



Clean Air Day Health Summit Report

Building clean air measures into the UK health sector's COVID-19 stabilisation and recovery

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1. Foreword

The more that health experts and scientists look, the more reason we have to be concerned about the impact of air pollutants on the health of people in the UK.

We know this concern is shared by many leaders and individuals in the health sector and we've seen some healthcare professionals and institutions act decisively to improve air quality and inform patients. For example, Barts Health NHS Trust provided low-pollution walking route maps inside patients' inhaler packs back in 2012, and Great Ormond Street Hospital launched its Clean Air Hospital Strategy in 2019 – a first in the UK, and possibly across the globe.

COVID-19 makes it even more important that we tackle air pollution, with some studies in the US, Italy, the Netherlands and the UK finding a correlation between long-term exposure to air pollution and deaths from COVID-19¹. Responding to COVID-19 has also delayed non-emergency procedures, leaving some people continuing to cope with health problems that are made worse by air pollution.

But in the midst of the terrible COVID-19 crisis, there are some specks of light that a better future can be possible. The better air quality across Europe that arose due to the sudden dramatic reduction in traffic and industry for just three months (March – May) is forecast to have avoided up to 30,000 premature deaths². Also, the NHS estimates that 46% of outpatient appointments (1.9 million in total) were carried out remotely during just seven-weeks of lockdown³ showing the possibility of healthcare without travel.

COVID-19 has shown us that air quality improves rapidly when we stop polluting, and that new models of care that cause less air pollution are available to us.

We are grateful for, and in awe of, the herculean efforts of the healthcare professionals who have put patients before their own health and provided care to millions during the COVID-19 crisis. And we know that the end is not yet in sight.

Those who lead, and work with the health sector mustn't let this COVID-19 crisis derail efforts to achieve clean air. As Sir Simon Stevens writes in the new NHS Net Zero Plan, *"The burden of coronavirus has been exacerbated and amplified by wider, deep-seated social, economic and health concerns. The right response is therefore not to duck or defer action on these longer-term challenges []. It is to confront them head on. With poor environmental health contributing to major diseases, including cardiac problems, asthma and cancer, our efforts must be accelerated"*. We must follow this lead.



Prof. Sir Stephen Holgate
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Chris Large
Co-CEO Global Action Plan

¹ ONS, 2020

² Giani et al, The Lancet, Vol4, Issue 10, E474-E482, Oct 01, 2020

³ NHS Net Zero Plan, 2020

2. Executive Summary

Air pollution is a serious and urgent health issue. Unless air quality is improved, the health and social care costs of air pollution in England could reach £18.6 billion by 2035⁴. 2,000 GP surgeries and 200 hospitals in the UK are exposed to polluted air⁵ and the NHS contributes 9.5 billion miles of road travel per year in England. The UK's health service treats people suffering the consequences of breathing polluted air, but also causes pollution through its operations.

NHS England and NHS Improvement recognises the need to cut emissions in its new *Delivering a 'Net Zero' National Health Service Plan*, which incorporates some air pollution-cutting measures. Public Health England made public education on air pollution one of its top ten priorities, and health professionals are among the most trusted members of society. GPs alone hold 308 million appointments per year. So the health sector could play a vital role in reducing air pollution levels and advising the public on cutting their exposure to air pollution.

Brexit and COVID-19 have made action more challenging, but despite politicians and health sector leaders acknowledging the importance of tackling the UK's number one environmental health hazard for many years, we do not yet have a comprehensive health sector response to air pollution.

In spite of COVID-19 pressures, a group of sector leaders came together in the 2020 Clean Air Day Health Summit to look for opportunities for the health sector to increase its response to air pollution.

These 30 leaders included a Government Minister, the Deputy Chief Medical Officer, MPs, and senior representatives from NHS England, PHE, NHS Trusts, Medical Royal Colleges, UKHACC, health NGOs, service user representatives, NHS suppliers and academics. The event was chaired by Professor Sir Stephen Holgate, UKRI Clean Air Champion and Special Advisor to the Royal College of Physicians, and Chris Large, Co-CEO of Global Action Plan.

