

Integrating Planetary Health and Sustainable Healthcare in Medical Education

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Planetary health is an overarching **determinant of human health**

Environmental sustainability is **core business for health systems**

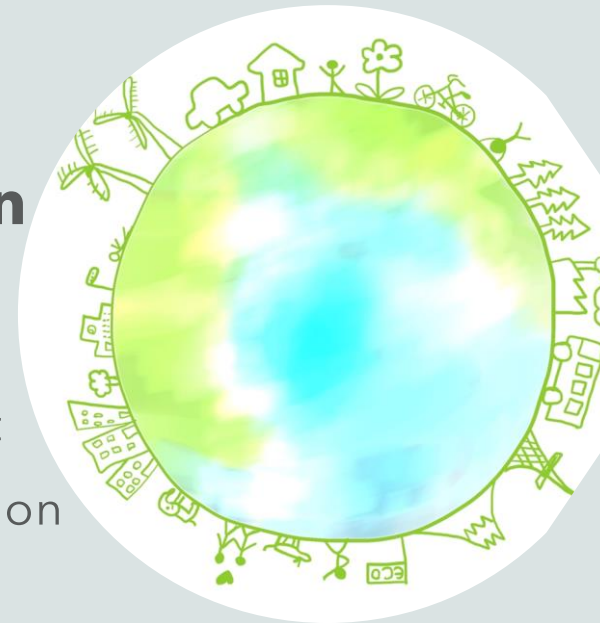
- This affects the duties of a doctor – as **scholar/scientist**; as **practitioner** & as **professional**
- We can adapt existing curriculums to help doctors (& educators!) acquire the relevant **knowledge, skills, values & capabilities**
- **Guidance, resources & case studies** from professional bodies
→ faculty development + adaptation of learning & assessment

Core Learning Objectives, referenced by GMC

- 1. Describe how the environment and human health interact at different levels.**
- 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.**
- 3. Discuss how the duty of a doctor to protect & promote health is shaped by the dependence of human health on the local and global environment.**

Thompson et al. (2014) Learning objectives for sustainable healthcare. The Lancet

Walpole et al. (2015) Exploring emerging learning needs: a UK-wide consultation on environmental sustainability learning objectives for medical education. IJME.



Education for Sustainable Healthcare

"Teaching and learning which prepares future health professionals to promote sustainable health and deliver sustainable healthcare"

(Walpole & Mortimer 2017)



Original Research

We are missing a trick by not also selling a more local argument. I think this would help to pick up and involve students with a broader range of values. (educator)

Hull York Medical School, Centre for Sustainable Healthcare, United Kingdom

[The project] has certainly pushed us further than we would have gone otherwise, and given us added gravitas when discussing sustainability teaching and learning with faculty. (educator)

Available online 4 July 2017

Keywords:

Collaborative work

Objectives. The objectives of this study were to (1) explore univers and challenges of collaboration for educational development between and within medical schools; (2) evaluate the effectiveness of a range of pedagogies for sustainable healthcare education; and (3) identify effective strategies to facilitate the renewal of medical curricula to address

25 Newly qualified doctors must be able to apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice.

GMC, *Outcomes for Graduates*, June 2019

They must be able to:

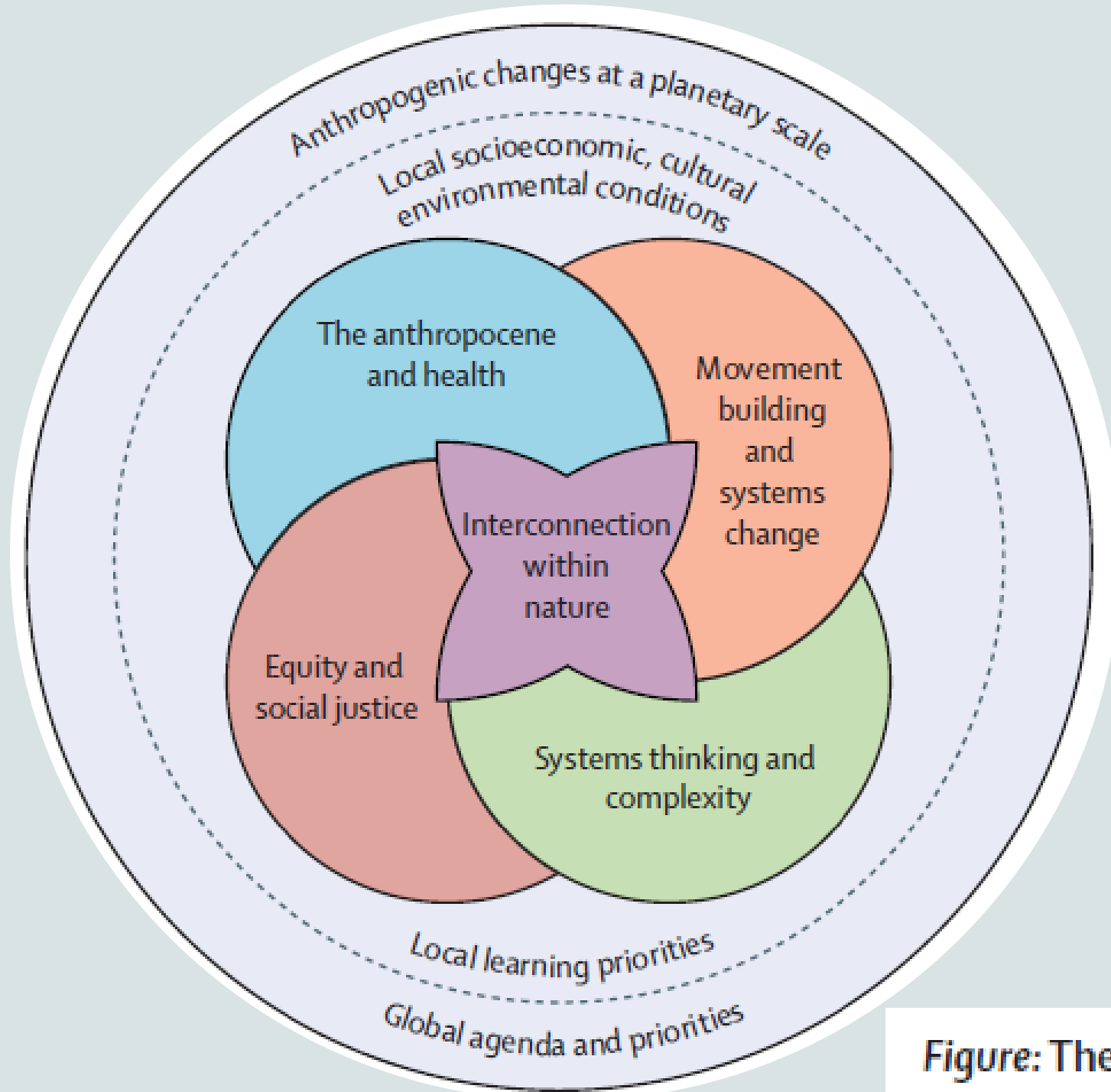
- a. Explain the concept of wellness or wellbeing as well as illness, and be able to help and empower people to achieve the best health possible, including promoting lifestyle changes such as smoking cessation, avoiding substance misuse and maintaining a healthy weight through physical activity and diet
- b. Describe the health of a population using basic epidemiological techniques and measurements
- c. Evaluate the environmental, social, behavioural and cultural factors which influence health and disease in different populations
- d. Assess, by taking a history, the environmental, social, psychological, behavioural and cultural factors influencing a patient's presentation, and identify options to address these, including advocacy for those who are disempowered



