

# St George’s University Hospital NHS Foundation Trust

UK Kidney Association/Centre for Sustainable Healthcare  
Group Scholar’s Study Report 2022/23

Embedding Sustainability in the Kidney Field – Dr Rosa M Montero

Strategies to implement sustainability in UK Kidney units, Trusts’ and University

Please identify (more than one option may be selected)

Adaptation <input checked="" type="checkbox"/>	Communications and engagement <input checked="" type="checkbox"/>	Estates and facilities (energy, waste, water) <input checked="" type="checkbox"/>	Food, catering and nutrition <input type="checkbox"/>
Funding and financial mechanisms <input type="checkbox"/>	Medicines <input type="checkbox"/>	Research, innovation and offsetting <input checked="" type="checkbox"/>	Strategic ambition <input checked="" type="checkbox"/>
Supply chain and procurement <input type="checkbox"/>	Sustainable models of care <input checked="" type="checkbox"/>	Travel and transport <input checked="" type="checkbox"/>	Workforce, networks and system leadership <input checked="" type="checkbox"/>
Green/blue space and biodiversity <input type="checkbox"/>	Digital transformation <input checked="" type="checkbox"/>	Sustainability education <input checked="" type="checkbox"/>	
Other (please specify): National engagement			

*\*Topics aligned with the 12 Greener NHS workstreams (NHS England) are shaded.*

UKKA/CSH Group Scholarship completed between October 2022-October 2023

## Key message / aim

Increase awareness and action changes to introduce sustainability to the renal department, actively working towards the Trusts’ green plan agenda to move this forward. Expand and introduce sustainability in all courses at the University and support changes nationally to embed sustainability in the renal and transplant community.

## What was the problem?

Despite there being a national UK kidney sustainability group and a Trust Green Plan there continued to be a lack of knowledge and action locally. In view of this I looked at ways I could grow sustainability locally in my department and Trust but also nationally through the UK kidney association (UKKA) and engaging NHS blood and transfusion. The UK Kidney Association and Centre of Sustainable Healthcare (CSH) global scholarship course has provided me with the opportunity and skills to be able to move things forward.

## What was the solution?

There are a number of different ways I have used to increase engagement. I continue to look for ways to embed this locally and nationally championing the importance of sustainability and endeavouring to make sustainability part of business as usual so it is considered at the time rather than an after thought if at all.

As a consultant I was able to drive the following changes on a small scale engaging and supervising SusQI projects but also influence those in decision making roles to discuss sustainability and the impact of decisions on this:

Acute dialysis unit at SGH and satellite units.

1) Basic changes were identified on reviewing how the unit worked and understanding the pressures involved. Process mapping allowed me to see how busy dialysis nurses discarded bicarbonate bags into the wrong waste bin leading to more incineration affecting our environment but also costs rather than disposing of this in a domestic bag. Education allowed staff to understand the impact and the change was immediate. A single session requiring this 3x a week for numerous patients per week rapidly leads to a significant but simple way of making a difference. The Trust have looked at how we can ensure waste goes in the right bag and further education is being supported in online trust education modules on sustainability and green week.

2) Changing to online priming on haemodialysis. Some units continue to use 500mls bags of 0.9% normal saline to prime dialysis lines. Many time <15mls of this is used and the rest discarded. In the event of low blood pressure extra fluid is given to patients by this means. Working with the education dialysis nurse we looked at how we may incorporate online priming and whether it would be able to meet this need of bolus/immediate fluid return in this situation. We looked at safety, infection control and education as a means to introduce this change. This small change would reduce PVC and discarding bags of normal saline down the sinks leading to more waste. The carbon footprint would also be reduced as less delivery would be made to the unit whilst providing increased storage in the dialysis storage area. See project.

3) Going paperless on the unit. Process mapping showed that dialysis nurses were triplicating their documentation on paper and electronic systems. With the dialysis education nurse and renal IT colleague we looked at how we could safely make a change to avoid using paper, reduce the time required to make entries that allowed the dialysis nurse to increase time spent with the patient improving patient experience whilst ensuring patient safety. Working with the team and driving sustainable changes has resulted in a template being created on our renal database cv5 with all the required checks to be documented in one place. The next steps are to be trialled by dialysis nurses with teaching to be rolled out to the staff by our education dialysis nurse. This project is ongoing

4) Dialysis patients may start their dialysis on the main site however if safe they will be transferred to our satellite units. With the unit's renal IT expert we were able to map out the nearest dialysis units to the patients home and then with our matron offered these patients to move nearer to home. This transfer improved patient experience as the transport waiting times reduced. The need for transport was removed in a couple of patients who could walk to the dialysis unit. This reduced the carbon footprint by dialysing closer to home and made financial savings – see project.

5) Fistula on/off pack. The contents of the pack used for dialysis lines have extra plastic pots and bags that are not required for connecting and disconnecting patients from their dialysis machine. With the education dialysis nurse we identified what needs to go into a fistula pack and have taken this to procurement to make a single pack with less waste to reduce our carbon footprint. This project is ongoing while waiting for procurement.

New Renal Build

I am the SGH sustainable kidney champion for the Trust and involved in the new renal build that is being planned for the SGH site where colleagues at Epsom & St Helier will be forming the renal services

jointly as GESH. The architects have designed energy reducing and renewable sources of energy to meet the needs of the new build. New technologies are being developed and I am part of the Academic Industrial Partnership (AIP) working with different universities and stakeholders to determine sustainable output data from this build. Central concentrate is being incorporated in the new build that will avoid the need to use multiple cannisters to deliver dialysis that avoids plastic in this process as delivery lorries provide the acid concentrate directly to the unit. There is a significant reduction in the dialysis carbon footprint using this method that has been described in previous projects. Dry powder concentrate has not been used as calculating the footprint from delivery abroad to centre use has a higher footprint than UK delivered concentrate. In future this may change depending on availability and demand. The new build will allow for any potential future changes. I continue to attend meetings for the build and have written with CSH an updated version of what is advised for a low carbon footprint new renal building.

