



**Healthy London
Partnership**

Toolkit for NHS trusts: supporting the NHS to reduce its impact on air pollution

Case Studies and Examples to support Trusts to reduce their impact on air pollution

Supported by and delivering for:



Public Health
England

NHS

SUPPORTED BY

MAYOR OF LONDON

London's NHS organisations include all of London's CCGs, NHS England and Health Education England

Thanks for pledging to reduce your organisation's contribution to air pollution

Let's be honest. Your trust is probably one of the largest organisations, with one of the largest estates, and one of the largest workforces in your local area. You hold contracts worth millions of pounds with many different companies to provide you with goods and services. You recruit some of the finest scientific minds in the country, if not the world. You are a major player in your local economy.

Because of your size, you could well be a major polluter in your area. But your size could also help you to be part of the solution, both through your actions, and your expectations of the companies that supply you with those goods and services.

This toolkit is designed to help you to think of ways that your organisation can help London to reduce the level of air pollution to help make London one of the healthiest cities in the world and to reduce the impact air pollution has on asthma in children in London.

The toolkit pulls together a range of ideas that your trust can implement. The innovations range from those that are quick, easy and free to implement to those that may require more work to implement or some additional funding. We have also outlined some innovations that can help you to save your organisation money. All the innovations have been taken from case studies which have been implemented elsewhere or from research which proves they are effective. Links to more information on the ideas are included.

Types of innovations an NHS trust could implement



Information giving



Procurement



Nature



Behaviour Change



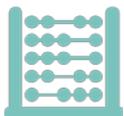
Travel



Innovation



Buildings/ Estates



Measuring your impact



01

Ideas which are free for trusts to implement

Encouraging staff and patients to take action

Encouraging staff and patients to take action is an easy and fast way to help to reduce levels of air pollution:

- Encourage staff to travel to work in a different way:
 - Cycle to work schemes
 - Walk to work schemes
 - Use of public transport
 - Carpooling
 - If your hospital has shuttle transport between sites, encourage staff to use these
- Let staff and patients know about alternative routes to your sites that avoid congested roads
 - Produce maps for staff and patients to key places around your site (e.g. to the nearest tube/train station or the nearest pharmacies)
- Let patients know about the local transport routes and timetables to and from the hospital <https://www.bhrhospitals.nhs.uk/plan-your-journey>



Driving does not only increase levels of air pollution for walkers. Drivers are in fact exposed to higher levels of air pollution in their cars than people walking, so cause more harm to themselves than to others. Walking therefore reduces air pollution exposure for society in general and drivers in particular.



Encouraging staff and patients to take action

You don't just need to encourage staff and patients to take action whilst at work but can let them know about local activities and schemes that can help to reduce the levels of air pollution in London through their day to day life.

These are some examples of initiatives/schemes you can signpost people to:

- Displaying your local air quality campaigns in the hospital -
- Blablacar – trusted carpooling platform www.blablacar.co.uk
- Zip car – car sharing and hiring in London <http://www.zipcar.co.uk/car-hire-london>
- Toogoodtogo – an app that signposts people to food which is sold at reduced prices from food stores at the end of the day to avoid food waste <http://toogoodtogo.co.uk/>
- Streetbank – a platform for sharing or giving away items you don't use very often with your neighbours, rather than buying more things you won't use <https://www.streetbank.com/splash?locale=en>
- National Park City – a group of volunteers across London aiming to make London a greener and healthier place to live <http://www.nationalparkcity.london/>
- Click Collect London - Encourage your employees to use Click and Collect services instead of having items delivered to their home or to work it reduces congestion and the impact on the air quality.



Engine Idling

Stopping engine idling is an easy and free way to help to reduce the NHS contribution to air pollution. Engine idling is keeping your engine on whilst stationary for a length of time. Research indicates that if you are waiting longer than 10 seconds, switching your engine off and on again can reduce unnecessary pollution. For trusts this could involve vehicles waiting outside your organisation, which could include:

- Patient transport
- Patient's own vehicles
- Staff transport
- Deliveries to the organisation

Sending messages out to staff and patients through newsletters, signs and posters, and using trust volunteers can help to remind drivers to turn their engines off whilst they wait.

Why not work with other organisations in your area to try to promote this further? For example, see if schools, colleges, or local authority buildings can help maximise the impact, and work out how many pollution you have prevented together.

Download this [inforgraphic about the issues surrounding idle engines](#).