- Learning objectives - knowledge, skills, values, mindset
 - Educational strategies
 - Assessment approaches
 - Faculty development and eco-ethical leadership
 - Key resources list
 - Glossary
 - Proposed route map for ESH implementation
 - Discussion of indicators to measure implementation
-
- Framed around the Sustainable Development Goals (SDGs);
 - Equity centred + Informed by a human rights approach and indigenous & land-based perspectives.

Association of
Medical Education
in Europe (AMEE)

Consensus
Statement, *Med.
Teacher* 2021



Planetary health
requires an
interdisciplinary
approach

Faerron-Guzman et al.
Lancet Planetary Health
2021

Figure: The planetary health education framework

5

Population Health and Sustainable Healthcare

Future Doctors will learn, while embedded in their local community, to better understand population needs and use resources optimally to improve the physical, mental and social wellbeing of the whole population. They will embrace a culture of stewardship and a sense of community responsibility.



NHS
Health Education England

The Future Doctor Programme

Skills for Sustainable Healthcare include...

Carbon literacy

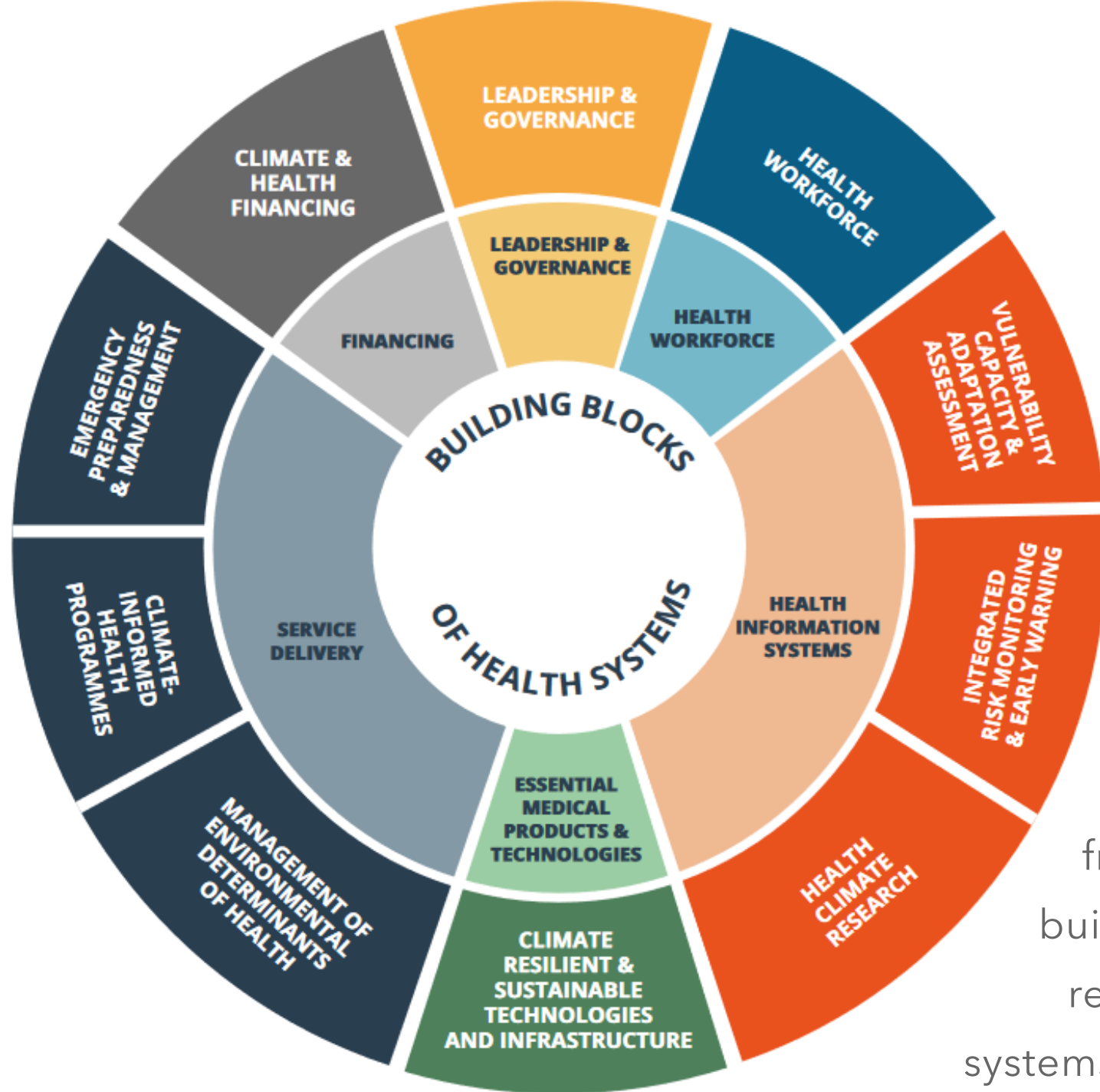
Adaptability

Creativity

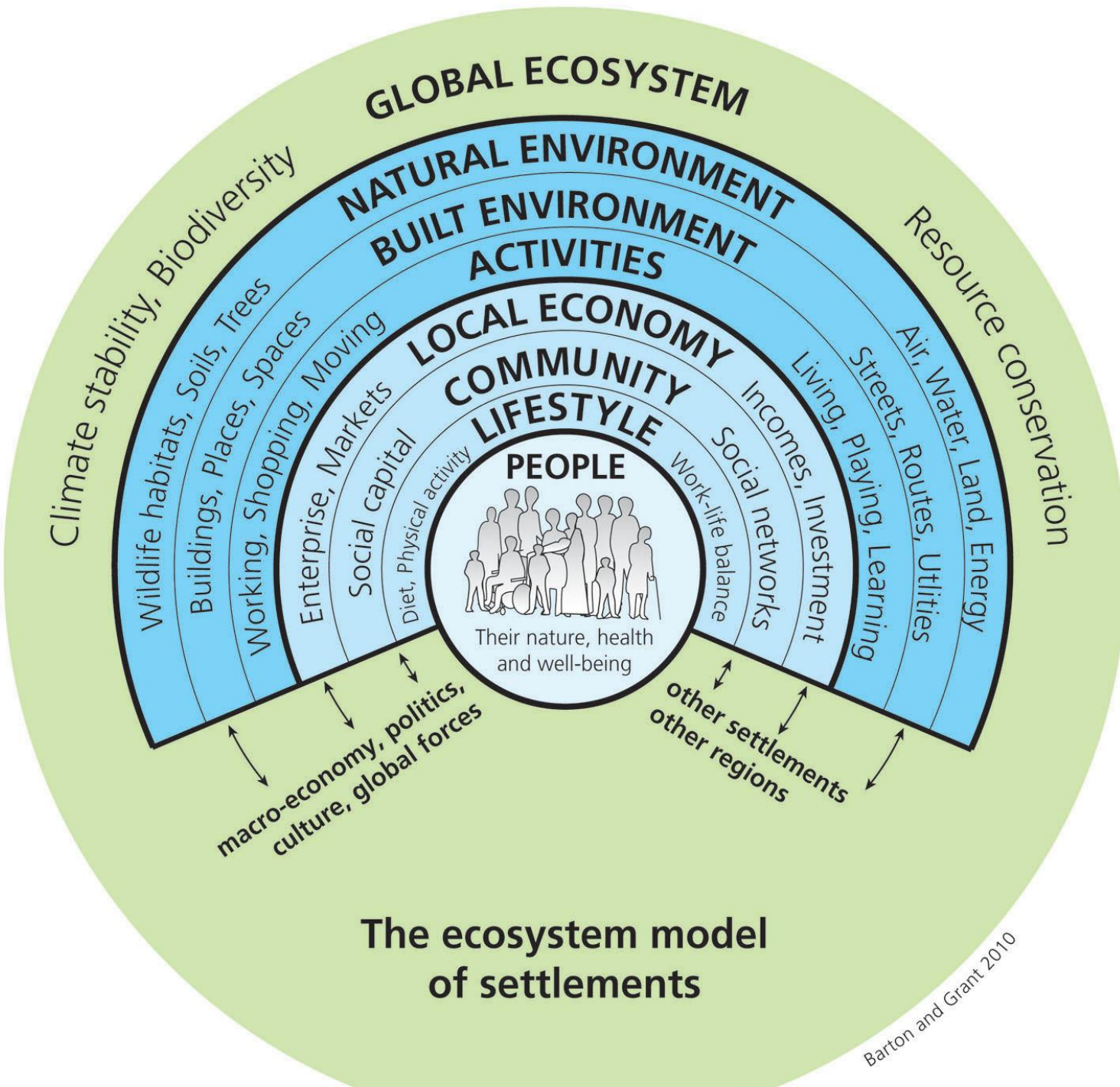
Transdisciplinarity

Communication

Leadership



Operational framework for building climate resilient health systems. WHO 2015



We can adapt existing education on social determinants of health very simply to incorporate a planetary health perspective

Doctor as:

