

Royal College of Nursing response to NHS Net Zero call for evidence

Background

The NHS has invited submissions from staff, patients, carers and experts relating to ideas for continuing the NHS's carbon emissions and become greener.

As a UK-wide organisation, the Royal College of Nursing (RCN) recognises that climate change undermines the very foundations of our health. The interdependencies between a person's health and their environment are clear. Nurses and midwives dedicate their careers to improving the health and wellbeing of our populations, but improving health requires us to look beyond the traditional health sphere and focus attention on the social determinants of health, of which the climate is a key factor. We are already experiencing the negative consequences of climate change on people's wellbeingⁱ.

Nurses have a duty to protect and promote public health in the face of these threats and have a unique and vital role to play. Their expertise, diverse roles and the trust invested in them mean they can be leaders in protecting the health of the public from the consequences of climate change. We acknowledge and endorse the climate emergency declared by the UK Government and commit to engage with our members and take action on this issue on behalf of them and the profession. We are also clear that initiatives that protect our planet and mitigate climate change are also good for our wider population's health. Investment and action now will bring multiple benefits to ourselves and will enable us to meet future generations' health and care needs.

How health and care providers can support action on climate change

Public and private health and social care provides employment for approximately 3 million people or 1 in 10 of the working populationⁱⁱ. Health and social care providers, including those in nursing and midwifery roles, can have significant influence driving changes to help us practice, work and live in more sustainable ways. The decision of RCN Congress to prioritise action on climate change acknowledges the close relationship between climate, health and our ability to meet future health and care needs. The health sector, whose mission is protecting and promoting health, makes a major contribution to the climate crisis and therefore must play their part in resolving it. Health care's climate footprint globally is equivalent to 4.4% of global net emissionsⁱⁱⁱ. The NHS produces higher emissions than the global average for health care and is responsible for 5.4% of the UK's total carbon emissions, equivalent to the greenhouse gas emissions of 11 coal-fired power stations^{iv}.

The importance of staffing for safe and effective care

Any service improvement or transformation is entirely dependent on there being sufficient staff to deliver safe and effective care. Without this, patient care is compromised. Nursing staff play a key part in identifying areas where efficiencies can be made in terms of procurement and making choices for the service which protect the environment. However, they are only able to do this when they have the right staffing levels and skill mix to meet patient needs.

To facilitate an environment in which staffing for safe and effective care can be provided, the RCN has a number of key asks:

1. Legislation must be produced which assigns clear roles, responsibilities and accountability for workforce planning and supply at all levels of decision making throughout the health and care system.
2. A fully costed and fully funded national workforce strategy for the entire health and care workforce. This must cover workforce supply, recruitment and retention based on population need. It should consider all the levers involved in delivering this supply and ensure that one national body's priorities do not work against the overall collective aim of increasing the number of nursing students.
3. Additional investment in the supply of registered nurses to remove financial barriers; this would include tuition fee support and maintenance support sufficient to cover students' actual living costs, so that students can afford to study without undue hardship.

Case studies from the nursing community

Case study: Helping staff to reduce waste and disposables, and encourage reuse and recycling

There is growing awareness of the environmental impact of nursing, where care is often heavily reliant on the use of disposable products to minimise infection risk, and how this contributes to physical waste and increased carbon emissions.

This case study describes the work of Harriet Dean-Orange, in her role as a senior staff nurse in an operating department, to reduce waste through water and glove use and other plastic materials. Harriet does this by raising awareness and educating staff about their environmental impact; and to encourage better use, reuse and recycling with the aim of significantly reducing carbon emissions.

Healthcare providers generate a large volume of waste, including excessive water use and physical waste. This produced carbon emissions that damages the environment which in turn has a detrimental impact on the health of current and future generations.^v

Various products including as single-use plastics and disposable items contribute to different streams of hospital waste which end up being incinerated, in landfill or as sewage. It is estimated that hospitals use almost 7 million examination gloves in any one year^{vi} although some estimates suggest the figure is closer to 1.4 billion.^{vii}

There is growing awareness of the critical need to reduce waste generated by NHS providers. Recent data shows that in 2016/17 NHS providers produced almost 590,000 tonnes of waste.^{viii} This represents approximately 2% of all commercial and industrial waste in England.^{ix} Some efforts are now being made to ensure the waste generated by NHS providers avoids going directly into landfill, and instead is used to produce energy or recycled/recovered to produce new products.^x

Harriet has taken a multi-level approach to drive forward the reduction of waste produced by her Trust, targeting unnecessary glove use and water consumption. At a strategic level, she delivered a presentation to the Chief Executive and the Board of Directors to highlight environmental impact and the importance of waste reduction. The Board

approved an external company to prepare a sustainable management plan which has the ability to audit and measure improvement across departments and this sets a Trust-wide ambition to reduce waste and carbon emissions.

