

Sustainable Dentistry – the future



CENTRE *for*
SUSTAINABLE
HEALTHCARE
inspire • empower • transform

Dr. Frances Mortimer
Conference on sustainable dentistry
29th June 2018

Vision

- Dental care delivery arrangements in the UK are recognised worldwide as leading in sustainable healthcare



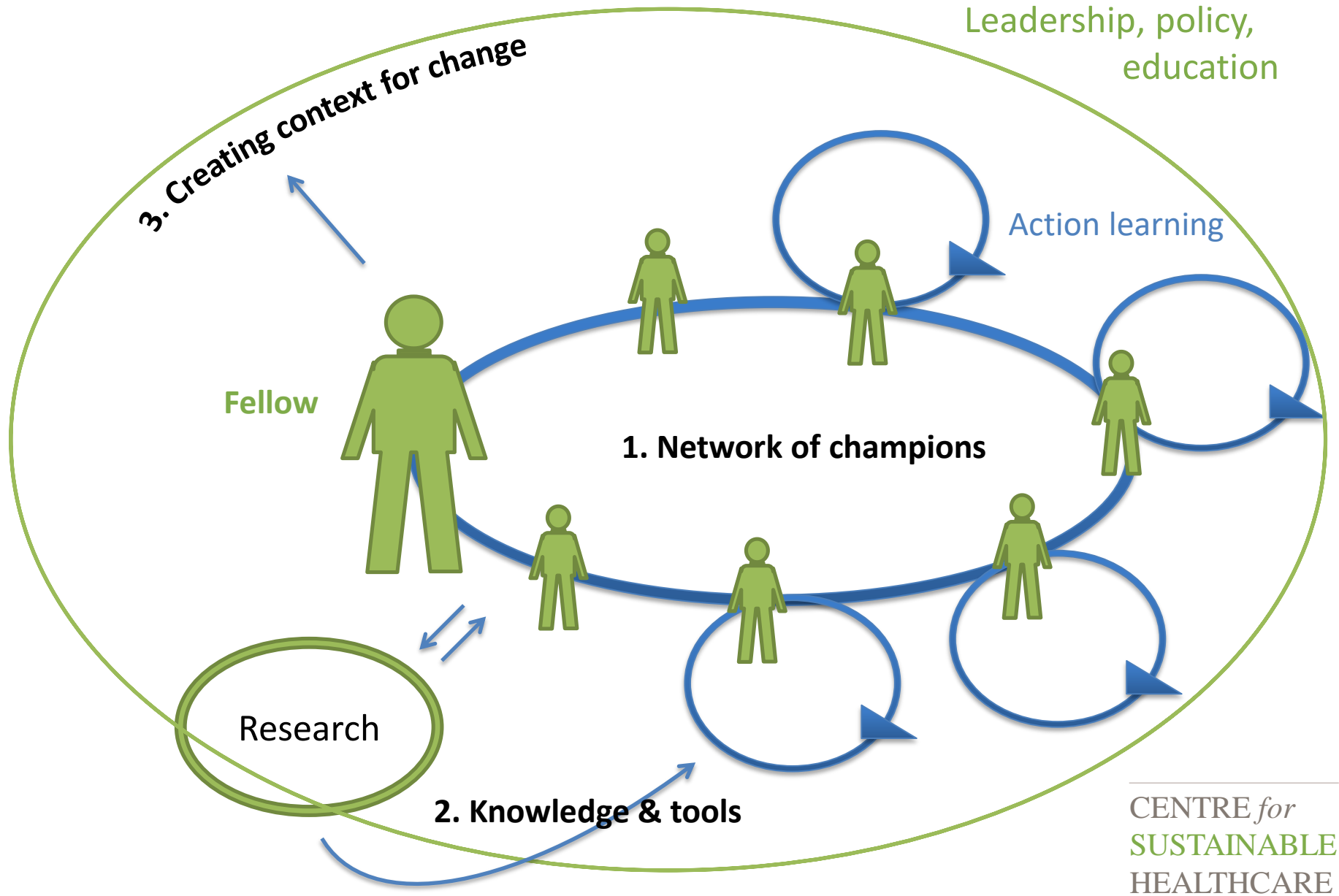
Vision (2)

