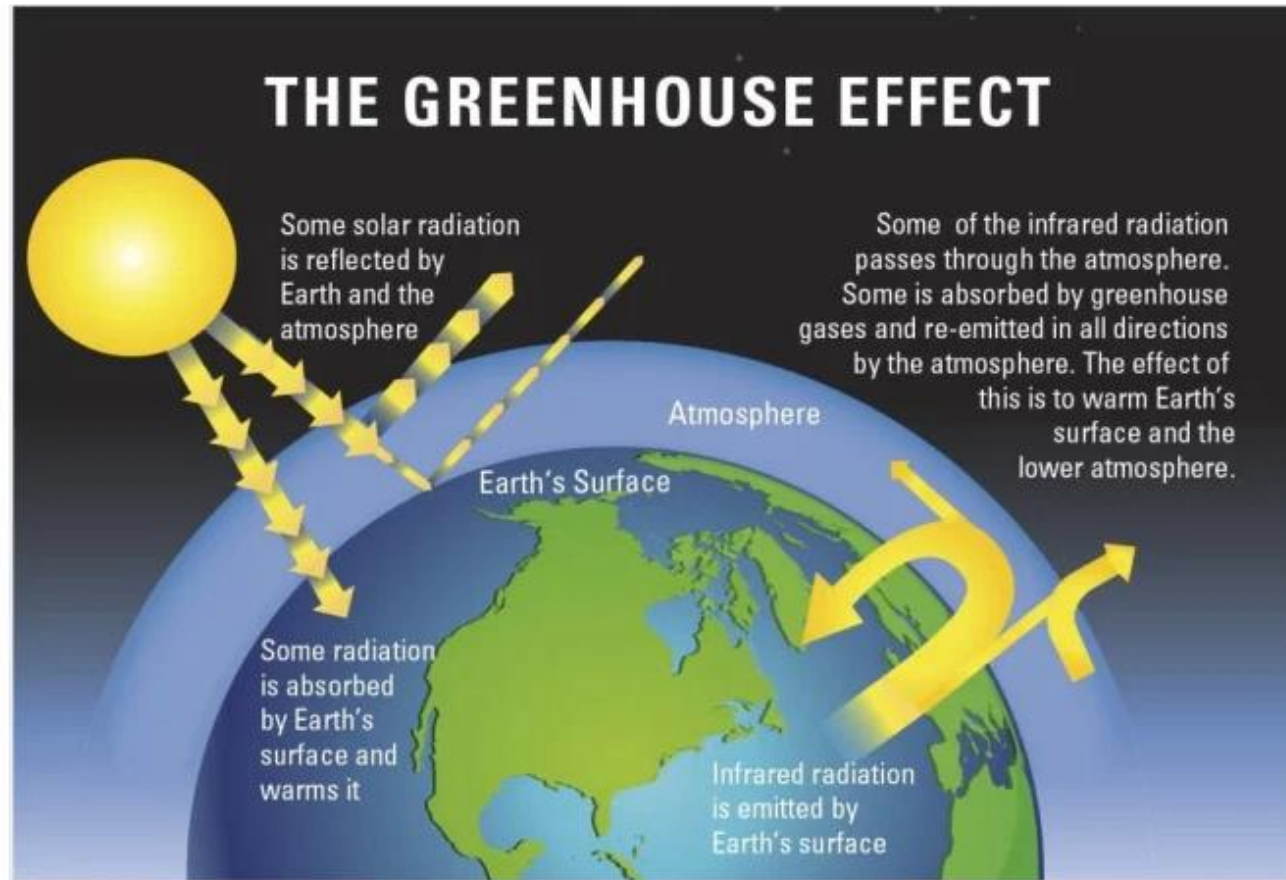


Improving respiratory care  
for patients & planet

In Greater Manchester

# Intro to climate change

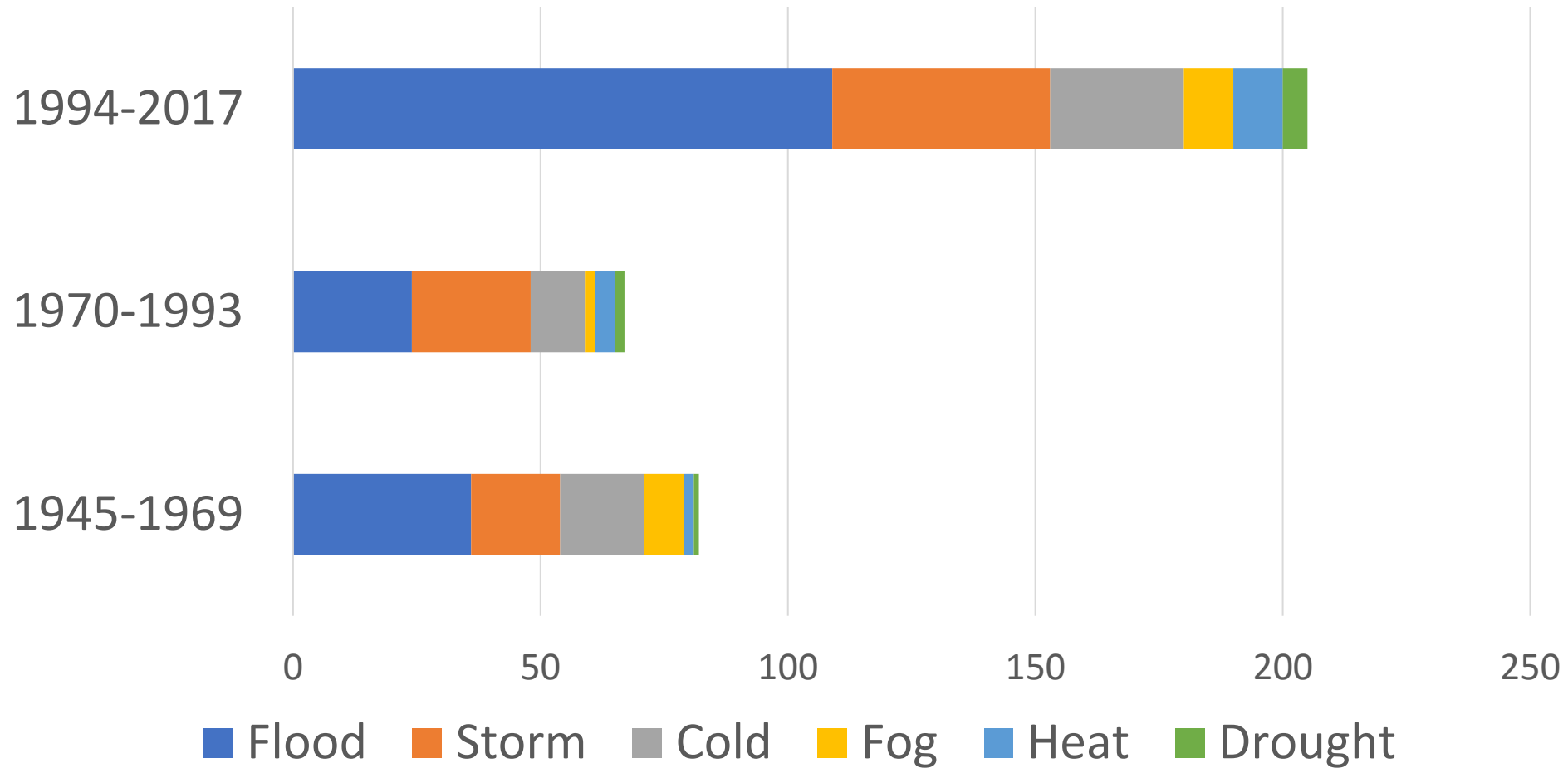


## Greenhouse gasses

- CO<sub>2</sub>
- Methane
- Nitrous Oxide
- CFC
- Hydrofluoroalkanes
- & Others

# Affecting us...

Severe weather events in GM in 23 year blocks



# • The Climate Crisis is a Health Crisis

- Having direct effects e.g. severe weather events
- And indirect effects e.g. mental health, food security, water, changes in infectious diseases.

