

Climate & Healthcare: greening up HIV for the future

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#NHIVNA24



Climate and Healthcare greening up HIV for the Future



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www.nhivna.org

Conflict of Interest

In relation to this presentation I declare that I have no conflict of interest

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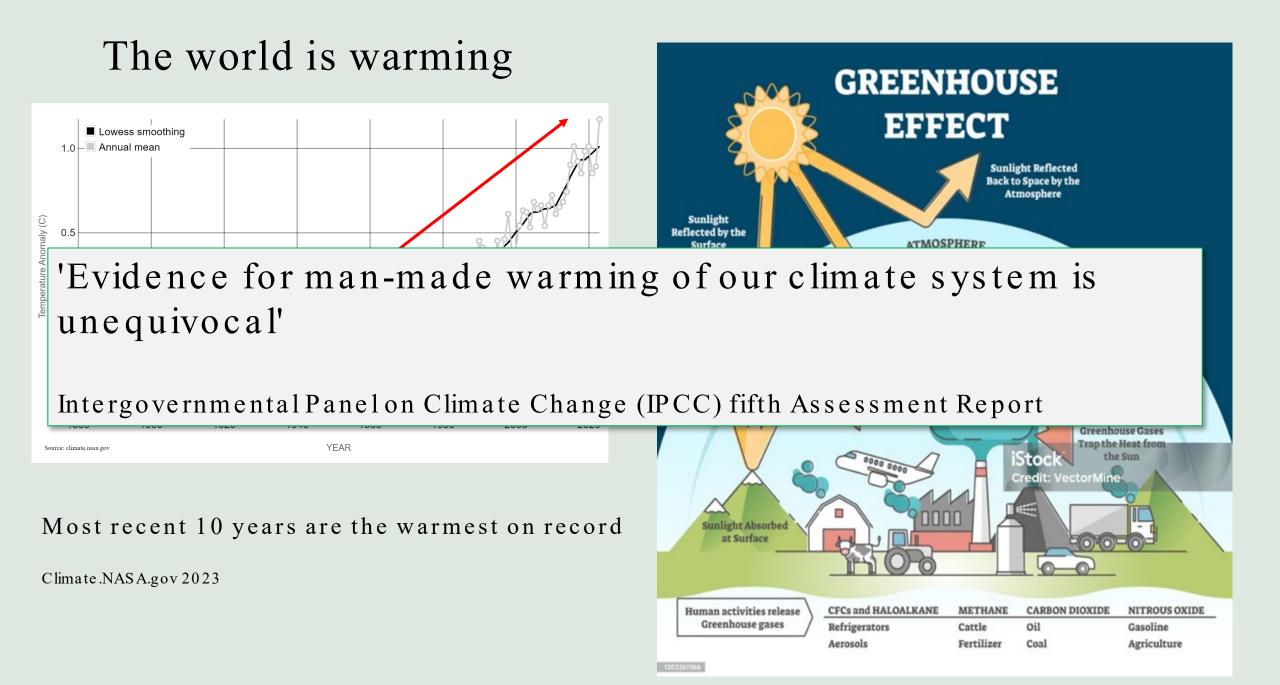




Plan

- Background
- Climate affecting healthcare
- Healthcare affecting climate
- NHS green plan & sustainable healthcare
- Examples within HIV & Sexual Health
- What you can do
- Summary











Brazil

Afghanistan

Kenya

MAY 2024







2023 Europe, low yield crops



China 2023, hydropower issue



Since 2020, Horn of Africa worst drought in 40 years



Sicily July 2023



Amazon 2023 - old growth forests



Icecaps melting

UK





Suffolk Oct 2023







Impact of Climate Change on Human Health

Injuries, fatalities, mental health impacts

Asthma, cardiovascular disease

Malaria, dengue,

encephalitis, hantavirus,

respiratory

allergies, asthma

Air

Pollution

Water

Quality Impacts

Heat-related illness

cardi Many Health organisations have now declared that the climate emergency is a health emergency

