, such as leadership or teaching
- soft skills, such as confidence and time management
- happiness and work-life balance.
Chapter 3: The state of medical education

Doctors’ preferred specialty can influence their decision to pause their training

In our 2018 national training surveys, we asked F2 doctors what they expected their future medical specialty would be. When we mapped their responses against 2019’s data, which showed the specialty they’ve progressed to, we found most doctors ended up either pausing their training or beginning their chosen specialty (figure 29).

A higher proportion of F2 doctors planning to specialise in emergency medicine and anaesthetics paused their training, compared with doctors who planned to specialise in general practice or psychiatry. Three-quarters of 2018 F2 doctors who planned to pursue emergency medicine were recorded as ‘not in training’ in 2019 – having paused the training pathway. Whereas, just over a third of 2018 F2 doctors who planned to specialise in psychiatry and radiology were ‘not in training’ in 2019.

Figure 29: 2018 F2 cohort predicted specialties, mapped against 2019 actual specialties, national training surveys from 2018 to 2019

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Desired specialty</th>
<th>Other specialty</th>
<th>Not in training in 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthetics</td>
<td>32.4%</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>23.5%</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>General practice</td>
<td>57.8%</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>52.7%</td>
<td>3.8%</td>
<td></td>
</tr>
<tr>
<td>Obstetrics and gynaecology</td>
<td>44.0%</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>40.0%</td>
<td>2.7%</td>
<td></td>
</tr>
<tr>
<td>Paediatrics and child health</td>
<td>51.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td>57.5%</td>
<td>2.5%</td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td>62.7%</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>Public health</td>
<td>22.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>57.0%</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>40.9%</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

n = 4,873 (all specialties). Respondents who indicated that they were undecided or that they intended to take a career break were excluded.
Doctors who paused training after F2 had a lower risk of burnout at core or specialist training, compared with those who didn’t pause their training.

In the 2019 national training survey, the average burnout indicator score, where a higher score equates to lower risk of burnout, for first year trainees in core or specialist training who had progressed directly from F2 was 49. By contrast, the average score of those beginning core or specialist training after a pause in training was 52 – a difference of 3%.

In other words, doctors who took a pause in training reported a lower risk of burnout than those starting core or specialist training directly from F2. This suggests that pausing the training pathway may help lower the risk of burnout.

It could also be that doctors less prone to burnout are more likely to pause their training.

Figure 30: Burnout indicator scores (higher score is preferable) of 2019 core and specialist trainees who progressed straight from F2 in 2018, compared with those who paused their training in 2017 (or earlier), national training survey 2019

* n = 5,028. National training survey burnout questions were voluntary.*
However, based on our current dataset, reporting feeling burnt out is not a statistically strong predictor that trainees will opt to pause their training after F2. There’s only a minimal difference in the average burnout score for the 63% of 2018 trainees who paused in 2019 and the 37% who continued straight to specialty training.

As figure 30 shows, this pattern is true for the two most popular specialty training programmes – general practice and core medical training.

- Trainees who progressed directly – without a pause – from foundation training to a general practice specialty training programme scored, on average, 5% higher for risk of burnout than those who paused before beginning specialty or core training.

- Trainees who progressed directly – without a pause – from foundation training to a core medical specialty training programme scored, on average, 3% higher for risk of burnout than those who paused before beginning specialty or core training.

And the pattern is also strongest for the specialty programme associated with the highest risk of burnout – emergency medicine:

- Trainees who progressed directly – without a pause – from foundation training to a specialty training programme in emergency medicine scored, on average, 11% higher for risk of burnout than those who paused before beginning specialty or core training.

The burnout questions have only been part of our survey for two years. As such, we don’t currently have enough data to track the progress of doctors who reported characteristics of burnout, paused the pathway, and then returned. This will begin to be possible from the 2020 survey. And, with each subsequent year’s data, we’ll have a greater understanding of how each year’s group of doctors experience burnout as their training progresses.

Trainees’ experiences vary throughout the pathway, but a higher proportion of foundation trainees report feeling burnt out, short of sleep at work, and forced to cope with work beyond their clinical competence

The proportion of trainees reporting characteristics of burnout peaks in F2 training. As a broad rule, burnout then becomes gradually less prevalent throughout core and specialty training. Figure 31 shows this trend using just one of our burnout questions, but the pattern holds true for all seven measures.

