SUSQI PROJECT REPORT

To improve the reuse and recycling of walking aids across the trust

Start date of Project: 27th May 2024
Date of Report: 16th August 2024

Team Members:

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MSK Physio Karishma utilising the returns box at main reception BNHH.

Background:

Historically, walking aids such as elbow crutches, frames and sticks have been single use items and not accepted back by many NHS premises. As part of the Greener NHS strategy, NHS England published a report in 2020, 'Delivering a 'Net Zero' National Health Service'[1], where expanding walking aid refurbishment schemes was specifically mentioned, with an aim of refurbishing 40% of all walking aids in the next 5 years. The average refurbished walking aid is 87% lower in carbon emissions than using a brand new one (www.recyclenow.com)[2].

NHS England report if just two out of every five walking aids were returned, the average hospital could save up to £46k per year. They predict that increasing the return rate of these aids over the next three years could reduce NHS carbon emissions by 7,400 tonnes of carbon dioxide equivalent (CO2e), equivalent to 281,397 car trips from London to Bristol.

Whilst the physiotherapy departments at Alton Community Hospital, Basingstoke and North Hampshire Hospital and the Royal Hampshire County Hospital have been reusing and recycling for several years, it became apparent that there were patients and staff within Hampshire Hospitals NHS Foundation Trust who were unaware that they could return their walking aids to us. It was not uncommon to see trust property being advertised for sale on social media or in charity shops. Hampshire Hospitals serves a population of approximately 600,000 across Hampshire and parts of

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West Berkshire. As such, we felt that we could significantly improve the reuse and recycling of mobility aids within our trust.

The therapy department are the biggest purchaser of mobility aids in the trust. Our staff often issue the aids but are also integral in progressing patients onto an alternative mobility aid, or discarding them completely, thus are in a good position to drive the recycling and reuse of these aids.

We were aware of similar projects being completed, both within our ICB and in trusts outside of our locality, which have had huge success in improving the numbers of aids being returned and recycled[3]. We were also made aware of a coordinated return scheme with the recycle now website where NHS trusts can sign up to register their premises. Over 100 NHS trusts are signed up to the website to recycle walking aids, with another 44 intending to join.

We wanted to ensure HHFT has an efficient process for return, reuse and recycling of aids to improve our carbon footprint and align with the Trusts green plan for sustainability.

Specific Aims:

1. To evaluate our current process for walking aid return, refurbishment and reuse to inform how to optimise the process and rates of reuse.
2. To measure and improve the potential environmental, financial and social impacts of optimising our return and reuse.
1. To increase the refurbishment of walking aids to 40 % within our Trust, as per the HNS England goal.

Methods:

Studying the system

We started by understanding the current processes that already existed within the trust in relation to the return and reuse of walking aids. We wanted to find out how much our staff understood about the process, and simply whether they were aware that aids should be returned to the trust. We sent out a survey via the intranet, email and trust staff social media pages. This found that the general consensus was that staff were keen to recycle and reuse aids but that there were barriers to optimising the process and rate of returns, such as:

- lack of clear process
- several clinical areas hand out aids - more than previously understood and not known to therapies (items may be handed out with no assessment of suitability for the patient)
- advice to patients varied
- practice varied - some staff recommended return, some didn't, some staff would accept aids for reuse, others didn't
- no set process to ensure quality and safety of devices (cleaning, remanufacturing)
- inconsistent recording of returns
- No clear designated areas for return of aids

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A discussion with BNHH therapy assistants discovered that a system was in use for recording how many aids were returned, recycled and condemned, however this was only for the Basingstoke site and didn't go into detail as to what parts were replaced for reuse or what protocol (if any) they were following for the checking that equipment met criteria for reuse.

We inputted this data into a spreadsheet to give us baseline data on the numbers of aids currently being returned, recycled or condemned so we would have a comparison post project to see if a change has occurred.

Next, we wanted to find out how many aids the Trust hands out annually, so we had data to compare against to calculate our reuse rate. There is no database in which issued walking aids are logged, therefore we used data from Procurement regarding the number of walking aids purchased by the Trust annually and assumed this as the number given out to patients. This also gave us information on how much the Trust spends on these aids annually.