Severe

Weather

UKHACC

Forced migration, Degradation civil conflict, mental health impacts

> Water and Food **Supply Impacts**

Malnutrition, diarrheal disease

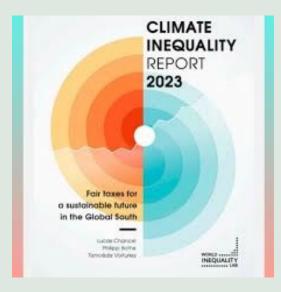
mental

Cholera, cryptosporidiosis, campylobacter, leptospirosis, harmful algal blooms

Source: Centers for Disease Control and Prevention

Inequalities

Disproportionately effect the most vulnerable and disadvantaged -> drives health inequality





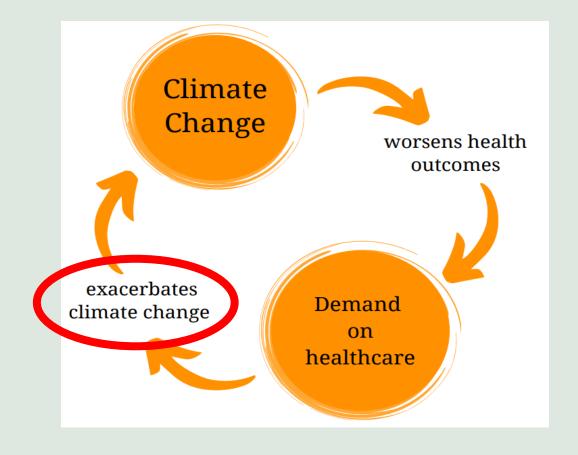




Ella Kissi-Debrah



Climate change and Healthcare



NHS contributes 4% UK Carbon emissions * What contributes to this?

Which has the highest (worse) carbon footprint?



Cannula

GP appointment

Email referral



Outpatient appointment



Salamol asthma inhaler



Answers (KgCO2e)



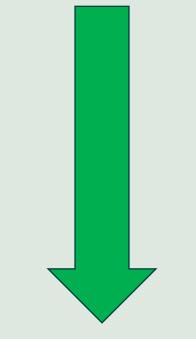
Email referral 0.004

Cannula 0.54

GP appointment 6

Salamol asthma inhaler 10

Outpatient appointment 23



Sources: Centre for sustainable healthcare, <u>www.susqi.org</u> Travel calculator via www.lner.co.uk

Answers (KgCO2e)



Email referral 0.004



GP appointment 6

Cannula 0.54



Salamol asthma inhaler 10



Outpatient appointment 23



1 inpatient day

- low intensity 38



l cataract surgery in UK 180



Train Brighton -Liverpool return 30



Driving Brighton-Liverpool return 103

Sources: Centre for sustainable healthcare, <u>www.susqi.org</u> Travel calculator via www.lner.co.uk