Seventeen immediate opportunities for health sector action on air pollution were raised in the Summit, covering the following four potential response elements:

- A. Getting emissions down:** Including reducing patient travel, supply chain innovation, setting targets for management and incorporating clean air fully in the NHS Net Zero plan
- B. Getting advice to patients:** Including updating healthcare professionals' practices, educational materials for patients in health centres and a national public health campaign
- C. Getting educated:** Getting a better understanding of the air quality inequalities and the need to protect those most at risk of health issues caused by pollution where they live, work and study

⁴ Review of interventions to improve outdoor air quality and public health, Public Health England, 2019

⁵ NHS Long term plan, 2019

D. Getting experiences to influence policy: Including sharing the real and personal impacts that air pollution is having on patients to ensure the need for comprehensive political action is understood across the political spectrum and across the country

This list of opportunities is not a collective agreement by those at the meeting, but a collection of practical and ambitious steps that could form the backbone of a comprehensive health sector response to the air pollution crisis. The full list of opportunities from the summit is provided in the next section.

We at Global Action Plan hope that the summit and this report act as a springboard to action. There are a few institutions from which any national plan needs to stem – those that control health sector-wide operations, communications, medical practices and healthcare professional training. We hope that these institutions do come together to form that comprehensive plan.

Leadership can also arise from any individual, no matter their grade or age, and we hope that advocates throughout the health community find a way to make improvements from today – an extra conversation with a potential collaborator, adding an additional target into a management plan, or incorporating air pollution exposure advice during any current reviews of advice given to patients.

For our part, Global Action Plan will continue to advocate, connect and facilitate. We will advocate for and facilitate the creation of systemic healthcare responses. We will run exemplar projects, like the Clean Air Hospital Framework, and seek to fill the gaps where knowledge or solutions are insufficient. And we will connect other advocates where we feel sharing of information would benefit both parties. We welcome any conversations with those that seek the same healthcare response to air pollution.

This report also includes a factfile of the current health sector activity in response to air pollution. This factfile was created for the summit and supplemented with additional knowledge at the summit itself, which we hope serves to provide all with a basic starting point for action for the future.

Historically, health professionals have been pivotal in protecting public health, for example, by pushing for the Clean Air Act of 1956, and more recently the measures to tackle smoking. Air pollution is the UK's most harmful environmental hazard, affecting the lives of millions. The health sector response could lead to the society-wide action we need to overcome this current health tragedy.

'As health professionals, we have seven million reasons to be outraged. Seven million lives that are prematurely ended every year by a cause for which the solutions are well known. We call it "the new tobacco", as it now has a similar global death toll: it is air pollution'⁶

⁶ Dr Maria Neira, 'The Real Cost of Carbon is felt in our Lungs', <https://blogs.bmj.com/bmj/2019/09/23/maria-neira-the-real-cost-of-carbon-is-felt-in-our-lungs/>

3. 17 Opportunities for the Health Sector to Respond to Air Pollution

The Clean Air Day Health Summit identified opportunities for health sector action on air pollution that ranged from managerial and procedural changes to research, training and innovation.

These opportunities provide possibilities for the measures that would be included in a comprehensive health sector response to the air pollution crisis.

A. Getting emissions down: Including reducing patient travel, supply chain innovation, setting targets for management and incorporating clean air fully in the NHS Net Zero plan.

- 1. Establish a central mechanism to scale up good practice across the health service.** NHS Trusts will spend more if they must each assess solutions to cut air pollutant emissions individually. Where decisions rest with trusts, costs can be minimised by identifying the common challenges, piloting solutions in some locations, and giving guidance to all trusts. Solutions that can be implemented via common shared services and procurement could be more efficient.
- 2. Encourage and embrace supplier innovation.** Suppliers have ideas to cut emissions from a range of activities that cause air pollution, including digitising health services, online patient interactions, remote support to reduce supplier visits, and freight consolidation.
- 3. Fully incorporate air pollution reduction in to the Net Zero Plan:** The 2020 *Delivering a 'Net Zero' National Health Service* plan is a galvanising instrument for managing the environmental impact of the NHS. It already includes steps to reduce air pollution because some activities cause carbon and pollution emissions (e.g. phasing out the use of coal and oil in NHS buildings). Some pollutants will not automatically be tackled by the Net Zero carbon plan, such as indoor air pollution caused by cleaning products, and construction site air pollution. It seems sensible to build all air pollution measures in to the Net Zero Plan rather than establish a standalone air pollution reduction plan.
- 4. Performance manage pollution like all other important metrics.** At the health summit, targets for CEOs of NHS Trusts were suggested as vital in ensuring action is prioritised from the top, and throughout NHS trusts. This suggestion was made by an NHS trust CEO.
- 5. Model other team efforts used to tackle sector-wide issues.** This is not the first issue that requires the attention of many staff in the health sector, and other engagement efforts can be mirrored to help leaders and teams act in unison, such as the "Hello My Name Is" initiative.
- 6. Utilise the full business case for air pollution abatement when making investment decisions.** Improving air quality reduces the number of patients requiring treatment, but there are many other co-benefits that make the case for

