



**How the Environment and Sustainability Link to Healthcare and Pharmacy**

24.05.2022

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**Overview**

**Introduction**

- 15 min

**Focused Topics & Interventions**

- 15 min

**Discussion Opportunity**

- 25 min

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**Air pollution a cause in girl's death, coroner rules in landmark case**

Coroner says failure to reduce pollution levels to legal limits was factor in death of Ella Kissi-Debrah, who had severe asthma

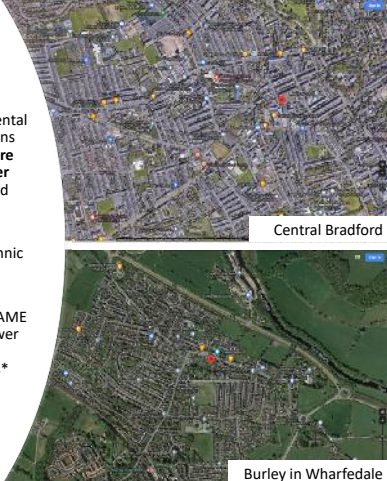


Dec 2020 – "For the first time in the UK - and possibly the world - air pollution has been recognised as a cause of a person's death"

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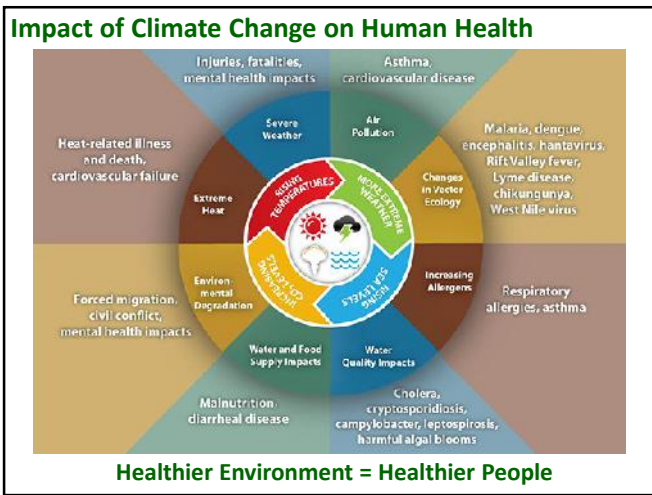
**Inequalities**

- Unequal distribution of environmental benefits and risks across society means that **socially disadvantaged groups are disproportionately exposed to poorer environmental conditions** (locally and globally)
- 23% of black, Asian or minority ethnic adults have no access to a garden\*
- Communities with 40% or more BAME residents have access to 11 times fewer green spaces locally than those comprising of mainly white residents\*



\*Environment Agency WY Climate Change Virtual Conference Oct 2020

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## RPS Sustainability Policies

**Declaration of Climate and Ecological Emergency**  
Pharmacists and pharmacy teams have a clear role to play in combating climate change.

**LET'S ALL ACT NOW.**

ROYAL PHARMACEUTICAL SOCIETY

1. Improving prescribing and medicines use
2. Tackling medicines waste
3. Preventing ill health
4. Improving infrastructure and ways of working

RPS Sustainability Policies ([rpharms.com](http://rpharms.com))

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## NHS Net Zero

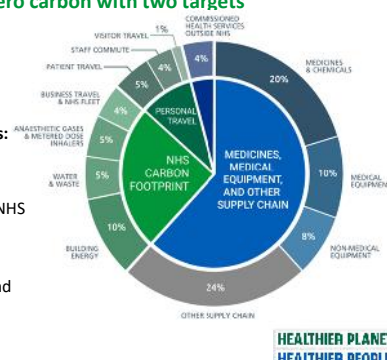
In Oct 2020 the NHS became the world's first health system to commit to reaching net zero carbon with two targets

**Carbon Footprint:** for the emissions we control directly, net zero by 2040.

**The NHS Carbon Footprint Plus:** for the emissions we can influence, net zero by 2045.

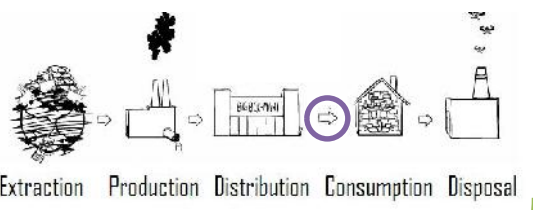
Medicines account for 25% of NHS carbon footprint (NHS netZero 2020)

MDIs alone are 3% of health and care carbon footprint



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## Pharmacy and Sustainable Quality Improvement



### Reduce Activity

- Best quality healthcare reduces worsening health
- Lean pathways, e.g. appt visits
- Reduced wastage in supply
- Preventative medicine
- Patient empowerment, Self care & Lifestyle Interventions
- Reduce unnecessary healthcare e.g. reducing ADRs and problematic polypharmacy

### Lowering the Environmental Impact

- Lower carbon options e.g. inhalers
- Appropriate disposal of medication
- Reduced packaging, and non-recyclables
- Recycling schemes for packaging and inhalers
- Low carbon distribution methods
- Promoting pro-environment attitudes

Image <https://www.storyofstuff.org/>

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We can all help in some way....big or small

Everyday is an opportunity.....