Patient First, Planet First: our green plan

MEDICAL EQUIPMENT

ALS

N-MEDICAL UIPMENT

In partnership with





Travel and Transport



Estates and Facilities



Research and Innovation



Workforce



Supply Chain and Procurement



Data and Analytics



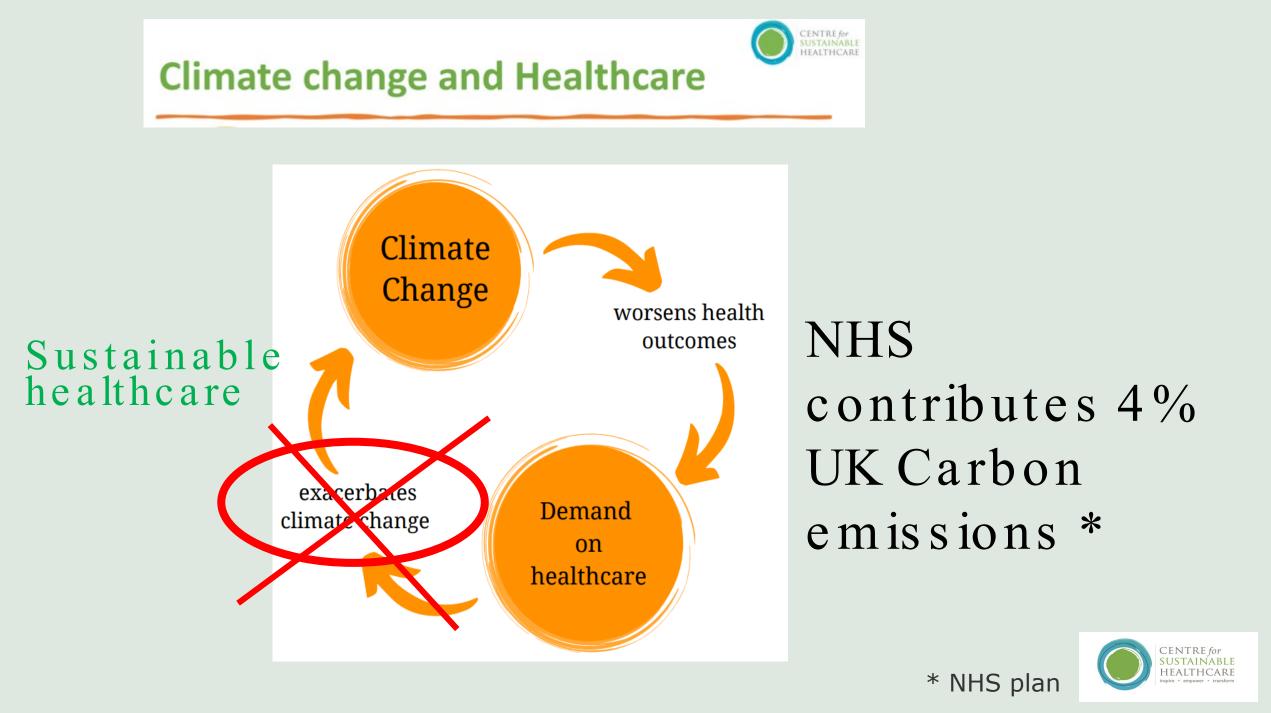
Food and Nutrition



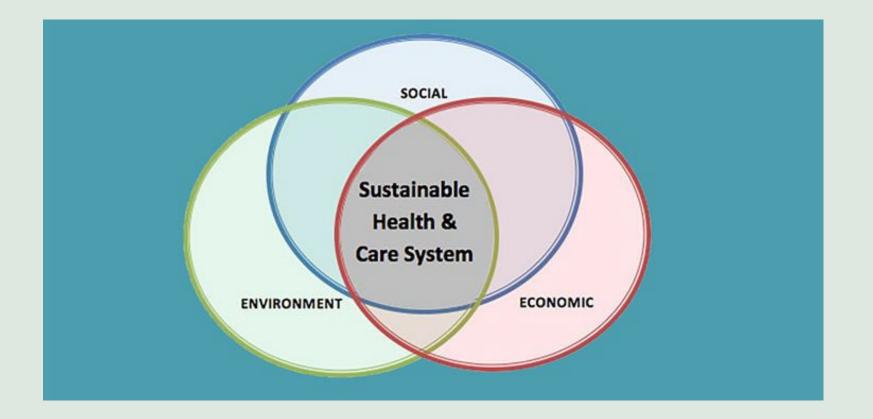
Medicines



Clinical Transformation



Sustainable Healthcare delivers high quality care without damaging the environment, is affordable now and in the future and delivers positive social impact





Sustainable Healthcare

1. PREVENTION

promoting health and preventing disease by tackling the causes of illnesses and inequalities

3. LEAN SERVICE DELIVERY

streamlining care systems to minimise wasteful activities Four principles of SUSTAINABLE HEALTHCARE

Mortimer, F. The Sustainable Physician. Clin Med 10(2). April 1, 2010. p 110-111. http://www.clinmed.rcpjournal.org/ content/10/2/110.full



CENTRE for SUSTAINABLE HEALTHCARE

2. PATIENT SELF-CARE

empowering patients to take a greater role in managing their own health and healthcare

4. LOW CARBON ALTERNATIVES

prioritising treatments and technologies with a lower environmental impact.