## • Urgent action is needed:

- IPCC report clearly indicates that emissions must peak BEFORE 2025 and drop by 45% by 2030 to have any chance of keeping average temperatures to 1.5 degrees

## • So we have much to do!

Personal Actions



Organisational Action

Campaigning at National & International Level



# What about respiratory care in GM?

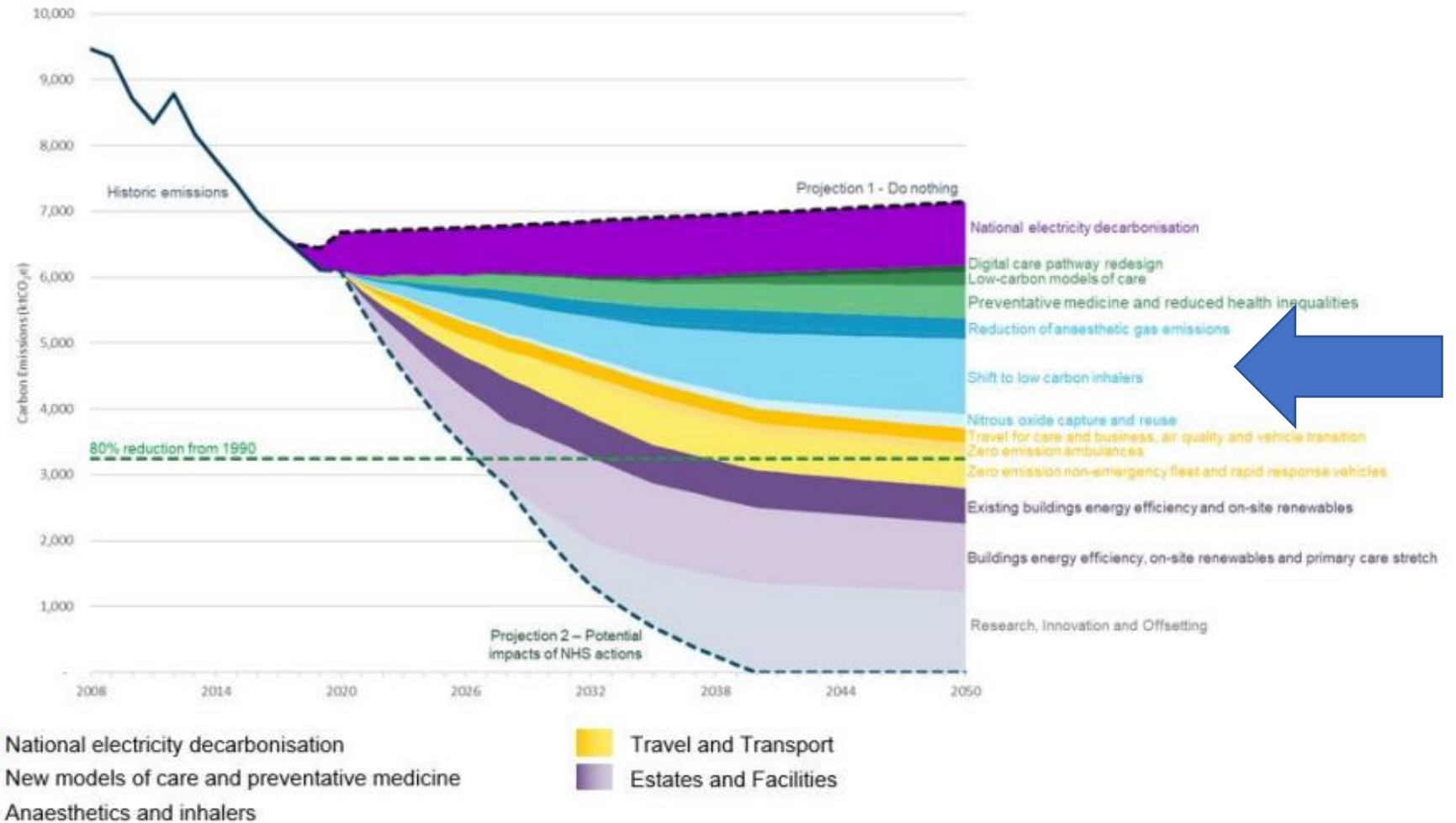
- Higher
  - Prevalence
  - Hospital admissions
  - Mortality