Case Study – Clean Air, Yeah! Great Ormond Street Hospital

Great Ormond Street NHS Foundation Trust (GOSH) worked with patients at their hospital on a project that aimed to promote cleaner air around the hospital. Through working with patients, GOSH created a suite of tools to encourage drivers to turn their engines off in front of the hospital and to encourage visitors to stop coming to the hospital in polluting vehicles.

A case study from the Sustainable Development Unit (SDU) on their air pollution work demonstrated how, in staff presentations, they encouraged drivers not to idle their engines, and by designing eye catching signs and illustrated walking maps, they helped patients to find their way to the hospital more easily.

http://www.sduhealth.org.uk/documents/case_study/GOSH%20-%20AIR%20POLLUTION%20new.pdf

GOSH also produced a video about children's views on pollution and what can be done to improve it for patients:

<https://www.youtube.com/watch?v=r9kEYY0mFrs>



TFL toolkits

- As part of TfL Cycling Workplaces, you can get the following for **free**:
 - cycle parking for your site
 - a cycle safety seminar for staff at your workplace
 - one-to-one cycle skills sessions for staff
 - bike safety checks at your site
 - a guided bike ride from your site (bikes can be provided)
 - Santander Cycles vouchers (waiving the £2 usage fee)
 - Cycle Champion training for staff at your workplace

Register at tfl.gov.uk/cyclingworkplaces. You will be asked to do a staff travel survey before you order and again in a year.

- TfL's [Walking Tube map](#) shows the walking times between adjacent stations on the same tube line in zones 1-3. A [steps](#) version shows the approximate number of steps.



Showing your support for the Mayor's air quality campaign

One simple way of helping to improve London's Air Quality is by supporting some of the campaigns that are already going on. This may include some of the campaigns mentioned in this toolkit or could include the Mayor's Air Quality Campaign for the capital. Ways of getting involved could include:

- Writing public letters of support for the campaign and the positive impacts it could have on health
- Responding to any public consultations which are on-going to represent the health perspective on the London Air Quality strategy.
- <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality>

Local boroughs have to complete a Local Air Quality Management framework each year to review and improve the air quality within their areas. A report outlining the findings and action taken by local boroughs can be found below. For more local information, contact your local borough to see how you can align your organisations plans to that of the local borough.

https://www.london.gov.uk/sites/default/files/borough_air_quality_report_2017_final_2.pdf

Clean Air, Better Business

The 'Clean Air, Better Business' campaign is run by the Cross River Partnership, a public-private partnership which has been delivering regeneration projects in London since 1994.

One of its key aims is to improve air quality and reduce the city's carbon footprint.

To support this the campaign has developed a suite of documents to help businesses reduce their impact on London's air quality, which includes:

- Options for redirecting personal deliveries
- Delivery and servicing Plan case studies
- Information on transportation and supply chains

<https://crossriverpartnership.org/projects/clean-air-better-business/>

They have also developed a clean air route finder to help people to reduce their exposure to air pollution:

<https://crossriverpartnership.org/projects/clean-air-walking-routes/>

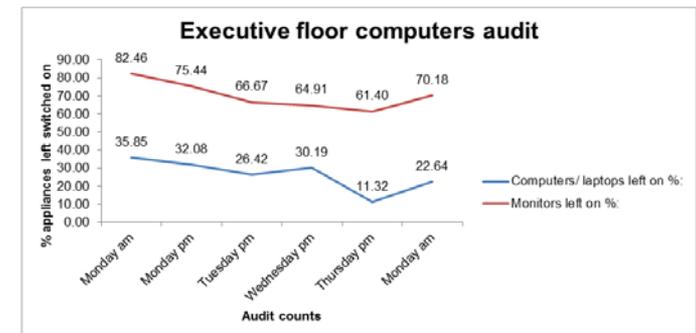


02

Ideas which can help to
save the organisation
money

Switching Off

- Over the 2015 Christmas period, there was an overall reduction in energy spending across the Royal Free London NHS Foundation Trust from people switching electrical items off, of **£7,856**.
- Interested to see whether these **cost and emissions savings** were replicable all year round, the Trust audited its executive offices and found that, in an office of 60 desks **£7,952** savings were achievable throughout the year if more people switched their desktops, screens, printers, projectors, air-conditioning, and other electrical appliances off, when they went home at night or over the weekend.
- The Royal Free London NHS Foundation Trust, at the time, had a total staff of over 10,000 people. If almost £8,000 savings were achievable from 60 people, that's a whopping **£1,333,333** over a year that they could save if everybody in the Trust switched things off at night or at weekends



Reviewing the products you buy in the organisation

Many different products and services which are bought in the NHS can have an impact on the quality of the air both inside and outside. Reviewing the products and services you buy and how they impact the contribution of your organisation to London's air quality could help to reduce your contribution and save your organisation a considerable sum too.

