SUSTAINABILITY TOOLKIT

JOIN YOUR TRUST'S GREEN GROUP

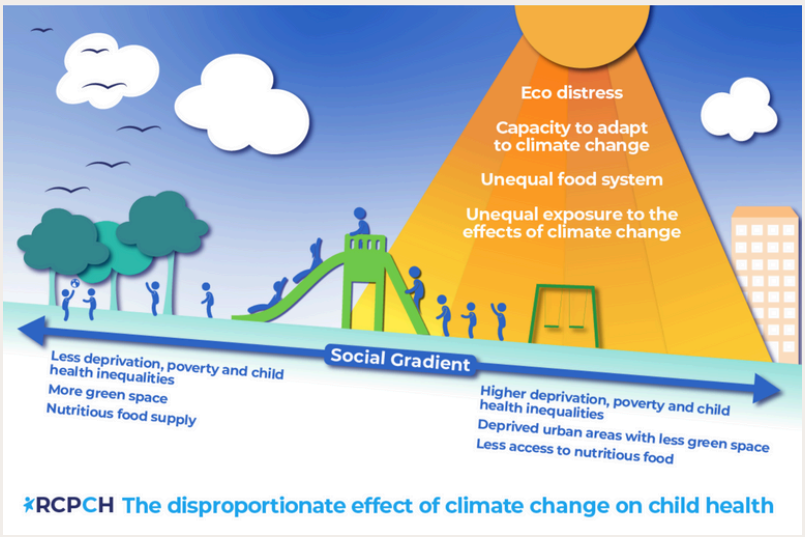
With the Health and Care Act 2022, the NHS became the first health system to embed net zero into legislation. Each trust should have a Green plan to set out their plans for carbon reduction. Being part of your trust's green group helps you get connected with the executives and managers that can help your efforts.

BE A GREEN CHAMPION

Sign up to be a London School of Paediatrics Green Champion and connect with other paediatricians who want to make a change. Be part of a community of sustainable practice!

TALK ABOUT IT

- Think about your sphere of influence
- Link personal values with how climate change impacts these. Connect over shared values like family, community, religion to prompt people to realize they already care about a changing climate
- Climate change has a larger impact on disadvantaged communities and worsens child health inequalities
- Children at especially at risk from health effects of climate change due to their vulnerability and developing organs



WANT TO LEARN MORE?

RCPCH Climate change working group
https://www.rcpch.ac.uk/resources/health-inequalities-climate-change-tool-2-advocate-action

Centre for Sustainable Healthcare course
https://sustainablehealthcare.org.uk/courses/sustainable-child-health

Podcast RCPCH : https://learning.rcpch.ac.uk/home/podcasts/the-paeds-round-from-rcpch-and-medisense/

EVERYDAY SUSTAINABILITY

Air pollution

- NHS Cycle to work scheme

Energy saving

- Ward checklist to turn off lights/heating/unused equipment.
- Reduce brightness of computer screens to 40%

Waste management

- Appropriate use of bins/recycling bins
- Set printer defaults to double sided
- Reduce length of handover sheets
- Reduce single use plastics, bring reusable cutlery and cups / water bottles
- Reusable PPE

Sustainable medicines

- Switching from IV to PO (IV medications have a much higher carbon footprint)
- Prescription choices, switching to lower carbon alternatives for MDIs
- Avoiding unnecessary investigations and medications

