



Centre for Sustainable Healthcare  
Dr Frances Mortimer

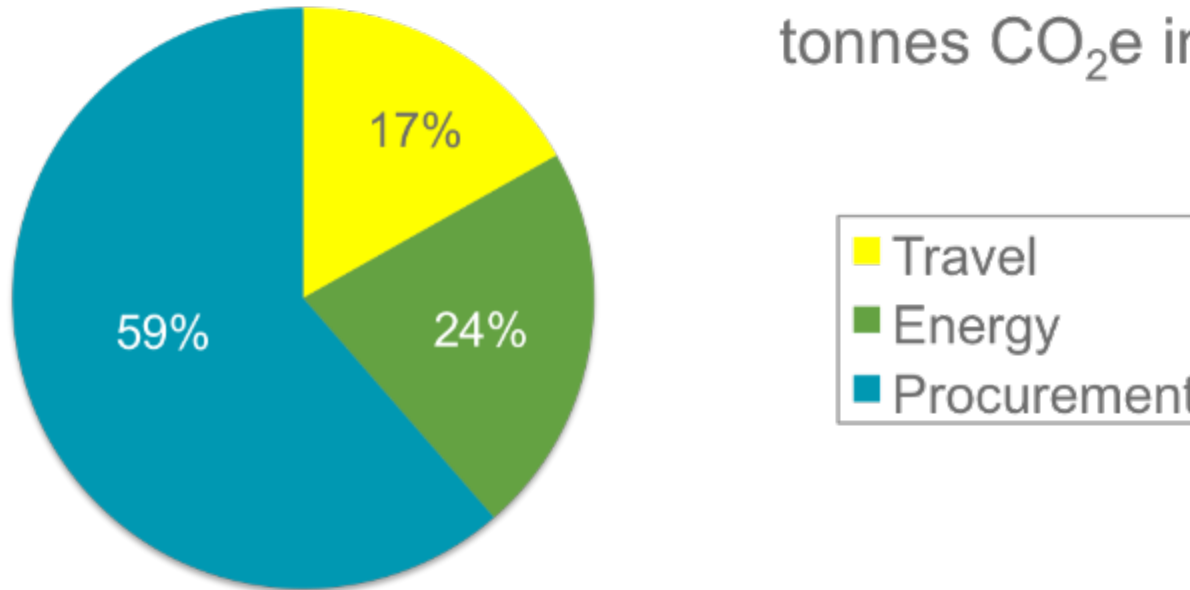
23.3.2012

# SUSTAINABLE SPECIALTIES

The vision for sustainable care and how to achieve it

# Carbon footprint – NHS England

Total annual emissions 21 million tonnes CO<sub>2</sub>e in 2007



25% public sector emissions  
3% UK total emissions

# Carbon footprint – NHS England

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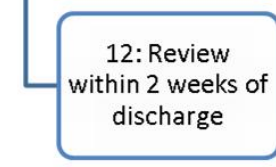
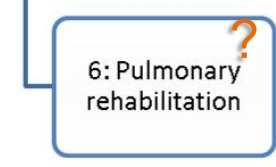
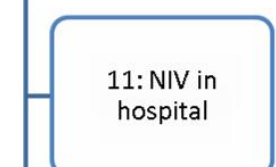
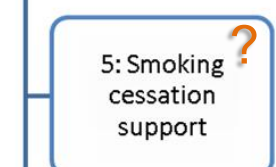
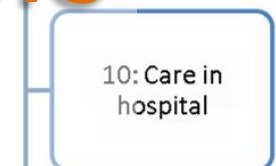
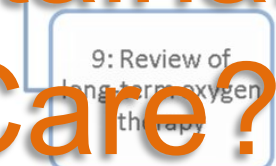
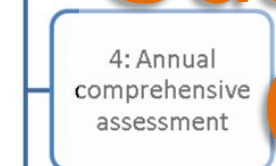
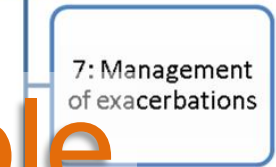
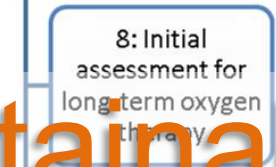
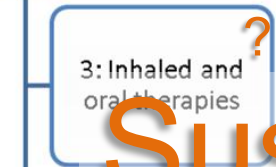
# 2. Patient empowerment

## 1. Prevention

Information and education for patients

2: Management planning

my care plan



Sustainable Care?

