
















Teaching SusQI - Engagement exercises

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|--|--|------------------|-------------------|
| Lesson Title: | Various exercises to engage students in SusQI | | |
| Level: | Any | Duration: | 10- 20mins |
| Lesson Objectives: | | | |
| <ul style="list-style-type: none"> • Help students understand what is a carbon footprint and how it maybe calculated | | | |
| Exercise 1: | | | |
| Students: | | | |
| <p>If we are serious about addressing climate change we need to become carbon literate and get to grips with the implications of our choices. How do we know what to choose between when looking at two different options?</p> <p>Order the items below according to the size of their carbon footprint.</p> | | | |
| <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="width: 20%; text-align: center;"> <p>A 1 outpatient appointment</p>  </div> <div style="width: 20%; text-align: center;"> <p>B 1 banana</p>  </div> <div style="width: 20%; text-align: center;"> <p>C 1 litre of Desflurane</p>  </div> <div style="width: 20%; text-align: center;"> <p>D 1 toilet roll (virgin paper)</p>  </div> <div style="width: 20%; text-align: center;"> <p>E 1 Salamol Inhaler</p>  </div> <div style="width: 20%; text-align: center;"> <p>F 1 Cannula</p>  </div> <div style="width: 20%; text-align: center;"> <p>G 1 email referral</p>  </div> <div style="width: 20%; text-align: center;"> <p>H 1 large cappuccino</p>  </div> <div style="width: 20%; text-align: center;"> <p>I 1 GP appointment</p>  </div> <div style="width: 20%; text-align: center;"> <p>J 1 pair of jeans</p>  </div> <div style="width: 20%; text-align: center;"> <p>K 1 inpatient day – low intensity</p>  </div> <div style="width: 20%; text-align: center;"> <p>L 1 letter referral (virgin paper & disposed of at landfill)</p>  </div> <div style="width: 20%; text-align: center;"> <p>M 1 cataract surgery</p>  </div> <div style="width: 20%; text-align: center;"> <p>N 1 500ml bottle of water</p>  </div> <div style="width: 20%; text-align: center;"> <p>O 1 return journey to Oxford – London in an average sized car</p>  </div> </div> | | | |

| Items/processes | Carbon footprint (kgCO ₂ e) |
|--|--|
| 1 email referral | 0.004 |
| 1 banana | 0.08 |
| 1 * 500ml bottle of water | 0.16 |
| 1 letter referral (virgin paper & disposed of at landfill) | 0.2 |
| 1 large cappuccino | 0.235 |
| 1 cannula | 0.54 |
| 1 toilet roll (virgin paper) | 0.73 |
| 1 GP appointment | 6 |
| 1 pair of jeans | 6 |
| 1 Salamol inhaler | 10 |
| 1 outpatient appointment | 23 |
| 1 inpatient day - low intensity | 37.9 |
| 1 return journey Oxford - London in an averaged sized car | 40 |
| 1 cataract surgery in the UK | 180 |
| 1 litre of Desflurane | 3,720 |

Facilitators:

Students may want to do this exercise in a group. If delivering virtual teaching this could be done in breakout rooms. If in person you could have the items/processes cut out and then students could order them together in a group.

This could lead onto a discussion of how a carbon footprint is calculated and the variables that go into that equation.

This video could be helpful:

https://www.youtube.com/watch?time_continue=7&v=8q7_aV8eLUE&feature=emb_logo

In brief, a carbon footprint is shorthand for all of the different global warming greenhouse gases. This includes Methane, Nitrous oxide, Hydrofluorocarbons (HFCs) and other gases. In the UK the breakdown of our CO₂e gas emissions is approximately 81% Carbon Dioxide, 11% Methane, 5% NO, HFC and other gases 3%.

Acknowledge that calculating carbon footprints is complex. Be honest about the uncertainty but be empathetic that uncertainty does not negate the exercise as we need to start somewhere if we are to try and change how we address the issue.

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|----------------------|--|------------------|-------------------|
| Lesson Title: | Looking at the full environmental impacts of healthcare provision | | |
| Level: | Any | Duration: | 10- 20mins |

Lesson Objectives:

- To gain a holistic approach to the environmental impacts of different healthcare activities

Task: What is the major environmental impact category associated with these areas of healthcare provision?