#### Education on sustainability

1) Trust. I am a green champion. In this role I have helped organise a green week at the Trust to increase awareness, increase the number of champions in the hospital and showcase work that is being done. I have spoken about sustainability in my department and taught junior doctors and AHPs regarding sustainability.

2) University. I am the T year academic lead and am reviewing the curriculum with the staff and course directors aiming to thread sustainability throughout the years and quality improvement (QI). I am liaising with the newly appointed lead for sustainability in the University so we can increase our commitment to producing graduates with the knowledge and skills to incorporate this in their area of future work. I have engaged the University so that they are taking part in green week. I am also part of the team that provide lectures on sustainability to students.

#### Sustainability Nationally

UK Kidney Association – I am a member of the Action and Education workstream where we held a climate pop up session at the UK Kidney week and were able to sign people up from different renal units across the UK to be champions. The team are looking at ways we can support champions in their roles to increase output and introduce positive sustainable change in their units.

NHSBT – I have encouraged NHSBT to have a sustainable working group following a British Transplant Society congress. I have provided the group with a potential template to review our current practices in transplant work up for recipients and donors, operating theatres with anaesthetists, pre and post ward care and outpatient care. A surgical junior has helped with the theatre aspect of this. I presented this to the group with positive feedback. We are also looking at top tips to make a green transplant unit and how we may cascade this across the country.

NHS Leadership course on Sustainability has further my knowledge and equipped me with further skills to be able to make changes that are wider than the Trust bridging primary and secondary/tertiary care and ICSs.

#### What were the challenges?

The main challenge has been to introduce change however this has been facilitated by linking with individuals that have an interest in sustainability. This helps to drive forward service changes whilst also raising awareness in the busy NHS environment that sustainability has a place and needs to be discussed when thinking of new changes or adaptations to systems. Knowing who in the organisation is responsible/has a role with sustainability and supporting them to move things forward has had

positive effect of eg. Developing and delivering a green week, creating education/online modules and involving comms to let people know of what is happening, what can be done and engaging and involving staff and public as part of sustainable changes.

Changing people's attitude to sustainability and how it is relevant in daily practice has been the greatest challenge. Once people have started to understand and see the social, environmental and financial benefits then more consideration has been given however, there is still a long way to go.

### What were the results/Impact?

Increasing knowledge and awareness of the triple bottom line.

Patient outcomes: Changes in service that have resulted in maintaining patient safety, improving quality of life in terms of patient travel to dialysis units.

Population outcomes: Scaling up of changes across the country has more benefits by providing treatment closer to home whilst also maintaining a healthier population by informing patients how their lifestyle and disease treatment can affect the environment. Carbon calculator and public education during green week.

Environmental impact: Across the different projects there has been a reduction in waste and a review of services and pathways that may implement change. Nationally looking at structures that can be modified to have a positive impact on the environment has been taken on board through working groups allowing changes to happen at scale.

Social impact: Ensuring there are no health inequalities in introducing sustainable changes. Encouraging and supporting people to talk about sustainability and getting involved has health benefits eg active travel but also improves mental health and wellbeing with increasing green spaces. Empowering staff and public to make/propose changes benefit society.

Financial impacts: In the majority of cases there are changes that are cost savings or cost neutral. With those that are cost neutral being areas that could be adopted. Many small changes lead to an accumulative gain hence a bottom up approach and top down approach may lead to cost savings.

### What were the learning points?

Teamwork is essential in being able to make effective sustainable change. Teaching individuals and talking about sustainability helps engagement but also provides others with a skill set to be able to make change. Creating an environment where sustainability projects (SusQI) can be developed and delivered with support and tools. Collaboration with different teams facilitated by effective communication and active listening. Understanding the processes that can lead to barriers for change in this area.

### Next steps

To continue to provide education at different levels of the institution and create an expectation that sustainability has been thought of and incorporated in daily work and new proposals. Support and grow green champions locally in the Trust and University but also nationally. Work nationally to embed sustainability in work and provide sessions at conferences on this work. Sharing sustainable practice and create resources that can be used or referred to be others in the community. Apply for sustainable funding to support development or introduction of sustainable pathways.

### What the team and/or patients and carers had to say

The team were energised by make sustainable changes feeling they are 'doing their part to help the planet'. Many teams felt that they did not know how wasteful certain parts of their daily actions could be and were willing and happy to make changes knowing this would be better for people and the environment. Supporting individuals to do projects has encouraged them to look at other processes in their area to see where else they can make change.

### Resources and references

Carbon databases: GHG conversion factors, ICE, BEISS

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Want to know more?

Contact 1:

- Name: Dr Rosa M Montero
- Role: Nephrology and Transplant Consultant
- Email: rosa.montero@stgeorges.nhs.uk
- Location & NHS Region if within the UK: St George's University Hospitals NHS Foundation Trust, London, UK
- Partner organisations involved: UK Kidney Association/Centre of Sustainable Healthcare, NHS Blood & Transfusion, GESH (George's Epsom St Helier organisation), St George's University London
- Has this project or story been made public in any form before? No

If available, please provide details of an additional contact to best enable others interested in your project to reach you in future.

Contact 2:

- Name: Dr Emma Evans
- Role: Consultant Anaesthetist
- Email: emma.evans@stgeorges.nhs.uk
- Location & NHS Region if within the UK: St George's University Hospitals NHS Foundation Trust, London, UK