Is Green the New Blue?

NHS England and NHS Improvement
Sustainable Development Unit

- Funded by and accountable to NHS England and Public Health England
- Hosted within Strategy Group, NHS England
- Set up in 2008 as the Climate Change Act came into force (26/11/2008)
- To support the NHS to fulfil its potential as a leading sustainable and low carbon organisation
NHS Scale

• The NHS…
• Helps over 20 million mental health service users a year\(^1\)
• Conducts 5 million GP consultations every week\(^2\)
• Serves over 1 million patients\(^3\), delivers 1,900 babies\(^4\), admits 64,000 people to A&E\(^1\), completes 28,000 operations a day\(^1\)
NHS impact on environment

• To deliver these services, the NHS is responsible for …

• 21.4 Mt of CO2 emissions, costing society up to £2bn pa in climate change damage

• 9.5 billion road-miles a year\textsuperscript{5}

• health-related air pollution costing society £6.9 million every week\textsuperscript{6}

• 11,300 tonnes of waste a day\textsuperscript{6} (22.7\% of which is plastic)

• Our impacts are often concentrated closest to the most vulnerable, potentially contributing to health inequalities
Progress

- 18.5% CO2 reduction since 2007 whilst activity increased
- Water footprint down by 21% since 2010
- 71% NHS organisations have SD Management Plans (mostly providers)
- Sustainability assessments, tools and reporting increasing
- Integrated into NHS Contracts, NHS Constitution
- Further progress go much further than switching lights.
NHS Long Term Plan
“Climate emergency is a health emergency”

There is a need for the NHS to “be the change it wants to see.”
# LTP priorities

## Improving Air Quality
- By 2023/24, we will cut business mileages and fleet air pollutant emissions by 20%
- Key initiatives:
  - Reducing NHS **fleet emissions** (including ambulances) and other specialist vehicles
  - Reducing **outpatient appointments** by a third
  - Working with **local government** to reduce emissions

## Reducing carbon, waste and water
- By 2025, we will reduce our carbon footprint by 51% against 2007 levels
- Key initiatives:
  - Greening our **estates and facilities**, including phasing out coal and oil fuel as primary heating
  - Switching to greener asthma **inhalers**
  - Reducing the carbon footprint from **anaesthetic gases**

## Reducing single use plastics
- We will deliver reductions in single use plastics throughout the NHS supply chain
- Key initiatives:
  - Reducing single use plastics across NHS catering as well as clinical and supply chain domains
  - Working to improve the **disposal and recycling** processes for plastics
  - Developing **innovation** in plastics

## Enablers
- Supporting data and analytics
- National procurement and supply chain
- Innovation & Technology
- Communications & Engagement
Corporate approach

- Develop a Plan approved at Board level (SDMP)
- Evaluate organisations approach and progress
- Measure, monitor and report on carbon as a minimum
- Raise awareness in staff, patients and public
Staff survey

Prevention
Carbon

- Grid decarbonisation
- Vehicle efficiency
- Supports 30% reduction

- Energy and travel efficiency
- Anaesthetic gases, Inhalers
- Models of care
- Public health
- Supports 58% reduction

Source: SDU
### Plastics

<table>
<thead>
<tr>
<th>No.</th>
<th>Product type</th>
<th>Weight 14/15 (t)</th>
<th>% Weight of plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Single Use Theatre Protective Clothing (inc drapes)</td>
<td>9.402</td>
<td>9%</td>
</tr>
<tr>
<td>2</td>
<td>Examination Gloves</td>
<td>7.952</td>
<td>8%</td>
</tr>
<tr>
<td>3</td>
<td>Disposable Wipes and Cleaning Cloth products</td>
<td>7.045</td>
<td>7%</td>
</tr>
<tr>
<td>4</td>
<td>Catering Products Tableware and Light Equipment</td>
<td>5.628</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>Polymer Products (aprons and bags)</td>
<td>5.244</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>Medical Holloware</td>
<td>5.044</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>Disposable Continence Care products</td>
<td>5.029</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Blood Collection Systems(sample tubes &amp; syringes)</td>
<td>4.851</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>General Woundcare</td>
<td>4.066</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>Suction Consumables (catheters, tubing, drains)</td>
<td>3.823</td>
<td>4%</td>
</tr>
<tr>
<td>11</td>
<td>Syringes, Needles And Associated Products</td>
<td>3.353</td>
<td>3%</td>
</tr>
<tr>
<td>12</td>
<td>Clinical Waste Containers</td>
<td>3.216</td>
<td>3%</td>
</tr>
<tr>
<td>13</td>
<td>Medical Packs And Sterile Supplemental Products</td>
<td>3.028</td>
<td>3%</td>
</tr>
<tr>
<td>14</td>
<td>Needlefree Connection Systems Products</td>
<td>2.324</td>
<td>2%</td>
</tr>
<tr>
<td>15</td>
<td>Urology Products (Drainage bags, catheters etc)</td>
<td>2.296</td>
<td>2%</td>
</tr>
<tr>
<td>16</td>
<td><strong>TOTAL</strong></td>
<td><strong>72,301</strong></td>
<td><strong>69%</strong></td>
</tr>
</tbody>
</table>