Sustainable Healthcare in HIV

TasP, vaccinations, PrEP, contraception, lifestyle, BP/DM control

1. PREVENTION

promoting health and preventing disease by tackling the causes of illnesses and inequalities

3. LEAN SERVICE DELIVERY

streamlining care systems to minimise wasteful activities

Four principles of SUSTAINABLE HEALTHCARE

Mortimer, F. The Sustainable http://www.clinmed.rcpjournal.org/ content/10/2/110.full

· empower · transform



diet/exercise/addiction, patient held apps, online testing 2. PATIENT SELF-CARL

empowering patients to take a greater role in managing their own health and healthcare

4. LOW CARBON ALTERNATIVES

prioritising treatments and technologies with a lower environmental impact.

single use plastic, electronic patient records, patient & staff travel, medicines??

motivational interviewing,

measures, peer support,

patient activation

efficient pathways, avoiding medication wastage, prudent investigations

Intersection of climate and HIV

- Drought in Sub-Saharan Africa
 - Decreased ART adherence, detectable viral loads
 - Reduced retention in care
 - Increased HIV prevalence



- HIV outcomes?
- Research into building up & adapting healthcare capacity

Trickey et al, BMC Infec Dis 23(1) 1 dec 2023 Effect of Climate change on HIV response; Lancet HIV, Vol 11, Issue 2 E63 Feb 2024 Personal correspondence C Iwuji, Jan 2024

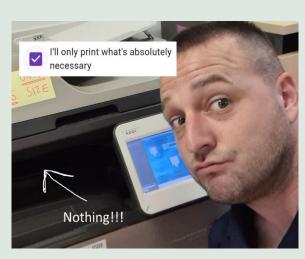
The HIV SHAC Green Team - Brighton

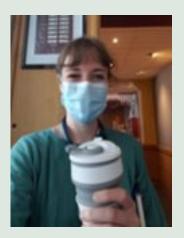
Multi - disciplinary team

Doctors, nurses, Health advisors, pharmacists, administrators & patient rep













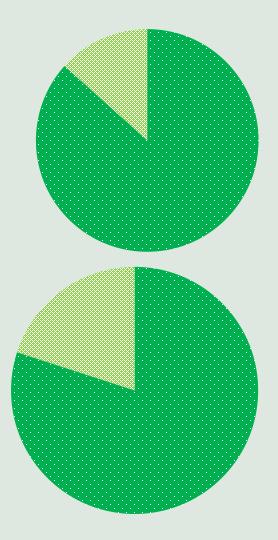
311 Green pledges during Trust environment week



Green pledge outcomes

87% stating they had made a permanent lifestyle change as a result

80% reporting it increased their awareness of environmental issues



Ross S, Simmons K and Clarke A. Greening up sexual health service Trashesm Infect. 2023; 99: 145

Changes to practice

Clinical:

- Agenda item
- Single use plastic items:

 specula/ instruments
 tourniquets
 gloves

ocups

- Virtual clinics
- 'Spotlight' project

Switch Off-tober

GOING HOME?

TURN OFF THE LIGHT (OR COMPUTER)

SAVE ENERGY BRIGHTONSEXUALHEALTH Non-clinical:

- Top Tips
- Switch off
- Quiz/ education
- Paper reduction
- Recycle points
- Vegan bake sales

Sexual health green team awarded for innovations to create a more sustainable service



2023 BASHH Conference Cathy Harman Award





Monthly glove use reduced 14,000 to 7,800 inic 45% reduction

2036 KgCO2e saved annually Carbon savings equivalent of boiling 3420 kettles That's a lot of cups of tea...!









Remember to maintain good hand hygiene by regularly washing your hands with soap and water