1. Scholar and scientist
2. Practitioner
3. Professional

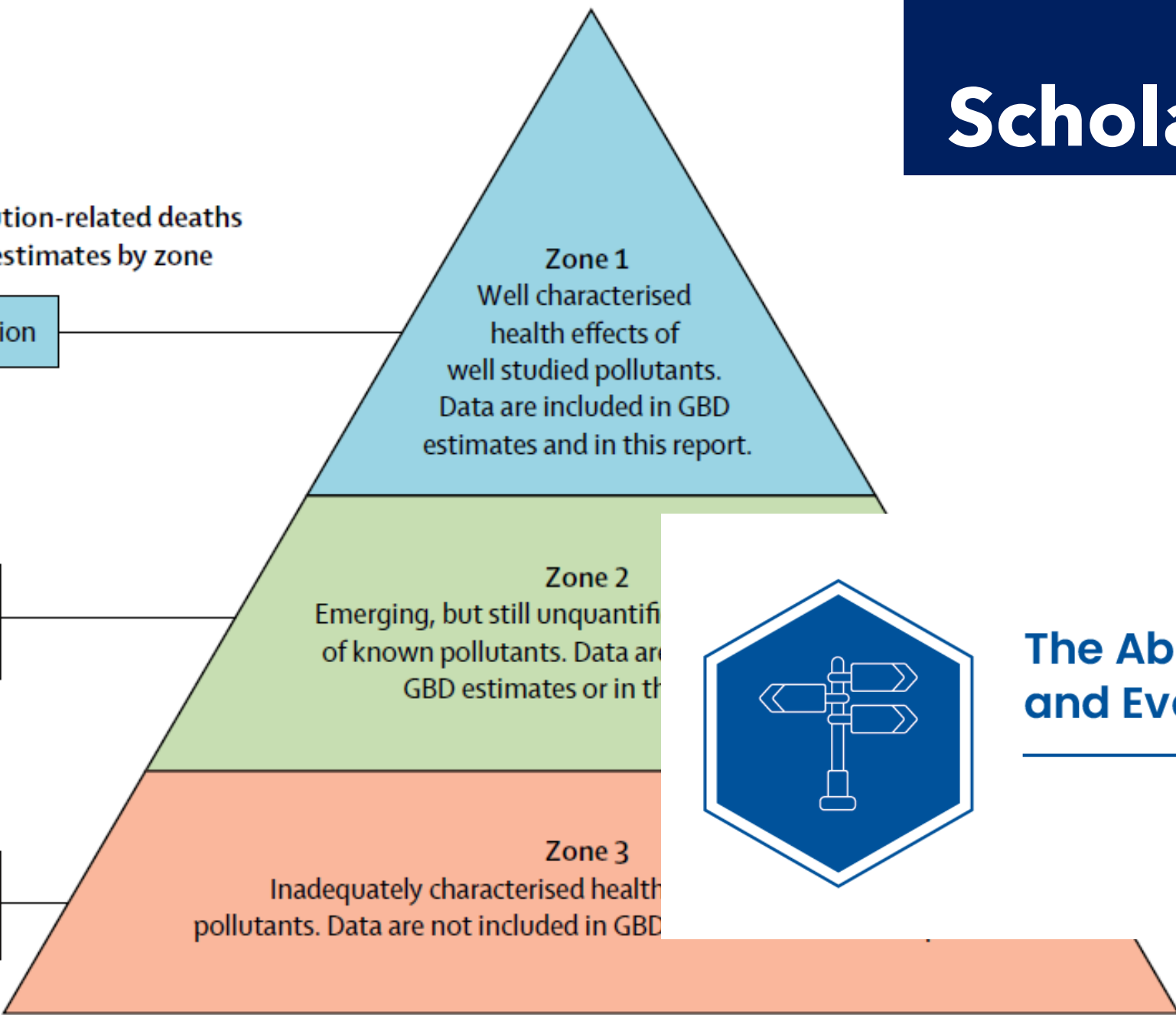
1. Doctor as Scholar & Scientist

Numbers of pollution-related deaths included in GBD estimates by zone

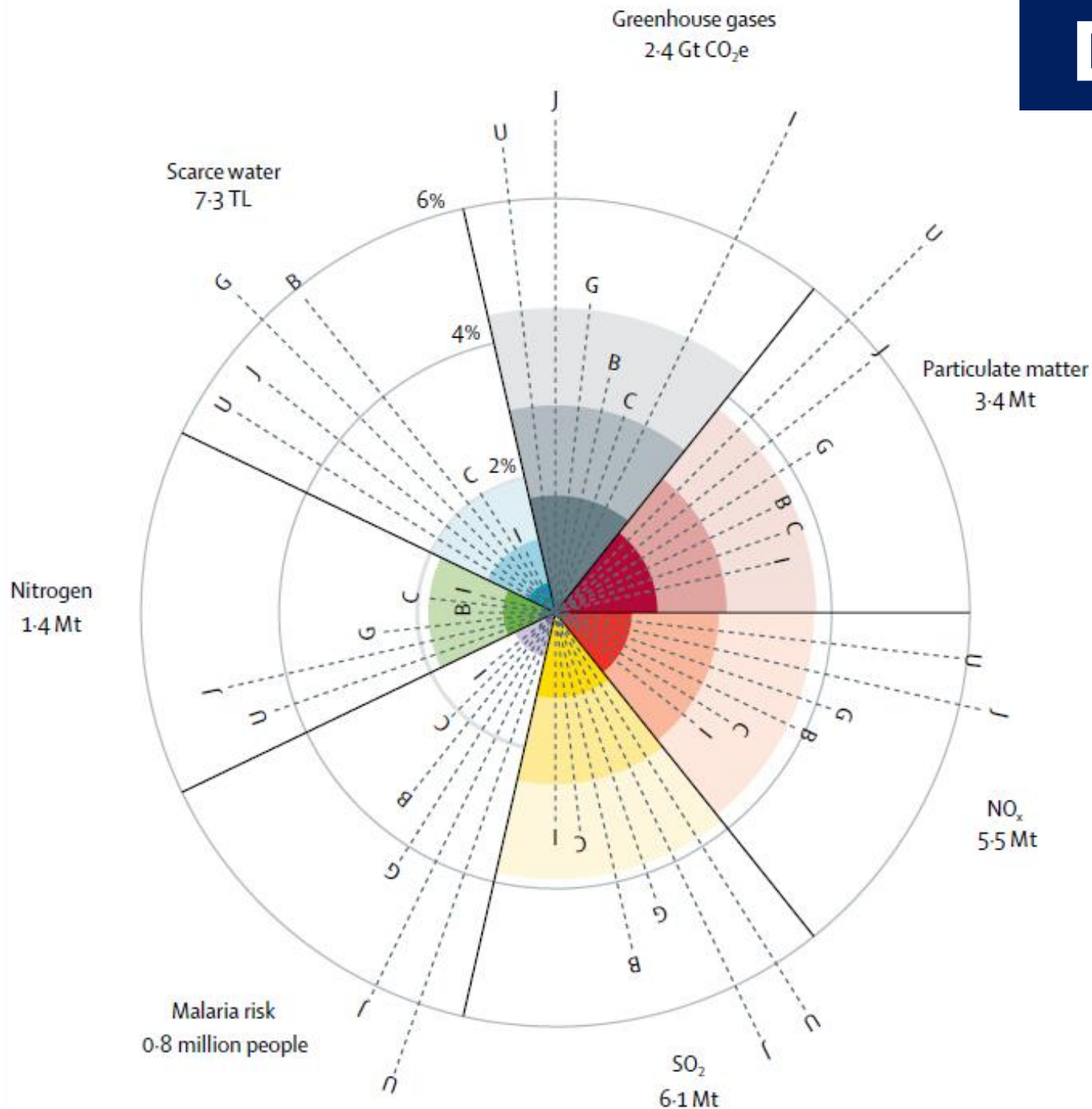
Zone 1: 9.0 million

Zone 2: none at present

Zone 3: none at present



The Ability to Hold Uncertainty and Evaluate Risk



The impact of
healthcare as % of
humans' total
environmental
footprint

Lenzen et al., Lancet
Planetary Health, 2020



Patient empowerment and self-care

Support patients to take a bigger role in managing their own health and healthcare

