NHS efforts in England to mitigate the climate crisis: uniting nurses and gastroenterologists

Robin Baddeley ,[1,2] Nick Watts,[3] Leigh Donnelly[4]

THE NATIONAL HEALTH SERVICE'S NET-ZERO AMBITION

For the majority of those working in the National Health Service (NHS—the UK's publicly funded healthcare system), the passing of the Health and Care Act 2022 in the UK would have barely registered as a blip on their radar. But hidden amidst the usual proposals for reorganisation, this Act included a more far-reaching ambition: the NHS's commitment to net zero. With this passing of the Act, the NHS became the first health service in the world to embed such a commitment into legislation.[1] Every NHS institution is now required to have a strategy, with board-level involvement, to deliver a net-zero health service by 2045.

Capital investment required to meet this ambition is expected to total £7.7 billion (US$9.6 billion) over a decade. Over the last 2 years alone, £800 million has been invested by the NHS in the installation of solar panels, heat pumps and other such infrastructure in hospitals. However, it is understood that more than 70% of emissions can be addressed without the need for any additional investment. Large, centralised initiatives are required to support the transformation of estates infrastructure, the transport fleet and procurement: non-blue-light vehicles are to be fully electrified by 2032, and work on all new and retrofit hospitals from October of 2023 will be obliged to comply with the Net Zero Hospital Standard.[2 3] Notably, by April 2027, the NHS will not purchase from any supplier who does not meet or exceed its net-zero ambitions.[4]

To bend the trajectory of the health system's emissions towards net zero, it is these steps to decarbonise support infrastructure—and ultimately the NHS' supply chain—which confer the greatest muscle. But the NHS's ambition also asks clinical communities to contribute; to re-examine their service through the prism of environmental stewardship and identify opportunities where care delivery can be safely redesigned. The question of how to best engage healthcare professionals with this project therefore requires our consideration.

WHAT MOTIVATES CLINICIANS TO DEVELOP SUSTAINABLE PRACTICE?

Providing medical care is an inherently reactive task; responding to the immediate needs of patients is rightly the central concern for clinicians. Those in caring roles rarely report feeling that they have extra capacity to actively partake in projects that require commitment beyond their daily clinical responsibilities. Clinicians are less likely to engage with a request to meet system-wide targets if the ultimate objective is perceived to lack clear relevance to daily practice, or for which simple solutions are not on offer.

The task put to clinicians—to reduce resource use without compromising clinical outcomes—is a complex one; it requires both an understanding of the determinants of patient outcomes and a pragmatic grasp of clinical practice. Those involved are also required to operate within regulatory boundaries, uphold clinical standards, and abide by (often competing) infection prevention and control policies. Harnessing this body of clinical experience and knowledge is dependent on the support and creativity of the health service's clinical providers and staff. Uniting nurses and gastroenterologists from all stripes to rally behind the net-zero goal therefore also requires that we identify the factors which motivate clinicians to involve themselves in this project.

For some, the putting of figures to a problem can be a motivating force. The drive to measure the carbon-footprint of our practice is discussed elsewhere is this series[5]; generating metrics which enable departments to monitor and quantify carbon savings could perhaps tap into the same behavioural psychology that has been exploited by the market in the form of sustainable travel apps, food packaging and clothing labels. But directing colleagues to a singular focus on carbon footprint may encourage a narrow conception of environmental pollution; carbon accounting may not fully capture and convey the potential for detrimental environmental impacts which can occur independently of greenhouse gas generation, such as air pollution, water depletion and ecotoxicity. Second, the practice of carbon-footprinting complex healthcare processes is in its infancy; complicated by dynamic variables and local caveats,[5] it could leave departments feeling like they are trying to shoot at a moving target. Such an accounting exercise also demands a collective introspection that has to be thoughtfully managed to ensure it motivates teams and does not burden individuals with more documentation and reporting requirements.

We should also recognise that the healthcare environment has a more complex interplay of responsibilities and incentives than many commercial exchanges, and we do not yet know the extent to which the enumeration of environmental impacts will influence clinician behaviour, or indeed patients' preferences. An approach to 'sustainable healthcare' delivery which encourages quantification and optimisation for efficiency will be recognised by clinicians familiar with concepts such as 'lean' service delivery, with which there is much overlap. But this reductive, technocratic approach may not be a universally effective lever to pull when applied to a complex problem. For some clinicians, a softer, less quantified discomfort— with the disposal of single-use plastic or the asking of patients to travel unnecessarily—may be a more powerful catalyst for reflection and pragmatic intervention.