NHS Supply Chain data from 2014/15
Plastics actions

‘...delivering improvements, including reductions in single use plastics, throughout the NHS supply chain’

• NHS Plastics- visible commitments from organisations?
• RCN Gloves campaign?
• What other SUPs could be reduced locally?
Air Quality

Air pollution affects people throughout their lifetime

- **Pregnancy**
  - low birth weight

- **Children**
  - asthma
  - slower development of lung function
  - development problems
  - more wheezing and coughs
  - start of atherosclerosis

- **Adults**
  - asthma
  - coronary heart disease
  - stroke
  - lung cancer
  - chronic obstructive pulmonary disease (as chronic bronchitis)
  - diabetes

- **Elderly**
  - asthma
  - accelerated decline
  - lung function
  - lung cancer
  - diabetes
  - dementia
  - heart attack, heart failure and strokes

Source: PHE
Air Quality Actions

‘Redesigned care and greater use of ‘virtual’ appointments’ ‘will also reduce the need for patient and staff travel.’

‘..the NHS will work to reduce air pollution from all sources’

• Walking or public transport?
• Digital or phone consultations?
• Encourage EV use?
Carbon footprint of pressurised Inhalers

1 Carbon Footprint of inhaler propellants in England (SDU NRF 2018)
2 Carbon Footprint of inhaler propellants worldwide (fluoro carbons.org)
3 Carbon Footprint of the NHS in England (SDU NRF 2018)
4 Carbon Footprint of England (2014 CAIT data WRI)
Inhaler Actions

‘A shift to lower carbon inhalers will deliver a reduction of 4%, with a further 2% delivered through transforming anaesthetic practices’

• Lower carbon alternatives could be highlighted in training, such as
  • DPI, SMI, Smaller MDI
• Return to pharmacy for environmentally safe disposal or recycling

BTS/SIGN guidelines
NICE patient decision aid
Anaesthetics

C500,000 tonnes CO2 equivalent

Similar to the CO2 impact of 1.5m NHS staff business miles

‘A shift to lower carbon inhalers will deliver a reduction of 4%, with a further 2% delivered through transforming anaesthetic practices’
Anaesthetic gases 2000-30

Maternity
Isoflurane
Desflurane
Nitrous oxide for anaesthesia
Dentists
Nitrous oxide 50:50 wedge
Surgical nitrous oxide wedge
Volatile wedge
Projection 1 - BAU
Anaesthetic actions

Nitrous Oxide 300 x climate impact of CO2
Servoflurane 130 x CO2
Desflurane 2540 x CO2

• Use sevoflurane instead of desflurane in surgery
• Identify clinically appropriate ways to release less N2O to atmosphere e.g. less waste, better handling, appropriate use, alternatives.
Working with Industry

NICE quote – “For NICE, the goal is to routinely consider environmental factors in the development of clinical guidelines and in the appraisal of new drugs and technologies.” Gill Leng
BMJ 2019;366:l4930 doi: 10.1136/bmj.l4930 (Published 2 August 2019)
Next phase?

• Sustainable clinical practice
• Partnerships with local government
• Partnerships with industry
• Innovation and solution focussed
• Holding ourselves to account
Thoughts to take away

• What opportunities are there in our own teaching or clinical practice to improve?:
  • Waste reduction
  • Low impact prescribing or clinical practice
  • Low impact/less travel

• Can we encourage engagement in our organisations’ approaches?
  • SDMP
  • Clinical group/committee
  • Patient travel

• Other?