- The dental team is supported and aware of how best to minimise waste and the carbon footprint
- The care delivery system continually strives to be as efficient and effective as possible
- Self care is seen as a cornerstone of care delivery
- Research findings on sustainable care are translated and disseminated into the delivery systems, for example through commissioning, procurement and changes in clinical practice

Approach

1. A whole system approach working with patients, clinicians, commissioners, managers, educators and industry as active partners
2. An active research programme which supports the development of good practice

Sustainable Specialties



Green Nephrology Network

- 80% units represented
- Case studies
- Awards
- Annual Summits
- Online network (426)



Green Nephrology

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HEALTHCARE

Green Nephrology Awards 2012

Glasgow Renal Services: Reduce, Reuse, Recycle and beyond

With a 105 GGO 350 people served on chronic kidney disease per year in its renal dialysis units (RDUs). Small footprint, large savings. This is ongoing reduction of different methods of reducing CO2 emissions without impact overall approach to reducing carbon footprint has been developed.

Benefits to environmental sustainability
 100 tonnes reduction of CO2 emissions (CO2e) in 2010

Green Nephrology Awards 2012

Newcastle Renal Unit: Baling and Recycling of Books

The Renal Unit produces large amounts of waste paper and cardboard during the clinical and administrative activities. In March 2011, a dedicated staff member was recruited to manage the baling and recycling of books and cardboard. This has resulted in a significant reduction in waste and a corresponding increase in recycling.

Benefits to environmental sustainability

Over 100 tonnes of waste paper and cardboard recycled in 2011, saving 100 tonnes of CO2e. This is equivalent to the removal of 200 cars from the road for a year. The unit has also implemented a range of other measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system.

Benefits to the Trust

Recycling of waste paper and cardboard has resulted in a significant reduction in the unit's waste disposal costs. This has allowed the Trust to invest in other areas of the business, such as the purchase of new dialysis machines and the installation of a new dialysis unit.

Details of implementation

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.



Green Nephrology Awards 2012

Doncaster Renal Unit: Paperless Reporting of Routine Haematology and Biochemistry Results

Each month, Doncaster Renal Unit generates a large amount of paper results for routine haematology and biochemistry. In 2010, the unit generated 100 tonnes of paper results. This is equivalent to the removal of 200 cars from the road for a year. The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system.

Benefits to environmental sustainability

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.

Reduction in unnecessary paper

By implementing a paperless reporting system, the unit has reduced its paper consumption by 100 tonnes per year. This has allowed the Trust to invest in other areas of the business, such as the purchase of new dialysis machines and the installation of a new dialysis unit.

Green Nephrology Awards 2012

Newcastle Renal Unit: Retrofit of Heat Exchangers to Dialysis Machines

Heat exchangers have been retrofitted to all 21 Ektachem Dialysis Machines for patients on home haemodialysis. This has resulted in a significant reduction in the unit's energy consumption and a corresponding increase in recycling.

Benefits to environmental sustainability

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.

Green Nephrology Awards 2012

Bradford Renal Unit: Central Delivery of Acid for Haemodialysis

The unit has implemented a central delivery system for acid for haemodialysis. This has resulted in a significant reduction in the unit's energy consumption and a corresponding increase in recycling.

Benefits to environmental sustainability

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.

Financial benefits

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Green Nephrology Awards 2012

East Kent Hospitals: 44:1 Haemodialysis Concentrate Solution

During haemodialysis, a concentrate solution of bicarbonate is added to the dialysis fluid. This concentrate is added to the dialysis fluid in a 44:1 ratio. This has resulted in a significant reduction in the unit's energy consumption and a corresponding increase in recycling.