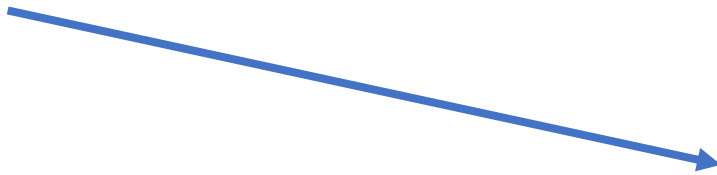
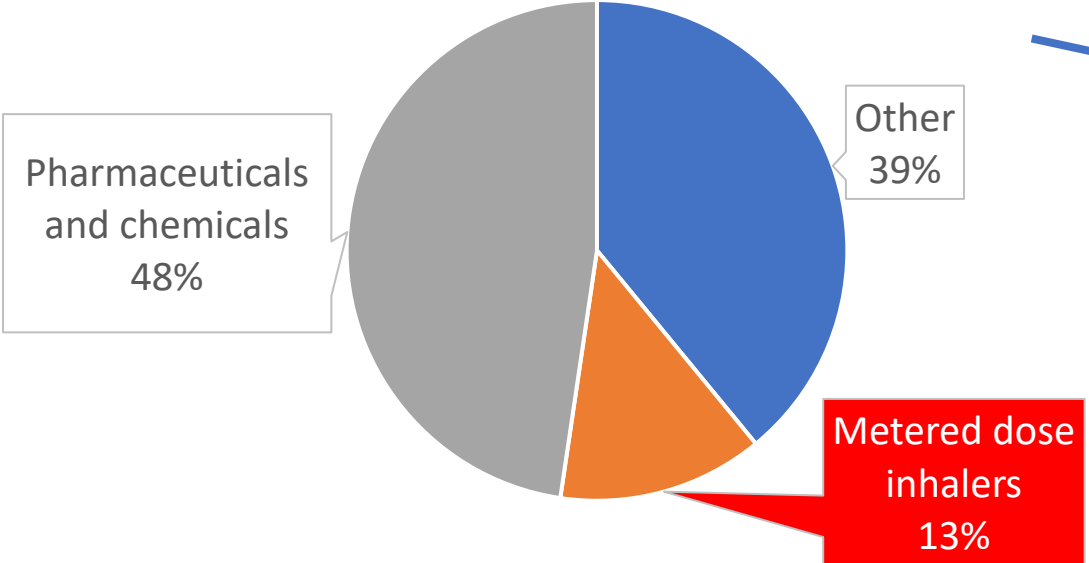
Figure 4: Pathway to net zero for the NHS Carbon Footprint Scope

Inhalers = 4% of NHS carbon footprint...

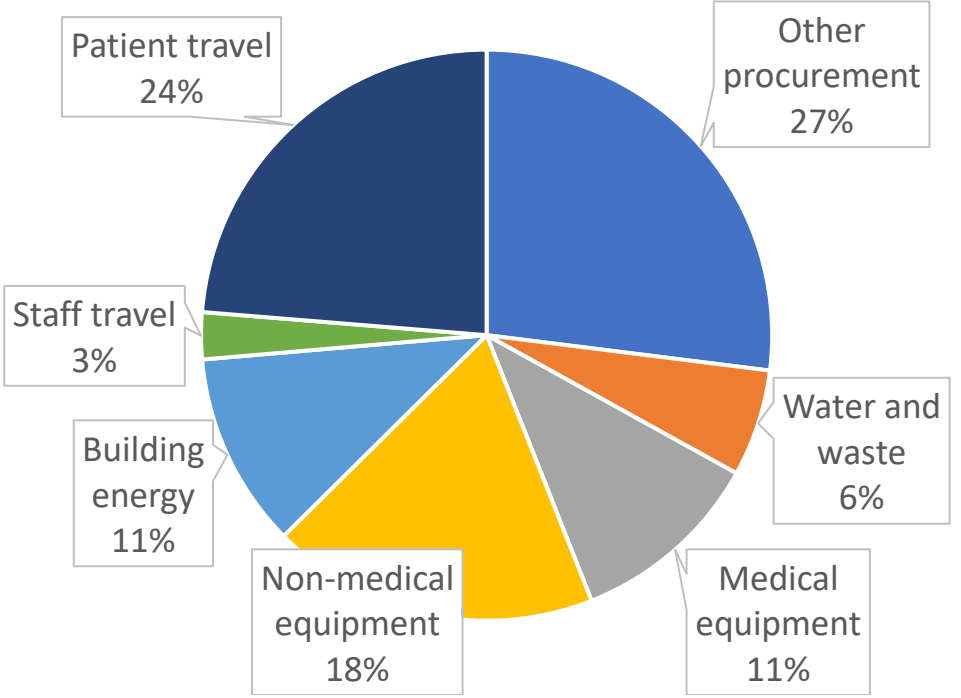
So reduction is part of NHS net carbon zero plan



# General Practice Carbon Footprint



## Other (Non Drug) Primary Care Footprint



# PCN inhaler targets – there are 2 groups

- Inhaler choice
- Asthma care



# Inhaler choice - targets rationale

The propellant gases in pMDI inhalers have a powerful global warming potential – 1,300 to 3,300 times more powerful than CO<sub>2</sub>



# Inhaler choice - targets rationale



96 % of carbon footprint  
of an MDI inhaler is due  
to propellant gasses used

In use ~50-75%

Disposal ~25-50%

Manufacture & materials ~4%

# PCN targets 1 – inhaler choice

## To reduce the environmental impact of inhalers starting Oct 21

Reduced MDI as a percentage of all non-salbutamol inhalers so that by 23/24 it will be <25% (over 12 y)

22/23 43% (LT), 35% (UT)

Reduced *mean carbon intensity* of salbutamol inhalers (kg CO<sub>2</sub>e) so by 23/24 <13.4kg

22/23 22.1kg (LT), 18.0kg (UT)

Move most patients from MDI (pressurised meter dose inhalers) to DPI (dry powder inhalers)

Ventolin evohaler = 28  
Salamol/airomir = 10  
DPI = 1

Move away from larger volume pMDI like Ventolin to DPI as first choice, but if they need MDI to use lower volume Salamol or Airomir which use propellant gas mixed with ethanol

