An introduction to Sustainable Healthcare

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Rachel Stancliffe, Director
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Sustainable Dentistry, 29th June 2018
A. What is sustainable healthcare?

B. Why should healthcare professionals be concerned about sustainability?

C. What general steps have been taken to address sustainability in healthcare?

D. What steps have been taken towards sustainability in Dentistry?
Healthcare challenges in the 21st century

**ECONOMIC**
- Rising demand
- Financial crisis
- Waste

**ENVIRONMENTAL**
- Climate change
- Air and water pollution
- Water scarcity

**SOCIAL**
- Inequalities
- Safety / quality
- Patient experience
- Staffing / morale
A healthcare system is sustainable if it works within its financial, environmental and social resource limits, improving and protecting health now and for future generations.
A. What is sustainable healthcare?

B. Why should healthcare professionals be concerned?
B. Why should healthcare professionals be concerned about sustainability?

1. Climate Change is the biggest health threat of the 21st century. Dr. Margaret Chan WHO Director-General
‘Although vector-borne diseases will expand their reach and death tolls, the indirect effects of climate change on water, food security, and extreme climatic events are likely to have the biggest effect on global health.’

B. Why should healthcare professionals be concerned about sustainability?

1. Climate Change is the biggest health threat of the 21st century
2. Healthcare contributes to climate change because of its high carbon emissions
Greenhouse gas emissions of healthcare

Healthcare emits:

• 10% GHGs in the US\(^1\),
• 7% GHGs in Australia\(^2\), and
• 5% GHGs in England\(^3\)


NHS England carbon footprint (22.8 million tonnes CO2e)

Commissioned: 10%
Travel: 12%
Building energy use: 20%
Procured (pharmaceuticals, equipment, everything else): 58%

Clinical
Estates

B. Why should healthcare professionals be concerned about sustainability?

1. Climate Change is the biggest health threat of the 21st century
2. Healthcare contributes to climate change because of its high carbon emissions
3. Resources are finite (water and scarce metals)
4. Legal reasons and international agreements (2008 CCA)
5. Healthcare professionals are respected advocates
6. Sustainability can improve productivity and value, saving money along the way
Sustainable value in healthcare

Value = \frac{\text{outcomes} \ (\text{goods} - \text{harms})}{\text{environmental} + \text{social} + \text{financial costs} \ (\text{the “triple bottom line”})}

Informed by patient values

Academy of Medical Royal Colleges, 2016 (with CSH)
A. What is sustainable healthcare?

B. Why should healthcare professionals be concerned about sustainability?

C. What general steps have been taken to make healthcare more sustainable?
NHS, public health and social care system wedges to 2050

Global and national actions

- National electricity decarbonisation
- National vehicle efficiency
- International carbon reductions affecting Health and Social Care supply chain
- Public sector financial challenge
- Avoided emissions from planned adaptation and resilience
- Health and Social Care Sector historic emissions
- Projection 2 - Expected National and International Govt. actions only (all actions above)
- Buildings energy efficiency
- Reduced need for staff, service user and visitor travel
- Shift from propellant inhalers
- Reduced anaesthetic gas emissions
- Sustainable procurement and supply chain decarbonisation
- Shift to less intensive models of care
- System demand reduction, from public health co-benefits of mitigation
- Projection 3 - Health and Social Care Sector + Expected National and International Govt. actions (all actions above)
- Climate Change Act Trajectory

Health sector actions

- -31%
- -30%
- -58%
- -80%
Summary of progress
Governance

• Analysing healthcare’s greenhouse gas emissions and identifying its hotspots
• Securing support at executive level
• Developing organisational sustainable development management plans
• Developing partnerships to support the embedding of sustainable principles within healthcare
‘No regret’ policies will improve health, enhance resilience, alleviate poverty and address inequality:

- Clean energy
- Active travel
- Housing improvements
- Green spaces

Sustainable clinical practice

Outcome needed

Reduce carbon without reducing health

Primary driver

Reduce activity

Primary driver

Reduce carbon intensity

Mortimer-F. The Sustainable Physician
Sustainable clinical practice

Primary driver
- Reduce activity
- Reduce carbon intensity

Secondary drivers
- Prevention
- Self care
- Lean pathways

Outcome needed
- Reduce carbon without reducing health

CENTRE for SUSTAINABLE HEALTHCARE

Mortimer-F. The Sustainable Physician
Sustainable clinical practice

Primary driver:
- Reduce activity
- Reduce carbon intensity

Secondary drivers:
- Prevention
- Self care
- Lean pathways
- Low carbon alternatives
- Sustainable estates

Outcome needed:
- Reduce carbon without reducing health
The 4 Principles of Sustainable Healthcare

• **Prevention** - promoting health and preventing disease by tackling the causes of illnesses and inequalities

• **Patient self-care** - empowering patients to take a greater role in managing their own health and healthcare

• **Lean service delivery** - streamlining care systems to minimise wasteful activities

• **Low carbon alternatives** – prioritising treatments and technologies with a lower environmental impact

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Working Groups

• CSH Sustainable Dentistry Programme
  wonderful dental scholars with input from Brett Duane

• Dental Sustainability Advisory Group
  with representation from: GDC, BDA, LDC, PHE, HEE, CSH and many others

• Network Dental Susnet
Carbon footprinting and Triple Bottom Line Analysis in Dentistry

• Taking a bite out of Scotland's dental carbon emissions in the transition to a low carbon future. Duane et al. Public Health 2012 Sep;126(9):770-7


• Carbon Footprinting of Dentistry in England. Ingeborg Steinbach and Brett Duane, . PH England,
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