Buying more sustainable products:

http://www.sduhealth.org.uk/documents/case_study/20160913_Case_Study_SDU_procurement_designed.pdf

http://www.sduhealth.org.uk/documents/case_study/2016%20NHS%20Supply%20Chain%20-%20Gloves.pdf

Thinking about your organisation's energy usage:

http://www.sduhealth.org.uk/documents/case_study/Procurement_Rotherham.pdf

http://www.sduhealth.org.uk/documents/case_study/1282897855_KWRI_energy_-_nhs_oldham_in_greater_manchester_-_sustai.pdf

- http://www.sduhealth.org.uk/documents/case_study/20150505%20-%20Blackpool%20and%20Salix.pdf



Reducing waste in your organisation – Barking Havering and Redbridge University Hospital Trust

Barking Havering and Redbridge University Hospitals Trust have run a number of projects over the last few years to reduce their contribution to air pollution. Some examples of their work and the impacts are detailed below.

Reducing waste in theatres:

<https://www.bhrhospitals.nhs.uk/download.cfm?doc=docm93jjjm4n844.pdf&ver=965>

Messaging to staff and demonstrating success:

<https://www.bhrhospitals.nhs.uk/download.cfm?doc=docm93jjjm4n846.pdf&ver=968>

Energy Savings:

<https://www.bhrhospitals.nhs.uk/download.cfm?doc=docm93jjjm4n845.pdf&ver=967>

Travelling to the trust, encouraging the use of public transport and walking routes :

<https://www.bhrhospitals.nhs.uk/plan-your-journey>



Reducing waste in your organisation – Barts Health

Barts Health have also done a lot of work over the last few years to improve become more sustainable and reduce their impact on emissions **whilst saving £9.2million**. Take a look at these resources they have created to get some ideas:

A video demonstrating how they implemented it:

<https://youtu.be/FCAskWHuye8>

An infographic with all their innovations and project:

<https://www.bartshealth.nhs.uk/download.cfm?doc=docm93jjjm4n662.pdf&ver=929>

A link to their vision or 2020:

<https://www.bartshealth.nhs.uk/download.cfm?doc=docm93jjjm4n664.pdf&ver=931>



Saving on staff time and travel costs

Encouraging staff to cut down cycle or walk to work benefits their health and the local environment. If you can cut down travel between sites during the day, by encouraging teleconferencing and virtual meetings, you can reduce costs and increase staff productivity.

Examples:

http://www.sduhealth.org.uk/documents/case_study/Leeds%20CCG%20Travel%20reduction%20-%20DESIGNED.pdf

http://www.sduhealth.org.uk/documents/case_study/Teleconferencing.pdf

http://www.sduhealth.org.uk/documents/case_study/1242995793_JFyh_transport_-_north_lincolnshire_goole_hospitals_fo.pdf



Bulk deliveries

NHS trusts have hundreds of contracts with many different suppliers which can result in many of different deliveries arriving at Trusts on a daily basis. One of the ways of improving your contribution to air quality is by streamlining your deliveries to the organisation and encouraging deliveries to be arranged in bulk.

This should form a key component of procurement and buying strategies. It also helps to reduce congestion around your Trust sites, due to there being fewer large, dangerous vehicles. It can also reduce delays on public transport by reducing traffic, so your patients are more likely to arrive on time and not miss their appointments.



Circular economy

A circular economy is a restorative and regenerative approach to keep products, components and materials at their highest utility and value at all times. The idea is that it removes waste from the system by using resources in their component parts to their maximum capacity. For example if a part of a machine has broken and can't be replaced, how are all the other working parts of the machine being used to maximise their use. This should also help patient care and experience. Instead of waiting for weeks to replace faulty equipment, get component parts replaced or fixed quickly and save money in the process.

The Ellen Macarthur Foundation is leading research and implementation of these principles by working with large companies, academic institutions and top business leaders to spread good practice. Have your suppliers signed up?

If yes, are they acting this way? Make sure that you hold them to account.

If no, which other trusts use them? Can you group together to influence them to sign up?