# Inhaler choice – Patients view

2020 UK  
Survey of  
patients and  
carers of  
those with  
asthma -  
>12,000  
responses

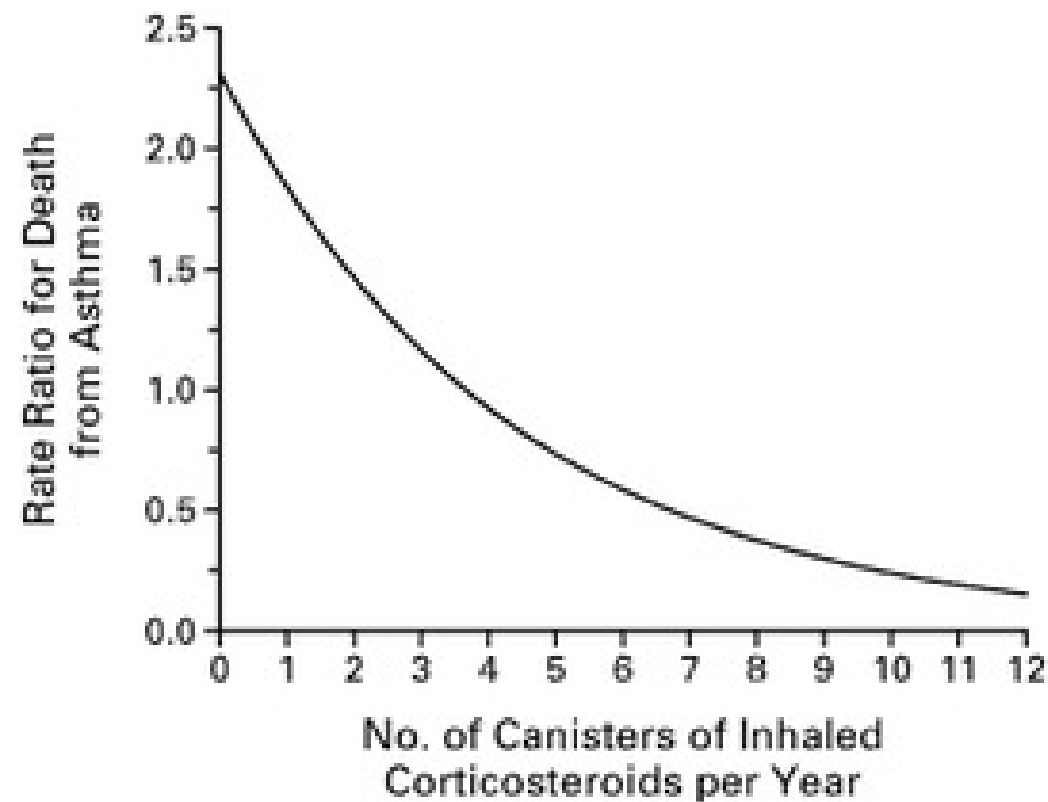
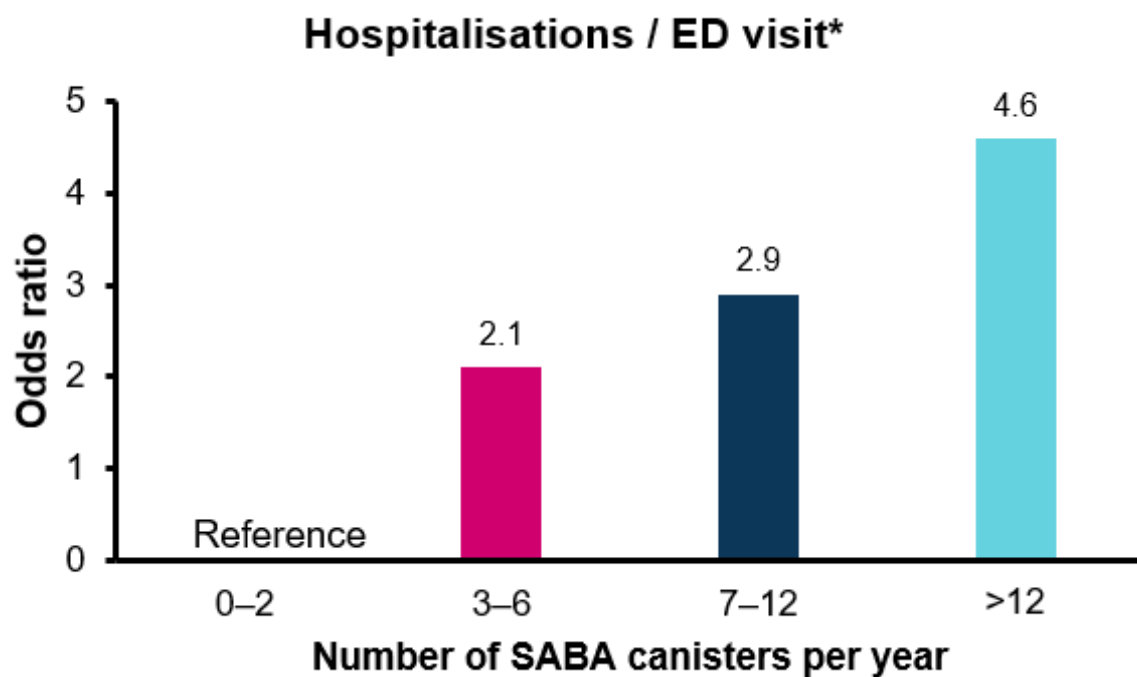
Question	Yes (n, %)	No (n, %)	Don't know (n, %)
1. Have you heard about the impact on the environment of metered dose inhalers (MDI)?	4,204 (35%)	7,864 (65%)	NA
2. If you were offered the choice, would you consider switching to a dry powder inhaler (DPI) for environmental reasons? (only asked to those receiving <u>a</u> MDI)	5,769 (60%)	1,850 (19%)	2,046 (21%)
3. Do you agree that people should be encouraged to switch to a more environmentally friendly inhaler?	10,184 (85%)	1,858 (15%)	NA
4. If you were to switch your inhaler, what would be most important to you? (only asked of those who would consider a switch)		<b>Number</b>	<b>Percentage</b>
	That it works	4,592	80%
	That I/my child know how to use it	3,416	59%
	That my/child's asthma management routine is not affected	3,106	54%
	That it is easy to use	2,675	46%
	That I/my child can switch back if I don't like using the new inhaler	2,593	45%
	That the environmental impact of the inhaler is lower	2,436	42%
	People that I/my child know also use the inhaler	181	3%
	Other	36	1%

# PCN targets 2 – asthma care

<b>For Asthmatics from April 22/23</b>	
<p>Asthmatics receive regular prescription of ICS over the preceding 12 months.</p> <p>LT 71% UT 90%</p> <p>22/23: 3 or more ICS prescriptions; 23/24 onwards: 5 or more ICS inhalers.</p>	<p>Ensure that asthmatics have ICS treatment</p>
<p>Patients on Asthma register to receive 6 or more SABA inhalers over the previous 12 months.</p> <p>LT 25% UT 15%</p> <p>From 23/24: who were prescribed 6 or more SABA inhalers</p>	<p>Avoid over reliance on SABA</p>