REUSABLE SPECULUM PROJECT

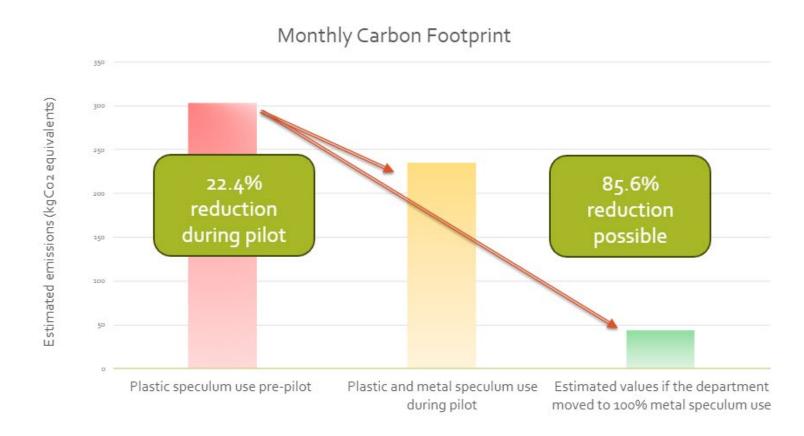
Staff questionnaire results

2

Usage data

Isobel Hall, 4th year medical student BSN

17th January 2024



Brighton

Speculum project carbon savings

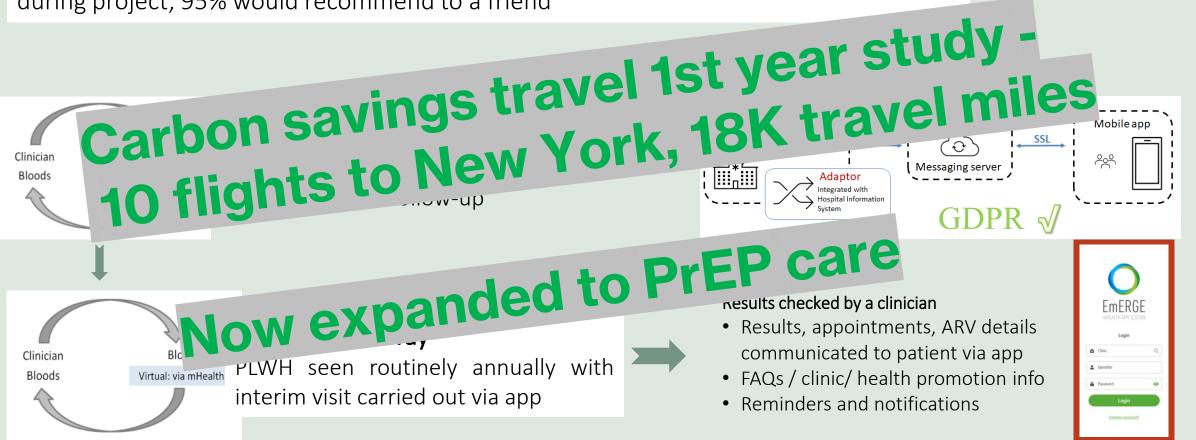
2,817KgCO2e annually



EmERGE digital pathway & platform for medically stable HIV patients

Co-designed with community & clinicians: providing access to own data own health data; reducing f2f visits to clinic by up to 30%; 2251 people followed up for 3891 patient years during project; 95% would recommend to a friend





A novel care pathway for stable HIV patients – a streamlined and sustainable countywide approach – Northamptonshire Integrated sexual Health team



Positive patient feedback – work/convenience Assuming 90% of cohort: Estimated 350 B6 hours saved Carbon savings 26K KgCO2e £45k annual saving consumables



<u>impact_report_- northampton_green_team_competition_2022.pdf</u> (sustainablehealthcare.org.uk)

Excess Baseline investigations for patients newly diagnosed with HIV - Cardiff

Excess baseline investigation of patients newly diagnosed with HIV - opportunity for decarbonising sexual health E. Cochrane¹, D. Cousins¹, R. Drayton nent of Sexual Health, Cardiff and Vale University Health B Introduction Methods In 2018/19 the NHS Wales carbon footprint We conducted a case-note review for all patients was approximately 1 million tonnes of CO₂ newly diagnosed with HIV attending Cardiff emissions (CO2e), representing 2.6% of Wales's Department of Sexual Health in 2021 and 2022 total greenhouse gas emissions⁽¹⁾. using Welsh Clinical Portal and MillCare electronic patient record (EPR) systems. Laboratory investigations are important in ensuring the correct management of patients We evaluated baseline testing within 4 weeks of living with HIV, but excess and unnecessary first doctor consultation with respect to the 2016 testing has financial and environment costs BHIVA guidelines for "Baseline/initial assessment with no evidence of patient benefit. for all newly diagnosed HIV-positive patients".⁽²⁾ We aimed to estimate the financial cost and CO₃e values were calculated using current carbon footprint associated with excess Greener NHS protocols, As such, each pound baseline investigation of those newly spent on laboratory equipment and services diagnosed with HIV. equates to 0.3kg CO2e. Results There were 26 new diagnoses of HIV in 2021 and 2022. 2 patients were lost to follow up within 4 weeks of diagnosis and therefore excluded. The graph below shows the incidence of patients receiving non-routine tests and the linked table shows the number of times the tests were completed without indication (excess tests), and the associated cost and carbon emissions



21 measles igG tests and 7 varicella zoster virus igG tests (£147.49, 44.2kg CO₂e) were completed without documented discussion of vaccination/infection history. In patients with a CD4 count >400 and previously normal findings, 17 biochemical/ haematological investigations (£77.92, 23.38kg CO₂e) were repeated without documented indication prior to commencing antiretrovirals.

ommencing antiretrovirals.

