



ISN GREEN-K LAUNCH:

Global environmental evolution in nephrology / kidney care

GREEN-K Steering Committee, CSH & Affiliated Societies

July 2 & July 11, 2024

GREEN-K LAUNCH: TODAY'S AGENDA

- Welcome & Introduction to GREEN-K 10 min
- Procurement Workstream 10 min
- Education and Implementation:
 - Centre for Sustainable Healthcare 10 min
 - ELP Education Activities 10 min
 - Working groups 10 min
- Q&A / Discussion (All) 10 min

INTRODUCING TODAY'S PANEL



Dr. Caroline Stigant

- Nephrologist, Island Health
- Assistant Professor of Medicine, University of British Columbia, Victoria, BC, Canada
- Medical Lead:
 - Island Health Planetary Health Steering Committee
 - BC Renal Planetary Health Working Group
- Chair, Sustainable Nephrology Action Planning Committee (of the Canadian Society of Nephrology)
- GREEN-K SC Member
 - Co-chair, Procurement Workstream
- **Mother, gardener, environmentalist!**



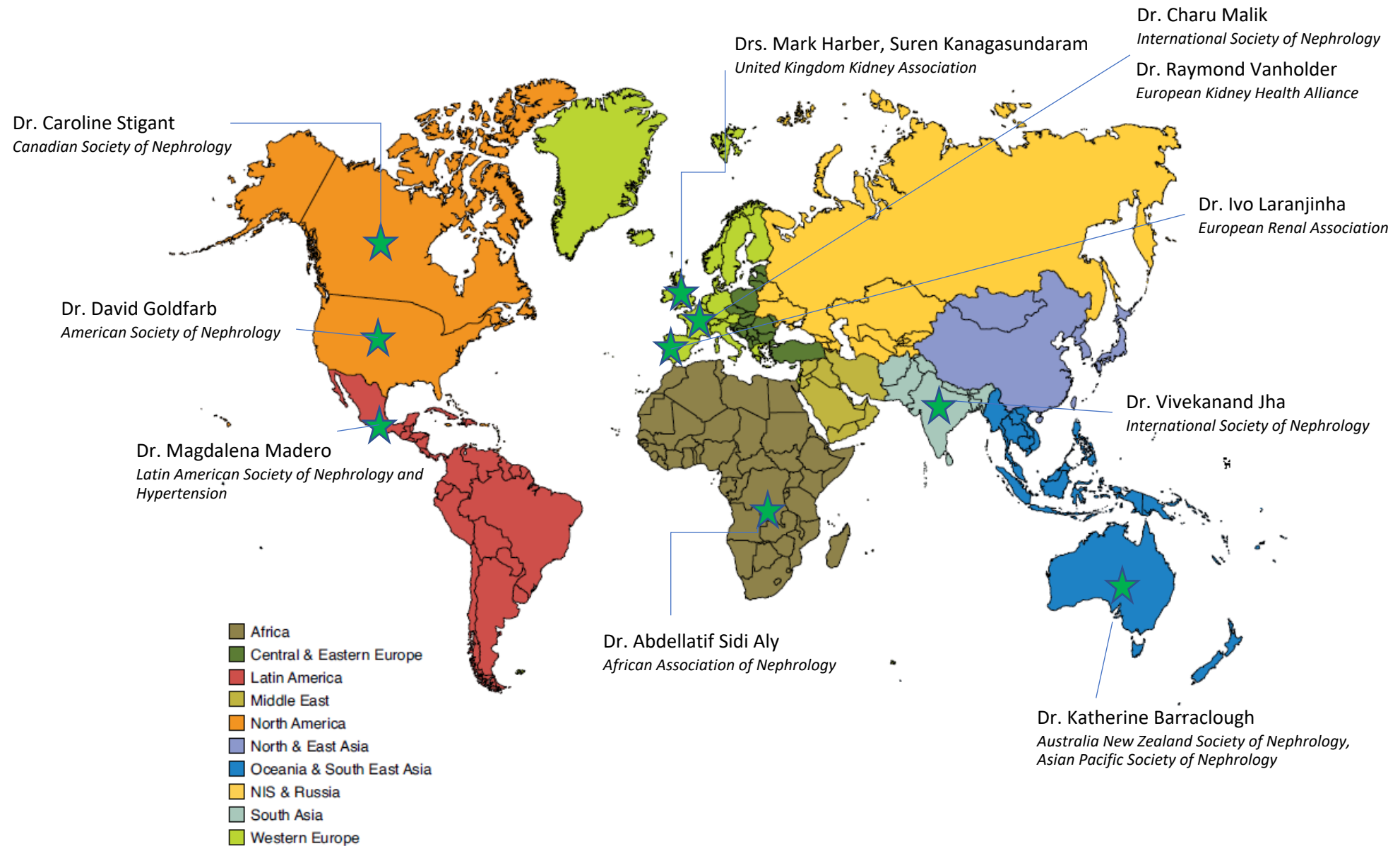
INTRODUCING TODAY'S PANEL

Dr. Suren Kanagasundaram

- Consultant Nephrologist, The Newcastle upon Tyne Hospitals NHS Foundation Trust
- Clinical co-chair of the UKKA's Sustainable Kidney Care committee
- Member: NHS England, Net Zero Clinical Advisory Board
- Co-developer of <https://ICHDCarbon.org>
- Trustee, Northumberland Wildlife Trust and founder of *Nature Connect – Newcastle Hospitals*
- Lead author, UKKA AKI clinical practice guideline, 2019-24
- GREEN-K SC Member
 - Co-chair, Procurement Workstream

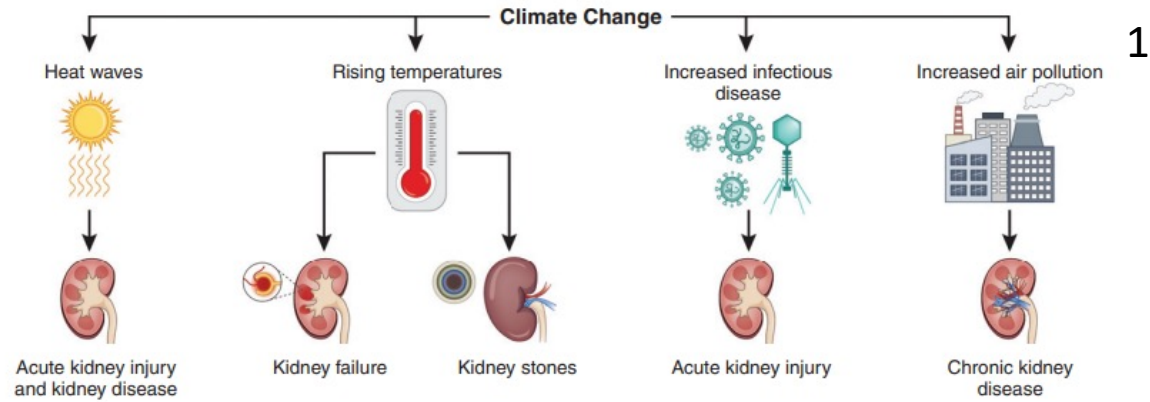


GREEN-K Steering Committee Members



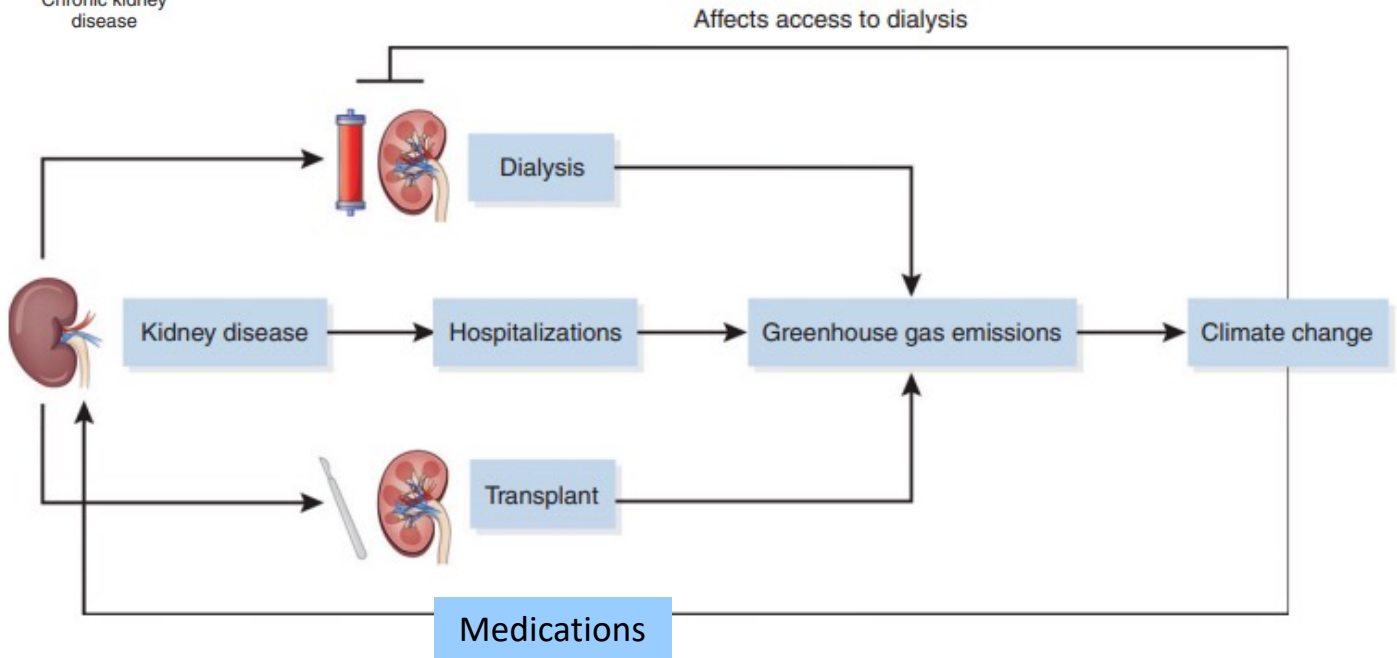
CURRENT SITUATION:

Kidney Disease and Climate Change Worsen Each Other



OR 1.6 AKI
T 32 vs 17 °C

2



1. Young S et al. CJASN 18:1-7, 2022

2. Hajat S et al. Lancet Planetary Health. 2024 Mar 1;8(3):e156-62

- > COVID-19
- > World Kidney Day
- > Declaration of Istanbul (DICG)
- > ISN-Global Kidney Health Atlas
- > ISN Observatory of CKDu
- > The Oby25 Initiative
- > Closing the Gaps CKD Initiative
- > Saving Young Lives
- > Data Collection
- > International Collaborations
- > **GREEN-K Initiative**



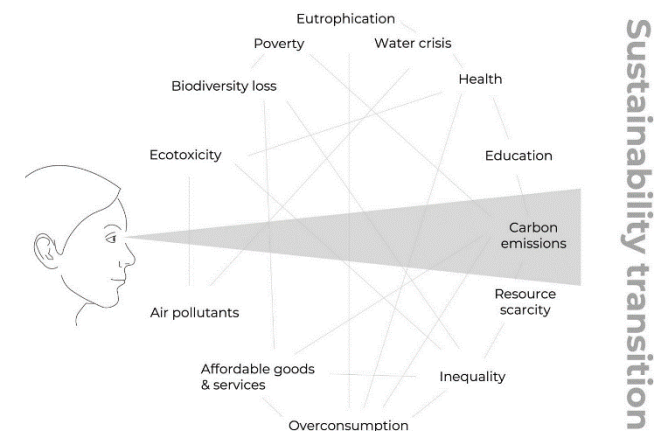
OUR SHARED RESPONSIBILITY – THE URGENT NECESSITY OF GLOBAL ENVIRONMENTALLY SUSTAINABLE KIDNEY CARE

The recently published Sixth Assessment Report of the Intergovernmental Panel on Climate Change¹ informs that the climate emergency is human caused, rapidly progressing, will worsen until at least mid-century regardless of future emissions scenarios, and heralds massive, unprecedented and cascading impacts on planetary and human health.

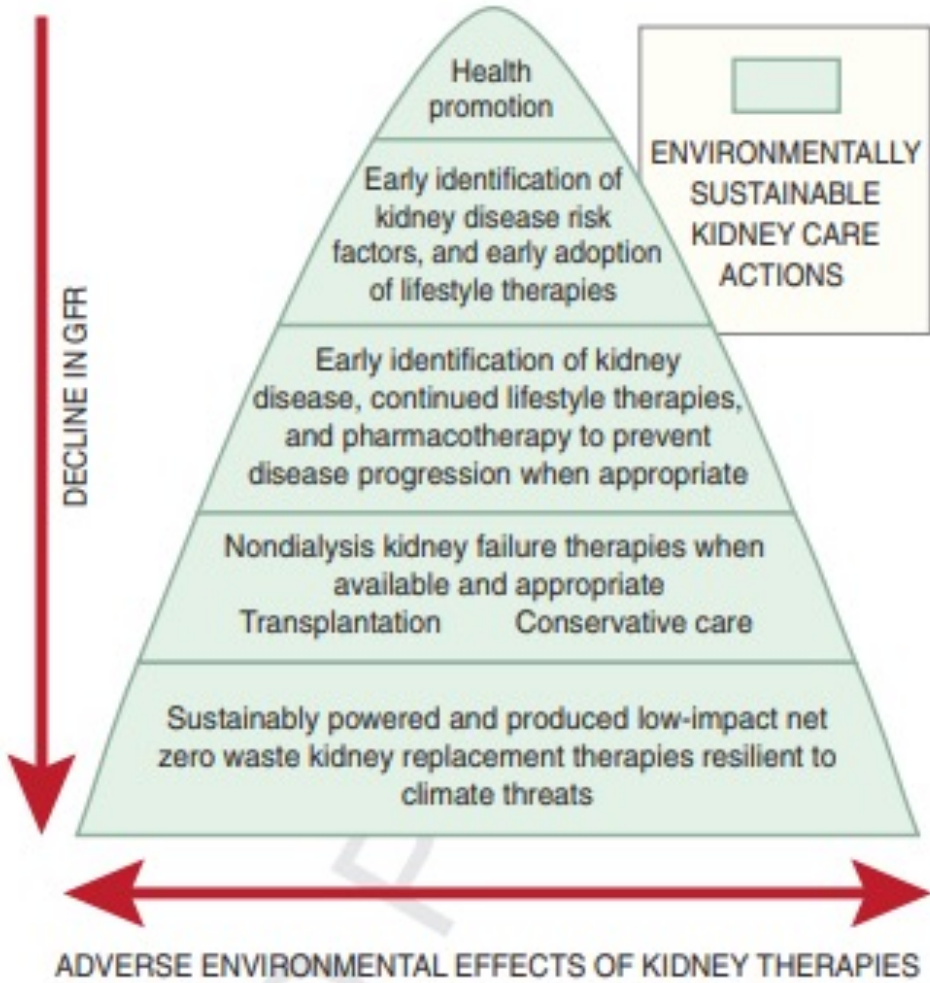
GREEN-K – Global Environmental Evolution in Nephrology and Kidney Care – calls on the development of climate resilient kidney care systems that function through accountable, sustainable low carbon health care, and propose a pathway to achieve this goal through a global, collaborative, and inclusive multidisciplinary working group.

FIRST A FEW IMPORTANT MESSAGES...

- ESKC does NOT place the needs of the environment over the needs of patients
- ESKC should NOT be more costly (in fact it is likely to save \$)
- ESKC should NOT provide additional burden to busy health care workers
- ESKC is NOT exclusively about dialysis &/or dialysis units (hemo / PD / or home)
- ESKC is about more than carbon emissions...



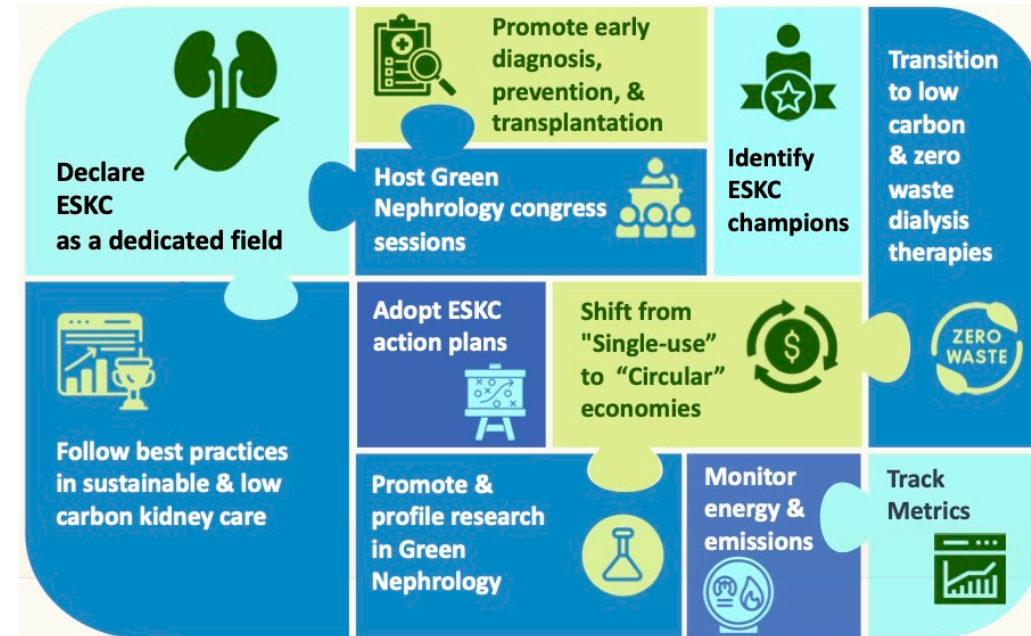
Optimal outcome = lowest cost = lowest environmental impact = most climate resilient