# Asthma treatment - targets rationale

Higher SABA usage (3+/year) AND low steroid use is related to poorer control



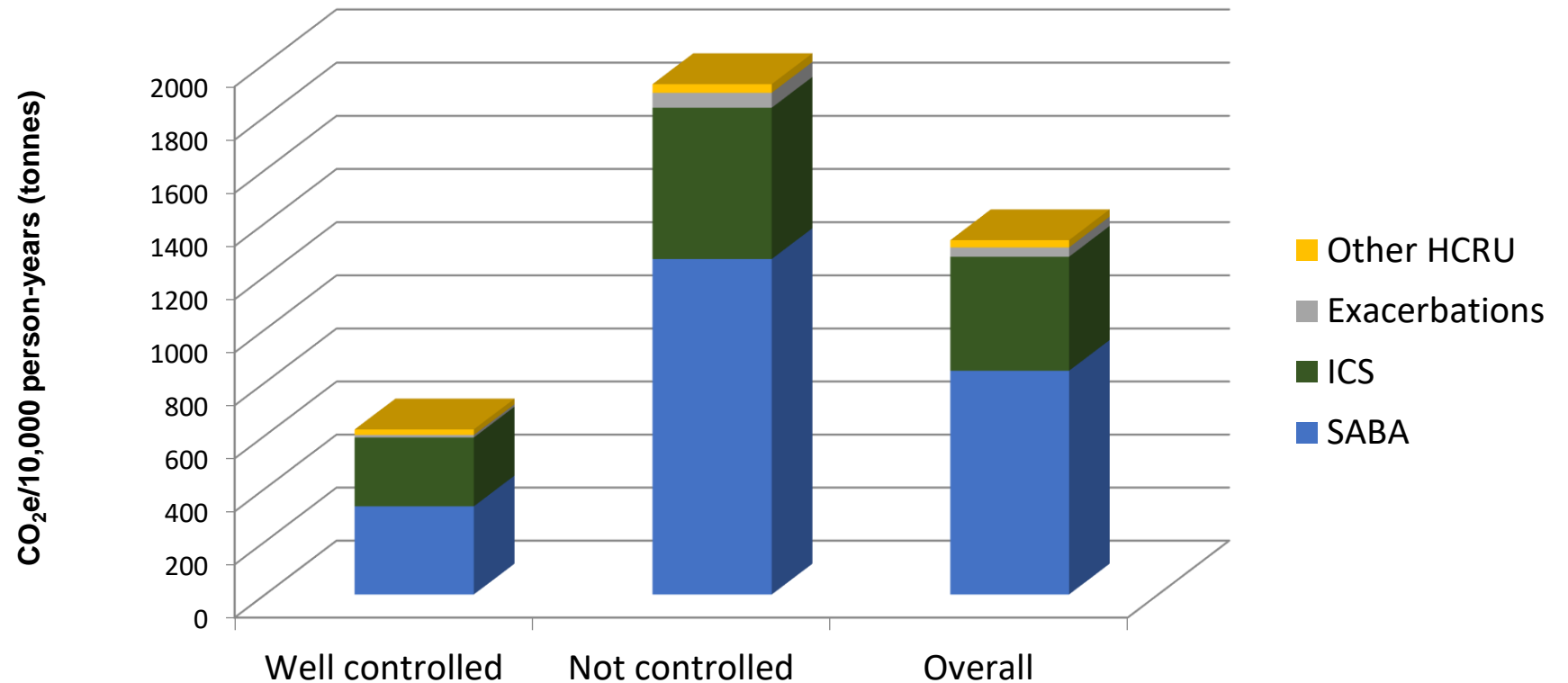
Schatz M, et al. *J Allergy Clin Immunol.* 2006;117:995-1000;

Low-Dose Inhaled Corticosteroids and the Prevention of Death from Asthma Samy Suissa, *N Engl J Med* 2000; 343:332-336

# Asthma treatment - targets rationale

What about overall care of asthma?

Per capita GHG emissions associated with asthma care



Greenhouse gas emissions associated with asthma care in the UK: results from SABINA CARBON

Alexander Wilkinson, Ekaterina Maslova, Christer Janson, Vasanth Radhakrishnan, Jennifer K Quint, Nigel Budgen, Trung N Tran, John P Bell, Andrew Menzies-Gow European Respiratory Journal Sep 2021, 58 (suppl 65) OA76; DOI: 10.1183/13993003.congress-2021.OA76

# So targets deliver...

- Better care for asthma patients
- Better care for the planet



# How are we doing?

- PCN targets data (based on CQRS on which target is based) can be found on PCN dashboard:
  - <https://www.gmtableau.nhs.uk/#/site/GMHSCPPublic/views/Group2-GPContractandPCNServiceSpecification/InvestmentandImpactFundIIFDashboardPCNView202223?:iid=1>
- A in-depth month by month look at inhaler type (based on prescribing data) can be found on GM Medicines Management Low Carbon Inhalers dashboard:
  - <https://www.gmtableau.nhs.uk/#/site/GMHSCPPublic/views/LowCarbonInhalers/HomePage?:iid=1>

# What does the data say?

- About 300,000 inhaler prescribed in GM each month
- Equivalent to 4000 metric tons of CO<sub>2</sub> – that is 4000 hot air balloons over GM each month!
- >95% are prescribed in primary care