Another approach Harriet has taken is to identify motivated individuals who can contribute to affecting change. Harriet does this through awareness raising about hand hygiene guidelines, and through establishing plastic recycling bins where the sterile plastic bags in which sterile equipment is initially delivered can be reused. On the ground this has involved staff collecting plastic and filling dispensing bins for the bags and reinforcing the 'reduce-reuse-recycle' message. This serves as a reminder to all staff to be conscious of other opportunities to reduce waste and find other ways of re-using items.

Harriet promotes the RCN's glove use guidance^{xi} and asks staff to rethink the purpose of their glove use and consider washing or decontaminating their hands before and after each contact with a patient instead. Harriet directs staff to the 2014 NICE guidelines on hand decontamination^{xii}, which recommends the use of an alcohol preparation as the gold standard for hand hygiene. She also highlights World Health Organization guidance which shows that 3 minute hand scrubs are effective.^{xiii} Adopting the use of alcohol preparations and reducing the time for surgical scrubs can significantly reduce water consumption. This in turn has positive knock-on effects for saving other resources too:

"a lot less electricity being used to warm the water and a lot less water being used.... it's also better for people's hands we found an improvement in the amount of people that we have sent to occupational health due to dry dermatitis from glove use."

Harriet is also working to raise awareness through a communication strategy including emails, posters and presentations to staff to reinforce the sustainability message.

Achievements

Currently, waste, re-use and recycling are not monitored sufficiently to demonstrate the effectiveness of environmental initiatives across specific departments. For example within an acute trust, water use is measured by floor (within the building) not at a departmental or ward level. This limits individuals' ability to recognise the impact of their sustainability work.

While staff are committed to sustainable development at home and diligently recycle domestic waste (glass, paper, plastic) at work the pressure of patient care along with competing priorities may mean they are not always in a position to give precedence to sustainability:

"There tends to be an opinion you are already doing a good life saving job. To take on a sustainable role on top of that [can be] too much to deal with. Unfortunately there's not much understanding that practising sustainability should just be a norm rather than an added extra. So if someone uses gloves inappropriately then they think 'well you know I'm already here dedicated my career to saving lives'. They are not worried about a pair of gloves at all."

Despite these challenges, the initiatives Harriet has implemented have provided cost savings and resulted in more efficient resource use and the reduction of environmental waste.

Case study: Better nurse procurement tailored to meet their clinical requirements and reduce waste

Rose Gallagher, the RCN's Professional Lead for infection prevention and control, works strategically within the four countries of the UK to deliver clinical advice, policy and development of resources for prevention, sustainability and procurement work. Rose's work considers the procurement of consumables nurses and other staff use to deliver patient care; involving them in creating the procurement criteria for items such as paper towels, single use plastics and rubber gloves, to prevent waste due to poor specifications. All these activities have important implications for environmental sustainability.

The procurement of consumable products for use in the NHS is not only about buying goods at a low price to save costs. A key feature of procurement now includes NHS Supply Chain sustainability and minimising the environmental impact of NHS healthcare.^{xiv} The NHS supplier code of conduct lists the laws and ethical standards for companies which do business with NHS Supply Chain that should be adhered to, including standards relating to the environment.^{xv}

Some of the waste generated by NHS Trusts is an unavoidable part of infection control protocols^{xvi} which require items to be disposed of and incinerated after one use. However, much of the waste is due to the products themselves being of an unsuitable specification. Such inferior products can often be chosen to achieve financial cost savings, which can paradoxically lead to greater long-term costs through more expensive types of disposal. However, more efficient use of resources through reducing waste, water consumption and energy costs in the NHS has been estimated to save £90 million.^{xvii}

Rose's work focuses on the everyday consumables nurses use, including dressing packs, gauze squares, syringes and needles, wound dressings and paper towels. Part of her work allows nurses the opportunity to create the criteria to procure these items so that they are more tailored to their clinical requirements. This new approach to procurement offers more precise specifications of what nurses and other staff need. Although cost is not the main motivation for this approach it is hoped the NHS can save money and reduce unnecessary waste by engaging staff in procurement decisions. This is important because not every NHS Trust has specialist procurement nurses to support these processes. Rose considers these nurses to have an important role, both now and in the future, to support NHS Trusts to improve their sustainability and reduce waste.