‘Make every job a climate job’

Multi-Stakeholder Action Plan:

engage health care and dialysis providers, administrators, policy makers, patients, and pharmaceutical companies and medical device manufacturers



Graphic credit: Dr. Vali PS, MD DM

- **Education** Development of best practices and guidance; increase dedicated “green nephrology” curricula for kidney care providers (administrators, technicians, nurses, and physicians); encourage and promote research; building global green champions
- **Procurement, infrastructure, and innovation** Focus on international procurement pathways and industry standards; encourage “circular” economies for KRTs
- **Sustainable clinical pathways in kidney care** Promote importance of early diagnosis and care provision from environmental perspective



GREEN-K: A global network for ESKC Information Sharing & Clinical Pathways

Objective and Plan:

identify, share, amplify ESKC implementable solutions and care pathways

- Multidisciplinary working groups (meeting regularly) of ‘green champions’ (and those interested in becoming!)
 - prevention, education, transplant, PD, HD, plant-based / sustainable diets, ‘green’ pharmacy
- Collaboration with experts:
 - UK CSH, Kitnewcare, ISN Emerging Leaders, ISN affiliate and member society sustainability teams
- Central posting of education and practice support materials
- Procurement innovation and tools (with broad stakeholder engagement along the way)
- ISN Social Media Team: Tweetorials #GreenNephrology

TWEETORIALS

by ISN Social Media Team



Dr. Anoushka Krishnan
Royal Perth Hospital,
Australia



Dr. Nathan Berman Parks
Instituto Nacional de
Ciencias Medicas, Mexico



Fernanda Arce-Amaré
ISN Social Media Teams
Manager, Mexico

Int Society of Nephrology @ISNkidneycare

#Tweeetorial alert! An Introduction to #GreenNephrology

Part 1: "The impact of climate change on health"

If we, as humans, continue living our everyday lives as they are, how long will the planet be able to support us?

We better go to Mars now	23%
Until 2050	30.9%
Until 2100	26.7%
Until 2500	19.4%

165 votes · Final results

11:17 AM · Mar 7, 2024 · **18.2K Views**

Part 2: "Water in Hemodialysis"

#WorldWaterDay observance (March 22)

United Nations and UN-Water

8:04 AM · Apr 5, 2024 · **10.8K Views**

Int Society of Nephrology @ISNkidneycare

#Tweeetorial alert! An Introduction to #GreenNephrology

Part 3: "The Carbon Footprint of Healthcare and Kidney Care"

12:04 PM · May 13, 2024 · **7,856 Views**

Projects by ELP cohort 2

1. Scoping review on the latest knowledge on ESKC Ongoing, Fall 2024
2. Global Survey on the knowledge, attitude, and practices of ESKC among kidney care professionals Published JASN May 2024
3. ISN Toolkit on ESKC (Green Nephrology) Ongoing, Fall 2024
4. Mini review series and an editorial on minimising the environmental impact of kidney care, in collaboration with KI Ongoing
5. ISN Academy Curriculum on ESKC, in collaboration with ISN Education Working Group and GREEN-K Ongoing, Summer 2024

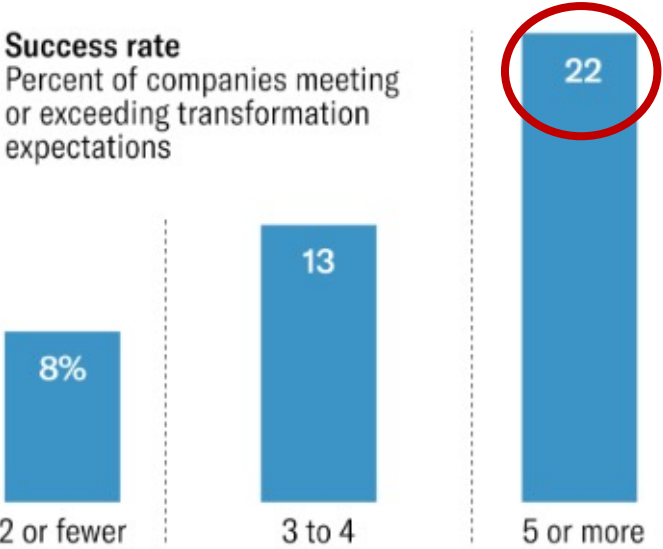
Climate Change, Kidney Health, and Environmentally Sustainable Kidney Care: A Multinational Survey of Health Care Professionals



Conclusions: There are knowledge and practice gaps among healthcare professionals on the bidirectional relationship between kidney disease and climate change. In a multinational context, we report several avenues to increase their engagement.

Shaifali Sandal, Isabelle Ethier, Ugochi Onu, et al. *Climate Change, Kidney Health, and Environmentally Sustainable Kidney Care: A Multinational Survey of Health Care Professionals*. JASN doi: 10.1681/ASN.0000000000000402. Visual Abstract by Edgar Lerma, MD, FASN

Systems Transformation: Good Practice → Better Outcomes (But still an ‘uphill climb’)



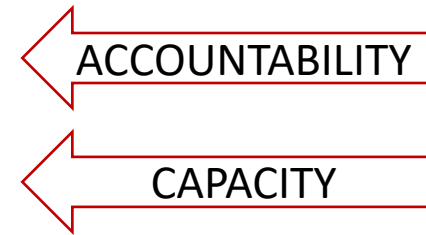
Number of practices (listed below) reflected in transformation effort

Treating transformation as a continuous process	Building it into the company's operating rhythm	Explicitly managing organizational energy
Using aspirations, not just targets, to set expectations	Driving change from the middle out	Accessing substantial external capital from the start

“lessons from companies that are defying the odds”

IMPLEMENTATION – Factors for Success¹

1. Strong regulations – preferably legally binding emissions reductions
2. Committed leadership / management
3. Measurement / reporting
4. Activated, motivated, energized workforce