Prevention

- > Promoting health
- > Preventing disease
- > Reduce the need for healthcare

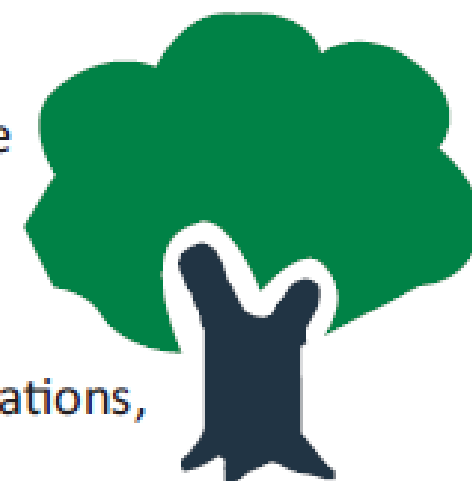


Lean service delivery

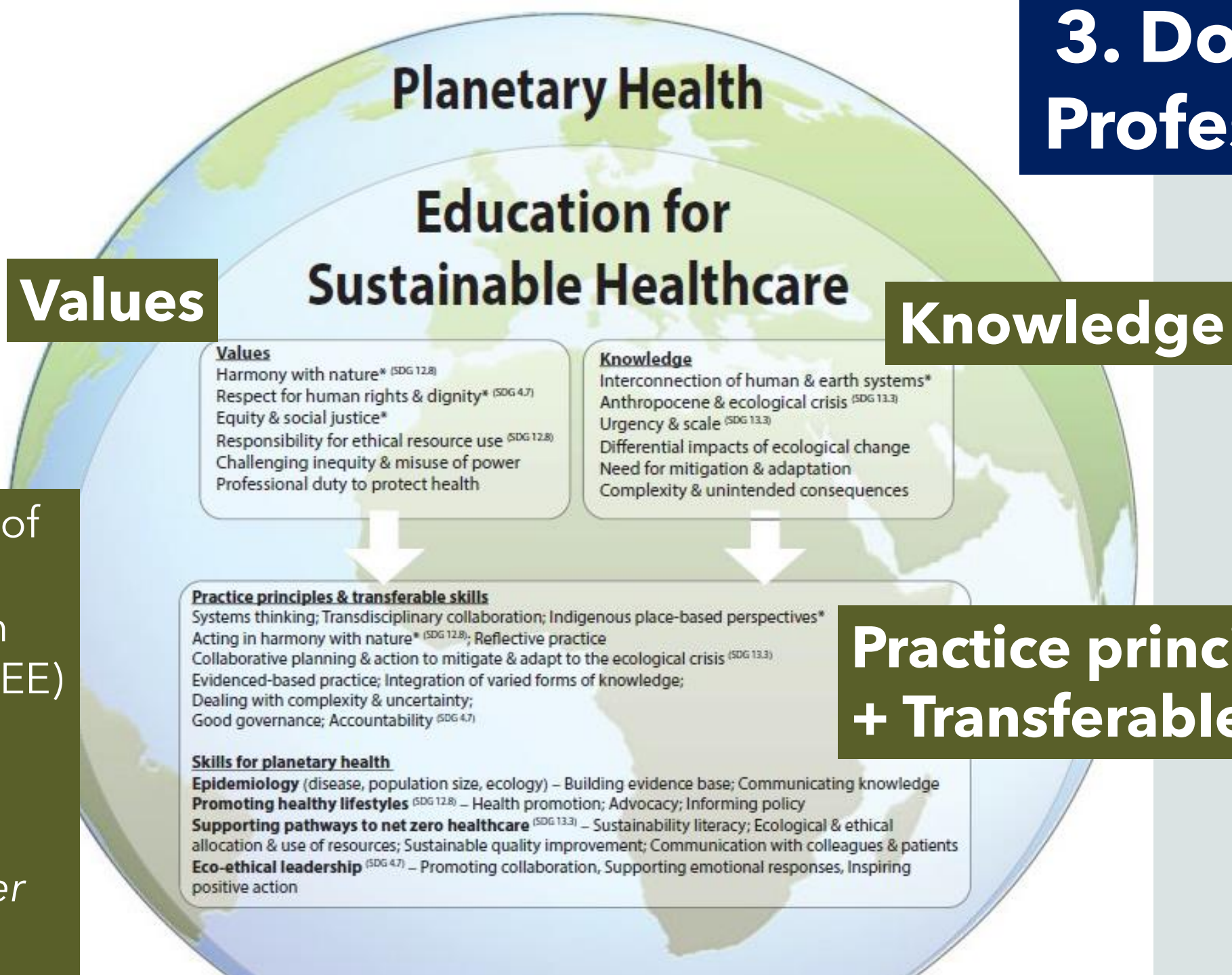
- > Services where people need them
- > Streamlining care to minimise low value activity

Low carbon alternatives

- > Preferential use of effective treatment and medical technologies with lower environmental impact
- > Minimising waste of medications, consumables and energy



3. Doctor as Professional



Association of Medical Education in Europe (AMEE)

Consensus Statement, *Med. Teacher* 2021

Practice principles + Transferable skills

Planetary health is an overarching **determinant of human health**

Environmental sustainability is **core business for health systems**

Education for Sustainable Healthcare (ESH) is **fundamental to** equip doctors with the **knowledge, skills, values and capabilities** to protect & promote health

Key guidance and resources include **GMC's Outcomes for Graduates** and the **AMEE Consensus Statement** on Sustainable Healthcare

A close-up photograph of an olive branch with several olives in various stages of ripeness, from green to dark purple. The branch is in the foreground, and the background is a soft-focus sunset over a landscape with trees and a body of water. The sun is low on the horizon, creating a warm, golden glow.

Integrating planetary health and sustainable healthcare into medical education: How?

Dr Aarti Bansal, MBChB, FRCGP, M.Ed, SFHEA
GP, Founder of Greener Practice,
Co-chair of the RCGP Climate Emergency Advisory
group
NIHR research fellow (Medical Education)

Integrating planetary health and sustainable healthcare into medical education: How?



