

probity and professionalism, with progress actively monitored.

In the 1990s, non-white clinicians made up only 23.4% of the consultant body and yet they account for 44.4% of the medical workforce.⁴ LGBT trainees remain four times less likely to choose a surgical career.⁵ Are we improving? Changes enacted today will not answer all of tomorrow's questions: constant review is imperative to ensure maximisation of inclusion in years to come. So to conclude, no, we are not in a Victorian era of closed doors and reliance on patronage, but nor are we at a point of equity. Further efforts to increase diversity and inclusion are not only meritorious but practicable: early interventions at schools and universities, clear guidance for colleges' members, restructuring of surgical curricula to facilitate differing backgrounds, a robust mentoring system easily accessible by potential candidates with reward for surgeons who

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Are single use items the biggest scam of the century?

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So, we can't see into the future - or can we? Well, I can. I can see that if we keep operating in the same manner that we have been we won't have a future, certainly from an environmental perspective.

The World Health Organization recently declared environmental damage as the world's leading cause of premature death. Yet a single operation can produce up to 814kg of CO₂, the same as driving up to 2,273 miles in an average petrol car. As surgeons, it is our responsibility to reduce our damaging impact on the environment and public health. That's why the College and other institutions are taking action on sustainability – from advocating for greener patient pathways to minimising single use equipment.

Healthcare generates 5% of global annual emissions – the equivalent of 514 coal power plants. Surgery is the biggest offender within the healthcare system. So, why isn't more being done immediately to reduce this contribution? Published estimates consistently associate hospitals and pharmaceuticals with the biggest greenhouse gas emissions.

We are constantly told that for 'infection control reasons' we must wear and use single use items. But where is the evidence for this? Is there evidence that single use items are always safer than reusable ones? Is there evidence that disposable drapes are better than washable for infection prevention? Or is it because most of the time we have been scared into following the 'advice' of the big companies selling these items as they have a vested interest in convincing us to use single use items? They get rich. Simple as that. These big companies have no need to encourage us to

devote time to this and a comprehensive system to audit change. The challenge is not insignificant, but we have a duty to act, a responsibility to do better.

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seek renewable alternatives. A bit like the big oil companies who green wash with offering to invest in some renewables but actually continue pedalling out the fossil fuels that are responsible for 75% of all greenhouse gases.

Why would a company selling a single use bowel stapler, wrapped in vast amounts of hard plastic, want to suggest that alternatives may be viable? They wouldn't. If they did then they wouldn't have a lucrative single use product to sell. It's easier for them to keep selling us staplers at £300 a pop that get chucked into waste bins and not even recycled by the hospitals. Should the onus be on the companies to take them back and recycle them? Should the companies that sell single use tools be made to pay for them to be recycled at the very least? There are companies that provide bins in theatre and recycle the plastic and metal in single use tools. Should the bill be placed at the feet of the manufacturers rather than at the hospitals' already over stretched budget?

Why would a company selling disposable drapes acknowledge that there is actually no evidence that disposable drapes are better regarding infection risk? They wouldn't as their bottom line would be affected. Once they are supplied by the hospital, it is assumed that someone has scrutinised the evidence rather than realising that there is none. But often, as we know, the evidence is supplied by the companies supplying the goods. Until the 2017 World Health Organization declaration pledging publication of all results of human trials, if you conducted 10 trials with 1 trial working in the company's favour and the other 9 not, you didn't need to declare the other 9 pieces of evidence. How many things in use today result

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from decades of this type of marketing? And once they are in use it's just easier to carry on going along with it. The companies have also diverted the conversation, creating a risk-averse arena. Regulatory bodies have added to this with extensive guidance making it difficult to reuse single use devices. We all know how hard it can be to get anything changed within our hospitals, let alone higher up in procurement. In general, people don't want to challenge the status quo. They don't want to have to put in the extra huge effort it takes to make changes or to try to make changes that may often be refused. The NHS is already over stretched and at breaking point; staff are over-worked and it is understandable that prioritisation is difficult. But this needs to change, and we need help when it comes to making it simpler for trusts and medical staff to want to make these changes or challenge. We need guidance and evidence. We need clear information that can be presented to departments and procurement to challenge the status quo. We need to challenge the big companies making single use instruments, into not making them single use! Vote with our feet. Insist on trials of reusables if there is an alternative, rather than being fobbed off with 'we've tried that before and it didn't work' or 'we can talk about that in a year or two' or 'we don't have the time'. Small changes can have a big impact. What can we do to help make these changes? What if the only gowns available were washable ones? Rather than always have both options lined up next to each other, why not just push for washable only? If there are staff members that specifically want single use disposable then it may not be worth the fight for a single individual, but at least the majority in that theatre on that day will be using washable gowns and drapes. Every person makes a

difference: the medical students who want to observe, the on call SHO who needs to pop into theatre briefly or the F1 who is briefly holding the camera. Think of the amount of waste that generates from gowns and hats.