Discussion

The prudent use of resources is a key principle in both sustainable healthcare and reducing financial costs. Factors contributing to high incidence of excess testing are: • Use of outdated proformas I nadeouate staff trainine

 Inadequate start training
 Use of 2 unlinked EPR systems
 Inappropriate electronic tests request sets These factors present an opportunity for service improvement and re-evaluation.
 The presented CO₂ evalues do not account for courier transport or venepuncture equipment, but are higher than estimates calculated using a life cycle assessment of pathology testing.¹⁰
 Although there are limitations to accurate estimation of CO₂ evalues, this first evaluation offers a benchmark for improvement. Estimated carbon emissions associated with excess completion of non-routine tests are equivalent to approximately 380 miles driven in a petrol car'.

References

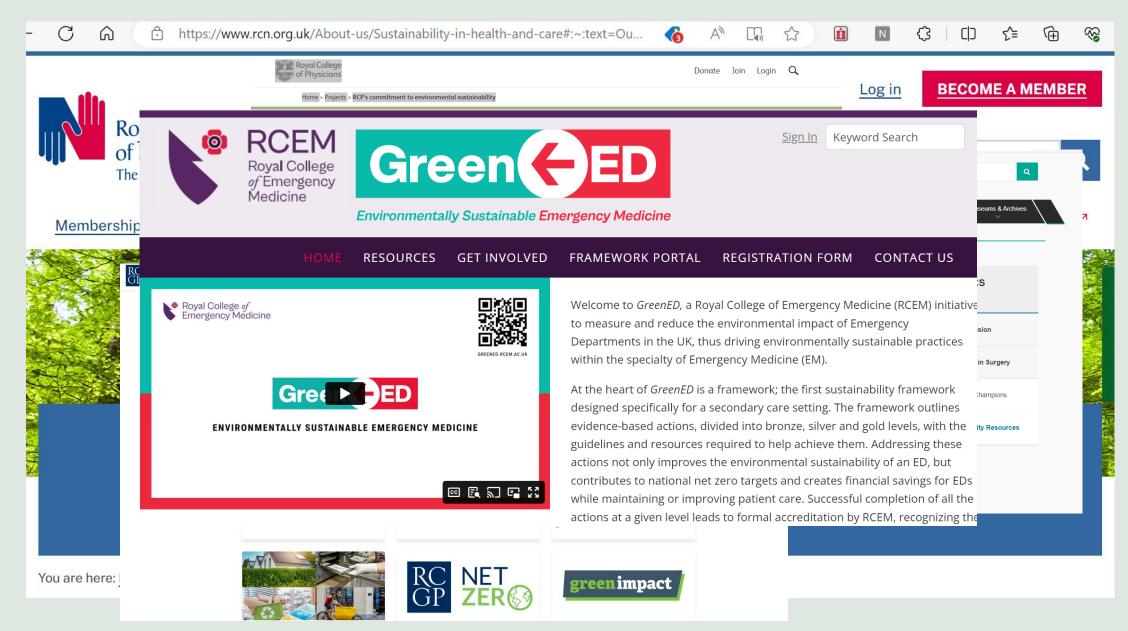
 Weih Gowenneset (2020). Setti Weie Ensisteins of Greenbaue art http://latiweie.acoverlet/Calleges/Environment and: Construint/Greenbaues Calleges/Environment and: Construint/Greenbaues Calleges/Environment/Calleges/Environment 21 Ages 6, Brook G, Anexus F, Barter G, Beffles M, Das S, Darrell L, Dono William E, Blerop K, Jacker G, Beffles M, Das S, Darrell L, Dono William E, Blerop S, Calleges J, Barter G, Beffles M, Das S, Darrell L, Dono William E, Blerop S, Grand S, Barter G, Beffles M, Das S, Darrell L, Dono William E, Blerop Scurly and Her Cans. Greenbaue gas reporting: Coversion factors 2022 [Internet]. GOV/UK 2021, Available thtp://www.gov.dovernment/jubalications/greenbaues gas reporting: coversion factors 2022 [Letternet]. GOV/UK 2021]. Available interporting: Coversion factors 2022 [Letternet]. GOV/UK 24 new patients, casenote review in first 4 weeks cf BHIVA guidelines