Doctors in training at the start of the training pathway also feel forced to cope on a more regular basis with clinical problems beyond their competence or experience (figure 32). 17% of trainees in F1 training experienced this on at least a weekly basis, compared with 11% of trainees in F2. In the mid-to-later years of core or specialty training, this figure drops to less than 5% of doctors.

* It is important to note that figure 30 discusses specialty programmes. Doctors on generalist training programmes undertake a wide range of posts – and so not all trainees on a specific programme will have been in a post of that same specialty at the time of the survey. For instance, a trainee on a GP programme may have been rotated onto an emergency medicine post at the time of the survey – and their responses to the burnout questions may reflect that.

† These measures are based on seven questions taken from the Copenhagen Burnout Inventory, as discussed in chapter 2.
Similarly, a high proportion of trainees in their foundation years said that handovers weren’t always used as a learning opportunity, compared with doctors further along the pathway.

A greater proportion of trainees at the beginning of the pathway – over a quarter of those in F1 and F2 posts – felt short of sleep at work due to their working patterns on at least a weekly basis. This proportion declines with each year of the training pathway until the fourth year of specialist training, at which point it increases again to around 20% and remains relatively stable.

These trends have remained consistent for several years of national training survey results. This may, in part, simply reflect the challenges of starting out on any developmental training pathway. However, these findings present useful context and insight into the foundation trainees’ experiences.

### Figure 31: Percentage of doctors who reported feeling burnt out at work to a high or very high degree, by training level, national training survey 2019

<table>
<thead>
<tr>
<th>Training level</th>
<th>Feel burnt out to a high/very high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>31%</td>
</tr>
<tr>
<td>F2</td>
<td>26%</td>
</tr>
<tr>
<td>CT1 &amp; ST1</td>
<td>25%</td>
</tr>
<tr>
<td>CT2 &amp; ST2</td>
<td>22%</td>
</tr>
<tr>
<td>CT3 &amp; ST3</td>
<td>25%</td>
</tr>
<tr>
<td>ST1</td>
<td>23%</td>
</tr>
<tr>
<td>ST2</td>
<td>23%</td>
</tr>
<tr>
<td>ST3</td>
<td>20%</td>
</tr>
<tr>
<td>ST4</td>
<td>22%</td>
</tr>
<tr>
<td>ST5</td>
<td>20%</td>
</tr>
<tr>
<td>ST6</td>
<td>22%</td>
</tr>
<tr>
<td>ST7</td>
<td>20%</td>
</tr>
<tr>
<td>ST8</td>
<td>22%</td>
</tr>
</tbody>
</table>

*n = 35,739. National training survey burnout questions were voluntary.*
More doctors are choosing to train on a less than full-time basis, with potential benefits for their wellbeing and work-life balance

In the 2019 national training surveys, over one in ten (12.6%) doctors in training reported working less than full-time (LTFT). Since we first asked trainees about this, the number of trainees working LTFT has increased steadily from 10.7% in 2017, to 11.5% in 2018, and to 12.6% in 2019. A further 2% had considered working LTFT but had not yet applied to. Together, these groups represent nearly 8,000 doctors.

Of those who are already working or who have considered working LTFT, three-quarters (74%) named childcare as their primary reason for that decision. Other reasons included: external commitments (9%); other work commitments (9%); disability, illness or health-related reasons (17%); and the responsibility of caring for another adult (5%).

A greater proportion of doctors who work full-time felt burnt out to a high degree (26%), compared with those who work LTFT (17%). An even higher proportion (42%) of those doctors who have considered applying to work LTFT, but who have not yet done so felt burnt out – although the sample size for this group is considerably lower. And 64% of doctors who work on an LTFT basis described their workload by day as ‘about right’, compared with 56% of those who work full-time.
Summary

Most trainees pause their training after their second foundation year. This has been the case since 2016, and this proportion has grown year-on-year since 2012. With 63% of the 2018 F2 cohort choosing to pause their training in 2019, we can confidently describe this pause as the norm.

A pause in training doesn’t necessarily mean a break from working as a doctor. Quite the opposite. Most doctors continue to work in the NHS while pausing their training. Many others work or volunteer in healthcare systems overseas or carry out further study and research. In doing so, they can gain valuable experience and skills – as well as the space and time to consider the direction of their medical career.

The majority of F2 doctors who pause their training return within three years. However, approximately 5% of each F2 cohort who have paused training, and have not returned after three years, are no longer on the medical register or hold a licence. It’s important to understand why most doctors pause their training at this point, to see whether certain aspects of the training environment affect their decision, and ultimately, identify areas for improvement.