Gloves are responsible for nearly half the carbon footprint of PPE used in the pandemic. Although the UK government has committed to 70% of manufacturing of PPE from the UK, this excludes gloves, so this ambition should be expanded. We need to reduce glove use where it is safe to do so, such as with low-risk patient contact. The Royal College of Nursing has had success with its 'gloves off' campaign, reminding staff to consider whether their task requires gloves before condemning another pair to landfill. What if we just took charge as individuals rather than wait for those higher up, or procurement or management to make changes? What if we politely stated during the WHO or the morning brief that we would like all the drapes to be reusable? What if we asked for the clip applier to be reusable for the lap chole? Or non-disposable ports to be used for the right hemi... and when faced with 'we've tried them and didn't like them' maybe politely ask how recently that was since technology has moved on and maybe it is worth trialling the newer items not tried before? Find a company that makes reusable laparoscopic scissors that do actually cut (they do exist, I have tried them myself) rather than the old ones on old sets that are substandard. What if when we see patients in the Emergency Department and need a suture kit we don't just open the useless disposable one, to be annoyed with the plastic forceps and chuck most of it away. What if we get a suture set from theatres that can be returned and reused? Better still, we try and work out with ED and management a way of providing reusable equipment?

Surely it can't be right that it is 'easier' to cut a suture with a metal pair of scissors and chuck them away?

Think of the journey this item has made to get into the hospital floor and into your hands...?

The metal has been sourced to make these scissors. A human being, often a child, has moulded, assembled and sharpened them, they have then been packaged up and have travelled from Malaysia or (most commonly) Pakistan to the UK. Then further distributed via fossil fuel burning vehicles to be used for just a few seconds and then binned. Surely this is insanity? But it's hard to feel responsible or empowered when decisions about which instruments are used are often made for us. Decisions are often made by non-medical people that have never had to use these items themselves. Glove suppliers are changed, suture suppliers are changed, but may not have been personally tested by those making these decisions. We may not think we have the power to make changes on the 'shop floor' but if we unite, our voices will have to be heard. What if we wanted the NHS to stop buying gloves from Topglove (the world's biggest glove manufacturer) who are reported to use Myanmar refugees kept in slave-like conditions to make their gloves? Sounds terrible, right? But this is where we are sourcing our materials and equipment from. In the first six months of the pandemic, most PPE was shipped from countries such as China, Thailand and Malaysia. Modelling demonstrates a 12% reduction in the carbon footprint if that manufacturing had been done domestically. The reductions aren't just because of reducing the overseas travel, but 80% of reductions result from far more of UK energy generation being from renewable sources than some of the other countries we were originally getting our PPE supplies from.

Air pollution is the world's single largest environmental health risk. Data from the United Nations shows that 9 out of 10 people breathe air containing high levels of pollutants, and that around 7 million people die every year from exposure to polluted air. And yet we still make patients travel to and from hospital appointments in cars and taxis only to come back the next day or next week for another test or appointment that could possibly have been bunched together on one day or better still carried out virtually or over the phone or tests organised locally. But that would involve different departments talking logistics between one another and yet again an over stretched NHS doesn't have logistics personnel dedicated for this purpose.

For those of us trying to make these local (and bigger) changes, the SiS (Sustainability in Surgery) committee at the College aims to develop guidelines, templates and tool kits based on actual evidence for people to take back to their hospitals to help effect change. We will be looking at the carbon footprint and life cycles of a variety of common items and operations, focusing on where changes can be made. Even more interestingly, often the more environmentally-friendly option is actually cheaper and as we know money talks, and sometimes that's the only way to get attention and be allowed to make changes.

My point in all this is that there is hope, by working together and standing united as a surgical community, by finding evidence and challenging the culture of 'we have always worked that way' or 'we have always used this'. If we make small local changes, they may end up bigger, being copied, extended and taken to other theatres and hospitals. If we start the conversation it will lead to bigger things. There is an appetite for change now and we need to capitalise on this, in the environmental sense. Look at the use of washable scrub hats, ideally with name and role in the #TheatreCapChallenge, and how many people now use them instead of disposable. Since new evidence demonstrating a lower infection risk with washable hats than disposable hats. This

saves the NHS valuable money and reduces the environmental impact too.

Let's not wait around for changes to be made. The time is now. Time is short and we need to take control. It's better to try to make changes, even small ones, than none at all. An imperfect, even sporadic, change is better than nothing. If every day in theatre you used to put on a scrub cap each time you went in and out, averaging 3 scrub caps a day, 5 days a week, that's a lot of caps. If you were to wear your own hat even one day a week that's between 52 and 156 caps you've saved from landfill or incineration just from your one day a week resolution. So even small imperfect changes are still worth it! It doesn't have to be perfect. Just think about what you can do personally. It doesn't have to be big. Start the conversation and slowly changes will start to happen.

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