COMMON
CONCERNS OF
EDUCATORS



APPROACH TO
INTEGRATING
PLANETARY HEALTH



HOW TO GET
STARTED



EXAMPLES

Common concerns of educators



Not core to clinical care



Not enough space in the curriculum

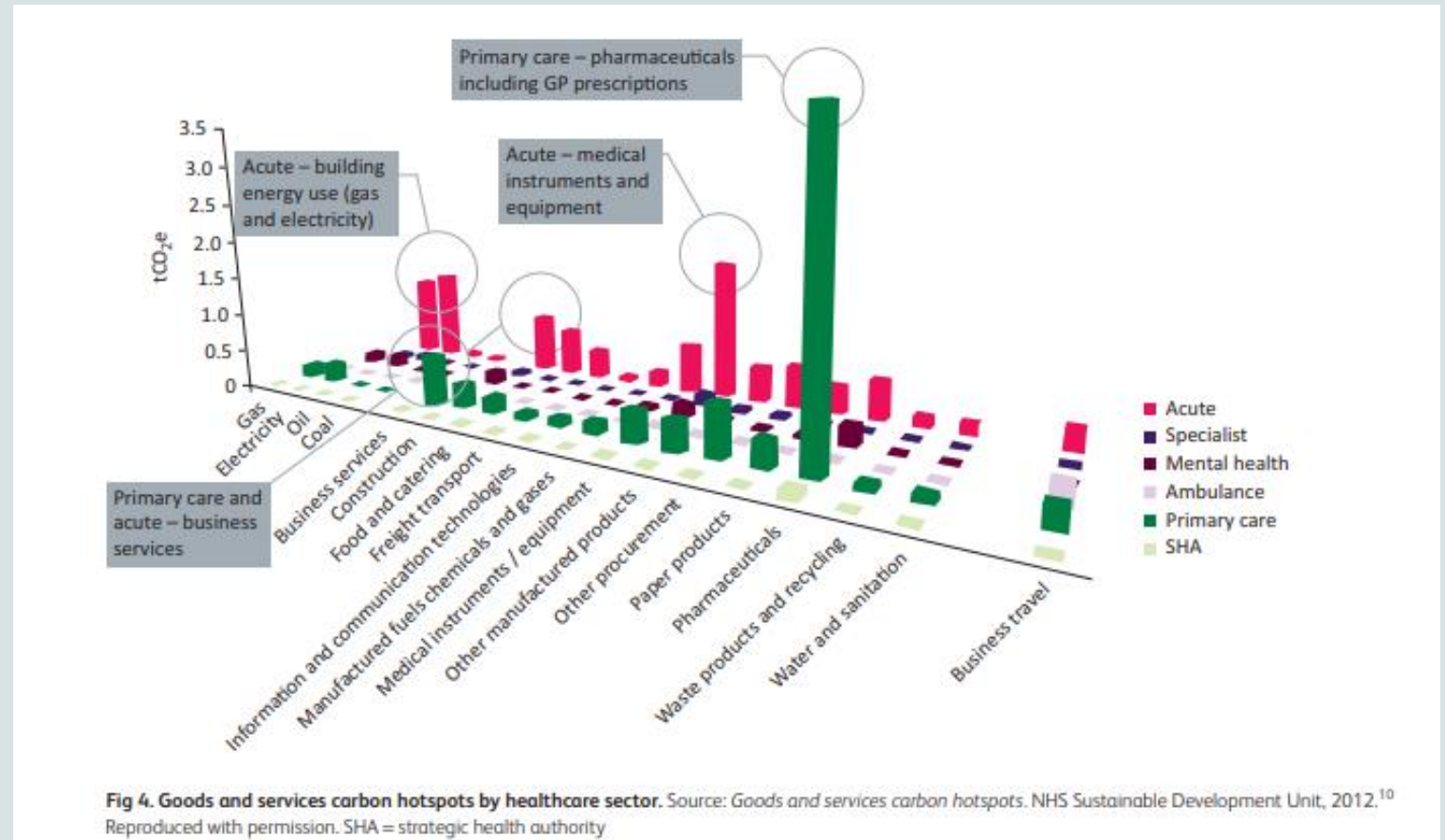


As educators we don't feel qualified to talk about this

Not core to clinical care?

Climate impacts health and healthcare impacts the climate!

<https://blogs.bmj.com/bmj/2020/12/15/aarti-bansal-and-grant-blashki-six-steps-to-both-greener-and-better-primary-care/>







Not enough space in the curriculum

“The role of education should shift from informative to transformative” *(Planetary Health Education Framework, Planetary Health Alliance)*

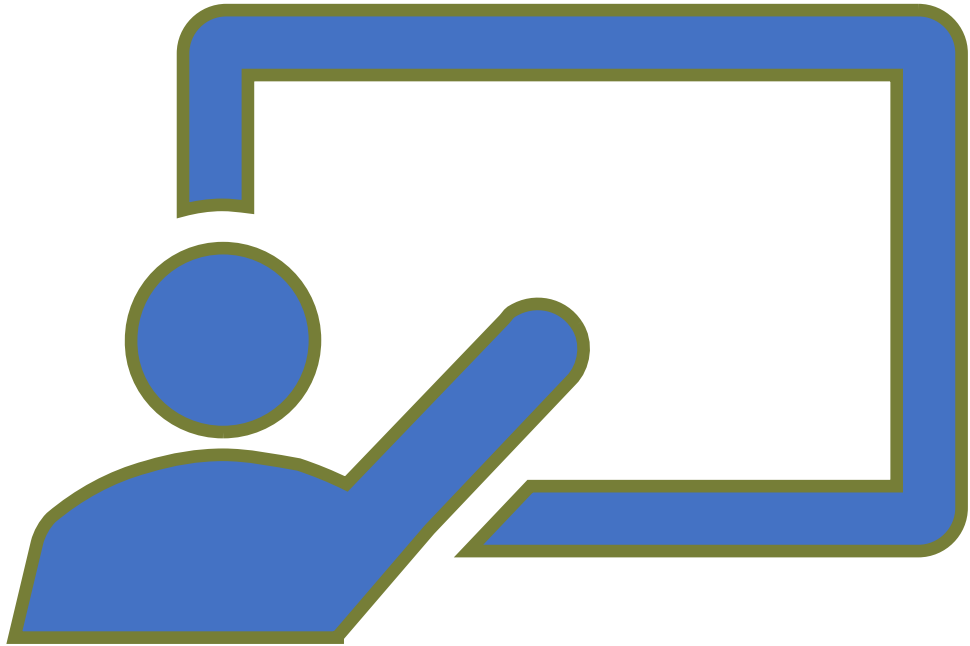
- **Think systems not silos**
- **Principles can be integrated across education and assessment**

Sustainable Clinical Care is healthy for patients and planet

 <p>Patient empowerment and self-care</p> <p>Support patients to take a bigger role in managing their own health and healthcare</p>	<p>Prevention</p> <ul style="list-style-type: none">> Promoting health> Preventing disease> Reduce the need for healthcare 
 <p>Lean service delivery</p> <ul style="list-style-type: none">> Services where people need them> Streamlining care to minimise low value activity	<p>Low carbon alternatives</p> <ul style="list-style-type: none">> Preferential use of effective treatment and medical technologies with lower environmental impact> Minimising waste of medications, consumables and energy 

Principles of Sustainable Clinical Practice
Frances Mortimer. Centre for Sustainable Healthcare

As educators we don't
feel qualified to talk
about this...



- **Plenty of content resources**