There’s strong evidence to suggest that doctors who paused their training after F2 were less burnt out at CT1/ST1 than those who didn’t. However, while pauses in training and more flexible working arrangements can bring advantages for many trainees, they can also present challenges, particularly for workforce planners.

Understanding the wider impact of pauses on the training environment, particularly if certain specialties, countries and regions are affected, is important. We know that some may view training pauses as costly; the challenge is to find a balance between individual doctors’ wellbeing and the need for doctors to progress efficiently through training.
Preparing medical students for foundation training is a key aspect of undergraduate education

We’ve seen how trainees are increasingly taking pauses from training after their second foundation year, as part of a modern medical career in a system under pressure. And, notably, there’s evidence to suggest that preparing trainees for postgraduate training and working is important for their future wellbeing.

In this section, we look at how the system is currently preparing doctors for their first postgraduate roles. And how, where done effectively, this can positively affect trainees’ perceptions and experiences of their roles.

Figure 33: F1 preparedness for their first postgraduate training post, national training survey 2019

<table>
<thead>
<tr>
<th>Perception</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was adequately prepared for my first foundation post</td>
<td>11%</td>
<td>55%</td>
<td>22%</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My skills in clinical practical procedures were adequate to prepare me for my first foundation post</td>
<td>19%</td>
<td>62%</td>
<td>11%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My skills in the early management of acutely ill patients were adequate to prepare me for my first foundation post</td>
<td>11%</td>
<td>57%</td>
<td>20%</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My skills in prescribing were adequate to prepare me for my first foundation post</td>
<td>13%</td>
<td>63%</td>
<td>15%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n = 7,145.

Most new graduates feel prepared for their first postgraduate training role, but this is declining gradually

The transition from undergraduate to postgraduate medical training is a key point in a doctor’s career, bringing increased autonomy, responsibility and specialisation. From this point on, almost all training will take place in a healthcare setting, alongside and throughout a doctor’s professional practice. The extent to which doctors feel prepared during this transition is an important measure of the success of their undergraduate medical education.

Each year, in the national training survey, we ask F1 doctors one general question and three specific questions about how well prepared they felt for their first postgraduate training role (figure 33). Over time, we see that F1 trainees’ overall perception of their preparedness has decreased (figure 34).
The majority of 2019 F1 doctors (66%) said they felt adequately prepared for their first foundation post. Although, one in ten did not. A greater proportion of F1 doctors reported being adequately prepared for clinical practice procedures (81%) and prescribing (76%).

However, since 2016, the proportion of F1 doctors who felt adequately prepared for postgraduate training has decreased by around five percentage points. And, in 2019, one out of eight (12%) trainees didn’t feel adequately prepared for their first F1 post.

Our position on this is clear: medical schools must make sure that every student graduates with the knowledge and skills to prepare them for the next step of their career. We know that the step from undergraduate to postgraduate education brings challenges – a new learning and working environment, increased autonomy and responsibility – but trainees should not feel as if they are playing catch up from the outset.

In the 2019 national training surveys, a greater proportion (30%) of F1 trainees with a primary medical qualification from the European Economic Area, excluding the UK, didn’t feel adequately prepared for their first foundation post, compared with around 20% of international medical graduates and about 10% of UK graduates.

**Student assistantships and shadowing periods help prepare trainees, but their perceived effectiveness is decreasing**

Student assistantships are a type of clinical placement carried out towards the end of a student’s undergraduate course. Their aim is to increase the student’s preparedness to start practice as an F1 doctor. Since 2015, the proportion of trainees who said this helped them feel prepared has steadily decreased, from 71% to 66%.

Shortly before beginning their first postgraduate post, it’s recommended that medical graduates take part in a shadowing period, to familiarise themselves with the site where they’ll be working in future. During this, the graduate works with a current foundation trainee at the site.
In 2019, 65% of F1 trainees said their shadowing period prepared them well for their first postgraduate post. However, one out of six (16%) didn’t feel it prepared them well. Since 2017, the proportion of trainees who found the shadowing period helpful for their practice has decreased by around two percentage points.

When asked what could have improved in their shadowing period, three-fifths (63%) of trainees said better advice on out-of-hours shifts. Around a third of trainees wanted better knowledge of the site’s equipment (40%) and physical environment (34%). A third (34%) also would have liked their shadowing activities to be better aligned with the activities they were due to cover in their first placement.

