SUSQI PROJECT REPORT TEMPLATE

This project report template should be used to report projects which have followed the Sustainable Quality Improvement 'SusQI' process. If your sustainable healthcare project does not apply SusQI methodology, please use our Case Study template instead (LINK)

This template is adapted from SQUIRE 2.0 reporting guidelines.

Project Title:	Start/End date of Project:
Dialysing Nearer to Home	05/22- 08/22 (data collection)
Team Members at St George's University Hospitals NHS Foundation Trust: Dr RM Montero (Kidney Consultant) , R Calayag (Renal IT), L Espiritu (Dialysis Matron), R Cubita (Dialysis Matron), Finance dept for transport costings	Date of Report: 11/09/23

Background:

It is well established that hospital transport contributes to 3.5% (9.5 billion miles) of all road travel in England relates to patients, visitors, staff and suppliers to the NHS, contributing around 14% of the NHS carbon footprint. The rising number of patients requiring dialysis has also seen an increase in the use of hospital transport for our dialysis patients to attend three times a week to our dialysis units. Renal is known to be the largest users of hospital transport.

Our renal unit has three satellite haemodialysis units where our patients dialyse. As the lead of the Acute dialysis unit where patients who start on dialysis are reviewed and if stable are transferred to a satellite unit. The three satellite units cover different areas with transport taking up to 2 hours to pick patients up from their home to up to 2 hours to collect them from the unit to take them home. In view of this I was keen to see how we could improve patients experience, increase active travel of patients to the satellite unit and reduce hospital transport

Our renal IT expert mapped out all the postcodes of our dialysis patients and distance to their nearest dialysis unit together with the distance of where their current dialysis unit. Our satellite matron went to speak with these patients to ask if they wanted to dialyse closer to home to improve their quality of life by reducing transport waiting times and travel. This will also decrease our carbon footprint.

Specific Aims:

1) Dialyse patients nearer to home thereby reducing carbon footprint due to travel
2) Encourage patients who have moved nearer to their home to use active travel or public transport to reduce hospital transport costs.

Methods:

Renal IT mapped patients to their nearest dialysis unit in miles and minutes. This was compared with their current unit of dialysis. Those travelling further away from their home unit were approached by our satellite matron to inform them of their closest unit and offer them transfer or where there were no places then to offer to put them on the waiting list to transfer when a space becomes available. Reasons behind why patients did not want to transfer to their nearest unit having been established in their distant dialysis unit were explored and respected.

All new dialysis starters were in the first instance placed on a waiting list for their nearest unit to allow patients who had been dialysing in a unit further away from their homes to be transferred first or swapped. Once everyone was dialysing in their nearest unit any new starter would ideally be sent to their nearest unit but if there was no capacity then they would be put on a waiting list for that unit.

Limitations: Transport do not transfer patients who require wheelchair or two person crew to dialyse on an evening shift thereby impacting on capacity to transfer these patients.

Measurement:

Patient outcomes: **Patient experience and patient satisfaction was collected verbally and through the PREM results on questions pertaining to transport. Datix (incident) reports arising from transport delays were reviewed. Dialysis experience assessed by adequacy of dialysis, assessing completion of session time, DNA rates.**

Population outcomes: **Reduction in health inequalities by patients attending dialysis sessions, allowing patients to work by reducing the time spent on dialysis days going to and having treatment**

Environmental sustainability: **CO2e calculated for mileage using hospital transport, those no longer using hospital transport (walking/public transport). Currently hospital transport fleet are predominantly using petrol cars/ambulances therefore emissions worked on this basis.**

Economic sustainability: **Cost of hospital transport for patients from finance**

Social sustainability: **Impact on patients – wellbeing, education/employment opportunities. Impact on dependents/carers. Other forms of getting to the unit eg active/public transport. Hospital admissions due to dialysis non-attendance.**

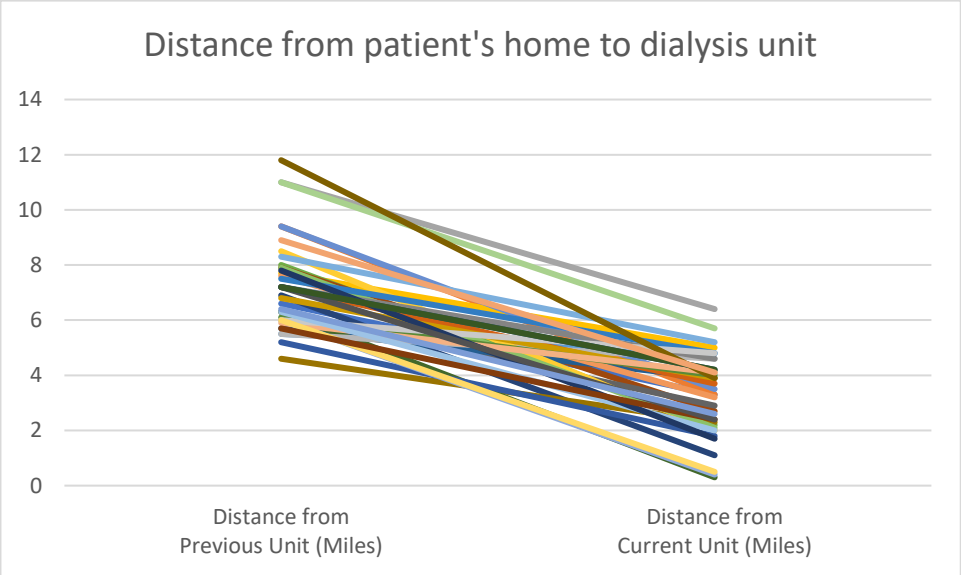
Results:

Patient outcomes:

39 patients in a unit further away

2 patients did not want to move eg been with the same consultant for many years

Total number of patients to transfer nearer to their unit = 39



PREM 2022-2023

Satellite units reporting session times complete for those transferred and positive experience. The number of patients on transport in units closer to their home ranges from 6-55%. Less transport incident reports.