Once we had our information, we developed a process map of the current pathway and how we would like the pathway to look. We identified steps in the pathway where change needed to happen to improve the service offered.

Changes implemented / Planned changes.
The process map identified the following areas for change:

- Finding a way to log issued aids across the Trust

To address this, we have designed a Teams database for the logging of issued & returned aids. The plan is to trial this within Therapies to see if it is workable and not too time consuming. If it's successful we will aim to role this out to all staff/ services who issue walking aids.

- Giving patients information regarding returns at point of issue

Paper information sheets were already being given out regarding safe use of the mobility aid, and the aids have an information sticker on asking for them to be returned to the site of issue.
To be more sustainable our aim is to put a QR code on the information sticker, directing the patient to our Trust website where we have set up a page with our waking aid collection information on it.

The web page and QR code have been created. Our plan is to add information regarding the safe use of aids to this page and use the QR codes on the stickers, to reduce the numbers of information sheets being printed. For those that require printed sheets we will include the return information and website details on these. Posters have also been created to be put up in locations that issue walking aids to advise how and where they can be returned, with also the QR code on them to signpost to the information on the HHFT internet page. An intranet page has also been created to provide accessible information for staff on the reuse scheme.

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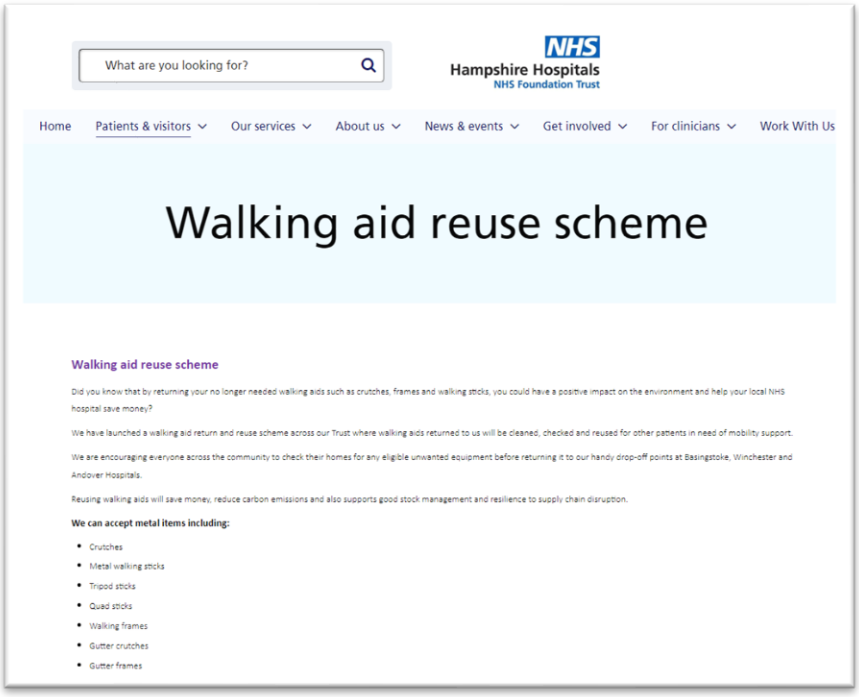

- Specific, easily accessible locations to return aids on each site

We have identified a location at the entrance of each hospital where collection bins would be most appropriate. These locations allow for patients to pull up and deposit their aids without having to pay for parking or having to walk far. We will also continue to collect aids at the entrance to the Therapies department, as this is often where patient will be attending when they progress off their aids and so returning them is most accessible in this location.

We currently have small boxes within the Therapies entrances. We have placed temporary solutions at the Front entrances of RHCH & BNHH, in order to start increasing the returns immediately. However, we require large, fit for purpose bins at all 5 locations.
We have researched the most appropriate solutions and were successful in a bid for charity funding. These collection bins have been ordered and we await their arrival so we can use graphics to label them effectively and place them in the appropriate locations.

- How the aids would be collected from identified locations to be checked, cleaned & reused

We liaised with the Facilities team who suggested porters would likely be able to add collecting the aids to their list of tasks and return these to Therapies for checking.
Our plan is to contact the security lead once the permanent bins are in place to discuss the logistics of how the aids will be returned from the front entrances to Therapies.
Currently, once the bins are full the reception call Therapies and our assistants collect the products.