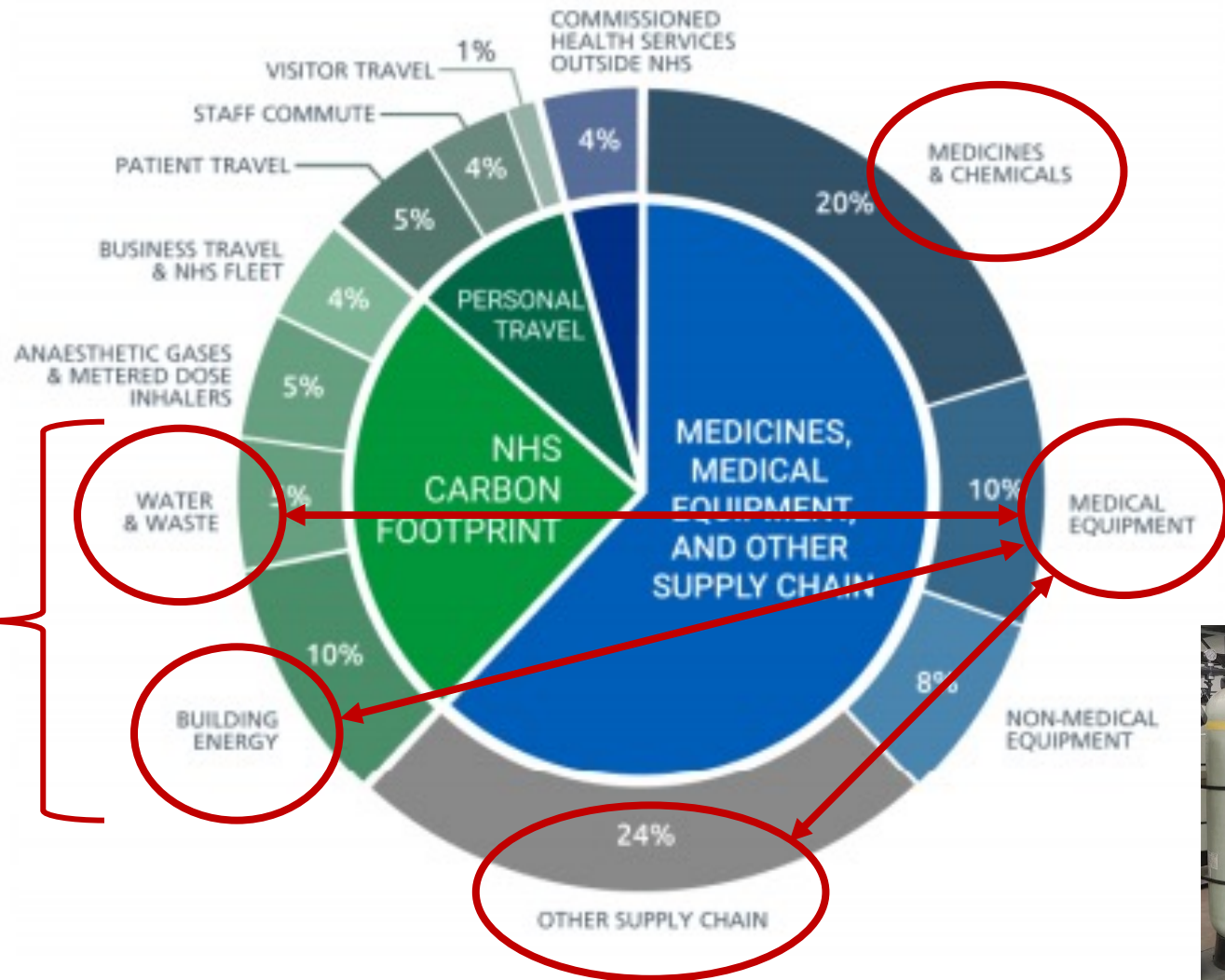


GREEN-K LAUNCH: TODAY'S AGENDA

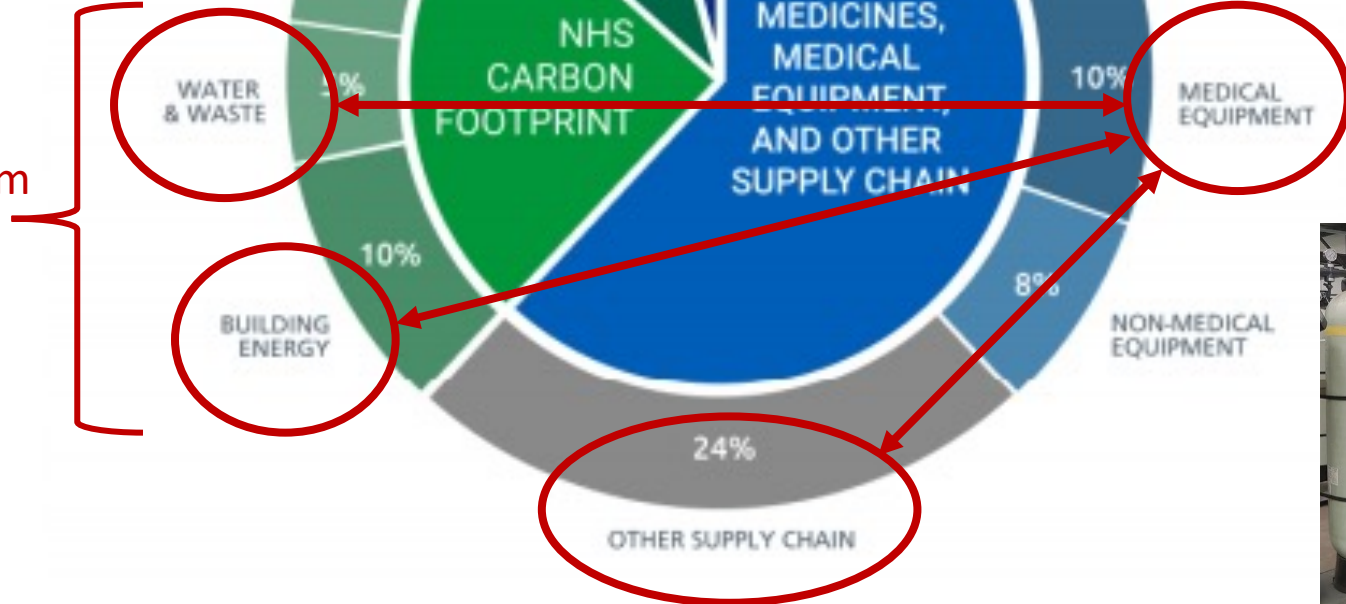
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Problem:

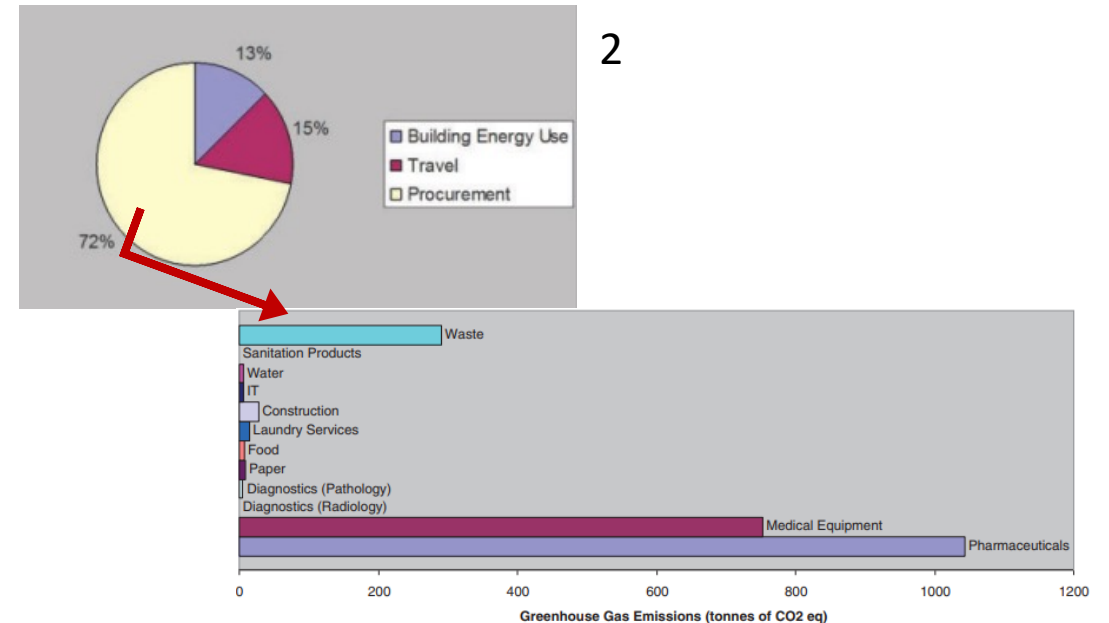
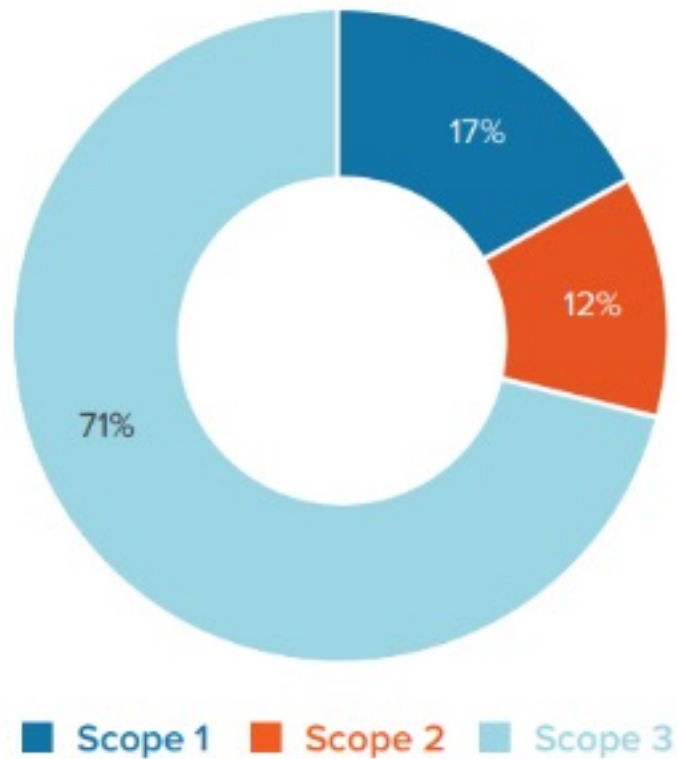
Limited ESKC Effectiveness at Prescriber, Program, and Regional Levels



Program
KPIs



Problem: Over 70% of Health (and Kidney Care) Emissions Originate From Supply Chain



Dorset Renal Service: 3007 tonnes CO2e / year

HD + PD (n=277): 1965 tonnes

18x more resource intensive than general healthcare³

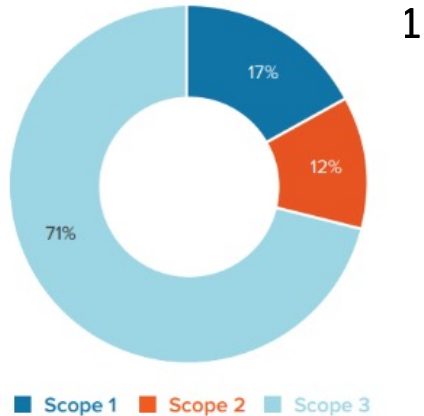
1. Karliner J, Slotterback S, Boyd R, Ashby B, Steele K. Health care's climate footprint. Health Care Without Harm and ARUP. 2019 Sep.
2. Connor A, Lillywhite R, Cooke MW. The carbon footprint of a renal service in the United Kingdom. Q J Med 2010; 103:965-975
3. <https://shcoalition.org/sustainable-kidney-care/> accessed online Sept 24/23