4. Lower carbon treatment options

3. Lean care systems

Diagram: COPD – NICE Commissioning Guide (2011)



## REDUCE, RE-USE, RECYCLE IN THE DIALYSIS UNIT

- In the 12 months from April 2009, the unit generated over 400 thousand litres of waste of which 80% was clinical waste
- This is equivalent to over 8kg of waste per patient per day
- The disposal of this waste costs the NHS around £3.5 million pounds a year
- A single haemodialysis session produces about 2.2 kg of solid clinical waste of which 80% is plastic
- This amounts to an estimated 400 kg per year per haemodialysis patient
- A patient undertaking a standard peritoneal dialysis regime produces even more - about 637 kg per year

### SECOND LIVES FOR DIALYSIS EQUIPMENT

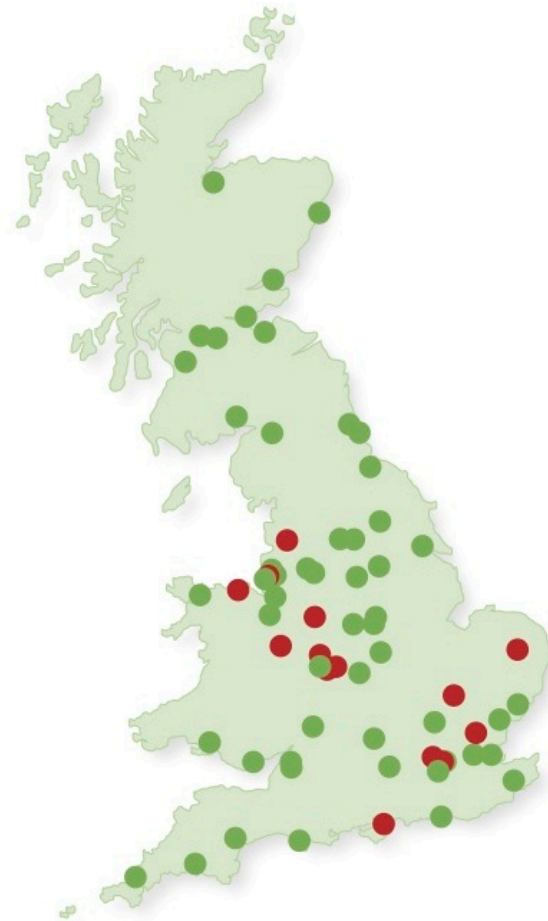
**Green** Nephrology

# THE GREEN NEPHROLOGY SURVEY OF SUSTAINABILITY IN RENAL UNITS IN ENGLAND, SCOTLAND AND WALES

*Andrew Connor, MRCP<sup>1</sup>, Frances Mortimer, MRCP<sup>2</sup>*

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Registrar in Renal and General Medicine, Dorset County Hospital, Dorchester, UK.*

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Why?

What?

How?



So you're doing this too?

# Case study: salvage of reject water in haemodialysis

In Canterbury dialysis unit, reject water from the purification system is salvaged to supply the hospital toilets, saving the Trust £7,500 each year on mains water and sewerage costs. A similar system was designed into a new-build dialysis unit in Ashford at even lower cost.

Year	Unit					
	Canterbury (retrofit)			Ashford (built in)		
	Investment	Savings to date	ROI	Investment	Savings to date	ROI
1	£15,000	7500	50%	£2,500	£10,558	422%
2	0	15000	100%	0	£21,116	844%
5	0	37500	250%	0	£52,790	2112%
10	0	75000	500%	0	£105,580	4223%



# Case study: e-consultation as an alternative to hospital referral in CKD

A CKD e-consultation service in the Bradford and Airedale allows GPs to send electronic referrals and share patient electronic health records with a renal specialist, after first obtaining verbal patient consent.

- Convenient and timely advice
- **Avoidance of unnecessary referrals**
- Further evaluation planned to determine whether the service will displace outpatient clinic activity.

Estimated CO<sub>2</sub> savings from avoidance of one outpatient visit: 22-78kg CO<sub>2</sub>e.