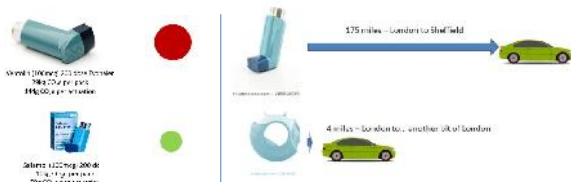
But the time to act is now

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## Inhalers

MDIs alone are responsible for 3% of the total NHS carbon footprint. A key early focus of the NHS Net Zero Plan.

Most of these emissions come from the propellants used in metered dose inhalers(MDIs) to deliver the medicine, rather than the medicine itself.



It is also important to note that poor asthma control has significant environmental effects through SABA use, acute treatments, appointments and admissions

**Counselling point** – Remind patients to return all inhalers **empty and full** to a pharmacy so gasses or remaining drugs are incinerated rather than released into the environment and hopefully improvements in recycling will be developed

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## Inhalers - Potential interventions



[A useful resource: Greener Practice guide to inhaler prescribing](#)

[Greener Practice - High Quality and Low Carbon Asthma Care Toolkit for Primary Care](#)

**Best respiratory care and control is the most important factor. The "greenest inhaler" is the one the patient is able to use properly and is effective**

Check inhaler technique & education\*

- in primary care utilise the New Medicines Service\*

Prescribe dry powder inhalers or soft mist inhalers as first line choice, where suitable for patients

Review patients with high use of SABAs (rescue inhalers)

- E.g. patients who have received 6 or more SABA inhalers in the last 12 months - this equates to at least 23 puffs a week (12 doses)

Ask about stockpiling or oversupply of inhalers

Be aware of duplicate supplies of inhalers during an admission

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## Inhalers

An in-depth presentation available regarding optimizing inhaler prescribing and reducing the environmental impact (free sign up required for log in)



[Optimising Inhaler Prescribing and Reducing the Environmental Impact \(Session Recording 08/04/2022\) – West Yorkshire \(icst.org.uk\)](#)

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## Antibiotics

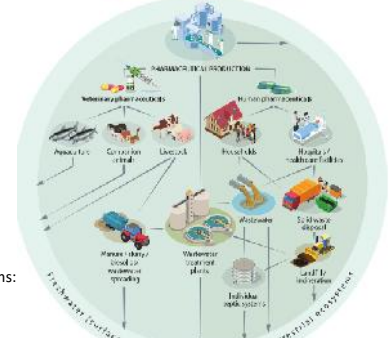
Antibiotics find their way into the environment through the same pathways as bacteria. When we take an antibiotic, up to 90% can be excreted, unchanged and still active.

Antibiotics are making their way into our waters in ever greater concentrations, increasing antibiotic resistance and risking a rise in deadly superbugs.

Top 5 antibiotics in water systems:

- Trimethoprim,
- Sulfamethoxazole
- Ciprofloxacin,
- Metronidazole
- Clarithromycin

Figure 1 Major pathways of release of human and veterinary pharmaceuticals into the environment



[pharmaceutical-residues-in-freshwater-policy-highlights.pdf \(oecd.org\)](#)

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## Antibiotics - Potential interventions

Antimicrobial stewardship is key in reducing the environmental effects

- Reduces overuse and therefore amount entering the environment.
- IV to oral switches when recommended
  - (lower consumables needed for administration)



Champion antibiotic stewardship

Consider audits, awareness and feedback to prescribers

### Patient counselling point:

**Ensure all antibiotics are returned to pharmacies if not needed. Don't flush medicines down the toilet, put in the bin or pour part bottles of liquids down the sink**

A high amount of antibiotic use relates to veterinary use such as animal agriculture (Varies by country and farming practices)

- Food choices are an important part of reducing antimicrobial exposure to the environment.

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## Overprescribing, De-prescribing & Wastage

[Good for you, good for us, good for everybody report](#)

It has been estimated that

- at least 10% of the current volume of medicines of the volume of medicines may be overprescribed.
- Between 30% and 50% of medicines prescribed for long-term conditions are not taken as intended
- medicines worth over £350 million are wasted each year. (Wasted environmental impact not known!)



Each medication review, supply and medicines reconciliation is an opportunity for open patient centred discussions about a person medications including those that may be inappropriate or not taken

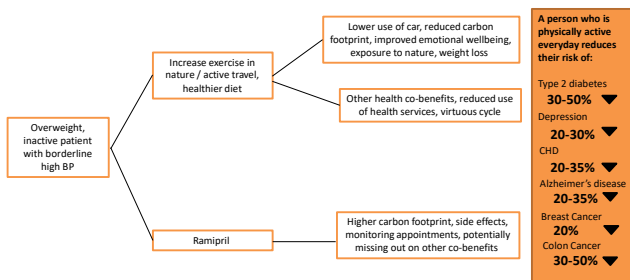
What matters most to the patient?