Patient satisfaction increased: No change in DNA rate as precipitated by illness/ did not DNA previously although 1 patient began attending full sessions.

Population outcomes: **Health outcomes improved as reduction of polluting vehicle transporting longer distances.**

Environmental sustainability:

Looking at the distance between patient's current distance travelled to the distance to the nearest unit allows for the mileage saved to be calculated. For our unit the total mileage saved was 151.9 miles.

Conservative calculation based on mileage saved using a Class 1 vehicle tail pipe and miles = 0.22875kgCO2e + 0.05572kgCO2e = 0.28447kgCO2e

0.28447kgCO2e x 151.9miles x3 sessions per week x 52wks =6740.91kgCO2e

Overall reduction in kgCO2e/yr = 6740.91 = 6.74 tonnes of CO2e for moving 39 people closer to home in a single centre.

There are 52 renal unit referring centres each with 2-5 satellite units. Moving a small number of people per centre to their nearest unit could potentially save 350 tonnes of CO2e per year showing the importance of each unit mapping the unit distance from patients home. Home

haemodialysis would reduce CO2e admissions further by removing the transport costs to dialysis units however, this needs to be weighed against production and delivery of consumables to have haemodialysis at home. I have not included kgCO2 from this.

Economic sustainability:
CO2e Current unit travel mileage 0-3miles £19.26 - £116.88, 2-6miles £29.63- £179.82, 7-10miles £42.20- £256.15, 11-15miles £55.54- £337.04, 16-20miles £66.73- £404.85, 21-25miles £76.52- £464.27.
Total mileage saved 151.9

Transport cost varies per mileage and per mobility (walker £19.26-£76.52, Single handed chair £25.03-£99.47, double handed chair £38.52-£153.03, stretcher £48.15-£191.28, bariatric £116.88-£464.27)
Minimum savings
Cost current unit travel £1517.92 (walker)
Cost nearest unit travel £1051.41 (walker)

Total cost current unit – cost nearest unit
Minimum Total savings: £466.51 for walkers per 1 session for 3 session per week = £1399.53 x 52 per year = £72775.56

Two walkers changed to no transport making additional savings.
Decreasing the need of patients with singe/double handed crew, stretcher or bariatric would increase financial savings further. Costings will vary according to transport provider and each unit will require to get local figures to calculate total savings.

Social sustainability: **Total time saving: 554 minutes for 1 session**
1 patient increased hours to full time, 1 patient was employed part time. 2 patients report walking, 1 patient takes public transport, 1 patient now driving as less tired. 1 patient spending more time with their children 'I can spend more time with my children as I don't feel so tired on dialysis days', 'I now have a full time job, it's made such a difference', 'my husband expects me to do the dinner but although I'm nearer I still feel really tired after dialysis, it washes me out', 'I can walk there and get back home quickly, it's great I've got some of my life back'.

Discussion:

Moving patients to their nearest dialysis unit had an overall positive impact on their health and wellbeing as reported by patients. These changes reduced journey time and mileage and decreased CO2e.

A limitation at the time of this report is that not all the patients have yet moved to their nearest satellite unit due to a lack of capacity at that unit. Some patients however have been moved to their next nearest satellite unit although are still waiting to move to their nearest.
2 patients did not want to move to a nearer dialysis unit as they wanted to stay with the same consultant they had known for years and were prepared to continue with their current travelling arrangements.

Increasing capacity in one of our satellite units was challenging however showing the demand of patients living in that area has led to numerous conversations to see how the unit may facilitate the increase in demand.

Risks: a couple of the patients decided to drive their own vehicles as they were now nearer to their home hence CO2e would still be present although a lower mileage.

This project will allow other renal units to reassess the distances travelled by patients by reviewing postcodes according to their dialysis units. This may find that patients have moved or they are nearer to a neighbouring dialysis unit that maybe under a different hospital. Discussions with patients and neighbouring trusts will allow patients to dialyse nearer to home providing a better overall health outcome, reduce health inequalities regarding going to dialysis and adherence to treatment. In addition to improving reported experience with hospital transport and promoting active travel if living nearer to units. This exercise also identifies whether there is a growth of the dialysis population in a different area that needs consideration of where a future dialysis unit is procured or built.

Conclusions:

This project has allowed us to improve patient experience whilst impacting positively on the environment and reducing financial spending looking at the triple bottom line. Key elements of success was our renal IT expert to map the patients and our units out, the satellite matron that asked patients and active promotion of the benefits of dialysing nearer to home by staff at the satellite units.

Lack of capacity limited our ability to get people nearer to home in some instances but facilitated moving to their next nearest unit. Unfortunately some patients will continue to wait on the waiting transfer list until capacity is increased.

Going forward we are maintaining waiting lists and where possible allocate people directly to their nearest unit. The mapping process occurs before a pt is transferred out and discussed with the patient. Every year we plan to repeat the mapping exercise to ensure the dialysis unit continues to be the one nearest to the patient.

References and Resources

ghg conversion factors datasheet
Conversion factors sheet
https://www.england.nhs.uk/greenernhs/a-net-zero-nhs/areas-of-focus/

Appendices

Template References

- SQUIRE | SQUIRE 2.0 Guidelines (squire-statement.org)
- Home | Sustainable Quality Improvement (susqi.org)