GREEN-K: The Power of Unity in Procurement

PROBLEM:

*Over 70% of Health /
Kidney Care Emissions
Originate From Supply
Chain*



PROCUREMENT:

1) Scope: More than dialysis equipment

Pharmaceuticals, consumables, medical devices, kidney care services

2) Domains: More than 'net 0'

Circularity in design

supply chain ethics

resilience (facilities and supply chain)

reduction of health inequalities

protection of living planet (including reduced toxics use – EPOL)

cost

... hence requires expertise

Multiple data sources referenced:

- CSH procurement course
- NHS guidance on sustainable procurement and social value
- UN Sustainable Development Goals

Procurement guides:

Health Care Without Harm
Global Green and Healthy Hospitals
UN Development Program
Nordic Sustainability Scorecard

Experts engaged from multiple organizations



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Pro-Innovation Procurement

Planned process¹:

Target Unmet Need

- ✓ State Goals
- ✓ Vet by procurement experts
- ✓ Incorporate expert feedback
- Create / 'Joint Statement of Demand' document



A group of buyers unite in planned purchasing of needed products, encouraging and inspiring industry to invest and innovate

Key Planned deliverable = procurement scorecard, inspired by:²

1 UNDP SPHS Health Care Without Harm

2

3

4 **The Sustainable Procurement Index for Health**

5 version 2021.8G

6

7 **About the SPIH**

8 The SPIH provides a consistent and transparent way for assessing the key sustainability credentials of a supplier. The SPIH consists of a set of questions and a scoring approach across for key themes which can be used when sourcing or managing suppliers. The SPIH is published by UNDP and SPHS as part of its Sustainable Health in Procurement Project.

9 Further information is provided in the User Guide for the SPIH, and it is strongly recommended that you read the guide before completing the SPIH.

10

11

12 **How to complete the SPIH**

13 This Tool contains the full Sustainable Procurement Index for Health (SPIH). It contains five

Cover page | SPIH scoring | GHG emissions | Resource depletion | Chemicals and toxic impact | Gender, human and labour rights ...

1) Adapted from Whyles G, Van Meerveld H, Nauta J. Forward Commitment Procurement : The European Journal of Social Science Research. 2015 Jul 3;28(3):293-311.

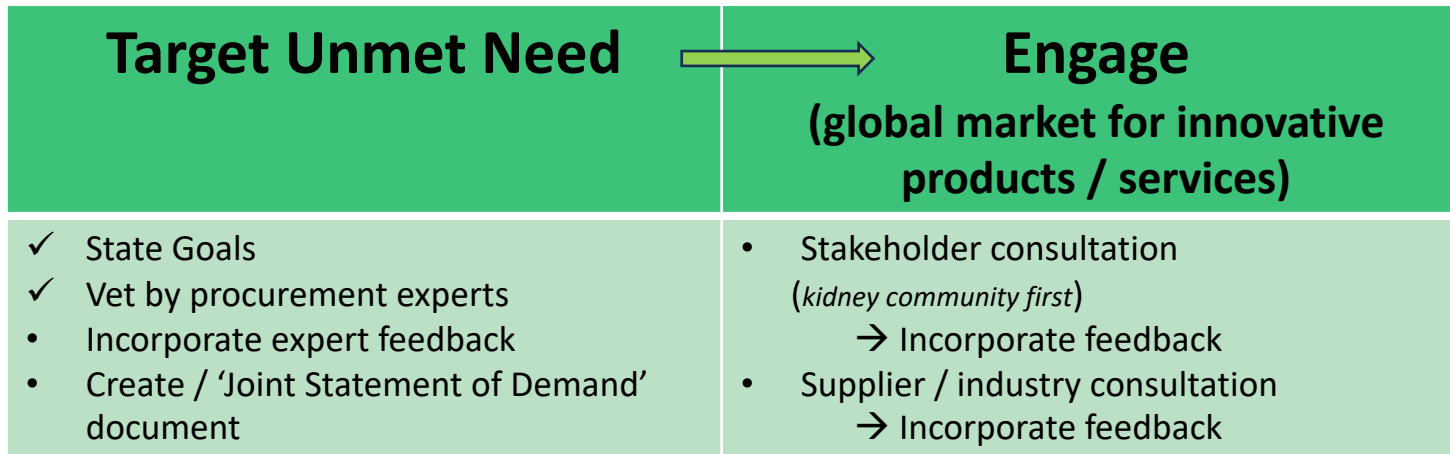
2) UNDP Sustainable Procurement Index for Health, accessed online February 20, 2024



Pro-Innovation Procurement

Process¹:

Autumn 2024 Procurement Workshop – STAY TUNED FOR DETAILS!



1) Adapted from Whyles G, Van Meerveld H, Nauta J. Forward Commitment Procurement : The European Journal of Social Science Research. 2015 Jul 3;28(3):293-311.



Pro-Innovation Procurement

Planned process¹:

Autumn 2024 Procurement workshop



YOUR INPUT IS REQUESTED –
INVITE COMMENTS FROM YOUR
MEMBERSHIP ON JSD DRAFT
PRIOR TO GREEK-K
PROCUREMENT WORKSHOP

- hemodialysis acid concentrates
- reverse osmosis systems
- dialysis-related consumables
- innovative dialysis systems

1) Adapted from Whyles G, Van Meerveld H, Nauta J. Forward Commitment Procurement : The European Journal of Social Science Research. 2015 Jul 3;28(3):293-311.



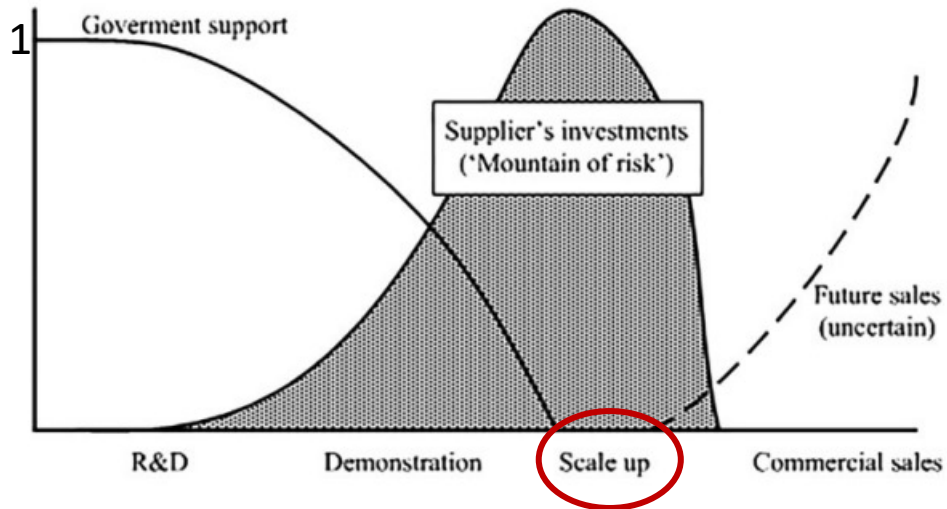
OUR 5 REQUESTS OF YOUR SOCIETY...



Will you / your society:

