level, a figure for the number of additional beds required can be proposed.

The article discusses alternatives to the 85% threshold which can become statistically complex and nuanced. Several organisations have attempted to define optimal occupancy levels and all have slightly different conclusions based on differing methodology.

In general, larger hospitals with more side rooms can tolerate higher occupancy levels without running out of beds. The empirical experience of the last five years has shown that higher occupancy levels lead to long stays in the ED, infection outbreaks, long ambulance handover times and cancelled elective surgery. The College has pragmatically decided to campaign on 85%, but recognises that some hospitals may be able to safely run services at occupancy levels of 90%. It is pretty clear that no hospital is efficient or safe at occupancy level of 92% and this is consistent with a lot of international evidence. Traditionally, occupancy levels have been used to ascertain how many beds are needed, but the pandemic and associated infection prevention and control measures have made this methodology less valid. Instead, we used an approach based on the ratio between admissions and bed numbers. The admissions per acute hospital bed has increased from 37 in 2017 to 40 in 2020. Using this approach and aiming to get back to 2018/19 performance, the UK would require 4,500 extra beds this coming winter, this is about one extra ward per hospital. To improve this to 2017/18 levels would require 13,000 extra beds. This may feel counterintuitive, but is easer to understand when we find that we have lost 2,000 beds since the beginning of the pandemic in early 2020 for a variety of reasons; infection outbreaks, staffing and refurbishment.

The report makes some clear policy recommendations.

We recommend that an additional 4,500 beds across the United Kingdom be made available between now and next Winter, and approximately 8,500 more over the next five years.

The allocation of additional beds should be made available based on a local assessment of population needs and not worsen health inequalities.

Hospitals should define thresholds for occupancy, and justify if they exceed 85% (sometimes this is appropriate, but more often, not).

Any new hospital buildings should increase the proportion of side rooms in order to restrict the number of beds made unavailable through infection and reduce nosocomial infections.

There needs to an increase in Mental Health bed capacity. Assessment areas for short term, resource intensive assessment of people suffering a mental health crisis would improve care and patient experience.

Theo Chiles,
Senior Policy Researcher RCEM, and
Adrian Boyle, Vice President (Policy) RCEM

Green ED update

How can we make our emergency departments more environmentally sustainable? An update from the Green ED team.

It's always difficult to start writing a piece about the climate and ecological crisis as it is easy to feel overwhelmed and powerless. When you picture your audience of overstretched healthcare professionals you really don't want to add to their stress. I hope, however, to show you how your emergency medicine family are addressing this crisis, and to inspire you to action which is one of the best ways to tackle climate despair.

We know that we have a short time in which to make the huge societal change needed to ensure a liveable future (1). As emergency care providers we will be key to making this happen. The NHS is 4% of the UK's carbon footprint and by working together to improve its sustainability we will exceed any effects we could make as individuals. Healthcare workers, especially nurses, are seen as some of the most trustworthy professions. So when we speak out about the health effects of the climate emergency and advocate for a healthier future it can really make a difference in changing society. After all, by trying to treat the climate crisis we are just doing what we do best: identifying and fixing emergencies.

Over the last few years, RCEM has been working to improve its own environmental sustainability and the sustainability of the practice of emergency medicine. So far the college has divested its investments from fossil fuels and has been making changes in the college buildings. In February we ran our first study day on environmental sustainability in emergency medicine and we have been lobbying the government for more stringent air pollution limits as well as ensuring the Health and Social care bill has net-zero targets set within it.

You may have also heard about the Green ED project. This is a framework that can be applied to any emergency department to improve its environmental sustainability. This is being created by RCEM's environmental specialist interest group and has just completed its first pilot run at a number of different hospitals.

THE GREEN ED

Our framework is comprised of three tiers of criteria, bronze silver and gold and is based on the Leaf sustainable labs project, which is already having great success in the laboratory world.

The framework covers a wide range of actions and is aligned with Greener NHS criteria. It has sustainable quality improvement woven in throughout and is backed up with a bank of how-to guides, carbon calculators and example quality improvement projects. All of this is building on the current evidence base and drawing from sustainability work in other specialities.

The aim is to make it easy and fun for emergency departments to implement sustainable changes.