# **The carbon footprints of home and in-center maintenance hemodialysis in the United Kingdom**

Andrew CONNOR,<sup>1,2</sup> Robert LILLYWHITE,<sup>3</sup> Matthew W. COOKE<sup>4</sup>

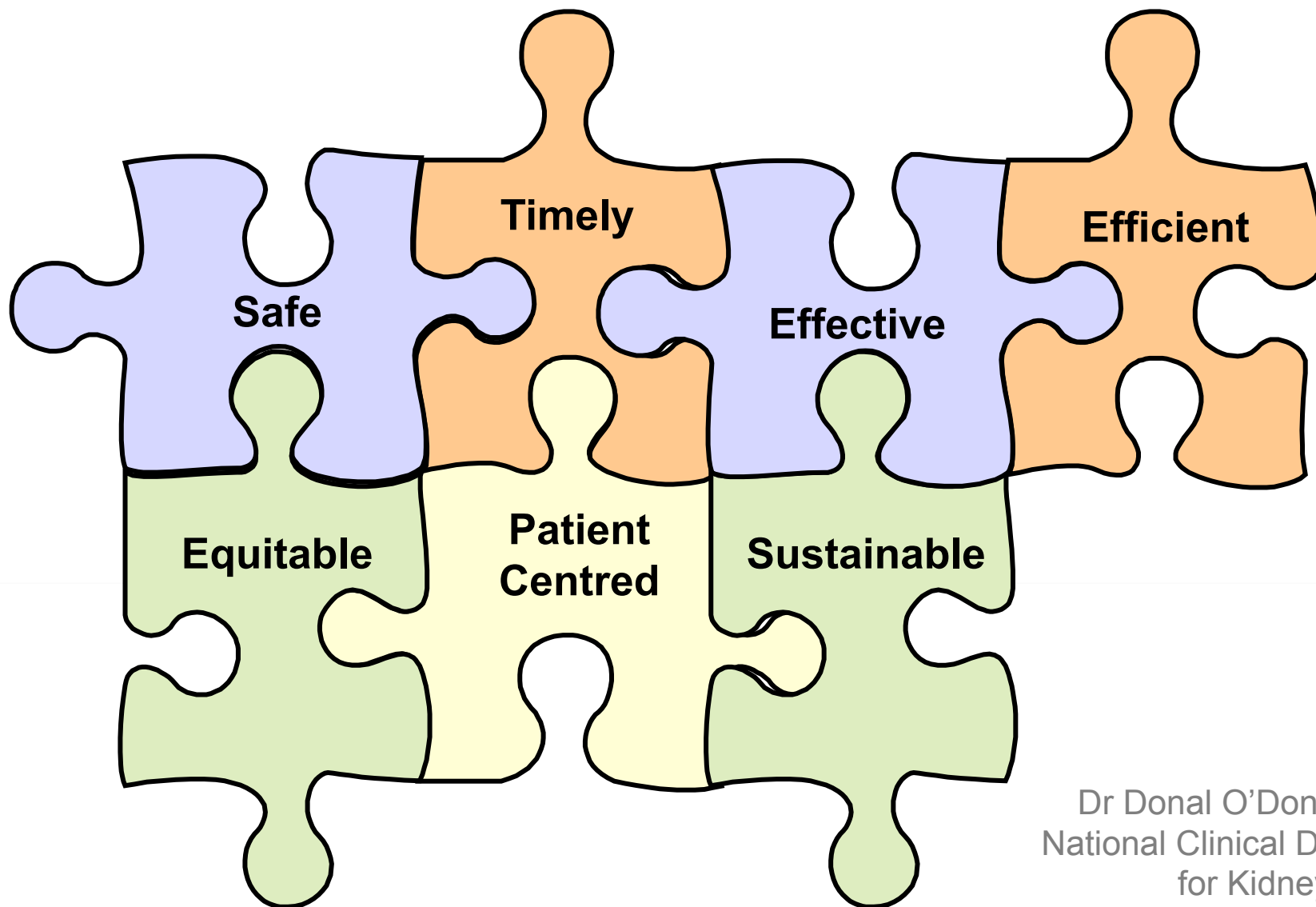
<sup>1</sup>*The Campaign for Greener Healthcare, Oxford, UK;* <sup>2</sup>*Department of Renal and General Medicine, Dorset County Hospital, Dorchester, UK;* <sup>3</sup>*Research Scientist, Warwick HRI, University of Warwick, Coventry, UK;*

<sup>4</sup>*Professor of Emergency Medicine, Warwick Medical School, University of Warwick, Coventry, UK*

“Thanks to Green Nephrology, sustainability is now the seventh dimension of Quality. The work over the past couple of years has caught the imagination of the whole kidney community and has launched a social movement to provide better, greener and leaner kidney care.”

Dr Donal O'Donoghue, National Clinical Director for Kidney Care

# “Quality is the only organising principle of the NHS”



Dr Donal O'Donoghue  
National Clinical Director  
for Kidney Care



CENTRE *for*  
SUSTAINABLE  
HEALTHCARE

inspire • empower • transform

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