action compelling. The full benefits of action can be included when making any decisions on investing time or money in tackling air pollution:

- Reducing the need for immediate treatment, such as a reduced rate of emergency asthma treatment, with up to 33 million attacks caused by asthma each year globally⁷
 - Minimising staff illness, as the recent CBI report quantified around 3m working days are lost because of illness caused by UK pollution levels exceeding WHO standards⁸
 - Stronger local communities as reduced traffic and more space for pedestrians can reduce road traffic accidents and social isolation, with the health site playing the anchor institution role
 - Reduced cost of operations, for example through smarter logistics and energy efficiency.
7. **Transforming transportation to minimise motor vehicle traffic.** Forced to minimise non-emergency visits to health sites in the COVID-19 response, three promising opportunities for long term change were highlighted at the summit: online consultations to minimise patient and family traffic, home or remote working for support staff, and minimising the number of goods deliveries.

B. Getting advice to patients: Including updating healthcare professionals' practices, educational materials for patients in health centres and a national public health campaign.

8. **Simple low-cost ways to explain how to avoid air pollution to vulnerable patients.** Patients – especially in respiratory, midwifery, paediatrics, and cardiology units – could be given information via onsite leaflets, posters, email, and social media for very little cost, giving patients the knowledge to protect their health by reducing their exposure to air pollution.
9. **A national public health campaign.** Many people do not understand the steps that would reduce the inhalation of air pollution, or do not place enough importance on taking those steps. A national campaign would increase understanding and increase action to reduce personal exposure.
10. **Health professionals and treatment pathways to give advice as standard.** Patients would be more inclined to follow health advice about reducing exposure to air pollution if given to them by healthcare professionals, and if that advice is given in a timely, consistent and clear way by being incorporated as standard in to the patient care pathway. Healthcare professionals are unlikely to become air pollution experts and so patients can be given answers to all their questions using the Clean Air Hub: www.cleanairhub.org.uk.
11. **Unfailingly communicating alerts of high air pollution episodes to patients.** The established air pollution alert systems are not always communicated by the health

⁷ Anenberg et al, Environmental Health Perspectives, Vol 126, No 10. 2018

⁸ Breathing life in to the economy, CBI, September 2020

sector to its patients. Doing so would lead to the vulnerable being more likely to avoid the heightened risks during episodes of high air pollution, for example by avoiding strenuous exercise outdoors on that day.

- 12. Combining good health advice and pollution-reduction efforts.** Increasing social prescribing of such activities as cycling and walking for exercise can have the co-benefit of reducing air pollution by eliminating short car journeys.

c. Getting educated: Getting a better understanding of the inequalities and the need to protect those most at risk of health issues caused by pollution where they live, work and study.

- 13. Carry out equality impact assessments, and connect with those under the greatest threat.** Air pollution has an unequal impact on those in inner-city locations and least affluent communities, which have a higher proportion of BAME residents than the national average. Decisions on pollution abatement and related health advice should factor in the need for greater equality, and connecting with these communities in the design of services will enable more effective services.
- 14. Provide a basic education on air pollution for all healthcare professionals and support staff.** It was felt that many in the sector do not fully understand the severity of the issue and this leads to it being overlooked entirely or deemed less important in clinical and operational decisions.
- 15. Find ways to make the issue personally relevant to the public to accelerate action.** Many who are affected by air pollution do not believe it is affecting their health. The health sector would have more success in communicating the need to act if armed with personal stories and evidence of the impact on individuals, rather than using the often quoted national figures of premature deaths.

d. Getting experiences to influence policy: Including sharing the real and personal impacts that air pollution is having on patients to ensure the need for comprehensive political action is understood across the political spectrum and across the country.