- **Adopt of co-learning approach**



Approach to learning

- **Principles-based learning**
- **Active service learning**

Principles-based integration (greener respiratory care)

Prevention	Air pollution, cold/mould, smoking, health inequalities
Patient empowerment and self-management	Motivational interviewing, medicines optimization, exercise, pulmonary rehab, patient action plans, inhaler techniques
Lean pathways and prescribing	Integrated services, reducing healthcare related travel, group consultations,
Low carbon alternatives	Metered dose inhalers to dry powder inhalers, reducing waste through recycling

Principles of Sustainable Clinical Practice
Frances Mortimer. Centre for Sustainable Healthcare

Active service learning

- **Opportunities to support Net-zero NHS**
- **Quality Improvement**
- **Working with community organisations**



Sustainable Quality Improvement

Triple bottom line analysis

**8 Medical Schools (and
growing) teaching SUSQI.**

**Resources at www.susqi.org
(Centre for Sustainable
Healthcare)**



SusQI teaching workshop at Bristol University

Swindon

WORKSHOP TOPICS

- Impacts of climate change on health
- Impact of healthcare on climate change
- SusQI framework
- Video of example SusQI project from consultant anaesthetist
- How to do SusQI using 'triple bottom line'
- Interactive activities to apply SusQI learning

In just two years, the staff at the trust have reduced use of carbon intensive desflurane significantly, saving the equivalent to 30,000kg CO2 per month.

Mat Molyneux, consultant anaesthetist at University Hospitals Bristol, said: "The monthly reduction when converted to carbon dioxide is equivalent to 166 cars off the road or 105,000 miles driven by an average passenger vehicle."