Rose is also aware that a significant amount of what is disposed of as clinical waste could be reclassified and disposed of normally. So raising awareness of how nurses can dispose of clinical waste by using the correct coloured bag can again lead to better sustainability and cost savings:

"It's really important nurses put the right item in the right bag so clinical waste is separate from domestic waste...Clinical waste is associated with infection prevention and control and there is a perception that...anything in a yellow or orange bag will kill you. That's simply not the case. ...there are obviously cases where we put infectious waste into these waste streams, but in the majority this is about meeting waste transport legislation."

Achievements

The potential to reduce waste is likely to increase as nurses become more involved in decisions relating to the procurement of consumables based on clinical specification, quality and safety. This in turn creates an improved patient experience, and feeds into the UK's achievement of the SDGs because fewer materials are discarded and/or incinerated.

Case study: Reducing sewage waste through better nursing procurement

This case study illustrates Clare Nash's work on achieving clean water and sanitation and responsible consumption through the procurement of consumable products. The focus is on pulp products, such as single-use moulded pulp urinals, bowl and dishes, that are disposed of using a macerator and ultimately flushed into the sewage system. Another part of Clare's work is to raise awareness and educate frontline nurses so they are cognisant of the better quality products available and become more confident in reducing use, which will help to reduce the volume of waste and save money. Her work also includes driving sustainability in the NHS Supply Chain to promote better standards for biodegradable products purchased by NHS providers.

In 2017, NHS Improvement listed a core set of NHS products to be used by all NHS providers, including medical pulp urinals, trays and bowls.^{xviii} There is limited available information on the number of products purchased, consumed and disposed of by NHS Trusts. While these products are considered important to preventing cross-contamination in patient care, their safe disposal includes being inserted into a macerator where they are pulverised and eventually sent into the sewage system.^{xix} The impact of these products on the environment is concerning, particularly in relation to the volume of water used to mash the products in a macerator. There is also a risk of waste pipes and macerators becoming clogged, leading to greater expense when technicians are needed to unblock, clean and service the macerators. This results in a false economy, especially when procuring cheaper and thinner pulp products which are more prone to leaking and need to be doubled up to prevent this occurring. Other products including wipes and colostomy bags, which are sometimes marketed as 'flushable' or biodegradable but often fail to break down sufficiently and also lead to blockages in the pipes. The volume of waste generated is considerable, and Clare reports that between two local Trusts up to 600,000 wash bowls a year are thought to be flushed away, which then needs to be processed at the local water treatment plant.

Clare is leading the push to help her Trust reduce its waste by implementing sustainable procurement policies which include procuring more suitable products and evaluating new products. The key is to involve nurses and other staff in developing the specifications for products so that they are procured based on their clinical effectiveness, rather than cost alone. Clare's approach considers the impact on other departments such as Estates who have to manage the disposal of increasing volumes of waste. By involving Estates within procurement Clare is able to consider the wider impact of decisions which would have previously only included a clinical perspective.

Clare has also compiled statistics highlighting the extent of the problem of macerator blockages and the economic impact of excessive use of pulp products, specifically the economic cost of repairs to clogged macerators. This allows Clare to demonstrate the impact on Estates and the environment, and that savings made in one department can be impact on other seemingly unrelated ones. NHS Supply Chain have worked with

Clare's local trusts to review other suppliers of pulp products and how these work in clinical practice.

Clare recognises the pressures hospital departments are under to identify cost savings but emphasises the importance of understanding the implications for Estates and the environmental impact:

"We've all got our budgets, we have to prove that we've saved, but there's a real conflict between what procurement have got to save and the life of that product ... We might say, it's cheaper to use single use plastic than buy some metal gadget that we've got to clean ... But nobody looks at the overall lifetime cost... [and the knock-on effects]."

Another important part of the work involves raising awareness among nursing staff about the cumulative amount of pulp products when disposed of and the impact on the environment. To do this she presents at nursing forums, and hosts a monthly multidisciplinary group which considers other products which are not sustainable.

Achievements

Previously buyers would focus on products at the best price without any recognition of the environmental impact. Clare has included environmental sustainability on the procurement agenda and it is now considered alongside quality, safety and cost.

There has already been success in communicating to staff that wipes are not flushable and it is hoped that she will be able to demonstrate that improved procurement of pulp products will reduce blockages, water use and unnecessary waste. The drive to reduce the use of pulp products is also part of a wider initiative to cut down on single-use plastic products. The Trust has successfully stopped the use of plastic straws and is now looking at alternatives to the 41,900 plastic cups disposed of in 2018. However, Clare emphasises the importance of considering how alternatives products may present their own problems and questions the standards of biodegradable products claimed by some suppliers.

Case studies from the Small Changes, Big Differences network

The *Small Changes, Big Differences* campaign launched in March 2015 and set out to promote the unique contribution that nursing staff can bring to decisions about procurement. Over time the scope was broadened to include how staff can positively contribute to making care more sustainable.