Greener facilities

- Plumbed water cooler

GREEN IDEAS & RESOURCES

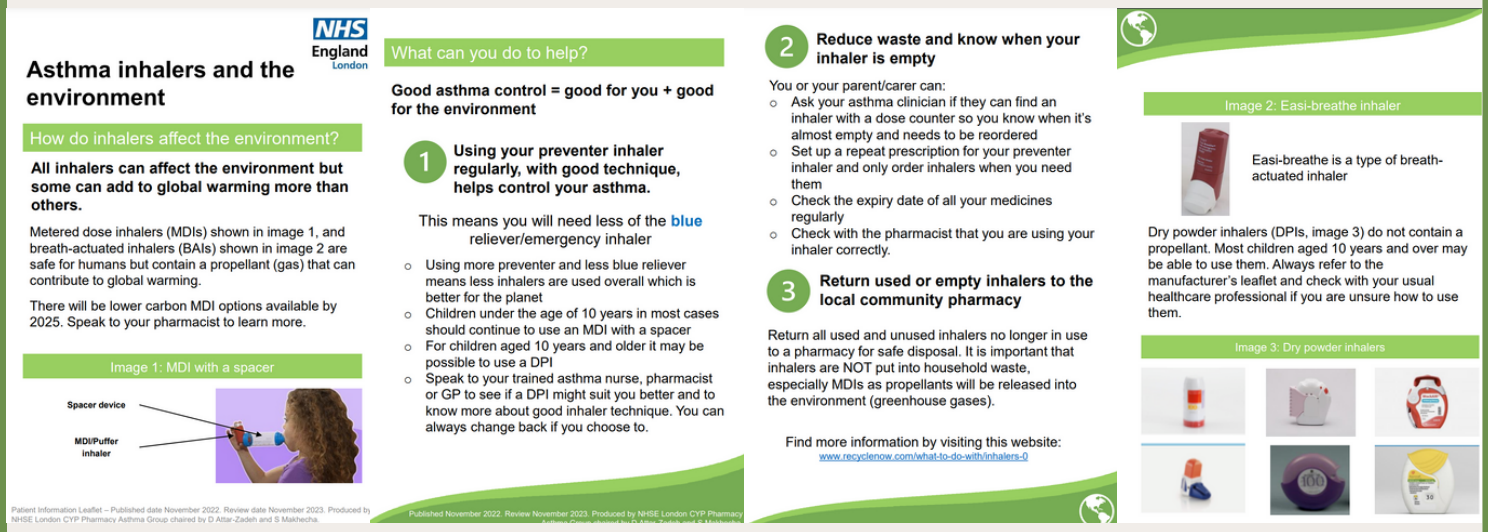
METERED DOSE INHALER RECYCLING

Inhalers used for asthma usually contain gas (called propellant) which is needed to carry the medicine into the lungs in a fine spray. This gas can contribute to global warming. You can help reduce the environmental impact of inhalers by taking old inhalers to your local pharmacy to dispose of properly.

- Spread the word about the impact of metered dose inhalers on the environment
  - NHS England Patient information sheet below
  - https://www.medicinesforchildren.org.uk/news/asthma-inhalers-and-the-environment/
- Educate patients on where they can recycle their inhalers or set up a recycling point if they do not exist in your local area.
  - https://www.selondonics.org/our-residents/your-health/local-nhs-services/inhaler-return-and-recycling/
  - https://www.grundon.com/services/clinical-waste/inhaler-recycling/

DID YOU KNOW?

The carbon footprint of a Salbutamol Evohaler is 28kg CO_2e (emissions equivalent to driving 175 miles in a small car) compared to a dry powder inhaler which is <2kg CO_2e.



NHS England London

Asthma inhalers and the environment

How do inhalers affect the environment?

All inhalers can affect the environment but some can add to global warming more than others.

Metered dose inhalers (MDIs) shown in image 1, and breath-actuated inhalers (BAIs) shown in image 2 are safe for humans but contain a propellant (gas) that can contribute to global warming.

There will be lower carbon MDI options available by 2025. Speak to your pharmacist to learn more.

Image 1: MDI with a spacer

Patient Information Leaflet – Published date November 2022. Review date November 2023. Produced by NHSE London CYP Pharmacy Asthma Group chaired by D Attar-Zadeh and S Makhecha.

What can you do to help?

Good asthma control = good for you + good for the environment

1 Using your preventer inhaler regularly, with good technique, helps control your asthma.

This means you will need less of the **blue** reliever/emergency inhaler

- Using more preventer and less blue reliever means less inhalers are used overall which is better for the planet
- Children under the age of 10 years in most cases should continue to use an MDI with a spacer
- For children aged 10 years and older it may be possible to use a DPI
- Speak to your trained asthma nurse, pharmacist or GP to see if a DPI might suit you better and to know more about good inhaler technique. You can always change back if you choose to.

Published November 2022. Review November 2023. Produced by NHSE London CYP Pharmacy

2 Reduce waste and know when your inhaler is empty

You or your parent/carer can:

- Ask your asthma clinician if they can find an inhaler with a dose counter so you know when it's almost empty and needs to be reordered
- Set up a repeat prescription for your preventer inhaler and only order inhalers when you need them
- Check the expiry date of all your medicines regularly
- Check with the pharmacist that you are using your inhaler correctly.

3 Return used or empty inhalers to the local community pharmacy

Return all used and unused inhalers no longer in use to a pharmacy for safe disposal. It is important that inhalers are NOT put into household waste, especially MDIs as propellants will be released into the environment (greenhouse gases).

Find more information by visiting this website:
www.recyclenow.com/what-to-do-with/inhalers-0

Image 2: Easi-breathe inhaler

Easi-breathe is a type of breath-actuated inhaler

Dry powder inhalers (DPIs, image 3) do not contain a propellant. Most children aged 10 years and over may be able to use them. Always refer to the manufacturer's leaflet and check with your usual healthcare professional if you are unsure how to use them.