Excess (unnecessary) tests = 380 miles petrol care (and ££/ patient harm)

Outdated proformas, inappropriate electronic test sets, staff, 2 unlinked EPRs, training etc

Cochrane et al, BASHH conference 2023

Royal Colleges are taking action



BASHH BHIVA Sustainable healthcare Special interest Group (SIG)





The power is in your hands...

Most and least trusted professions in Britain

Share of British adults that trust people in the following professions to tell the truth

Nurses		93%
Ductors		91%
Engineers		89%
Teachers		85%
Judges		84%
Estate agents	27%	
Journalists	23%	
Government ministers	16%	* //
Politicians generally	15%	
Advertising executives	13%	

n=916 adults (18+) in Great Britain. Conducted 16-25 October 2020. Source: Ipsos Mori Nursing is the largest occupational group in the health sector, globally estimated at 27 million.

Nurses

and midwives are essential, as they are best placed in the communities they serve to provide immediate care to those most at risk during climate emergencies, and to actively engage in mitigation and adaptation efforts.

Nurses and Midwives as Global Partners to Achieve the Sustainable Development Goals in the Anthropocene. Rosa W, Catton H, Davidson P et al





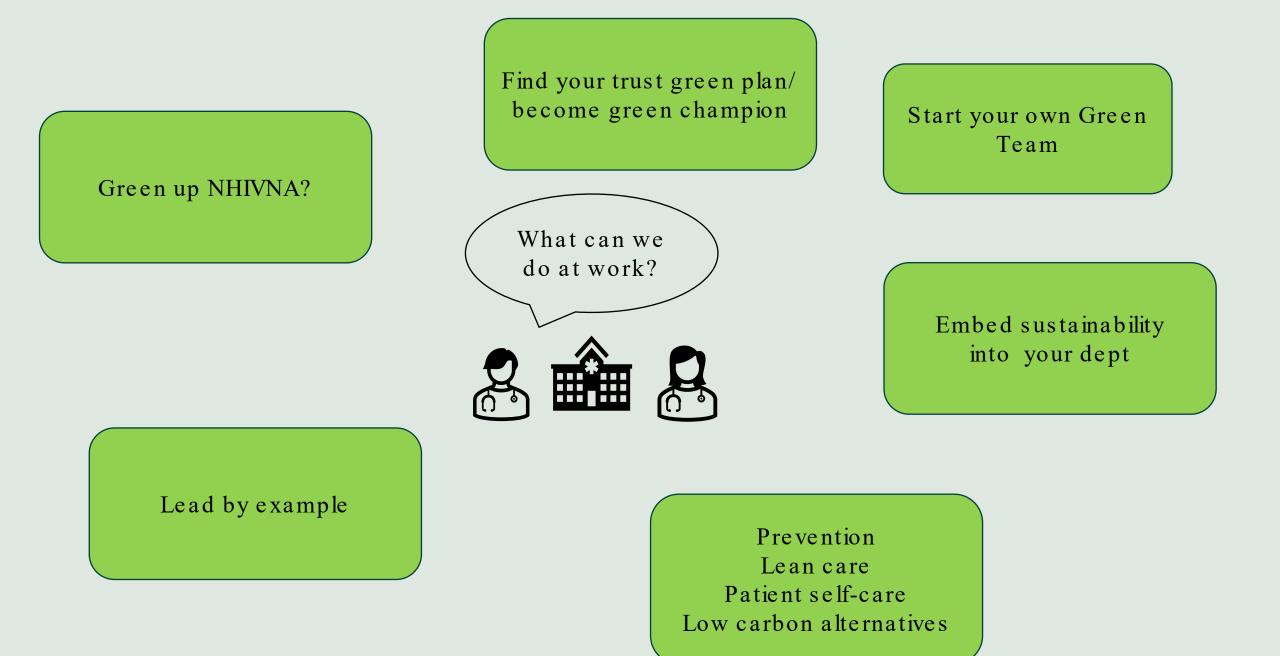
Sustainability: nurses demand e-cars and waste reforms