NURSING CONTRIBUTION TO SUSTAINABILITY

Nursing teams providing direct clinical care are well aware of the high resource requirements and waste generation associated with the provision of advanced healthcare, particularly as related to digestive healthcare. Conversations with colleagues over where our responsibilities lie with regard to tackling the problem are plentiful. However, it is a healthcare professional's duty to become an expert resource for patients, committees, stakeholders and policy-makers.[6] Furthermore, it is suggested that healthcare professionals are considered to be a trusted group of people, valued for their leadership, sustained commitment, policies and advocacy on the matter of climate change.[7] The reality is, of course, that being an advocate for environmental preservation is considered a low priority in the busy day-to-day responsibilities for nursing teams.[7–9]

A review of contemporary nursing literature suggests that were nurses and students

[1]Wolfson Unit for Endoscopy, St Mark's Hospital and Academic Institute, London, UK
[2]King's Health Partners Institute for Therapeutic Endoscopy, King's College Hospital, London, UK
[3]Centre for Sustainable Medicine, National University of Singapore, Singapore
[4]Department of Gastroenterology, Northumbria Healthcare NHS Foundation Trust, North Shields, UK

Correspondence to Dr Robin Baddeley, Wolfson Unit for Endoscopy, St Mark's Hospital and Academic Institute, London, NW10 7NS, UK; robin.baddeley2@nhs.net

to receive formal teaching on environmental sustainability and responsible management in healthcare, the benefits would reach beyond any 'raising awareness' campaign: equipping nurses with the training and skills they need puts them in a much stronger position to discuss and help implement possible improvements themselves.[10]

Nursing teams are in a pivotal position to catalyse change and can be early implementors of green initiatives on wards, endoscopy units or within departments. But such change requires collaboration between clinical teams and hospital management (though grassroot efforts are generally successful, at least at the local level). It is well recognised that enacting culture change within a complex institution such as the NHS can be a challenging task and requires a considered approach from the entire multidisciplinary team. However, challenges to the development and implementation of environmental sustainability competencies into nursing practice predominately relate to the lack of engagement around climate change in nursing roles, and the limited knowledge among many nursing leaders regarding the relationship between nursing practice and climate events.[6] Fortunately, there is improvement on this front: in recent years the Royal College of Nursing and the Centre for Sustainable Healthcare have sought to increase nurses' awareness of the impact of climate change on health, and encouraged the profession to promote aspects of sustainable clinical practice.

'GREEN' GASTROENTEROLOGY

Endoscopy services are particularly suited to lead the way with sustainable initiatives due to the service's high consumption of single use supplies, packaging, sterile water and the energy intensive decontamination requirements. The publication of several consensus statements reflects a recent drive to improve sustainability within general gastroenterology, endoscopy and hepatology units.[11–17] These documents raise awareness of the ecological footprint of the practice of digestive health, advocate for green gastroenterology, and provide guidance to reduce the environmental impact of endoscopic and non-endoscopic gastroenterology practice, education and research. Success is dependent on first identifying those changes that are easy to achieve, collaborative, have a significant sustainability benefit and yet also maintain quality and access to care.[10]

Gastroenterology units in the UK are slowly beginning to embrace the challenge and are keen to deploy sustainable initiatives. One endoscopy unit has modelled the carbon footprint implications of rationalising specimen pots following polypectomy.[18] Others have reported their experience of introducing novel waste disposal routes for endoscopic accessories, techniques which minimise the carbon-intensive high temperature incineration, recover metal and reduce costs.[19] This has been achieved through establishing links with various organisations such as Waste Management departments, the recycling officers from the local county councils and, importantly, the Infection Control Team. The COVID-19 pandemic expedited the adoption of virtual consultations within gastroenterology clinic services with resultant reduction in travel-related carbon emissions.[20] The addition of 'Green Endoscopy' to the Endoscopy User Group (EUG) as a standing item has introduced the concept of sustainability to the local EUG; units report that it has fostered collaboration across the whole team, opening channels of communication to ensure that sustainability is one of the key areas of quality practice. Green Champions—enthusiastic team members with a keen interest in sustainability—have been assigned in a number of gastroenterology clinics to help facilitate and embed sustainable strategies. This role has been crucial in maintaining momentum and improving green practices.