The information gained from sites working with the framework will also help us to identify common sticking points. We will then be able to use this information

to engage with Greener NHS to try and address these problems at a national level.

Below we have put together a few examples of some successful projects to give you an idea of what can be done.

Pilot successes

Unnecessary Cannula reduction

A stalwart of FRCEM QI projects for years, the unnecessary cannula reduction project has great green credentials as it follows the top tier of the green hierarchy: Reduce, Reuse, Recycle. This is a simple project to undertake with quick financial savings and long-term improvement for the environment by reducing plastic waste.

A little bit dim

Many of our pilot sites have had quick and easy success with reducing monitor brightness and speeding up sleep times on their monitors, with feedback from staff not noticing any changes in their screens. One site reported that by doing this they would make the financial savings of £2368.62 with a subsequent annual carbon reduction of 3.85 tonnes which is about 11 877 miles driven in a car.

Pilot difficulties

The feedback from our pilot sites all highlighted these three main themes:

Lack of senior support

Many of our Green ED pilot site teams are made up of more junior members of nursing and medical staff, they have found it difficult to instigate change in their departments. More senior members of the team bring better connections in the hospital, and more clout when it comes to making change. They are also more likely to be in the department long enough to drive and maintain significant sustainability improvements.

Lack of guidance

We really are at the forefront of emergency medicine sustainability which means there is very little literature out there to guide our way. Thankfully the creation of the Greener NHS has turned things up a notch so more guidance on how to weave sustainability into clinical practice is on its way, as well as guidance created by the Green ED team itself.

Lack of time

Our Green ED pilot site teams are also trying to juggle this work with their day-to-day jobs, training and life commitments leaving our teams overstretched. A good answer to this would be to create posts with time set aside for sustainability work both for medical and nursing staff.

WHAT ACTION CAN YOU TAKE NEXT?

Hopefully, this piece and the work we have done will have inspired you into some action, but where to start? In order to properly address the climate crisis in a just way, we need to work on systemic change moving away from a fossil fuel-based society, so any work that we can do to that end is great. This could mean getting more involved with climate-related activism at a local or national level as well as making simple changes in the way we live our lives to be more sustainable.

For action at work, have a think if any of the projects we mentioned above would work in your department and if they do how about signing up to join the next phase of the GreenED rollout.

If you are a leader in a department which already has a GreenED project going on could you add your support and find out what barriers they are facing, could you create a sustainability-themed clinical fellow role?

We know that the only way we will overcome the climate and ecological crisis is by working together to address systemic problems, and part of this is to create a sustainable way of practising emergency medicine. We love to have you join in with us to make this happen.

REFERENCES

1 https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgi-ii-pressrelease/

Dr Sandy Robertson
EM ST5 Royal Infirmary of Edinburgh
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Candid reflections: National QI – Building a wicked team to tackle a 'wicked problem'

Working across four nations, across four different health systems, to deliver a national improvement programme is challenging at every step in the process. Some regard it as a wicked problem with no easy wins and a resultant paucity of 'how to' examples. Improved patient care is our primary driver and key metric but it will take years before we can form a judgement on our actions taken yesterday, today and tomorrow.

We want to share our journey with you as we transitioned from a national audit programme to a national quality improvement programme.

Historically, the Royal College of Emergency Medicine undertook annual national audits in three key subject areas that changed each year. Data collection and visualisation gathered in this way was not achieving sustained, meaningful improvements in healthcare. With time it became clear that change in the programme was needed. In 2018 the RCEM elected to change from an audit framework to that of Quality Improvement (QI) in the hope that it would help drive improvements in EDs across the four nations.

Between then and now we learnt a great deal. A small national team that was well equipped to develop audits was not sufficient to facilitate QI on such a scale. Members of the group, already heavily burdened with the increasing clinical demands, were burning out. Trying to retrofit QI methodology into something that was structurally audit was doomed to fail.

This hybrid programme took its toll on the small team as they continued trying to develop three annual topics in a more complex way than simple audits. Timeframes were tight and of course, there was that little thing called Covid. Not only was the programme impacting the team, but all also reflected that it was not inspiring local QI in a sufficient number of EDs to say with any confidence that care for patients had been improved. Credit for maintaining standards locally lay firmly