- 16. Ensure policymakers understand the real health issues patients present with.** We heard from health professionals who believe that air pollution is leading to an increase in cases presenting in their practices. Real experiences inform policy measures, help target them where needed and add urgency to the issue.
- 17. Health professionals could be more vocal in pushing for transformative policies.** Attendees suggested health professionals could make their voices heard on specific decisions or moments, such as the Environment Bill, COP26 and local decisions on measures such as ultra-low emission zones or clean air zones to add a powerful supportive voice to measures to cut air pollution.

Global Action Plan's view is that the UK health sector's response to air pollution will set an example for the world to follow when:

- All essential air pollution abatement measures are incorporated into the *Delivering a 'Net Zero' National Health Service Plan*
- There is a national public communication campaign of the scale seen to educate patients about healthy diets, being active, and the risks of smoking, drugs and drinking
- The health professionals and institutions dealing with those most vulnerable to air pollution are providing advice to patients on minimising exposure to air pollution
- A special focus is given to minimising the air pollution the health sector causes in communities that are homes to the most vulnerable, and providing pollution avoidance advice in these places
- All national and local policy decisions that affect air pollution levels are made with insight from health professionals on the health burden of air pollution.

A working party that combines relevant central and local parties would best begin this comprehensive response to air pollution.

4. Fact File on the UK Health Sector's Work on Air Pollution

This paper provides an overview of the UK health sector's current work on air pollution and outlines the unique role the sector can play in tackling the largest environmental health risk we face today. From lowering the health sector's direct contribution to air pollution, to the role of health professionals as trusted messengers, in raising awareness on the health impacts of air pollution and reducing people's exposure to airborne pollutants.

The paper details evidence and ideas from the recent "Delivering a Net Zero NHS" report⁹, alongside existing evidence borne from practical air quality projects in the health sector. It also includes the insights from the 2020 Clean Air Day Health Summit, which convened experts from the health sector, central government, local government and beyond to specifically discuss this topic.

The paper also outlines which aspects of pollution the health sector may be able to significantly address and identifies opportunities on how it may play this role, in partnership with others, and in sync with health initiatives such as the 2040 Net Zero aim.

'We know what the solutions to tackling air pollution are. We can see what leadership and taking action can do in a very short period of time.' 'If we can commit to that action and to collaborating we can make a difference to people's lives.'

A. Global Perspectives

The Heath Summit invited guests with an international outlook to share thoughts on what the UK could learn from health sector action on air pollution around the globe. They suggested that the UK is leading the way in some perspectives, notably with success in reducing air pollution in recent years and the policy measures in cities such as London. The UK is considered a champion on this topic by many overseas. At the same time, we could benefit from connecting to other health professionals globally, from Argentina, South Africa, the Philippines and beyond to learn from what else health professionals are doing to mobilise action on air pollution and to share the UK's learning.

Many cities such as Madrid and Paris are doing important work now on reducing traffic and urban greening, and health professionals can play a key role in supporting such initiatives. In summary, the perspectives provided suggested that the UK has a leadership position to uphold, but that there is still much to do to in the health sector to get air pollution levels down and protect patients, and international exchanges of ideas and solutions could be beneficial.

'Will air pollution be the new tobacco?' 'Perhaps, but on this issue we have very little time. Clean Air is fundamental to our health and is needed for a healthy and green recovery.'

⁹ In October 2020 the NHS adopted a goal to reach net zero carbon emissions by 2040.

B. Advising Patients & the Public

There are currently 1.3 million staff in the National Health Service, and they treat a million patients every 36 hours. The appreciation that the general public has for the service provided by the NHS is one of the most widely agreed aspects of the UK's national identity and medical professionals regularly top the polls of who the public trust the most.

The need for all staff to contribute to minimising the environmental impact of the NHS is recognised in the Net Zero Plan, which states "Whether it is a physiotherapist keeping their patients active with sustainable mobility aids, a mental health nurse providing high quality care via telemedicine or a hospital chef sourcing their ingredients from the local community, we all have a role". The same sentiment is true for the tackling of air pollution, but additionally, air pollution can have a direct and immediate impact on patients. The health impact of climate change follows a more convoluted path, such as the steady growth in regions affected by infectious diseases as vectors spread.

For air pollution, there is already a direct government-led warning about its impact on health (<https://uk-air.defra.gov.uk/air-pollution/daqj>), which is given to the most vulnerable when high air pollution episodes occur.

