Training: Everyone's problem, but not everyone's job?

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The surgical apprenticeship model is well worn and well loved. Developed by William Halsted at Johns Hopkins in the late nineteenth century, it continues to underpin surgical training today. Its foundations were good ones: progressive autonomy, a principle that, more than a century later became the backbone of competency-based medical education[1]; supervised skill acquisition; and an insistence on meticulous tissue handling, aseptic technique and careful haemostasis. They remain just as relevant today as when Halsted first established them.

Some elements are dated though. Halsted's trainees were called residents because they lived in the hospital, it was their home as much as their workplace. Working hours and professional expectations have rightly moved on since then, meaning the rest of the model needs scrutiny.

Grace Hopper put it bluntly: "we've always done it this way" is the most dangerous phrase in any organisation. Surgical training still relies on experienced surgeons passing on knowledge, technical skill and judgement to those coming up behind them. Yet shorter working hours, tighter finances, and relentless pressure to improve productivity, outcomes and patient safety are steadily eroding the time available for it. Meanwhile the science of how to teach technical skill, and our understanding of how surgeons actually perform, is rapidly advancing. This raises an uncomfortable question: should every surgeon be expected to train, or is training itself a specialist skill, one that should be concentrated in the hands of experts, much as we already do with research?

The trainer's dual role – in the moment

If we want to continue producing consultants capable of delivering the highest standards of care, our trainers must be highly skilled and adaptable. They carry two jobs at once. The first is obvious: preparing the next generation of consultants. The second is easy to overlook, but arguably just as important – their day-to-day influence on the outcomes of the patients in front of them, through the quality of the supervision they provide.

Staff engagement and patient outcomes are not separate conversations. Hospitals with more engaged staff consistently achieve better patient outcomes, including lower mortality[2]. Likewise, a trainee's satisfaction at work is not a soft perk to be addressed once the 'real' priorities are met – a disengaged trainee is a warning sign for worse patient outcomes, including higher all-cause mortality. Good supervision is therefore not simply an educational responsibility; it is part of delivering safe, high-quality patient care.

Trainers rarely think of themselves as managers, and often assume they have little influence over a trainee's engagement. Gallup's Q12 research suggests otherwise[3]. An employee's direct manager is one of the strongest determinants of engagement – and several of the Q12 questions map directly onto the ES and CS roles trainers already hold. Whether we recognise it or not, trainers ***are*** managers, and fostering trainee engagement is part of our job.

Gallup groups the twelve elements of engagement into four broad domains: **basic needs**, **individual contribution**, **teamwork**, and **growth**:

Basic needs

1. I know what is expected of me at work.

Individual contribution

2. I have the materials and equipment I need to do my work.
3. At work, I have the opportunity to do what I do best every day.
4. In the last seven days, I have received recognition or praise for good work.
5. My supervisor, or someone at work, seems to care about me as a person.
6. There is someone at work who encourages my development.



Teamwork

7. At work, my opinions seem to count.
8. The mission or purpose of my organisation makes me feel my job is important.
9. My colleagues are committed to doing quality work.
10. I have a best friend at work.

Growth

11. In the last six months, someone at work has talked to me about my progress.
12. This last year, I have had opportunities to learn and grow.

Look down that list and ask yourself which of these you can influence for your trainee. This isn't abstract HR theory, it is an opportunity to improve patient care. Setting clear expectations, recognising good work, showing genuine interest in our trainees' development, and reviewing their progress should be easy for all of us.

The trainer's dual role – the future

Good patient outcomes have never depended on technical excellence alone, and training that focuses solely technical excellence is producing an incomplete surgeon. The evidence on motor skill acquisition is clear, and so is the evidence for deliberate, goal-directed practice[4], the same principle that underpins elite performance in music and sport. We know that skills are retained more effectively when practice is spaced out over time[5]; intensive bursts of training are less effective, however tempting they may be when dedicated training lists are scarce.

Our future consultants need to develop decision-making under pressure, intra-operative judgement, professionalism and professional identity, theatre ergonomics and systems thinking, and critically, the ability to recognise, manage and learn from complications. Better teamwork in theatre measurably reduces mortality and complications. Likewise, the units with the worst outcomes are not always the ones with the most complications – they're the ones with the worst culture around how complications are handled.

We do not lack evidence on how surgeons should learn. We lack systems that consistently apply that evidence at scale. Which brings us back to the uncomfortable question: should every surgeon be expected to train, or is surgical education itself a specialist discipline; one that should increasingly be entrusted to those with the greatest expertise?

What actually makes a good trainer?