These data show that, while most trainees find these opportunities useful in preparation for practice at foundation level, year-on-year each successive training cohort is finding them less effective.

Preparedness at F1 may signal long-term trends in doctors’ perceptions of training

Analysis over time has shown that doctors who felt unprepared for their first foundation post were more likely to have long-term negative views of their training environment and experience issues with wellbeing and burnout.

We looked at the burnout scores for F1 doctors who said they felt adequately prepared for their first post and compared them with the scores of those who did not feel prepared. We continued this analysis for each subsequent year of their postgraduate training to date.

Doctors who felt unprepared in their F1 year continued to rate all aspects of their training significantly lower in each subsequent year of their postgraduate career. This was consistent across all indicators except workload, and across all cohorts since 2012.

There are several factors and variables that could impact the feeling of preparedness. More detailed research is required to fully explore and understand these findings.

We’ve published an interactive data visualisation of this analysis on our education data reporting tool, to allow people to explore the data in more detail.¹⁷

Preparedness at F1 relates to a longer-term risk of burnout

Doctors from each F1 cohort since 2012, who felt prepared for their first post, were, on average, less burnt out in 2019 than those who didn’t feel prepared. The inverse of this is also true: doctors who felt unprepared at the start of their postgraduate training reported a higher risk of burnout in the 2019 survey. This effect is still visible for cohorts who reported lower levels of preparedness seven years ago (figure 35).

Looking at each individual annual cohort from 2012 to 2019, we can see this pattern holds true for each one. This pattern also holds true for each of our other national training survey indicators. On average, doctors reporting lower preparedness score lower on all national training survey indicators, compared with doctors reporting higher levels of preparedness. Full data are available on our education data reporting tool.¹⁷
Trainees in foundation and acute specialty posts were least positive about inductions

Inductions are a vital part of welcoming trainees to and preparing trainees for a new post.

Effective inductions must cover what is expected of the trainee, and what the trainee should expect of the post. They must also clearly set out the trainee’s duties, their team, workplace policies, access to resources, and how to get support from senior colleagues. Doctors in training must also receive an educational induction to make sure they understand their curriculum and how their post or clinical placement fits within the programme.

Almost three-quarters of trainees rated the induction they received in their current post as good or very good. However, one in ten doctors in training said they were not given all the information they needed about their workplace when they started their post. A greater proportion of trainees in F1 posts (18%) and the first year of core or specialist training (16%) reported this in the 2019 national training survey compared to the average for all trainees – as did trainees in surgery (18%) and medicine posts (16%).

Proportionally, almost twice as many F1 trainees who rated their induction as poor reported not feeling adequately prepared for their first foundation post (18.2%), compared with those who received a good induction (9.7%).
Summary

Our data show the first years of postgraduate training can be the toughest for doctors. A high proportion of foundation trainees reported feeling burnt out, short of sleep at work, and forced to cope with work beyond their clinical competence.

Analysis over time showed doctors who don’t feel adequately prepared for F1 will tend to rate many other national training survey measures lower in future years. We haven’t established whether there is any causation here, but lack of F1 preparedness may point to trainees who need more support throughout postgraduate training.

High-quality undergraduate training, good inductions, and strong support mechanisms for foundation doctors are important and may have lasting effects. So it’s crucial that medical schools and employers give doctors the resources and support they need during this period. This is particularly important as our evidence suggested an overall decline in trainees’ perceptions of how effective some of these mechanisms – student assistantships and shadowing periods – are in preparing them for their first foundation post.

We know that there are several factors and variables that could have an impact on how prepared a trainee feels, and more detailed research is required to fully explore and understand these findings. However, given the strength of our initial findings, we’ll explore carrying out a more detailed multivariate analysis next year.

No doctor should begin their postgraduate career feeling inadequately prepared. Medical schools need to develop programmes and experiences that ready undergraduates for the next step, and training providers and employers must make sure that new – indeed, all – postgraduate trainees are given the information and support they need to learn and carry out their professional duties.
An introduction to our work with UKMED

The UK medical education database, or UKMED, brings together data on medical school selection, fitness to practise, and postgraduate training. It’s a collaborative project between us and the Medical Schools Council. The database currently holds information on the performance of UK medical students and doctors in training across their education and future careers. This includes achievements before medical school entry, admissions tests and graduation point information – as well as our data on postgraduate training, career progression and choices, fitness to practise and postgraduate exam performance.