Dr Mat Molyneux
Anaesthetic Consultant, Bristol



SSC medical student project (Sheffield)

- Greener Practice contacted the practices and supported the students
- Students spoke to practices, collected evidence input into GIFH toolkit
- Students delivered planetary health education

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green impact

RC GP Royal College of General Practitioners

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Travel and Exercise

Quality Improvement

Zero Carbon

News & Communication

Food & Drinks

Vulnerable Groups

Welcome to Green Impact for Health

New users: contact giforhealth@sos-uk.org for a registration code. This is a simple security check to stop inappropriate registrations.

We developed this toolkit to help every general practice improve their sustainability and environmental impact; reduce their harmful impact on planetary health, the risks of climate change and reduce their practice expenses. It answers the question – What can we do in our practice?

The key message of the Lancet Countdown report in 2019 summarises why this is important: 'The life of every child born today will be profoundly affected by climate change, with populations around the world increasingly facing extremes of weather, food and water insecurity, changing patterns of infectious disease, and a less certain future. Without accelerated intervention, this new era will come to define the health of people at every stage of their lives.'

Login

Register

Lost Password

Tweet #GreenImpact

Tweets by @rcgp

RCGP Retweeted

Justice Committee @CommonsJustice

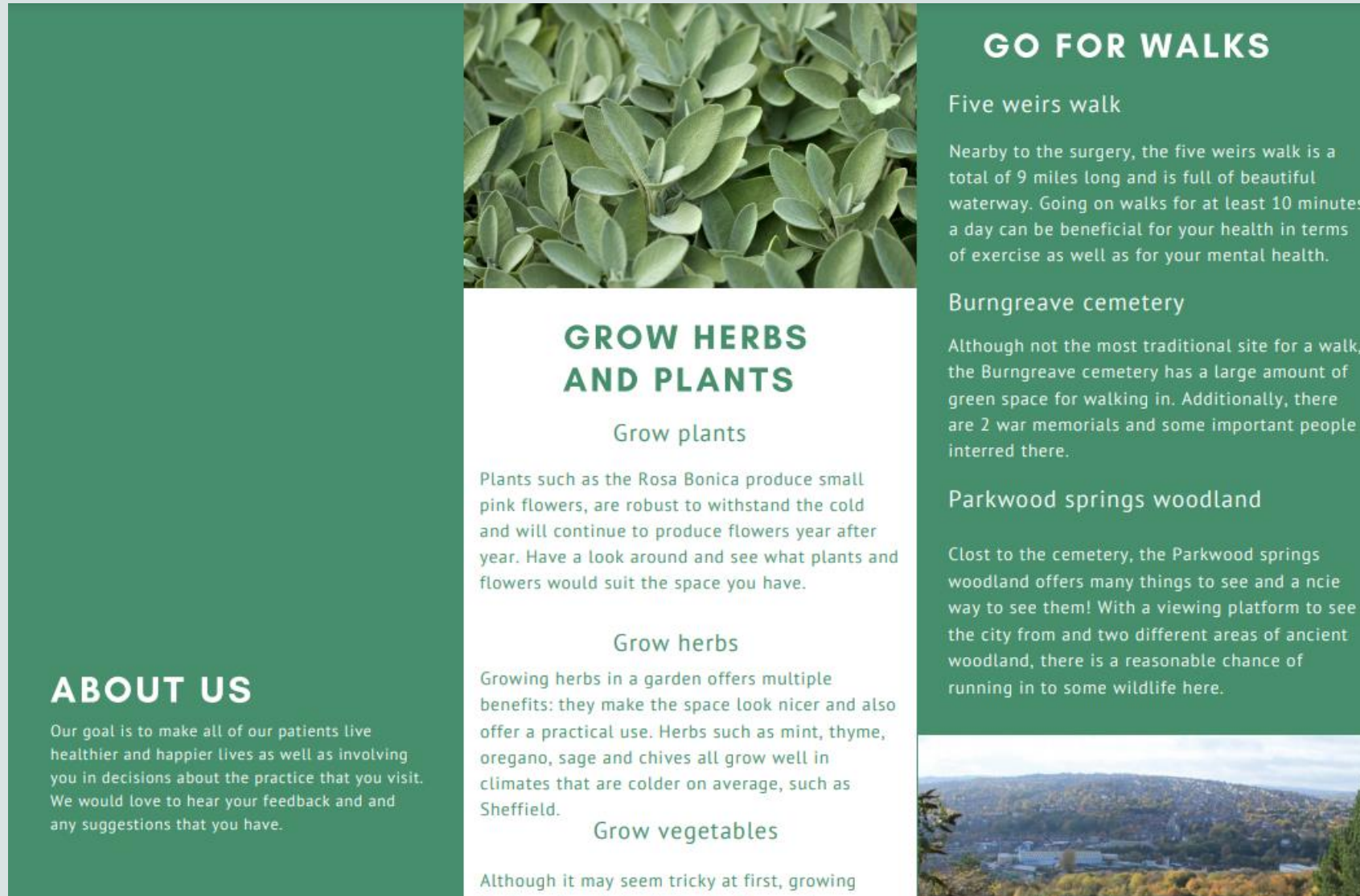
Watch the first session of our Mental Health in Prison inquiry today at 2:30pm. Link below

We will be hearing from providers and experts in prison mental healthcare

provision: @CNWLNHS@PracticePlusGrp@rcpsych@rcgp@theRCN <https://twitter.com/CommonsJustice/status/1401954609833385990>

7h

Students also developed useful resources!



ABOUT US

Our goal is to make all of our patients live healthier and happier lives as well as involving you in decisions about the practice that you visit. We would love to hear your feedback and any suggestions that you have.

GROW HERBS AND PLANTS

Grow plants

Plants such as the Rosa Bonica produce small pink flowers, are robust to withstand the cold and will continue to produce flowers year after year. Have a look around and see what plants and flowers would suit the space you have.

Grow herbs

Growing herbs in a garden offers multiple benefits: they make the space look nicer and also offer a practical use. Herbs such as mint, thyme, oregano, sage and chives all grow well in climates that are colder on average, such as Sheffield.

Grow vegetables

Although it may seem tricky at first, growing

GO FOR WALKS

Five weirs walk


Nearby to the surgery, the five weirs walk is a total of 9 miles long and is full of beautiful waterway. Going on walks for at least 10 minutes a day can be beneficial for your health in terms of exercise as well as for your mental health.

Burngreave cemetery

Although not the most traditional site for a walk, the Burngreave cemetery has a large amount of green space for walking in. Additionally, there are 2 war memorials and some important people interred there.

Parkwood springs woodland

Clost to the cemetery, the Parkwood springs woodland offers many things to see and a nice way to see them! With a viewing platform to see the city from and two different areas of ancient woodland, there is a reasonable chance of running in to some wildlife here.