<https://www.ellenmacarthurfoundation.org/circular-economy>



03

Ideas which may cost the organisation to implement them

A Green Fingered NHS

How you can use plants to improve the air quality

Although this does require some expenditure from the organisation, it can be a low-cost way to improve your contribution to London's air pollution. Here are 3 suggestions on different types of things you can plant:

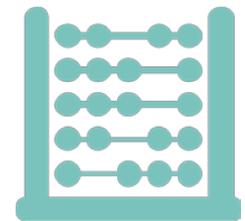
1. Plant Nitrogen fixing plants – These are plants which thrive on nitrogen and collect the nitrogen from the air (as opposed to the soil) and store it in their roots: e.g. clover, roobios, honeybush, indigo, lupins. Legumes and beans also have these properties. Why not grow your own beans and peas at your organisation to support your staff and patients to eat healthily too!
2. Improve your indoor air quality with plants – Indoor air quality can also contribute to poor health outcomes, consider lavender, eucalyptus, aloe vera, spider plants, and snake plants
3. Green Walls, Green Roofs, rooftop gardens and tiny parks – These initiatives require a little more investment and time but they have a greater impact in reducing the levels of nitrogen and carbon in the air. Many hospitals already have Green Walls and you can see edible bus stops and underground “parks” on the tube in London already. <http://theediblebusstop.org/>
www.growup.community www.energygarden.org.uk



Air quality sensors

Air quality sensors allow trusts to understand and measure their impact on London's air pollution. They help to let the Trust know what their own individual impact on London's air quality is and can help to identify what action to take.

New York implemented air quality sensors and discovered that some of the buildings using certain heating oils were contributing more to air pollution than all the vehicles on the road combined. This meant that those buildings could find alternative heating oils to reduce their impact on the city's pollution levels. New York is currently enjoying its cleanest air quality in 50 years. Organisations such as Bloomberg Philanthropies are working with the Mayor of London to implement similar sensors and monitors in London.



Turn the pollution from your vehicles into ink

Graviky Labs have designed a form of technology which captures the pollutants from the exhaust of a vehicle and turns the pollutant into a safe ink which can be used in pens for artwork.

Graviky Labs have estimated that if all the cabs in London were fitted with the device there would be 30 trillion litres of clean air each year – imagine what it could be if all NHS vehicles in London were fitted with these devices. <http://www.graviky.com/>



Recycle your coffee cups

Most NHS sites have coffee shops selling takeaway coffee on site. Takeaway coffee cups are renowned for being difficult to recycle. However a new innovation has started to recycle these cups to reduce waste levels.

London started to place coffee cup bins around the city and Liverpool Street Station and in one month they collected 509,091 cups – which can now all be recycled into new products. What impact would this have if all NHS trusts in London did the same?

This could be as simple as placing bins around your organisation or you could go even further and work with the contracted provider to demonstrate how they are trying to reduce their impact on London's air pollution.

www.nextcupcycle.co.uk



Innovations which help to produce energy and remove particulates – Bird street

1. Pavegen – This company have developed tiling which can generate kinetic energy and renewable electricity from foot-steps. Installing it in places where there are large numbers of people walking can generate electricity for the organisation. <http://www.pavegen.com/what-we-do/>
2. CleanAir Bench - Clean Air bench is a street furniture solution which has been developed to remove nitrogen dioxide and particulate matter from polluted air and lets the clean air out for people sitting on the bench to breathe in. <http://www.airlabs.com/cleanair-bench-campaign-page>
3. Airlite – A company which develops paints to reduce air pollution including nitrogen oxide and nitrogen dioxide. <http://www.airlite.com/airlite-miracles/anti-pollution/>

If you are interested in these products they are all currently in use on Bird Street near Oxford Street <http://www.birdstldn.com/>



Worried about cost? Involve your Trust charity

If you are concerned about the potential costs of some of these suggestions, get in touch with your Trust charity. They have a remit to pay for equipment that will improve patient care and patient experience, or to help Trusts to make financially sustainable investments.

By reducing the air pollution output of your Trust, you will improve the **experience** patients with respiratory conditions, especially young patients, who feel the effects of pollution more harshly than adults.

Air pollution can aggravate clinical symptoms, so by taking steps to reduce it, you are also more likely improve clinical outcomes for **patients**.

As well as ideas that save money by reducing expenditure on non-clinical costs, improving patient experience and outcomes is another good way to **reduce expenditure** in the long-run.

Remember, all of these are exactly the kinds of things that a Trust charity is there to support with.