Research opportunities

From 2015, the database has been open to research applications, with the view to identifying best practice in the selection, education and progression of medical students. Key themes include:

- finding out if the system is selecting the right people to become the best possible doctors
- evaluating the impact of widening access to medicine for applicants from non-traditional backgrounds
- exploring doctors’ career choices to inform workforce planning
- determining the key factors associated with doctors’ progression, and the value added by each stage of training.

Researchers apply to access select data, and their proposal is reviewed by an expert panel – the UKMED Advisory Board – who makes a recommendation to us based on this review. If we approve the proposal, we prepare and provide an extract of the requested data, which can only be accessed through a Safe Haven portal provided by the University of Dundee Health Informatics Centre. As the data controller, we comply with the General Data Protection Regulation (EU) 2016 by de-identifying the data.

We only receive data from organisations wishing to participate in UKMED fairly and transparently. And we cannot use data to make decisions about individual doctors.

Recent projects have found that:

- participants pursuing careers in more competitive specialties had significantly higher academic scores than colleagues pursuing less competitive ones. Trainees who came from families where neither parent was educated to degree level had statistically significant lower odds of choosing careers in medical specialties relative to general practice
- measures of undergraduate educational performance and situational judgement tests are both effective selection measures for postgraduate training – but additional degrees and academic publications offer no further insight as to whether an applicant will complete the foundation programme

* See: www.ukmed.ac.uk/published_research
across all specialties, there were no sex differences in applications for specialty training, but women had increased odds of getting an offer and accepting one. Men were less likely to be offered a place on GP and paediatrics training programmes, and if offered GP were less likely to accept.\textsuperscript{22}

Current and forthcoming projects\textsuperscript{*} will look at:

- the potential factors that might influence Prescribing Safety Assessment scores among UK final year medical students, and their predictive validity for performance in early postgraduate training
- how students on gateway courses progress through medicine, compared with standard entry peers of similar backgrounds
- whether situational judgement tests, educational performance measures and Prescribing Safety Assessment scores predict the likelihood of receiving a sanction.

\textsuperscript{*} See; www.ukmed.ac.uk/accepted_applications
Chapter summary

**Good training is being delivered in challenging environments**

Organisations and employers responsible for medical education continue to provide a high standard of postgraduate teaching and training, and trainers are highly regarded by their trainees.

However, trainers’ and trainees’ day-to-day experiences are marked by the demands of a system under pressure. It’s important that the healthcare system continues to think, not just about the impact this has on doctors while still in training, but about its potential legacy and resonance throughout doctors’ working lives.

Key to alleviating the effects of training in a system under pressure is a supportive training environment – one which is founded on mutual respect, and where there is a focus on teamwork and building the confidence of trainees. This is also crucial for improving doctors’ health and wellbeing.

**Preparing doctors for future challenges is crucial**

There’s clear evidence of the challenging environments doctors face when they enter postgraduate training. It’s therefore essential that the undergraduate training experience prepares doctors as much as possible for joining the register. But, in response to our 2019 national training survey, one out of eight F1 doctors reported not feeling adequately prepared for their first foundation post.

It’s also essential that doctors entering UK postgraduate training feel prepared. Analysis over time showed that not feeling adequately prepared at the start of foundation training is associated with higher risk of burnout and lower perceptions of the training environment. No trainee should begin their postgraduate career with a heightened risk of encountering these issues.

**Pausing the training pathway and having greater flexibility may protect trainees from feeling burnt out**

In a sense, trainees have taken it into their own hands to make the training pathway work in a way that is best for them – whether to gain experience outside of a training post or to help secure a post in a preferred specialty or location – or in a way that protects them. On the latter point, evidence suggests that their strategy may be working. Trainees in the first years of core and specialist training who had returned from a pause in training reported lower burnout risk levels than those coming directly from F2.

Post-F2 pauses in training are now the norm, with 63% of F2s in 2018 choosing to pause in 2019, compared with 37% who went straight into the first year of core or specialty training.

The value of our work with partners in each country of the UK to formalise the arrangements for taking a pause in training is clear. We recognise that pausing the training pathway can give doctors the perspective and expertise
Chapter 3: The state of medical education

of working in non-training roles, which can be valuable at an early stage of their careers.

Working patterns are also changing. In line with wider workforce trends outside the healthcare profession, working less than full-time (LTFT) is now more popular than ever among doctors in training. In 2019, over one out of 10 (13%) of doctors in training said they were working on a less than full-time basis. And, notably, these doctors reported significantly lower risk of burnout than their full-time colleagues.