Postgraduate GP curriculum

- **RCGP committed to a planetary health chapter.**
- **HEE Y&H have commissioned a six- module planetary health course for GP trainees (QI activities integrated):**

Introduction to planetary health

Understanding systems through pandemic

Person-centred practice and planetary health (overmedicalisation)

Respiratory Health

Nature-based interventions

Healthier Living

Ideas on how to get started....



Faculty development/CPD

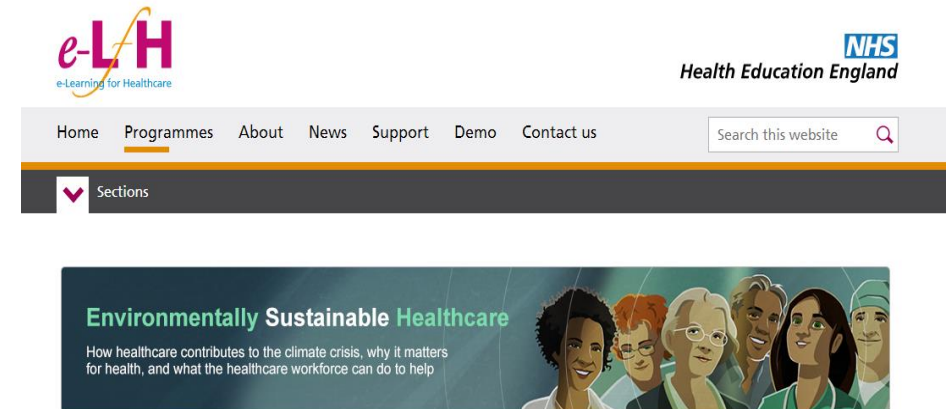
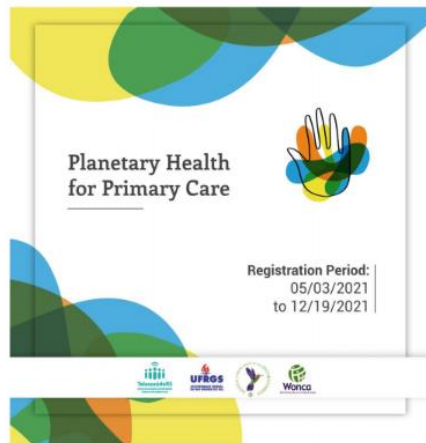
**Planetary Health Leadership
Group/champions**

Learn from others



For faculty & practitioners

WONCA course



Sustainability Leadership Group

- **Drive integration**
- **Keep it high on the agenda**
- **Have Student/Trainee representation**



Learn from others



Global Consortium on Climate and Health Education

Infusing climate change and sustainability into the medical school curriculum - The BMJ

2020-2021 Summary Report
United Kingdom

Planetary Health Report Card

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
Keele University	B	B	B	D	B+	A+
University College London	B-	B	C+	F+	B	A+
University of Exeter	B-	B-	A+	D	C	A-
Brighton and Sussex Medical School	B-	B	B+	D	B	B-
Poninsula Medical School	B-	B	B	C	C+	B-
University of Aberdeen	B-	C+	C	B	C+	B
Queens University Belfast	B-	B	C	D	B+	C+
Norwich Medical School (UEA)	C+	C	B	D	B+	B+
University of Edinburgh	C+	C	B	C	B-	B+
Queen Mary University of London	C+	B	C	C	C+	B-
King's College London	C+	C	C	C+	C	B-
Imperial College London	C	C+	C	C-	C+	A-
Leeds Medical School	C	B	D+	C-	C	C+
University of Nottingham	C	C	C	F+	B-	B+

80-100% = A, 60-79% = B, 40-59% = C, 20-39% = D, 0-19% = F
Scores within top or bottom 5% awarded + or -, respectively

phreportcard.org

For Primary Care: Greener Practice website resource
www.greenerpractice.co.uk



The banner features a central graphic of a stethoscope with its chest piece resting on a globe. The text 'GREENER PRACTICE' is displayed in large, bold, black letters, with 'GREENER' in a teal color. Below this, the slogan 'HEALTHY PLANET, HEALTHY PEOPLE' is written in large, white, bold letters. A small circular icon containing the letters 'GP' is positioned near the stethoscope. At the bottom left, the tagline 'Engaging General Practice in actions for the health of patients and planet' is written in a smaller, italicized font. At the bottom right, the name 'DR AARTI BANSAL @DRAARTIBANSAL' is displayed. A dark grey sidebar on the right side of the banner contains a list of resource categories, each preceded by a white 'X' icon.

GREENER PRACTICE

**HEALTHY PLANET,
HEALTHY PEOPLE**

Engaging General Practice in actions for the health of patients and planet

<https://www.greenerpractice.co.uk/#>

DR AARTI BANSAL @DRAARTIBANSAL

- FOR GPs AND HEALTH CARE PRACTITIONERS
- WHY GREENER PRACTICE?
- GREEN IMPACT FOR HEALTH TOOLKIT
- RESOURCES FOR GREEN IMPACT FOR HEALTH TOOLKIT
- PRESCRIBING AND DEPRESCRIBING
- OVER DIAGNOSIS AND TESTING
- NATURE-BASED INTERVENTIONS
- ASTHMA CARE AND INHALERS
- INHALER RECYCLING
- ACTIVE TRAVEL
- SOLAR PANELS FOR PRACTICES
- ELECTRIC VEHICLE OFFERS
- PROMOTING HEALTHY LIVING

Active learning

- Learn by doing
- Be recognised and advocate to patients
- Engage in QI activities

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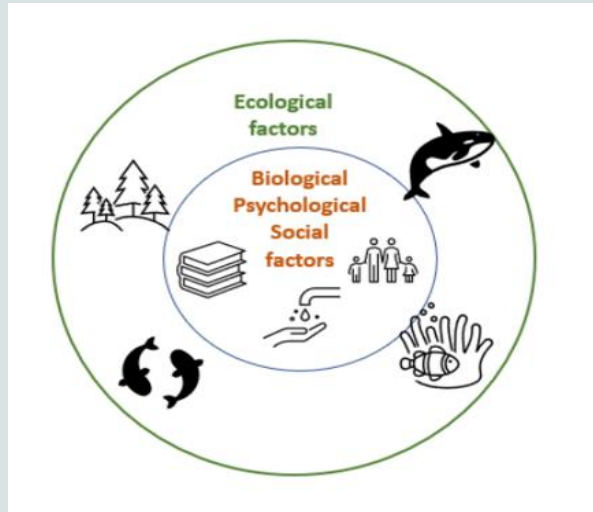
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Think systems, principles and service learning



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