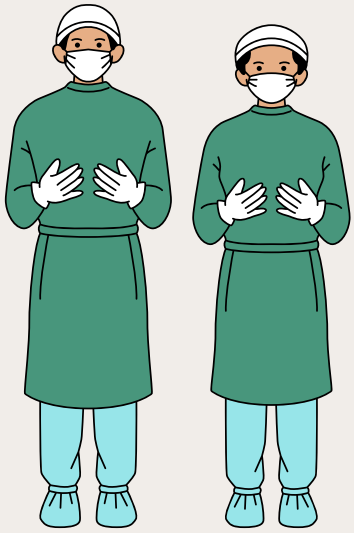
Image 3: Dry powder inhalers

PILL SWALLOWING

- Pills require less packaging and minimise medicine wastage as precise doses can be dispensed thus likely to reduce environmental impact compared with an equivalent dose of liquid medication.
- Pills have a longer shelf-life, are more easily stored and contain fewer additives.
- Swallowing pills is an important life skill that can improve dosing accuracy and adherence.
- Pills more commonly stocked in pharmacies compared to suspensions and are cheaper.
- Children can successfully learn to swallow pills from 4 years of age.
- You can help teach your young patients learn to swallow pills
  - Kidzmed is a programme developed to help families to teach children and young people how to swallow pills using a simple six-step technique. It was set up at the Great North Children's Hospital, Newcastle.

QR CODES FOR INFORMATION LEAFLETS

- NHS GGC created QR codes for parent information leaflets in various languages for common paediatric conditions.
- Reduces unnecessary paper waste and more accessible for patients from non-English speaking backgrounds.



REUSABLE GOWNS

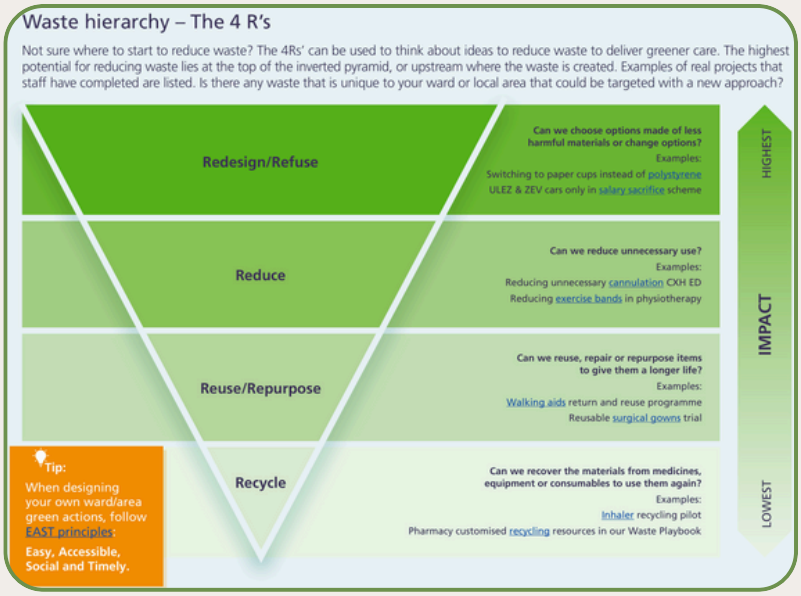
- Single-use gowns are carbon-intensive PPE with significant opportunity to reduce environmental impact by finding alternatives.
- Report on switching from single-use to reusable gowns by Health innovation North West coast
- https://www.healthinnovationnwc.nhs.uk/news/the-benefits-of-switching-from-single-use-to-reusable-surgical-and-isolation-gowns-

INNOVATIVE CARE PATHWAYS

- Virtual clinics
- Combined speciality clinics to reduce the number of trips patients need to make to hospital.

Reducing the carbon burden of PPE by reducing unnecessary use of non-sterile gloves. Inappropriate glove use is associated with poor hand hygiene, plastic waste, and healthcare associated infections.

HOW TO START A GREEN QIP



1. Set SMART goals

- Generating Green Ideas

2. Study the system

- Identify resource hotspots
- Recruit stakeholders
- Prioritize patient safety and quality of care

4. Measure impact

- Consider principles of sustainable healthcare (prevention, patient empowerment, lean clinical pathways, low-carbon alternatives)

3. Design improvement

- Consider principles of sustainable healthcare (prevention, patient empowerment, lean clinical pathways, low-carbon alternatives)

Triple Bottom Line

The QIP you are doing probably has a sustainability aspect to it. Think about triple bottom line - social, environmental and economical costs. Maximize sustainable value.

References:

1. *https://www.susqi.org/step-by-step-guide*
2. *Lim et al, BMJ 2024;384:e076257 | doi: 10.1136/bmj-2023-076257*
3. *https://www.rcpch.ac.uk/key-topics/climate-change*