Do you feel comfortable asking an open question to the patient regarding non adherence whether intentional or not.

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## Lifestyle vs Treatment

- Lifestyle interventions can reduce the need for medication by providing alternative management options and preventing the need for future healthcare
- Supporting patients with lifestyle measures and public health messages can reduce the need for healthcare and the environmental impacts which go with it
- Consider common lifestyle interventions relevant to your area of practice



Ref: Honey Smith WYH Climate Conference 2020

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## Patient Counselling Points:

### How to dispose of your medications safely

Dispose of unused or expired antibiotics properly. Take them to your local community pharmacy!



If all used inhalers in the UK were returned for safe disposal, this could save 512,330 tonnes of CO<sub>2</sub>e annually - the same as a VW Golf car being driven around the world 88,606 times!



**All used inhalers should be returned to a pharmacy to be disposed of safely**



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## Recycling

Unfortunately recycling opportunities remain limited currently.

Schemes are in pilot or have very limited access so all pharmacies unable to participate

e.g. blister pack recycling and inhaler recycling



[The Medicine Packet Recycling Programme](#)  
| [TerraCycle® UK](#) · [TerraCycle](#)



Recent inhaler recycling examples:  
TEVA/Terracycle and Chiesi TakeAIR pilot (Leicester)

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## Patient Counselling Points: Pen-Cycle

Every year in the UK, these pens are among **23 million** medical pens that end up incinerated or sent to landfill as, until now, there has not been a viable recycling alternative. This is not sustainable.



Although we are not in a pilot area for pharmacy participation patients can sign up as individuals on the website and use a free-post return system to the company

[Home | PenCycle \(pen-cycle.co.uk\)](http://pen-cycle.co.uk)

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## Example – Mid Yorkshire Hospitals Pharmacy Dept.

The pharmacy department has a “Green Group”

- The lead of the group has also built up links with the trust Sustainability Lead.

The group act upon department ideas to reduce the environmental impact of pharmacy e.g.



Plastic Bags being switched to paper bags

Reducing orders for paper BNFs



Audits of duplicate inhaler supplies during admissions to reduce future over-supply

Where suitable using split box original packaging instead of always packing into fresh boxes to reduce waste



A whole team approach showing lots of individual changes add up

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## Summary

The environment is a personal and clinical topic

Pharmacy is key in reducing the environmental impact of healthcare

Will become a core part of pharmacy

Think about win-wins

How does this fit into other objectives?  
Remember SusQI principles

Why does the environment matter to you?



What ONE thing will you commit to doing differently after today?

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## Discussion

Is this something you are aware of within your pharmacy team?

Can you share any examples of things you are doing or have done?

What ideas do you have going forward?

Are there any barriers which are preventing your pharmacy being more sustainable?

What would you ask to be changed to allow you to be more sustainable?

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## Useful Links

### Learning and Webinars

- e learning - “Building a net zero NHS module” available via ESR or [e-LfH Hub](#)
- Learn at Lunch Climate Change Webinars. Series of talks on various topics – webinar 1 is a useful starter. [West Yorkshire and Harrogate Partnership :: Climate Change Events including Lunch and Learn \(wypartnership.co.uk\)](#) (You tube recording link at top of page)
- Pharmacy Declares Virtual Conference 2021 Recordings. Includes inhaler and anaesthesia topics - [Pharmacy Declares - YouTube](#)
- BMA webinar specific to medicines and the environment - [How can medical leaders manage the environmental impact of their prescribing? - YouTube](#)

### Organisations/Groups

- [Pharmacy Declares](#) website plus on contact page can ask to join the telegram group to connect with other interested pharmacy professionals
- [Greener NHS](#) - [Delivering a net zero NHS \(england.nhs.uk\)](#) Main source for info on Greener NHS activity
- [Greener NHS Community - member space - FutureNHS Collaboration Platform](#) (free sign up required) Official greener NHS community for people interested and wanting to contribute to promoting this agenda. Includes message groups and useful resources for promotion.
- [Centre for Sustainable Healthcare](#) | Useful for resources and training on general aspects of healthcare and sustainability
- [Greener Practice](#) – GP led group. Resources available on website and multiple WhatsApp groups which can be joined. Mainly GPs but some pharmacists also in groups
- [Sustainability | RPS \(rpharms.com\)](#) RPS sustainability information and declaration
- [YGAS - Yorkshire Green Anaesthesia Society](#) – Has some resources and promoting this agenda locally anaesthetist led group

### Toolkits/Articles

- [Green Impact for Health Toolkit](#) – Toolkit for general practice outlining interventions to improve environmental impact (includes a pharmacy specific section)
- [Home - The Pharmaceutical Journal \(pharmaceutical-journal.com\)](#) – Various recent articles (see pharmacy declares website for direct links)

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