Almost no one would argue that being an excellent surgeon automatically makes you an excellent researcher. Yet we routinely assume surgical excellence and training excellence are the same skill. They are not. Although the evidence is still developing, it points instead to relationships, trust and personal attributes as the qualities that distinguish exceptional trainers.

The attributes that appear most consistently are patience, the ability to build psychological safety quickly, accurate assessment of capability, high-quality developmental feedback, and the flexibility to adapt style to each trainee[6]. Some overlap with what makes a good clinician. Some do not, and will not come naturally to every surgeon. The trainer must lead the relationship. The asymmetry of power means psychological safety is not something trainees create for themselves; it is something trainers deliberately cultivate. A good trainer must judge, moment by moment, when to step back and allow productive struggle, while ensuring the trainee has complete confidence that help will arrive the instant it's needed.

Even for the naturally gifted, good training takes real, effortful thought and action. It requires deliberate attention, reflection and practice, layered on top of an already challenging clinical role within a healthcare system that places relentless demands on its clinicians.

Should every surgeon train?

Every surgeon has something worth passing on. That is not the same as saying every surgeon should be a trainer or supervisor. The demands are too specific, and the responsibilities too significant, for trainer status to be a default. >>



Some surgeons simply do not enjoy regular training, or may need to step back from it for a while. For others education is not a natural strength and can feel imposed rather than chosen. Some struggle to communicate effectively with trainees, while others are already stretched too thin to take on the additional cognitive load of supervising and accountability for a trainee's progress. A surgeon's practice may be so subspecialised that they aren't a good fit for most trainees.

Training time is scarce and expensive, and it becomes even more costly when it is not used well. Training extensions whether caused by low case numbers or ineffective supervision carry costs for the trainees, patients and wider healthcare system. Trainers who are unable to support timely trainee progression should be able to step back, short-term or long-term, rather than limping through it. Equally where a trainer is willing but underperforming, the answer isn't to quietly carry on; it's to identify the gap, mentor and develop them in the same we would address a concern over clinical outcomes.

The system is the problem

W Edwards Deming's words are relevant here, "every system is perfectly designed to produce the results it gets". If that is true, then the shortcomings of surgical training are not simply the failings of individual trainers – they are the predictable products of the system we have built.

Waiting lists are growing, theatre efficiency is under constant scrutiny, and training is often assumed to be in competition with both. Even the best trainers can feel conflicted about handing over the knife. Yet the evidence increasingly challenges those assumptions. Theatre efficiency actually improves when surgeons have strong non-technical skills[7], and any time invested in training may be offset by gains elsewhere in the system. There is also growing evidence that supervised trainee operating produces outcomes comparable to consultant operating. If those assumptions are wrong, they deserve to be challenged, not only by trainees, but by trainers themselves. Improving surgical education begins with questioning the beliefs that shape how we teach.

Technology is not making this any easier. The rise of robotic surgery is already creating tension in specialties where consultants need minimum case numbers to maintain their own competence. If adoption becomes widespread in orthopaedics, training practice will need to adapt fast, not catch up later.

Shorter working hours and the changes to the resident doctor contract have made continuity of care more difficult within full-shift rotas. Returning to 24-hour on-calls is neither realistic nor desirable in busy units, so we need other solutions. Rotas designed around training and theatre lists, trainees operating with multiple consultants through planned training opportunities, greater use of simulation, and better access to high-quality simulation facilities, which remains patchy at best. The workplace-based assessment burden has also grown substantially, and it eats into the time trainers could otherwise devote to teaching and supervision. Greater scrutiny and documentation may benefit patients, organisations and regulators, but they come at a cost. If we expect trainers to fulfil these responsibilities well, we must provide them with protected time to do so – and treat that time as a sign they're valued, not an afterthought.

The future

Orthopaedics still has a remarkably engaged trainer workforce. Many go well beyond what is expected of them, driven by goodwill and a genuine wish to give something back. That goodwill is not a sustainable training strategy. It's a gap we've been quietly relying on for years, and the strain is starting to show.

High-quality training is not a luxury. It's how we guarantee that the standard of care we provide today is sustained tomorrow. We all have something valuable to contribute to the trainees who follow us, but contributing meaningfully is not the same as being a trainer. Perhaps the time has come to identify those with the aptitude and enthusiasm to train at the highest level, and formally invest in them as trainers, and recognise surgical education as a specialist discipline in its own right. However, we must remain inclusive, while recognising that high quality supervision and training needs a certain skill set. Some do this naturally, some with development and support, but not all of us will be good at it, even with support.

We still produce outstanding surgeons, but "we've always done it this way" is not a strategy, it's an excuse with an expiry date. Our patients do not need us to preserve the old model. They need us to build one that can carry us through the next century without losing the trainers who got us through the last one. ■

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