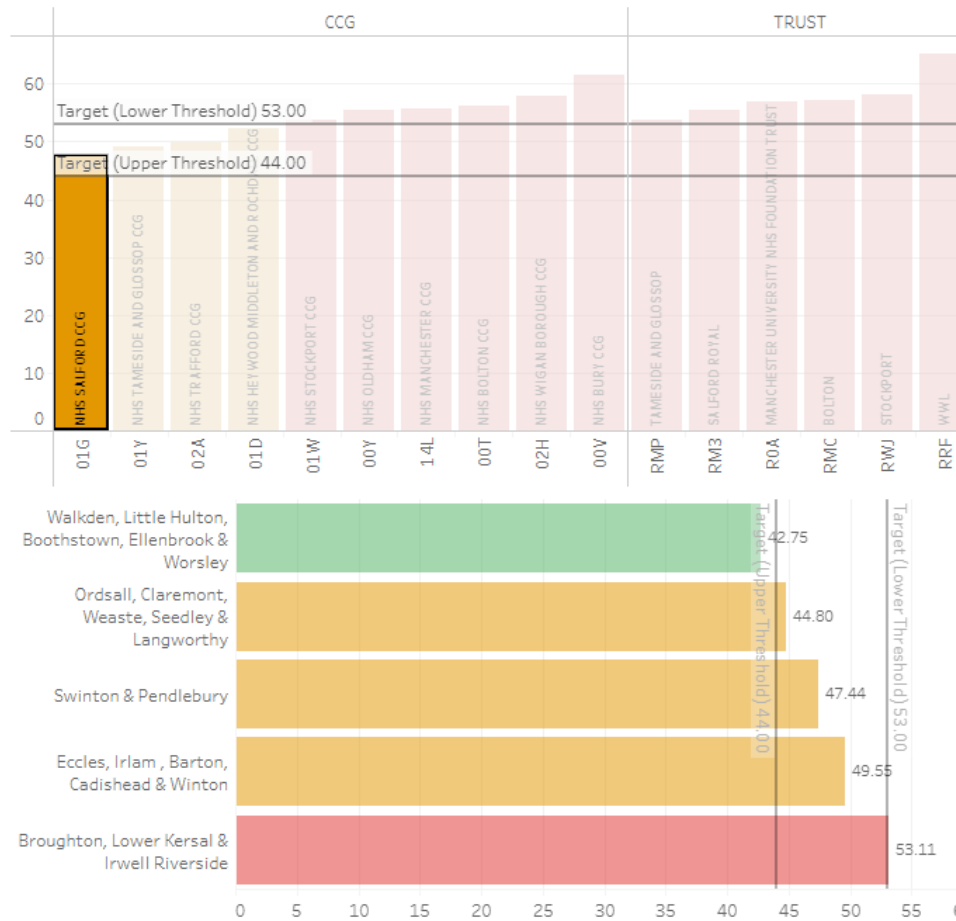


# What does the data say? – Inhaler type – GM Dashboard

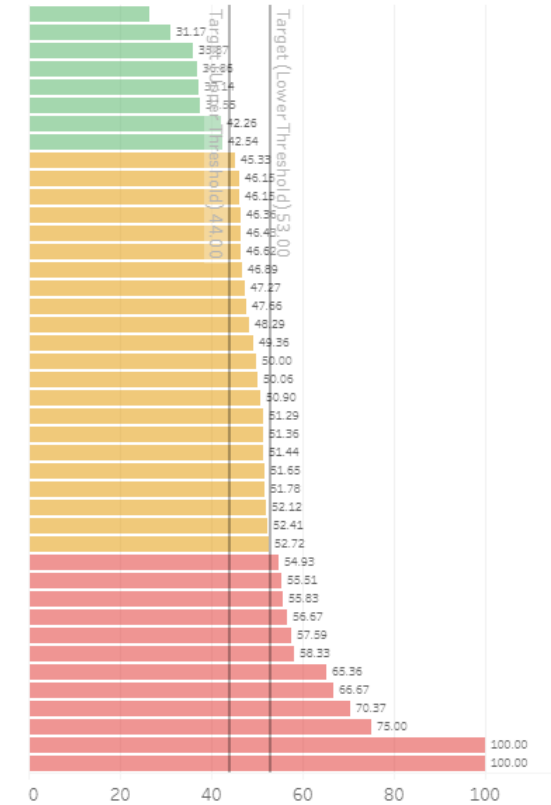
Indicator: IIF: ES-01: Metered Dose Inhaler (MDI) prescriptions as a percentage of all non-salbutamol inhaler prescriptions

Month(s): December 2021

Select CCG to view PCN and practice split



- P87035 - Ordsall Health Surgery
- P87017 - The Limes Medical Practice
- P87630 - Cherry Medical Practice
- P87015 - Pendleton Medical Centre
- P87019 - Silverdale Medical Practice
- P87008 - Walkden Medical Centre
- P87028 - The Gill Medical Practice
- P87639 - Cornerstone Medical Practice
- P87032 - Orient Road Medical Practice
- P87004 - 1/SALFORD Medical Practice
- P87618 - Dr Loomba And Partners
- P87658 - The Willows Medical Practice
- P87661 - Manchester Road East Medical Practice
- P87020 - St Andrews Medical Centre
- P87654 - 3/LOWER Broughton Medical Practice
- Y00445 - Salford Primary Care Together
- P87634 - Clarendon Medical Practice
- P87025 - The Lakes Medical Practice
- P87040 - Sorrel Bank Medical Practice
- P87625 - Dearden Avenue Medical Practice
- P87610 - The Mosslands Medical Practice
- P87024 - 3/SPRINGFIELD House Medical Practice
- P87026 - Newbury Green Medical Practice
- P87027 - Langworthy Medical Practice
- P87620 - 1/MONTON Medical Practice
- Y02767 - The Height General Practice
- P87624 - Ellenbrook Medical Centre
- P87649 - Chapel Group Medical Centre
- P87627 - Orchard Medical Practice
- P87016 - The Sides Medical Practice
- P87022 - Mocha Parade Medical Practice
- P87002 - The Poplars Medical Practice
- P87657 - (IRLAM) Salford Care Ctrs Medical Practi
- P87651 - Limefield Road Medical Practice
- P87613 - Cleggs Lane Medical Practice/129
- P87648 - Dr Davis's Medical Practice
- Y02625 - Care Homes Medical Practice
- Y03789 - Salford Community Health
- Y02622 - Blackfriars
- Y00203 - Extended Primary Integrated Care 24 Ooh
- P87664 - Children's Services
- Y07190 - Ordsall & Claremont Pcn Hub



# What does the data say? – Asthma care – PCN Dashboard

**RESP01**  
 Percentage of patients on the QOF Asthma Register who received three or more inhaled corticosteroid (ICS, inclusive of ICS/LABA) prescriptions over the previous 12 months

Lower Threshold 71.00%  
 Upper Threshold 90.00%

Desired Direction ►

Numerator / Denominator  
 126,207 / 204,327

Achievement  
 61.77%

**RESP02**  
 Percentage of patients on the QOF Asthma Register who received six or more Short Acting Beta-2 Agonist (SABA) inhaler prescriptions over the previous 12 months

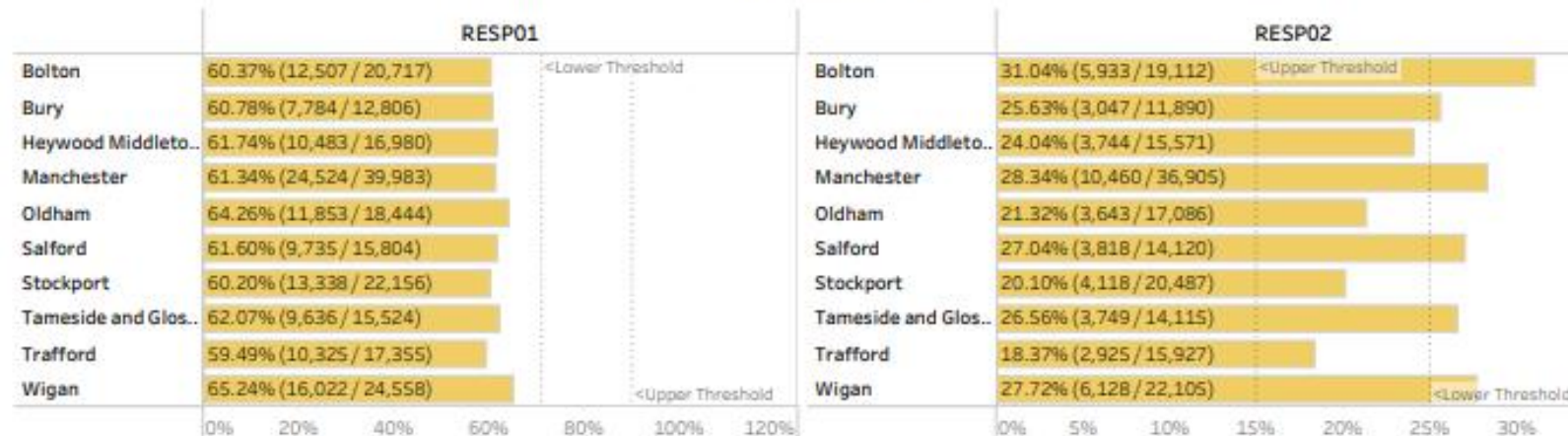
Upper Threshold 15.00%  
 Lower Threshold 25.00%