Financial benefits

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.



Additional benefits

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Green Nephrology Awards 2012

Bradford Renal Unit: Lighting Project

The unit has implemented a lighting project in the Renal Unit. This has resulted in a significant reduction in the unit's energy consumption and a corresponding increase in recycling.

Financial benefits

The unit has implemented a range of measures to reduce its carbon footprint, including the use of energy-efficient lighting and the installation of a water-saving system. This has resulted in a significant reduction in the unit's waste disposal costs and a corresponding increase in recycling.



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Green Nephrology case studies - cumulative annual savings

Innovation type	No.	£ saving	CO ₂ e saving	Water saving	Estimated replication potential
Infrastructure	6	57,000	84 tonnes	12 million L	30%
Process	11	186,000	183 tonnes		60%
Model of Care	3	?	6 tonnes		N/A

Est. potential savings from widespread replication in UK renal units:
£7 million, 11,000 tonnes CO₂e, 470 million litres water / year.

Source: *Cumulative Savings from Green Nephrology Innovations. Mortimer F, Stott I, Connor A. Poster presented at Renal Association – British Transplantation Society Congress, March 2013*



Leadership

NEWS

NHS could save £1bn by adopting green strategies used in kidney units

BMJ 2013; 346 doi: <http://dx.doi.org/10.1136/bmj.f588> (Published 28 January 2013)

Dr Donal O'Donoghue
National Clinical Director for Kidney Care



“Sustainability in mental health care will deliver better outcomes for patients now and in the future, in the face of environmental, economic and social constraints.”



Royal College
of Nursing



Royal College of
General Practitioners



CENTRE for
SUSTAINABLE
HEALTHCARE
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Mental Health Network
NHS CONFEDERATION

bacp

British Association for
Counselling & Psychotherapy

onsun
network for mental health

Centre for
Mental Health



www.networks.sustainablehealthcare.org.uk/mh-position-statement

POSITION STATEMENT

As leading organisations in mental health we will strive to improve the sustainability of mental health care, by designing and delivering services that....

- 1 Prioritise prevention.** We will seek to prevent poor mental health and thereby reduce the need for health care in the future.
- 2 Empower individuals and communities.** If people become unwell, we will promote opportunities for self-management and independent living and will support community projects, social networks and employment, all of which improve mental health resilience.
- 3 Improve value.** If people need services, we will seek to offer interventions that provide the maximum patient benefit for the least economic and environmental cost by delivering the right intervention, at the right time, to the right person.
- 4 Consider carbon.** We will work together to understand the carbon impacts of interventions and models of care within mental health. This knowledge will become increasingly important in the design of carbon efficient services.



Joint Commissioning Panel
for Mental Health

www.jcpmh.info

Centre for Sustainable Healthcare

www.sustainablehealthcare.org.uk

Guidance for commissioners of
**financially, environmentally,
and socially sustainable
mental health services**

(future proofing services)