The Potential Advancement

It is possible that the health sector could be helpful in supporting

- the public to sufficiently understand how to avoid exposure to air pollution, and
- helping members of the public make lifestyle choices that minimise air pollution because they have health benefits, e.g. prescribing active travel.

This could be achieved through the dual approach of:

- National-level communications similar to existing campaigns on healthy eating, smoking, alcohol and drug taking
- Healthcare professionals providing guidance, especially to those whose health is more susceptible to damage from air pollution.

Current Situation

The UK Government Clean Air Strategy 2019 recognises the essential role of health professionals in helping patients and the public to protect their health from air pollution and commits to *"equip health professionals to play a stronger role by working with the Medical & Nursing Royal Colleges and the General Medical Council to embed air quality into the health profession's education and training."*

Public Health England's 2020-2025 10-point strategy includes a headline ambition on the health impacts of air pollution: **"Priority 3: Creating cleaner air - Develop and share advice on how best to reduce air pollution levels and people's exposure to polluted air"**

Under this priority, the aim is to achieve

- reduced exposure to polluted air and lower rates of ill health attributable to air pollution
- better health outcomes for vulnerable groups most affected by poor air quality

by

- growing and sharing the evidence base on the impact of air pollution on health and influence national and local partners to implement the most effective interventions.
- targeting our actions towards the most vulnerable population groups, including more deprived communities, people with pre-existing respiratory and cardiovascular conditions and young and older people.

Public Health England's activity may include the following:

- develop the evidence base on air quality, including on sources of pollution, levels of exposure and how this contributes to health outcomes
- advise and influence decision-makers on the effectiveness of actions to promote healthy indoor and outdoor environments (including their ability to reduce inequalities) and support their implementation, sharing information and learning from local, national and international partners
- working with Defra, the Sustainable Development Unit, third sector organisations and other partners, develop the Air Pollution Control Plan, implement the Clean Air Strategy, and inform existing and emerging legislation and regulation
- improve how advice and information on indoor and outdoor air pollution can be communicated, drawing on behavioural science and, where resourced, supporting awareness-raising activity.

The following insights have been provided by 40 NHS medical staff and members of the medical royal colleges through a pilot exploration in to healthcare professionals potential advisory role on air pollution. This pilot has been conducted by the UK Health Alliance on Climate Change and Global Action Plan, funded by Defra and the Clean Air Fund.

1. Most health workers would be willing to provide advice on air pollution to vulnerable patients (in an appropriate place in the patient care pathway).
2. The advice itself, when it is provided, and the language used to convey it will need to be tailored for different patient groups such as respiratory, midwifery, paediatrics, cardiac etc.
3. Health professionals cannot be expected to be air pollution experts. Back up resources will be required such as a central resource (online) for public information to refer patients to.
4. Patients mustn't be made to feel responsible for overcoming the air pollution challenge by themselves. Any specific health advice to patients would be best accompanied by a national public health campaign.
5. For advice to become a mainstream activity, air pollution would need to become part of professional training and development for health professionals.

The pilot has created communications samples to be utilised with a narrow range of patients.

The Clean Air Hub has been designed to be the general-public reference site to which health workers can send patients for further information, removing the need for health workers to become experts on all aspects of air pollution. Created by Global Action Plan with funding provided by The Clean Breathing Institute, Defra, Kusuma Trust and Uber Foundation. www.cleanairhub.org.uk

The Net Zero Plan might also provide some guidance as to what solutions could be available to support wider NHS communication about air pollution. The Net Zero Plan includes the following commitments about staff action on carbon emissions:

- Meeting the growing demand for skills will require partnerships, which need to be further supported by the introduction of sustainable healthcare into the curricula for all health professionals. This is already being done by the General Medical Council outcomes for medicine graduates, the Nursing and Midwifery Council Standards of Proficiency for Midwives and the World Federation of Occupational Therapy Minimum Standards for the Education of Occupational Therapists.
- Teaching on climate change, health and sustainable healthcare is also being introduced to a range of medicine and allied courses in the UK – including medicine at the University of Bristol and nursing and dietetics courses at Plymouth University. The NHS Confederation is developing training to educate and upskill non-executive directors on the opportunities for sustainable healthcare in their trusts.