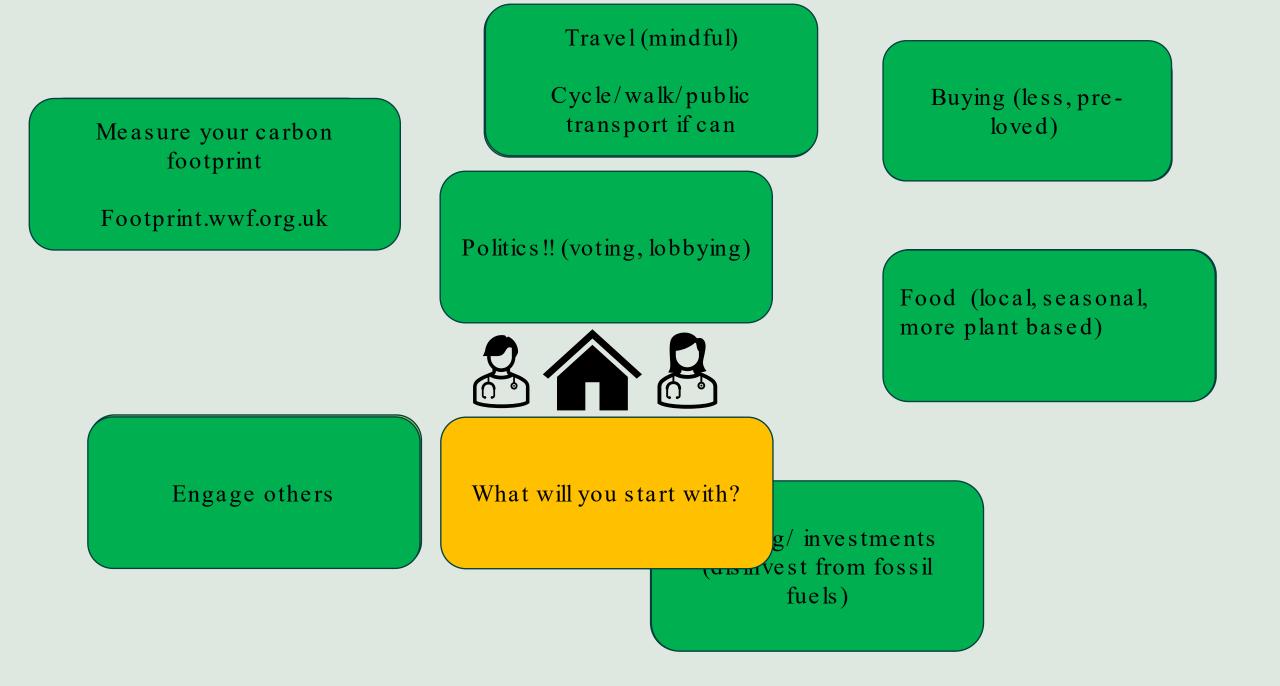
03 APRIL, 2024



Reducing the environmental impact of healthcare is a major challenge that the next government will need to embrace if it is to fulfil its climate promises. The UK has pledged to reduce its greenhouse gas emissions to net zero by 2050 – meaning that, by that year, the emissions it...

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Summary

- Climate change is real
- Health is worsened by climate issues in many different aspects
- We (the NHS) are contributing to climate change
- We all have a role to play to help mitigate our impact on the environment
- HIV Clinics are already taking action
- Plenty of opportunities to do more



Thanks for listening



Thanks for sharing projects or slides: Dr Ayoma Ratnappuli (centre Sustainable Healthcare) Dr Jenny Whetham (Emerge) Isobel Hall (reusable speculum project) Laurie Smith (Gloves off) Rachel Drayton (excess testing) Lynn Riddell (lean HIV pathways)

TV Books films organisations



Our Planet etc, Kiss the Earth (uplifting!)



Outrage & Optimism, Matter of degrees, Eco medics, TED Climate

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BMJ sustainable Practise series eg <u>Sustainable practice: what can I</u> <u>do? | The BMJ</u>

Lancet Countdown on Health & climate change

Your hospital Green plan!



sustainablehealthcare.org.uk