The 'Gloves are off' campaign

Nursing staff at Great Ormond Street Hospital identified a link between hand hygiene and the opportunity to reduce glove use. It was recognised that staff would often be wearing gloves when undertaking activities where there was no risk of blood or bodily fluids, such as administering medication. In Spring 2018, they launched the 'Gloves are off' campaign to educate staff and support them to undertake hand hygiene where appropriate to reduce unnecessary glove use. Evidence was collected before and after the campaign, and this led to an average reduction of 36,608 pairs of gloves per week. In an average

year this would generate a saving of nine and half tons of plastic. The full case study can be accessed [here](#).

Stock management system

A key contributor to the carbon footprint of the NHS is supplies and devices which have been over-ordered or ordered inappropriately, leading to stock being held which cannot be used. Derby Teaching Hospital NHS Foundation Trust has introduced an innovative stock management system. In particular this system aimed to address (1) issues with crucial resuscitation equipment not always being accessible, (2) problems with mismatched suitable available products, (3) wasted resources and budget. The solution was that key products were stocked in a vending machine. This has been found to reduce waste and allows staff to give feedback or suggest improvements in a routine manner. The full case study can be accessed [here](#).

Making operating theatres greener

Nursing staff at Brighton and Sussex University Hospitals NHS Trust recognised that there was a lack of awareness within theatre teams about waste disposal, and the impact that this has upon the environment. It was identified that many items were unnecessarily being placed into clinical waste, including sterile packaging. Simple awareness raising measures were put in place to encourage staff to think about what things are made from, and whether they can be reused or recycled. This helped staff to consider whether they truly did need to use a particular item. There was also a focus on water usage. Hand preparation for theatres can take about 5 to 6 minutes, and during this time the tap is running. Teams were encouraged to consider alcohol-based options where appropriate. The full case study can be accessed [here](#).

About the Royal College of Nursing

With a membership of around 450,000 registered nurses, midwives, health visitors, nursing students, health care assistants and nurse cadets, the Royal College of Nursing (RCN) is the voice of nursing across the UK and the largest professional union of nursing staff in the world. RCN members work in a variety of hospital and community settings in the NHS and the independent sector. The RCN promotes patient and nursing interests on a wide range of issues by working closely with the Government, the UK parliaments and other national and European political institutions, trade unions, professional bodies and voluntary organisations.

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ⁱ <https://www.who.int/globalchange/global-campaign/cop21/en/>

ⁱⁱ Kings Fund (2013) Overview of the health and social care workforce <https://www.kingsfund.org.uk/projects/time-think-differently/trends-workforce-overview>

ⁱⁱⁱ ARUP, *Health Care Without Harm, Health Care's climate footprint*, September 2019 [Available at <https://www.arup.com/-/media/arup/files/publications/h/health-cares-climate-footprint.pdf>]

^{iv} Health Care's Climate Footprint: Health Care Without Harm, ARUP Sept 2019

^v <https://www.nuffieldtrust.org.uk/news-item/the-environment-needs-to-be-higher-up-the-nhs-agenda>

^{vi} <https://www.england.nhs.uk/2018/10/nhs-saves-288-million-on-everyday-essentials/>

^{vii} <https://www.gosh.nhs.uk/news/gloves-are-off>

^{viii} ERIC, 2016/17 data <https://digital.nhs.uk/data-and-information/publications/statistical/estates-returns-information-collection/estatesreturn-information-collection-2016-17>

^{ix} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784263/UK_Statistics_on_Waste_statistical_notice_March_2019_rev_FINAL.pdf

^x <https://www.sduhealth.org.uk/policy-strategy/reporting/natural-resource-footprint-2018.aspx>

^{xi} <https://www.rcn.org.uk/professional-development/publications/pdf-006922>

^{xii} <https://www.nice.org.uk/guidance/qs61/chapter/Quality-statement-3-Hand-decontamination>

^{xiii} <https://www.ncbi.nlm.nih.gov/books/NBK144036/>

^{xiv} <https://www.supplychain.nhs.uk/about-us/sustainability/>

^{xv} https://wwwmedia.supplychain.nhs.uk/media/supplier_conduct_code.pdf

^{xvi} <https://www.rcn.org.uk/clinical-topics/infection-prevention-and-control>

^{xvii} <https://www.sduhealth.org.uk/policy-strategy/reporting/sustainable-development-in-health-and-care-report-2018.aspx>

^{xviii} <https://improvement.nhs.uk/resources/core-set-nhs-products-be-used-all-nhs-providers/>

^{xix} <https://www.cullen.co.uk/moulded-pulp/medical/>