As part of the discussions at the Clean Air Day Health Summit, the following insights were also shared on this issue:

- At present air pollution is not part of the professional training and development of health professionals. There is a feeling that health professionals are not yet speaking publicly enough about the health impacts of air pollution with decision makers as well as patients.
- Some senior health professionals reflected that clear messaging needs to be shared from government centrally on the impacts of air pollution, and the need for changes to street space.
- Work by WHO and Guy's and St Thomas' Charity which demonstrate the importance of including the communities that are worst hit by air pollution to be part of the conversation, were referenced. Representatives of these often-deprived communities will help health professionals devise the best ways to communicate air pollution advice to the community.
- Increasingly, tools are being used to highlight information about high pollution days, including the GLA's air pollution alerts and DEFRA'S UK air pollution forecast map. Patients are not yet receiving this information universally, especially those most in need.

C. Minimising Emissions Controlled or Influenced by the Health Sector

In October 2020 the NHS adopted a goal to reach net zero carbon emissions by 2040. The accompanying report, alongside existing evidence borne from practical air quality projects in the health sector, provide us with insights in to the causes of emissions and the potential solutions. This section provides a summary of these insights and discussions on the Net Zero Plan and other sector activities as part of the Health Summit.

'We need to look at how all of our operations, and every aspect of what we do can positively impact reduction of air pollution and emissions. This effects those with the biggest social and health inequalities, and we have an absolute duty to fix that'

What are the emissions from the health sector?

Defra's 2019 clean air strategy describes the causes of the UK's air pollution emissions as road transport, manufacturing and construction, industrial processes, the energy industry, non-road transport, agriculture and domestic burning. The health service directly undertakes some of those activities, and relies on further products and services that cause emissions in these ways.

The brand new report "Delivering a Net Zero NHS" (Oct 2020), which provides a plan to reach net zero carbon emissions by 2040, provides a helpful distinction of activity that causes carbon emissions in the NHS, which has crossover with activity that causes air pollution:

1. The NHS Carbon Footprint refers to the carbon emissions produced through providing care, over which the NHS has direct control
2. The NHS Carbon Footprint Plus refers to carbon emission from the entire scope of its emissions, which it may not directly control but can influence.

Both footprints are included in the Net Zero pledge, with the following activities listed as critical areas for carbon reduction

- Estate and facilities
- Medicines
- Supply chain
- Travel and transport
- Food, catering and nutrition
- Research, innovation and offsetting.

This frame of thinking – emissions under direct control and emissions that can be influenced – applies equally to air pollution. And many of the activities that cause carbon emissions also cause air pollution. The additional factor to consider in air pollution emissions is also that the location of emissions is highly pertinent to the degree of potential harm to humans, whereas carbon emissions have the same contribution to climate change no matter the geographic location.