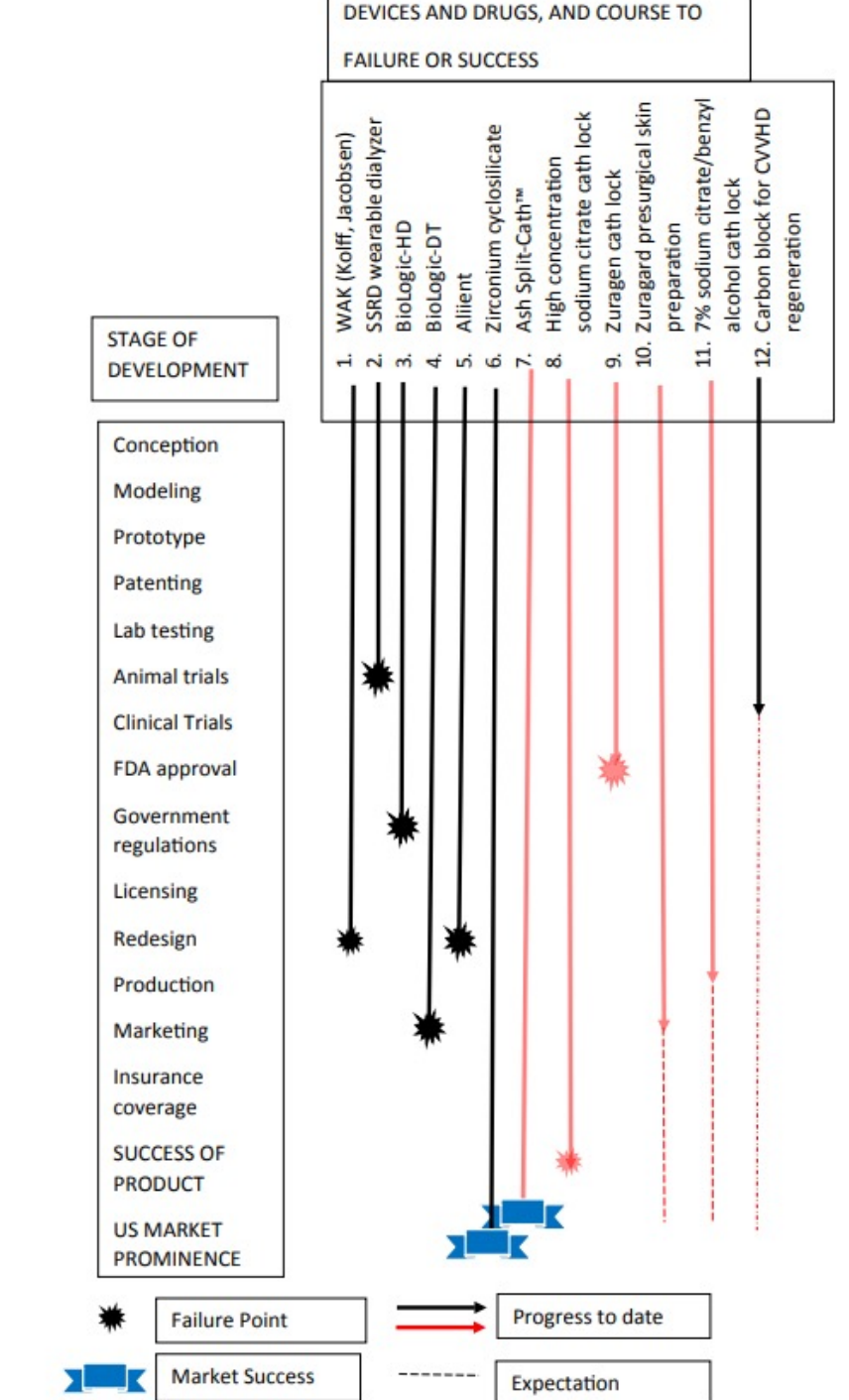
1. Invite comments from your membership on JSD draft before GREEN-K Procurement Workshop this Autumn *e-mail to: procurement@theisn.org*
2. Feedback and discuss at the workshop in Autumn 2024
- Request representation from each society to include: nephrologist x 1, nurse x 1, patient x 1, renal tech x 1
3. Disseminate the final version broadly within your affiliate society
4. Endorse the final version on behalf of your affiliate society
5. Lobby to incorporate the JSD in network, regional, national, or other cross-facility procurement processes

Overcoming a 'Mountain of Risk'



Ash:
*'perhaps success is just being so persistent
 that you just run out of mistakes'*

1. Whyles G, et al. 2015 Jul 3;28(3):293-311
2. Ash SR. Artificial Organs. 2022 Jan;46(1):16-22



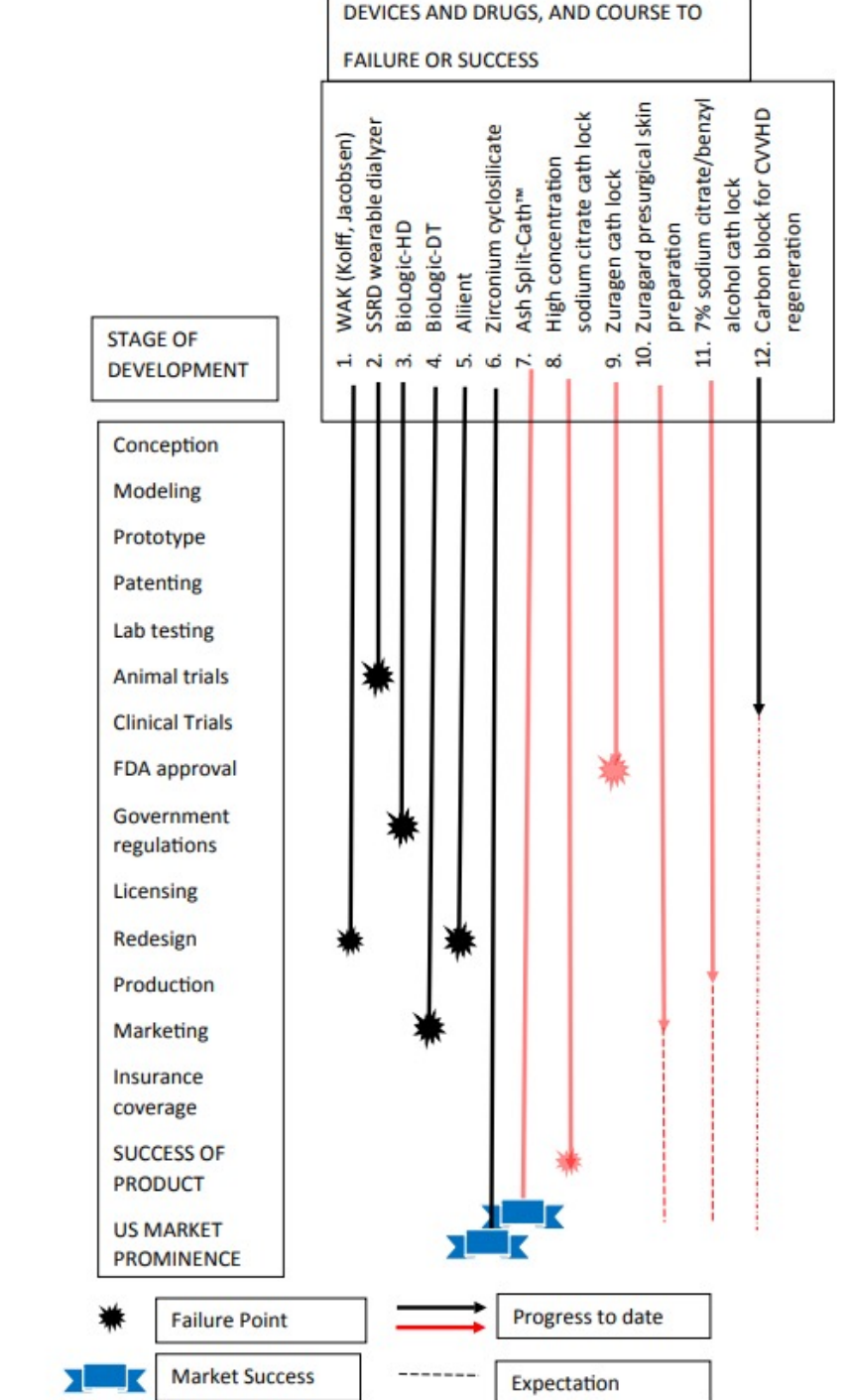
Overcoming a 'Mountain of Risk'

Theme: RESISTANCE TO CHANGE

'some Nephrologists interviewed would not use a sorbent-based dialysis machine if it did not perform exactly like the machines they use now. What had changed? We did'

Theme: MULTIPLE STAKEHOLDERS, MARKET FORCES

'most failures were due to decisions made by various corporations, governmental agencies, and venture capital groups, out of the hands or control of the R&D company'



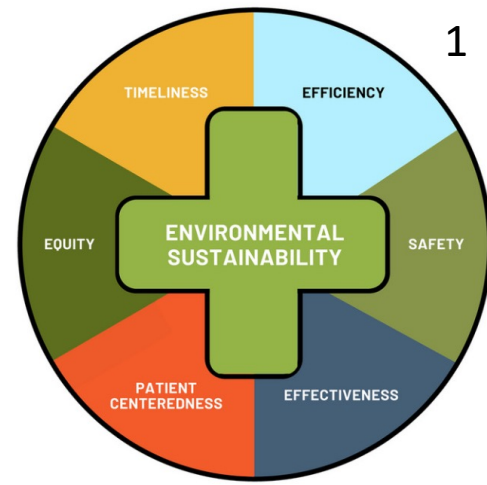
1. Whyles G, et al. 2015 Jul 3;28(3):293-311
2. Ash SR. Artificial Organs. 2022 Jan;46(1):16-22

“Saving the planet is no longer just a scientific challenge but a communications challenge”





EMBED ESKC



Administration

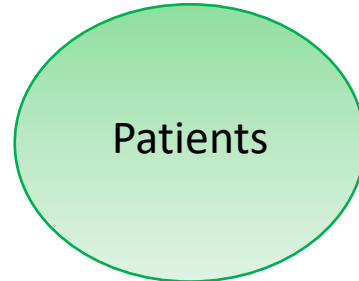
Embed sustainability – working group a necessity
Mobilize available educational tools
Systems thinking
- encourage, empower, inspire all staff
Networks (knowledge sharing / procurement)
QI using ESKC KPIs
Invest program \$ ethically
Fund prevention
Facilitate low carbon transport
Capital funding for infrastructure upgrade
Modality planning informed by LCA data

Industry

Product redesign
Transparent emissions
Improved communication with other stakeholders
Circular product design

Advocacy groups

ESKC champions
Reinforce rights (healthy environment, national and international commitments)



Clinicians

Techs, Dietitians, RN, MD:
expanded workforce and intellectual development

Academia

Planetary Health calls to action
ESKC curricula
ESKC Editorial expertise
Profile ESKC: conferences, abstract categories, awards
Research funding

Regulators

Knowledge/ framework to evaluate novel technologies
Time urgency for change

Everyone

Personal action – learn to act sustainably!