Desired Direction ◀

Numerator / Denominator  
 47,565 / 187,318

Achievement  
 25.39%

## Locality Achievement



# Headline data

- Non SABA prescribing as DPI is about 50% across GM – CCGs and Trusts
  - **So about 50% of patients are on mixed kind of inhalers**
- **>90% of Salbutamol in all CCGs and Trusts is prescribed as MDI!!!**
  - Trusts are better at using Salamol (nearly 100%), but CCGs only 2.5 to 35%. (they are prescribing Ventolin or Generic Salbutamol)
  - **A fast shift in kg CO<sub>2</sub>e** can be seen in some PCNs who have done a shift from Ventolin & Generic to Salamol
    - But should be wary this is dealing with only ¼ targets and needs good messaging
- There are a lot of patients who need better care!

What shall we  
do about it?

# Review Reduce Return

What things can we do to improve our Asthma or COPD  
AND reduce our carbon impact?

## Review (control)

Regularly review how your self-management is controlling symptoms

See your nurse/doctor for an annual [check up](#) and when:

- Symptoms are poorly controlled
- You are using four or more blue inhalers per year
- You are uncertain about how to use the inhalers

## Reduce (carbon)

Discuss with your doctor or nurse about the lowest carbon inhalers  
option that are suitable for you

- One year's use is equivalent to the following miles in an average car:



Dry powder or soft mist inhalers



3-90 miles

Equivalent to 0.1-2.5 loops around the M60



Metered Dose inhalers



268 - 1556 miles

Equivalent to 7-42 loops around the M60

## Return (to pharmacy)

Return all unwanted, out of date & used inhalers to pharmacies to  
ensure carbon-friendly disposal, but make sure it is empty first!

# Review - control

- Focus on the poorly controlled patients first
  - High SABA usage – 3+ inhalers per year – start with the highest users first e.g. 12+
  - Recent exacerbations or admissions
  - Frequent use of oral steroid courses.
- At annual review consider change
  - Where the patient is on mixed MDI and DPI inhaler types – change all to DPI
  - Where patient would like to, or is willing to try a DPI for environmental reasons
  - Is the patient suitable for MART therapy
- Listen to patient
  - Discuss push back e.g. powder feeling in mouth – is this poor technique?
  - Consider using in-Check device to identify and discuss best inhaler choice

# Reduce - carbon

- Only make inhaler change in consultation with a patient
- Use the guidelines
  - Choose low carbon inhalers following GMMMG guidelines for Asthma & COPD
- Whenever starting a new inhaler treatment
  - always consider DPI before MDI
- Avoid mixing inhaler device type
  - e.g. DPI and MDI – as they have different techniques
- Use combination inhalers where appropriate
  - E.g. MART
- Never use very high footprint inhalers
  - E.g. Flutiform and Symbicort MDI inhalers, and Ventolin MDI



# Return – to pharmacy

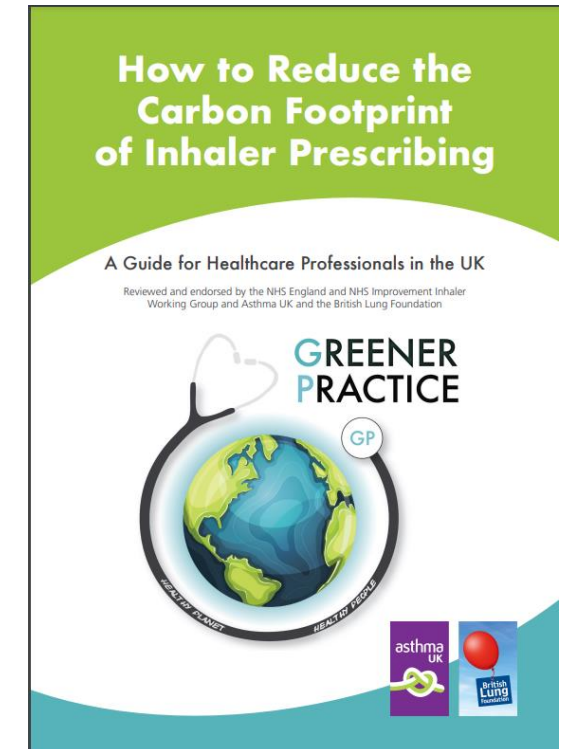
- 25-50% of the environmental impact of MDI inhalers can be due to disposal
  - Encourage patient to ensure inhaler is empty before discarding (DPIs are better as most have a counter)
  - Return *all* inhalers to pharmacy for proper disposal

# Make your own plan – e.g.

- Getting started
  - Involve the whole team & so they understand the targets & rationale
  - Check your performance on GM Tableau
  - Review of current GMMMGM prescribing guidelines &
  - Review Greener Practice excellent videos and tools
- Review - control:
  - This is quality of care as much as greener care! Find those with poor control & over reliance on SABA
- Reduce - carbon:
  - *Always* consider DPI or SMI first.
  - If need to use MDI choose lowest carbon intensive one (NOT Ventolin, Flutiform, Symbicort MDI)
  - Be smart, consider MART
- Return - to pharmacy
  - Promote returning on *all* inhaler to pharmacies for proper disposal
- Monitoring performance
  - Decide how often you will review of performance and who is responsibility for this and when to feedback to the team

# Resources

- GP excellence site  
<https://gpexcellencegm.org.uk/sustainability/>
  - Educational videos
  - Links
- Asthma UK and Lung UK inhaler technique videos & action plans
- Very helpful NHSE/I approved toolkit from greener practice. Lots of information and quality improvement project ideas <https://www.greenerpractice.co.uk/high-quality-and-low-carbon-asthma-care/>
- Local pharmacies can support
  - Support the patient under the new medicines scheme or
  - Special commissioned service in one chemist in each PCN to support improving inhaler technique – see list on GP excellence website.