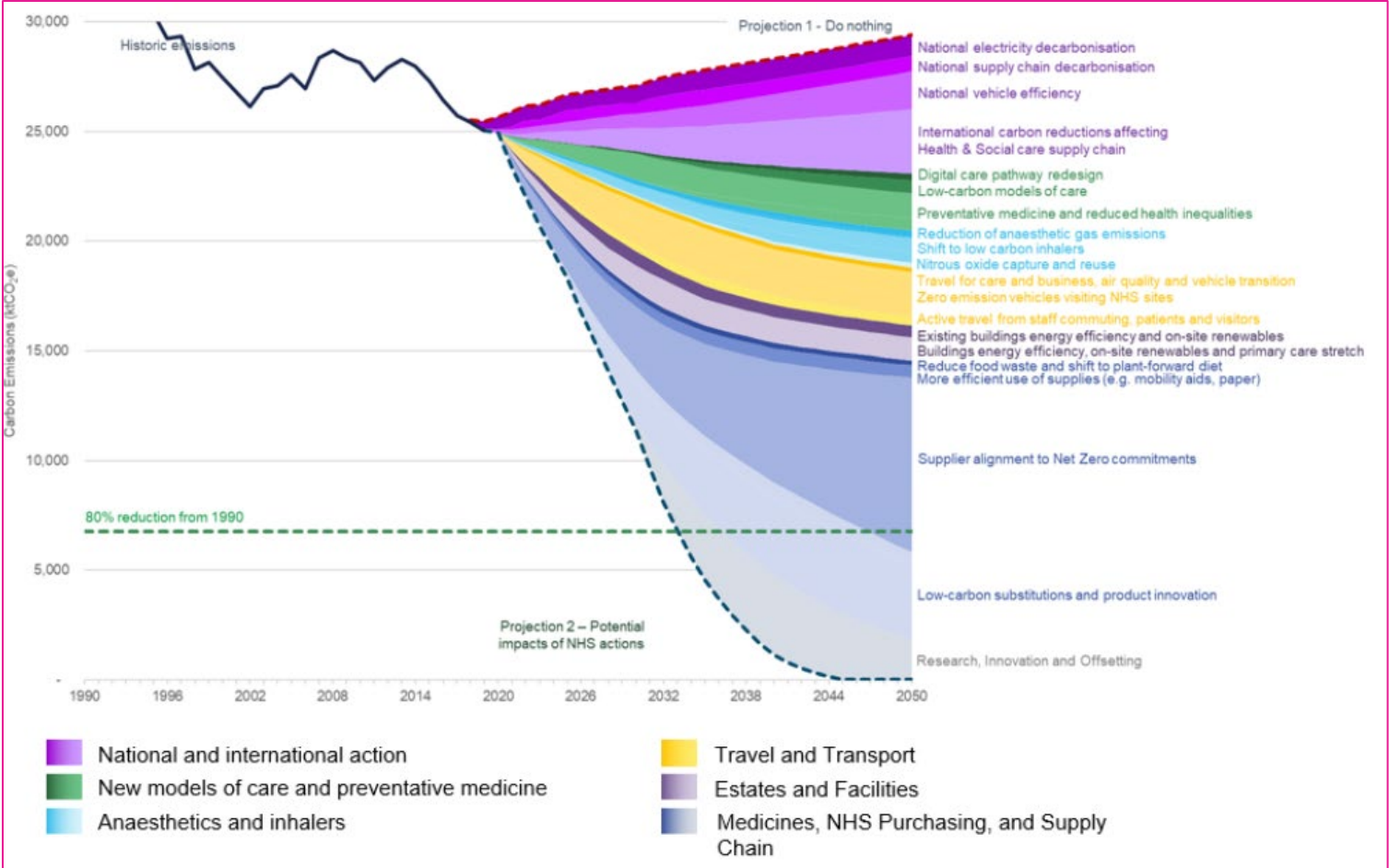


Figure 1 - Pathway to net zero for the NHS Carbon Footprint Scope

The above chart, taken from *Delivering a Net Zero NHS*¹⁰, provides an indication of the emissions reduction through action on the different parts of the NHS Carbon Footprint Plus. Although we do not have data on the NHS *air pollution* footprint, this chart may provide some guide as to which elements of the NHS ecosystem require action if the air pollution footprint is to be minimised.

In 2018, Great Ormond Street Hospital NHS Trust and Global Action Plan created the Clean Air Hospital Framework to enable hospital sites to understand their air pollution causing activities and the solutions to address them. The framework can be downloaded here: www.cleanairhospitals.org.

¹⁰ Delivering a 'Net Zero' National Health Service, <https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf>

This exercise identified that air pollution is caused by hospital operations that contribute to air pollution in the local area, and which can also affect the air quality inside hospital buildings. The major sources of air pollution within hospitals sites that were identified in the Clean Air Hospital Framework are:

- Logistics and waste transport
- Fleet vehicles and ambulances
- Staff, patient and visitor travel
- Materials used in refurbishment, fit out and cleaning
- Use of fossil fuels or biomass on site for heating
- Construction phase use of diesel and creation of dust

Potential solutions

The Net Zero plan again includes insights that are helpful to understand the potential solutions to the health services' air pollution footprint. The plan states that "to deliver a net zero health service the NHS will need to pay close consideration to" the following aspects:

- New models of care and alignment with the NHS Long Term Plan
- Workforce and leadership
- Funding and financial mechanisms
- Data and monitoring
- Adaptation

The Clean Air Hospital Framework explored the solutions that could be adopted by hospitals as communicated in the following image:



The Net Zero plan includes the following commitments or activities that will contribute to minimising the air pollution caused by health service activity:

- Remove all coal and oil heating systems from the estate
- Ensure all vehicles purchased or leased are low and ultra-low emission (ULEV), in line with the existing NHS operating planning and contracting guidance deliverable for 2020/21.
- Meet the NHS Long Term Plan commitment for 90% of the NHS fleet to use low, ultra-low and zero-emission vehicles by 2028, and go beyond this with the entire owned fleet of the NHS eventually reaching net zero emissions.
- Undertake green fleet reviews to identify immediate areas of action at the individual trust level.
- Incentivise staff to use electric vehicles, including increasing access to EVs.
- Develop and test the world's first hydrogen–electric hybrid double-crewed ambulance.
- All NHS trusts will be required to have a green travel plan as part of their annual planning and reporting, which should also set out how staff can be offered flexibility in their working patterns and supported to choose sustainable methods of transport for their commute.
- Emissions can be reduced through dedicated programmes to tackle air pollution, and prevent unnecessary journeys through improved preventative medicine and enhanced digital care. Early estimates suggest that moving to online outpatient appointments in response to COVID-19 restrictions could have avoided 58,000,000 miles of travel over three months
- Working with the supply chain to electrify freight and decarbonise construction: "Before the end of the decade, the NHS will no longer purchase from suppliers that do not meet or exceed our commitment to net zero"
- A new Net Zero Carbon Hospital Standard will be available from spring 2021, and applied across the 40 new hospitals to be built as part of the government's Health Infrastructure Plan
- The urgent and emergency care programme is working in partnership with the primary care and community care teams with NHS 111 First helping to rapidly triage and connect patients to the most relevant, and often community-based, health professional. It is estimated that accelerating this approach will directly improve patient treatment, avoiding approximately 8.5 million km of unnecessary travel per year, to and from hospitals.
- Digitally enabled care models and channels for citizens that will significantly reduce travel and journeys to physical healthcare locations, with care closer to home being delivered through remote consultations and monitoring.
- A Tailored induction module all NHSE-I staff to support staff understanding of the links between health and climate change, and interventions they can take to reduce emissions, with a dedicated net zero training package for staff working in estates and facilities.

Reporting: Annual sustainability reporting is now mandated for clinical commissioning groups (CCGs) and trusts by the NHS Standard Contract. This will be supported by efforts to mainstream sustainability into the common data pipeline for the system, and by making a wide range of tools available online to allow NHS organisations to measure their own progress.

As part of the discussions at the Clean Air Day Health Summit, the following insights were also shared on this issue:

- CEOs of NHS Trusts are not given targets on environmental performance, and action throughout the entire trust is limited by that omission. A performance indicator on how environmentally sustainable a hospital is will drive accountability through the leadership of organisations, including on how they deliver on air quality. This will create a step change – until then it will rely on enthusiasts.
- Making a stronger case of the cost benefits to tackling air pollution will enable faster action on emissions, building on the recent CBI/CAF report on the economic impact of air pollution.
- Hospitals will act much more swiftly when they don't have to find an extra budget for the advice that they need to tackle air pollution. They won't find £50-100k each for consultancy advice each year to taking air pollution action forward. Collective approaches to learning are needed.
- COVID-19 has forced the health sector to embrace remote working, and remote consultations. This was deemed to be an incredible opportunity to embrace these advances to reduce the NHS's contribution to 4% of all road journeys.
- In some cases, the air pollution patients will breathe at hospitals may be worse than the air pollution they breathe when at home if they live on the outskirts of urban areas. That is deeply concerning for vulnerable groups.
- Improvements around hospitals sites may also bring wider improvements than just air quality – e.g. more access to street space, better social cohesion with things like pedestrianisation of road space.

'On hospital play streets, this is what all children in hospital deserve. The open space was phenomenal. It brought joy to our staff. Hospitals want to do this stuff.'

Ecosystem support and achieving the long-term transformation

The Net Zero Plan goes to lengths to explain that the carbon footprint cannot be minimised solely by NHS staff alone, and the same can be said of the air pollution footprint.

"Everyone will need to continue to play their part – including our partners, our suppliers and our staff."

The Net Zero Plan goes on to explain that the aim to be net zero by 2045 (for the 'footprint plus') has set the long term direction but that all the solutions needed to bring down the carbon footprint are not necessarily available yet. Innovation and collaboration to find new solutions will be essential.

The next six months are the beginning of this process, with the chance to consult widely on the plan that has been published at the start of October 2020, and to identify if further commitments can be published throughout 2021.

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global action plan

OUR LIVES. OUR PLANET.

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