Practical
mental health
commissioning

Postgraduate education: RCPsych Scholars



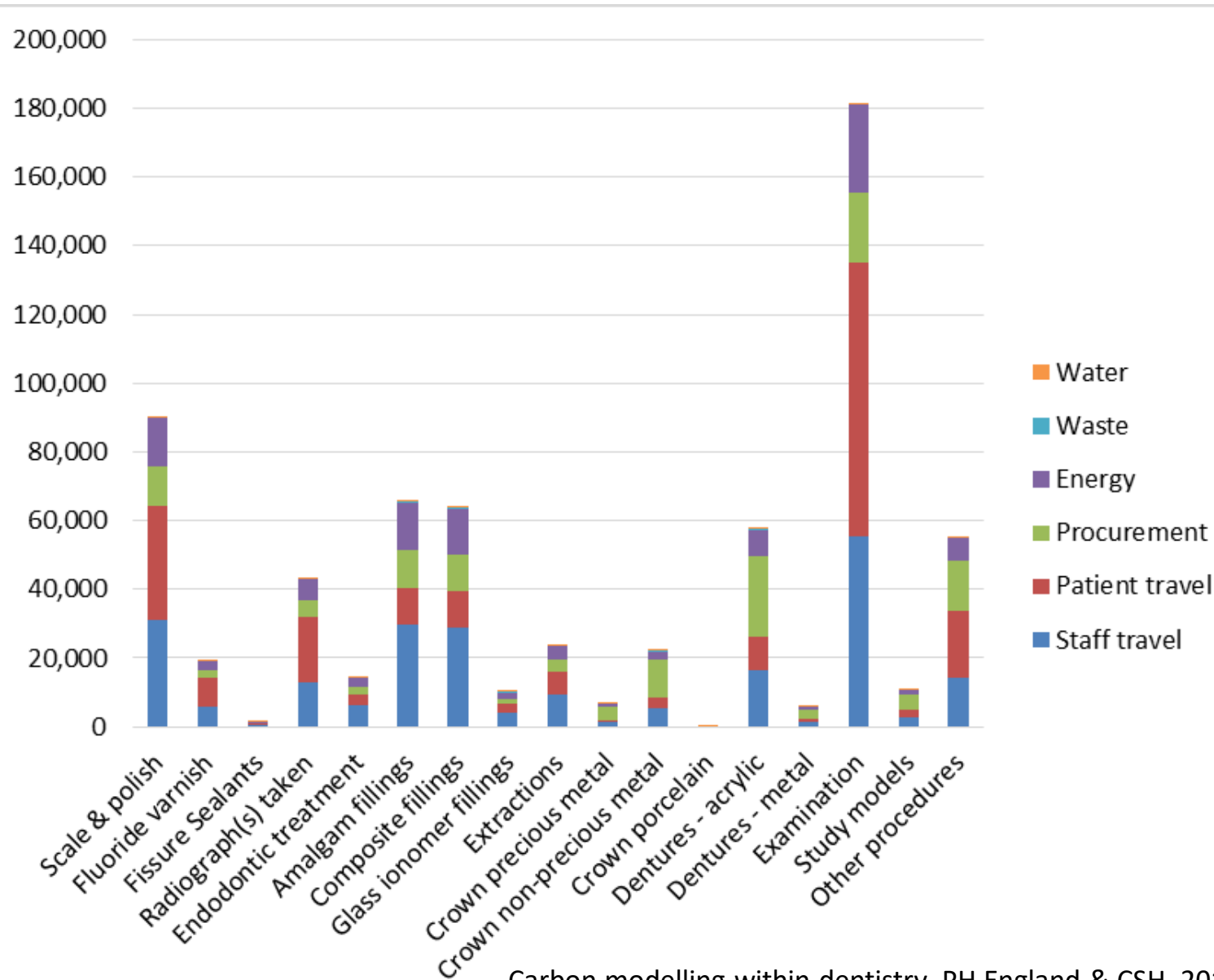
Undergraduate education: GMC Outcomes for graduates 2018

Health promotion and illness prevention

- 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.**

General
Medical
Council

Research informs practice... in dentistry



Carbon modelling within dentistry. PH England & CSH, 2018.

Research informs practice... in dentistry (2)

1. Travel emissions: service configuration options include

- increase in number of practices
- combining procedures per visit
- telephone clinics

2. Procurement emissions: detailed research into carbon footprint of dental products needed

Research informs practice... in dentistry (3)

3. Ongoing improvement

- Linking carbon data to cost-benefit analysis of treatments and the pricing of dental claims
- Dental teams feed into data collection, and take local action on travel, procurement, resource use



dental
susnet

Improving the sustainability of
dental services

networks.sustainablehealthcare.org.uk/dental-susnet