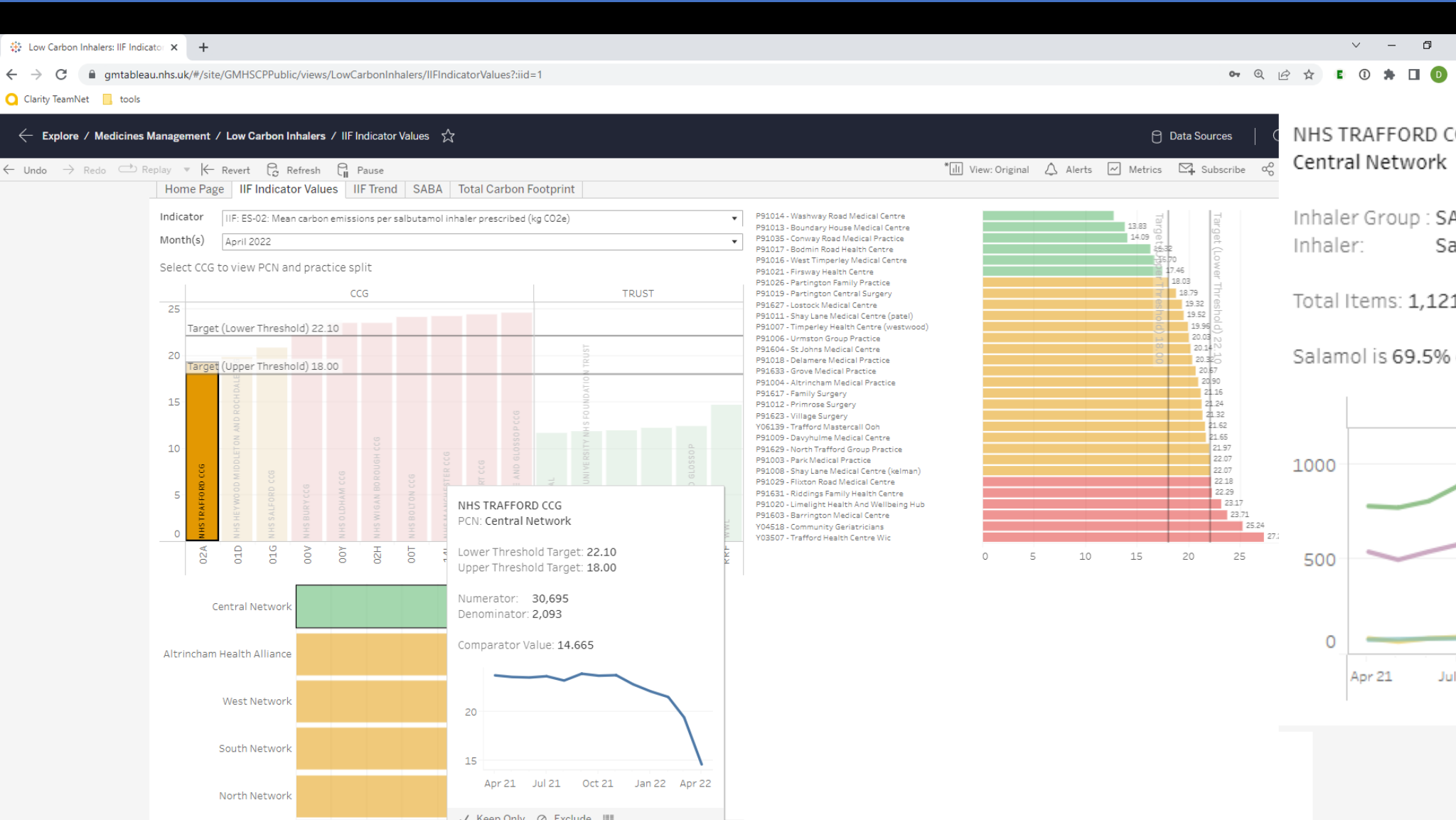


# A review

- The climate crisis is real and needs urgent response
- Working as an organisation we can make a difference
- Focusing on respiratory care and moving off MDI inhalers can make a difference to patient & planet
- Take a minute:
  - What will YOU do next?
  - What barriers can you remove, or nudge can you add?
  - Which 7 other people can you recruit?



# Salbutamol MDI switch

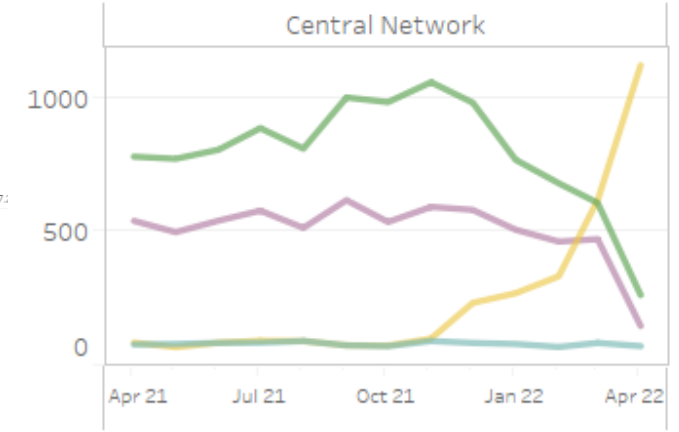


## NHS TRAFFORD CCG Central Network

Inhaler Group : SABA Metered Dose Inhalers  
Inhaler: Salamol

Total Items: 1,121

Salamol is 69.5% of all SABA Metered Dose Inhalers



# Salbutamol MDI switch

- kgCO<sub>2</sub>e of Salbutamol reminder
  - Ventolin 28
  - Salamol & Airomir 11
  - Dry powder 1
  - Generic Salbutamol – community pharmacy can dispense Ventolin, Salamol or Airomir – and Ventolin often cheapest.
- Some practices and PCNs have done a switch programme
  - Identify those on Ventolin & Generic Salbutamol
  - Check record if they have tried Salamol/Airomir
  - If not tried Salamol - do switch and inform the patient e.g. SMS and on script (Greener Practice Toolkit for wording)
  - Involve local community pharmacy – to educate patients and ensure appropriate stock
- Outcome
  - Less than 1:10 do push back
  - Use pushback as opportunity for review and trial of a DPI
  - Dramatic drop in Salbutamol kgCO<sub>2</sub>e
- Warning
  - Will not improve respiratory care
  - Will not address the other 3 targets
  - Only gets half way – everyone including patient should be aware of this