SUMMARY

Emerging somewhat weary from the COVID-19 pandemic, those working in healthcare report feeling particularly overburdened. Asking clinicians to mitigate yet another cost of the care they provide risks asking too much of a depleted workforce. But when framed and communicated effectively, the NHS's net-zero ambition could represent an opportunity for clinicians across our specialty to unite around a common goal. This model provides at least one powerful template that seems to be making an impact and has clear and actionable goals. Perhaps the project to innovate a service towards a greener version of itself could be understood as one in which all members of the team have equal contribution.

Contributors All authors contributed to the content of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests RB: Research grant from Boston Scientific.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Baddeley R, Watts N, Donnelly L. *Gut* 2023;**72**:2214–2216.

Received 6 October 2023
Accepted 7 October 2023
Published Online First 16 November 2023

Gut 2023;**72**:2214–2216.
doi:10.1136/gutjnl-2023-331275

ORCID iD
Robin Baddeley http://orcid.org/0000-0001-5604-246X

REFERENCES

1 Health and Care Act, c.31. 2022. Available: http:///www.legislation.gov.uk/ukpga/2022/31/part1/contents/enacted
2 Delivering a 'net zero' national health service. Available: http://www.england.nhs.uk/greenernhs/a-net-zero-nhs/
3 NHS net zero building standard. 2023. Available: http://www.england.nhs.uk/publication/nhs-net-zero-building-standard/
4 Available: http://www.england.nhs.uk/greenernhs/get-involved/suppliers
5 Pohl H, Baddeley R, Hayee B. The carbon footprint of Gastroenterology practice. *Gut* 2023.
6 Leffers J, Levy RM, Nicholas PK, *et al*. Mandate for the nursing profession to address climate change through nursing education. *J Nurs Scholarsh* 2017;49:679–87.
7 Butterfield P, Leffers J, Vásquez MD. Nursing's pivotal role in global climate action. *BMJ* 2021;373:1049.
8 Schenk EC, Cook C, Demorest S, *et al*. Climate, health, and nursing tool (CHANT): initial survey results. *Public Health Nurs* 2021;38:152–9.
9 Iira T, Ruth M-L, Hannele T, *et al*. Finnish nurses' perceptions of the health impacts of climate change and their preparation to address those impacts. *Nurs Forum* 2021;56:365–71.
10 McDermott-Levy R, Jackman-Murphy KP, Leffers JM, *et al*. Integrating climate change into nursing curricula. *Nurse Educ* 2019;44:43–7.
11 Leddin D, Omary MB, Veitch A, *et al*. Uniting the global gastroenterology community to meet the challenge of climate change and non-recyclable waste. *Gut* 2021;70:2025–9.
12 Veitch AM. Greener gastroenterology and hepatology: the British Society of Gastroenterology strategy for climate change and sustainability. *Frontline Gastroenterol* 2022;13:e3–6.
13 Donnelly MC, Stableforth W, Krag A, *et al*. The negative bidirectional interaction between climate change and the prevalence and care of liver disease: a joint BSG, BASL, EASL, and AASLD commentary. *Gastroenterology* 2022;162:1561–7.
14 Pohl H, de Latour R, Reuben A, *et al*. GI multi-society strategic plan on environmental sustainability. *Gastroenterology* 2022;163:1695–701.
15 Sebastian S, Dhar A, Baddeley R, *et al*. Green Endoscopy: British Society of Gastroenterology (BSG), Joint Accreditation Group (JAG) and Centre for Sustainable Health (CSH) joint consensus on practical measures for environmental sustainability in endoscopy. *Gut* 2023;72:12–26.
16 Rodríguez de Santiago E, Dinis-Ribeiro M, Pohl H, *et al*. Reducing the environmental footprint of gastrointestinal endoscopy: European Society of Gastrointestinal Endoscopy (ESGE) and European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA) position statement. *Endoscopy* 2022;54:797–826.

17 Setoguchi S, Leddin D, Metz G, *et al*. Climate change, health, and health care systems: a global perspective. *Gastroenterology* 2022;162:1549–55.
18 Yong KK, He Y, Cheung HCA, *et al*. Rationalising the use of specimen pots following colorectal polypectomy: a small step towards greener endoscopy. *Frontline Gastroenterol* 2023;14:295–9.
19 Jack S, Parker C, Catlow J. P194 green endoscopy MR64 sharps-bin pilot: preferred, greener and cheaper. *Gut* 2023;72:A153–4.
20 Sun C, Chrysikou E, Savvopoulou E, *et al*. Healthcare built environment and telemedicine practice for social and environmental sustainability. *Sustainability* 2023;15:2697.