Look at the items in the left-hand column. What is their major environmental impact? Please indicate with a tick.

| | Greenhouse gas emissions | Air pollution | Deforestation | Water consumption | Plastic pollution | Eco-toxicity | Scarce resources | Ozone depletion |
|--------------------------|--------------------------|---------------|---------------|-------------------|-------------------|--------------|------------------|-----------------|
| Inhalers | | | | | | | | |
| Energy use | | | | | | | | |
| Anaesthetic gases | | | | | | | | |
| Medical equipment | | | | | | | | |
| Pharmaceuticals | | | | | | | | |
| Operating theatres | | | | | | | | |
| Staff travel | | | | | | | | |
| Patient travel | | | | | | | | |
| Gloves (plastic, rubber) | | | | | | | | |
| Dialysis | | | | | | | | |
| Laundry services | | | | | | | | |
| Medical instruments | | | | | | | | |
| Single use plastic | | | | | | | | |
| Antibiotics | | | | | | | | |
| Cotton linen | | | | | | | | |
| Oral contraceptives | | | | | | | | |
| Anti-depressants | | | | | | | | |
| Propofol | | | | | | | | |
| Nitrous Oxide | | | | | | | | |

This may then lead onto discussion about planetary boundaries- and could be an opportunities to show this video about planetary boundaries

https://www.youtube.com/watch?time_continue=1&v=V9ETiSaxyfk&feature=emb_logo

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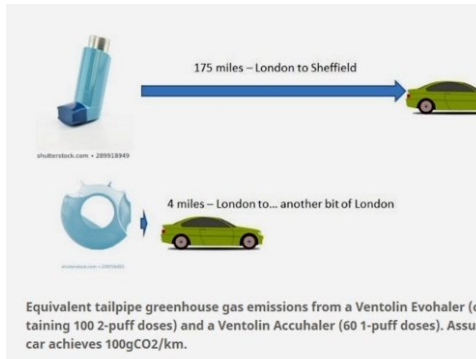
| | | | |
|--|--|------------------|-------------------|
| Lesson Title: | Learning about Healthcare's Carbon Hotspots | | |
| Level: | Any | Duration: | 10- 20mins |
| Lesson Objectives: | | | |
| <ul style="list-style-type: none"> • To gain a better understanding of why the high impact areas are for Co2e in healthcare delivery | | | |
| <p>Task: Using the cards below try and sort the items into high impact and low impact carbon footprint items.</p> <p>The NHS Sustainable Development Units information about carbon hotspot can be helpful in engaging participants in identifying the hotpot areas in their own practice.</p> <p>https://www.sduhealth.org.uk/policy-strategy/reporting/natural-resource-footprint-2018/carbon-hotspots.aspx</p> | | | |

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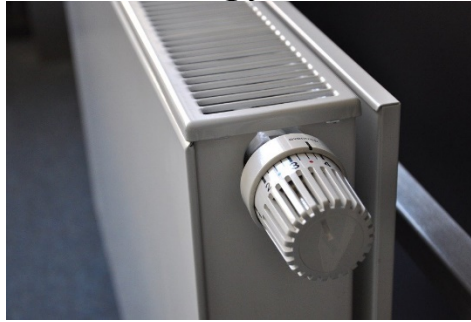
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Inhalers



Energy use



Anaesthetic gases



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Medical equipment



Pharmaceuticals



Operating theatres



Staff travel



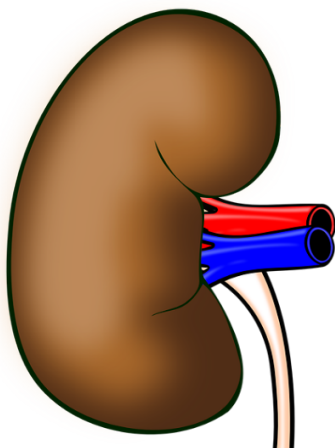
Patient travel



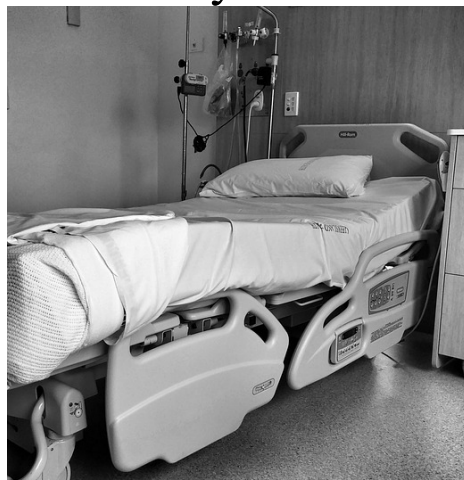
Gloves (plastic, rubber)



Dialysis



Laundry services



Medical instruments



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Single use plastics



Antibiotics



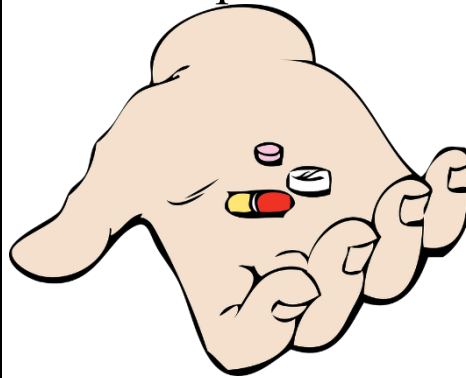
Cotton linen



Oral contraceptive pills



Antidepressants



Propofol



Nitrous oxide



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