Accept change



FUTURE DIRECTIONS



- GREEN-K engagement and increased global community alignment and practice change
- Procurement JSD template dissemination
 - Generic – Target: Stay tuned for Autumn 2024 invitation
 - Product-specific (TBA)
- Sustainability key performance indicators – defined, data collection, continuous process improvement
- Science-based decarbonization, no unnecessary waste, and resiliency targets defined and achieved

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Education & Implementation

Center for Sustainable Health

Emerging Leaders Program Activities

Working Groups



not

Sustainable Kidney Care

Lucy Brown RNC
Clinical Delivery Lead,



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sustainablehealthcare.org.uk



@sushealthcare

Centre for Sustainable Healthcare

Our vision is that all people in the health system can shape and deliver sustainable healthcare which supports our communities and our natural world.

We aim to inspire and empower people with the knowledge, skills and tools to play their part in the transformation to sustainable healthcare



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Principles of Sustainable Clinical Practice

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



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

Mortimer, F. The Sustainable Physician. Clin Med 10(2). April 1, 2010. D110-111.



KitNewCare EU Project

Part of the European Union's key funding programme for innovation and research to tackle **climate change** and achieve the United Nations Sustainable Development Goals (SDGs). The programme also part funded by Innovate UK will transform the delivery of **kidney care across Europe**.

The trailblazing project team will reduce the environmental impact, improve patient outcomes with a key focus on preventative healthcare to improve population health across Europe. The project started in January 2024 and will end in December 2027.

[KitNewCare - Sustainable Care, Lasting Impact](#)



Sustainable Kidney Care Course

Sustainable Kidney Care

This foundation course explores the bi-directional relationship between health and the environment, with a focus on kidney care. The climate crisis poses a threat to human health and current models of healthcare contribute to climate change and ecological destruction. Reducing the financial and environmental impact of services and improving their social value while ensuring a high standard of care is essential for making healthcare services sustainable. Using case studies, this course introduces the steps healthcare workers in nephrology can take to make their services greener and become leaders in sustainable transformation.



Learning Objectives

1. Describe the risks the global environmental crisis presents to human health and healthcare systems.
2. Describe the contribution of the health sector, particularly kidney care, to the global environmental crisis.
3. Understand the basic principles of carbon literacy.
4. Understand how sustainability can help to address existing challenges in the healthcare system.
5. Apply the principles of sustainability to kidney care.
6. Plan a project to improve the sustainability of healthcare in your workplace.

You are welcome to continue attending Cafes as many times as you wish. Upcoming dates are [available here](#) and will also be emailed out to you with your certificate of completion after the workshop.

Course Structure – Self Study Online: 4-6 hours of interactive online materials
- Live Workshop Online: 4 hour virtual workshop
- Mentoring and networking

Book here - [Sustainable Kidney Care | Centre for Sustainable Healthcare](#)

12 steps to GREEN A KIDNEY UNIT

SCAN ME



1 **Communication:** nominate a staff Sustainability Champion to be the link to best practice with other units and encourage all staff to join the wider Kidney Care Sustainability Network

2 Reduce and decarbonise patient travel

3 Reduce energy consumption of kidney care estates

4 Decarbonise energy sources

5 Focus on acid concentrates

6 Save water

7 Reduce and decarbonise staff travel

8 Encourage patients to bring own blankets to dialysis

9 Move charitable and research accounts to greener banks

10 Consider carbon implications in procurement

11 Tackle prevention and tailor dialysis

12 Develop resilience/contingency plans

This is a summary of UKKA Sustainable Kidney Care Committee's "12 Steps to Green a Kidney Unit". For the full version go to: [Networks.sustainablehealthcare.org.uk/resource/s/12-steps-green-kidney-unit](https://networks.sustainablehealthcare.org.uk/resource/s/12-steps-green-kidney-unit)

[Home page - ICHDCalculator \(ichdcarbon.org\)](https://ichdcalculator.ichdcarbon.org)

[12 Steps to Green a Kidney Unit \(sustainablehealthcare.org.uk\)](https://sustainablehealthcare.org.uk)



INSPIRE

EMPOWER

TRANSFORM

Kidney Unit Sustainability Champion



**Sustainable
Healthcare
Coalition**



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Get involved – Become your Kidney Unit’s Sustainability Champion

Background - Why do we need a joint approach?

- The climate crisis is a health crisis: here in the UK, air pollution is the single greatest environmental threat to human health, accounting for 1 in 20 deaths. Reducing emissions will mean fewer cases of asthma, cancer and heart disease
- The health service emits energy at a staggering rate, with almost 5% of the country’s emissions health related, and around 40% of all public sector emissions. One year on from setting net zero targets, the English NHS is on track to reduce its emissions equivalent to powering 1.1. million homes for a year
- We know that NHS staff overwhelmingly support a greener NHS – almost nine in ten support the NHS net zero ambition



[Role Description for Kidney Unit Sustainability Champion - June 2023.pdf \(sustainablehealthcare.org.uk\)](#)

[Kidney Unit Sustainability Champion Scheme | Sustainable Healthcare Networks Hub](#)

[Kidney Unit Sustainability Champion - Sign Up \(google.com\)](#)

CSH Networks

About the Sustainable Healthcare Networks Hub

The Networks hub, developed by the Centre for Sustainable Healthcare, provides a platform for sharing resources, knowledge, and ideas, and connecting with like-minded individuals from around the world.

[User guide](#)





Resource library

Access our full collection of sustainable healthcare resources, such as toolkits, case studies, publications and more shared across the hub, or use the search option to easily find and access specific resources. You can also add a new resource to the library.

Activity overview

 30
networks

 5147
members



CSH NETWORK
[Kidney Care Sustainability Network](#)
628 members

[Read more](#)



CSH NETWORK
[Nursing Sustainability Network](#)
559 members

Includes
Case Studies

[Kidney Care Sustainability Network](#) | [Sustainable Healthcare Networks Hub](#)



Our **Carbon Footprinting** offers

Have you measured your carbon footprint baseline? Do you know where your carbon hotspots are?

SCAN ME



Organisational carbon footprint analysis for:



NHS Trusts



Department



**Clinical pathway
or service**



Hybrid analysis of scope 1, 2 and 3 greenhouse gas emissions



Write-up including recommendations



provides insight where change will have the highest carbon reduction impact



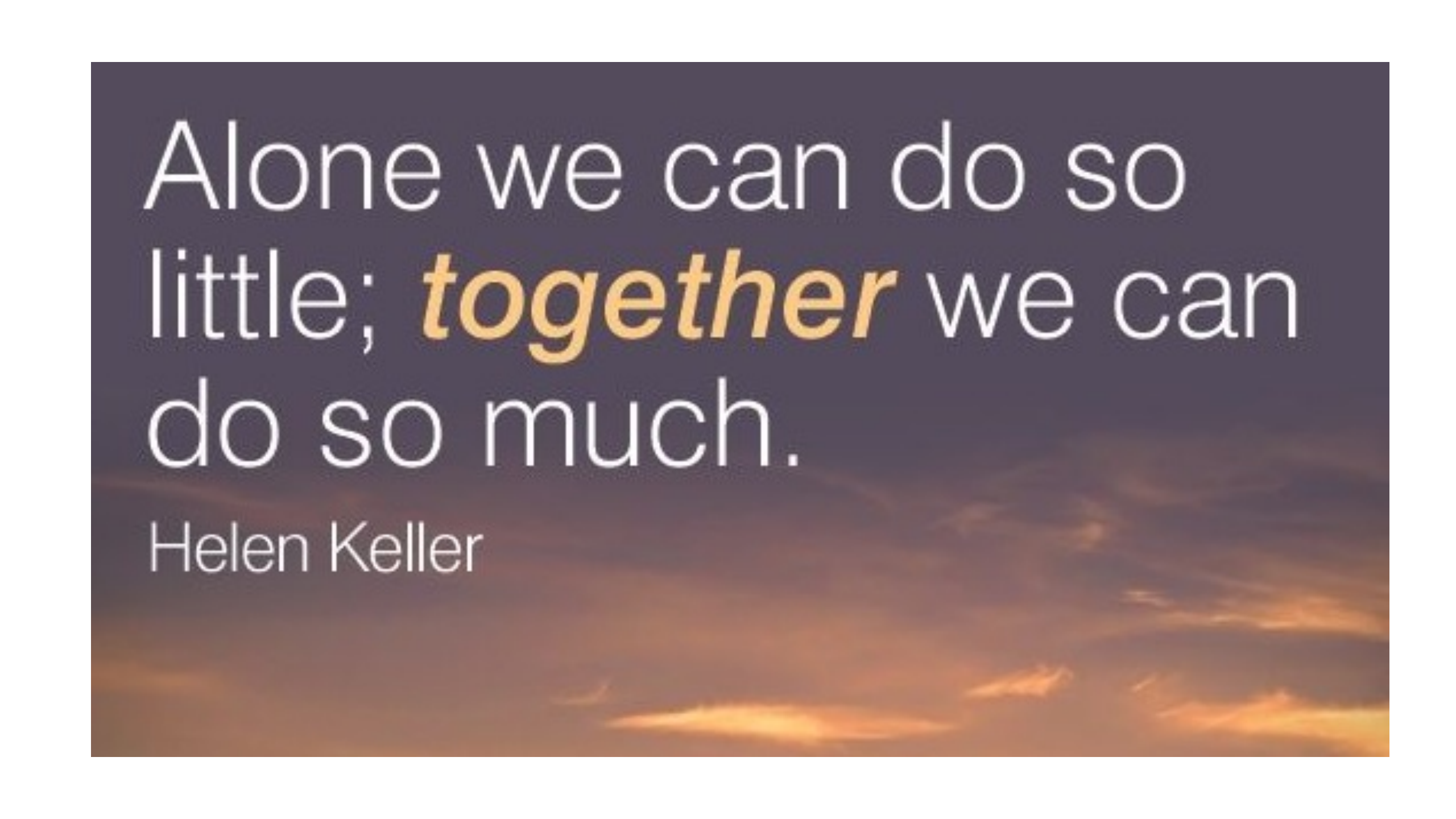
**Carbon
Footprinting for
Healthcare
Network**



sustainablehealthcare.org.uk



[@sushealthcare](https://twitter.com/sushealthcare)



Alone we can do so
little; *together* we can
do so much.

Helen Keller

Thank you

Contact Details – lucy.brown@sustainablehealthcare.org.uk

LinkedIn - [Lucy Brown - United Kingdom | Professional Profile | LinkedIn](#)



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[@sushealthcare](#)

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ISN academy curriculum

Environmentally sustainable kidney care

Our Planet is in Trouble ... unless We Go GREEN!



What the Nephrology Community
Can Do to Help

Winston WS Fung, on behalf of the ELP cohort 2
MBBChir (Cantab), FHKCP, FHKAM (Medicine), FRCP (London), FISN
Honorary Clinical Assistant Professor, Associate Consultant, CUHK
Emerging Leader cohort 2, ISN
Young Nephrologist Committee, ISN
ISN-GKHA Fellow, ISN



ISN
INTERNATIONAL SOCIETY
OF NEPHROLOGY

**Emerging Leader Program
Cohort 2**



Emerging Leader Program Cohort 2



Peace Bagasha
Uganda



Ehab Hafiz
Egypt



Winston Fung
Hong Kong,
China



Letizia De Chiara
Italy



Shaifali Sandal
Canada



Ugochi Onu
Nigeria



Dearbhla Kelly
Ireland



Isabelle Ethier
Canada



Maria Pippias
UK



Workagegnehu Bilchut
Ethiopia



Divya Bajpai
India



Brendan Smyth
Australia



Climate Change, Kidney Care: A Multinational Study

Cross-sectional survey

Who participated?

n=972

108 Countries represented

68% From middle and low income countries

Conclusions: The study highlights the need for climate change and climate change adaptation strategies in kidney care.



International Society of Nephrology (ISN) Emerging Leaders Program (ELP) Second Cohort

ISN Green Nephrology Toolkit

74% Research opportunities

31% Research endeavors

Some countries have a high and variable level of research investment in sustainable kidney care, particularly in high income level countries.

Climate Change, Kidney Care: A Multinational Study

by Edgar Lerma, MD,

ISN academy curriculum

Environmentally sustainable kidney care



► A series of webinars and podcasts

1. Kidney health on Climate change: Causes
2. Climate change on kidney health: Impacts
3. Going Green: peritoneal dialysis
4. Going Green: haemodialysis
5. Going Green: supportive care and kidney transplant
6. Environmental disasters and kidney care/ preparedness
7. What is Green Nephrology and Where do I even begin??
8. Importance of prevention and delaying kidney failure in Green Nephrology
9. Green Experiences and Challenges from HIC
10. Green Experiences and Challenges from LMIC
11. Ethical challenges for Green Nephrology: getting the priorities right
12. Advances in Green Technologies

Thank you for listening!

Our Planet is in Trouble ... unless We Go GREEN!



**What the Nephrology Community
Can Do to Help**

GREEN-K LAUNCH: TODAY'S AGENDA

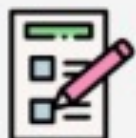
- Welcome & Introduction to GREEN-K 10 min
- Procurement Workstream 10 min
- **Education and Implementation:**
 - Centre for Sustainable Healthcare 10 min
 - ELP Education Activities 10 min
 - **Working groups 10 min**
- Q&A / Discussion (All) 10 min

MARK / KATHERINE INTRO SLIDE HERE

Climate Change, Kidney Health, and Environmentally Sustainable Kidney Care: A Multinational Survey of Health Care Professionals

JASN[®]

Journal of the American Society of Nephrology



Cross-sectional survey

Who participated?



n=972



108 Countries represented



68% From lower or middle income countries

98%

Believed that climate change is happening



<50% Knowledgeable about the impact of climate change on kidney health or the environmental impact of kidney care

14%

Involved in climate change and kidney health initiatives



(membership, knowledge/ awareness, research, advocacy)

22%

Involved in sustainable kidney care initiatives



(education/ advocacy, preventative nephrology, sustainable dialysis, promoting transplant/ home therapies, research)

26%

Reported organizational initiatives in sustainable kidney care



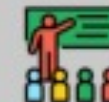
(sustainable general or dialysis practices, preventative/ lean nephrology, focused committees)

Top choices to increase engagement



79%

Guidance/ toolkit



75%

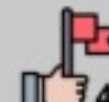
Continuing education



74%

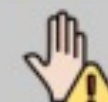
Opportunities

Top avenues for organizational engagement



47%

National initiatives



35%

Preventative measures



31%

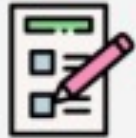
Research endeavors

Participants from lower-income countries reported higher knowledge and variable level of concern, yet engagement in sustainable kidney care did not vary by income level

Conclusions: There are knowledge and practice gaps among healthcare professionals on the bidirectional relationship between kidney disease and climate change. In a multinational context, we report several avenues to increase their engagement.

Shaifali Sandal, Isabelle Ethier, Ugochi Onu, et al. *Climate Change, Kidney Health, and Environmentally Sustainable Kidney Care: A Multinational Survey of Health Care Professionals*. JASN doi: 10.1681/ASN.0000000000000402. Visual Abstract by Edgar Lerma, MD, FASN

Climate Change, Kidney Health, and Environmentally Sustainable Kidney Care: A Multinational Survey of Health Care Professionals



vvv
Cross-sectional
survey

Who participated



n=972



108
Countries
represented



68%
From low
middle income
countries

YET...

- **<50%** possessed knowledge about the impact of CC on kidney health or the environmental impact of kidney care
- **13.6%** were involved in CC and kidney health initiatives
- **22.5%** in ESKC initiatives
- **25.7%** reported organizational initiatives in ESKC

(sustainable general or dialysis practices, preventative/lean nephrology, focused committees)

to increase engagement

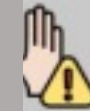


75%
Continuing
education



74%
Opportunities

organizational engagement



35%
Preventative
measures



31%
Research
endeavors

Lower-income countries
knowledge and variable level

of concern, yet engagement in sustainable kidney care did not vary by income level

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Green-K Education & Implementation Working Group



- **Aims**

- to build a community of people with ideas and passion
- share ideas
- ***accelerate the implementation*** of more sustainable (and better) kidney care

Green-K Education & Implementation Working Group



- Working groups
 - Implementing greener haemodialysis
 - Implementing greener PD
 - Plant-based/sustainable diets
 - Pharmacy (reduced carbon-footprint of medication)

(Prevention, increasing transplantation, optimised supportive care)

Green-K Education & Implementation Working Group



- Our ask
 - ***Each society to identify individuals with the interest and expertise to participate in these working groups (nephrologists, nurses, technicians, pharmacists, other...)***
- WGs will be tasked with
 - identifying a list of Achievable, Ambitious and Impactful interventions
 - developing 'How To' resources and a communication strategy
- First working group meetings to be held in October

GREEN-K LAUNCH: TODAY'S AGENDA

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