- Standardising the checking and cleaning process across sites

We investigated the manufacturers guidelines for safety checking and advice regarding the issuing of aids to inform the development of a checklist for use by our therapy assistants when assessing returned aids for reuse. We will roll out training to the relevant staff who participate in this process.

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- Establishing a database of returned, refurbished, reissued, and scrapped aids

We will trial the Teams data log for capturing the number of aids that are returned, how many required part changes e.g. ferrules, how many were reused and the numbers scrapped.
Training for this will be provided to the Therapy assistants initially and then to further staff if the use of this tool gets rolled out across the Trust.

- Advertising the walking aid reuse scheme to staff, patients, and the local community

We have created a webpage on the HHFT internet, advertising the collection point locations at our hospitals, which includes information on the benefits of reusing aids. We've advertised our new scheme on the staff intranet and social media pages to encourage staff to remind patients to return their equipment. There is a National database of locations which will accept used walking aids. We have added all 3 HHFT sites to this database.

Once our process is fully operational in Therapies and we have tweaked any problems, we will engage staff in other Teams who issue aids, to encourage them to follow our processes and therefore reduce the number of new walking aids they order. The procurement data has highlighted which other teams order aids, so these will be the stakeholders we initially engage with and train. We are hoping with positive data regarding cost savings and carbon foot printing the other teams will see the changes positively.

Measurement:

Patient outcomes:

To date, there have been no incident reports due to inappropriate, unsafe or unclean aids being issued to patients, however, there has been anecdotal evidence of unsafe practice in ED. Examples included the issuing of the incorrect heights of aids to patients and not checking the quality of ferrules before issue. A standardised checking and cleaning process would eliminate any risk associated with this.

Patient outcomes have not been measured due to limited baseline data however potential impacts have been summarised in the results section.

Environmental sustainability:

Our primary measure of environmental impact is the carbon footprint (expressed in Carbon Dioxide Equivalents, or CO2e. We used a walking aids carbon footprint tracker developed by the Greener NHS. The tool takes into account the carbon footprints of disinfecting, parts and travel when calculating the potential carbon impact.

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Economic sustainability:
Our procurement team provided us with data of the numbers of walking aids ordered and the financial cost of these for two full years; 2022 & 2023. There was a one off cost of £805.14 for the collection bins, which was funded via Central charity bids.

Social sustainability:
We predict there will be increased time required for checking and cleaning aids by staff due to an increase in returned items. A time in motion analysis would be required to evaluate this pre & post implementation of the project.

A qualitative questionnaire of patient views on the initiative would give an indication of patient satisfaction regarding the scheme. This is something we could plan to do once the project is fully operational.

Results:

Patient outcomes:
With increased returns we predict a greater number of aids available to issue patients within our hospitals. Anecdotally, there are occasional delays in providing patients with walking aids when waiting for a delivery. An increase in available aids due to returns would prevent any delays.

Staff have reported that some returned aids are given out without being checked for safety or cleaned, especially in busy areas such as ED. There are no incident reports around near misses/ accidents because of faulty aids being issued. However, a thorough process of checking and cleaning aids, rolled out to all teams, would ensure no incidents will happen in the future.

Following manufacturer guidelines for checking and cleaning processes will reduce risk to patients who are issued aids and standardise procedures throughout the Trust.

Reducing the Therapies spend on walking aids will increase the budget for other patient equipment, which is predicted to have improved patient outcomes. For example, increased budget may allow for extra exercise equipment e.g. parallel bars or TheraBand to be procured, thus improving patient rehabilitation in either the wards or outpatients with the aim for reducing length of stay or decreasing appointments. We do not have data on this but would expect a positive change in patient outcome based on reduced spending on aids and therefore increased spending on other necessary equipment for patient rehabilitation.

Environmental sustainability:
In 2022, HHFT ordered a total number of 7,162 walking frames, elbow crutches and walking sticks with 2,020 returned. In 2023, 6698 of these aids were ordered and 2,228 were returned. Based on the return data collected at BNHH and the procurement data of purchased aids for 2022 and 2023, the carbon footprint calculator gave the following results:

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- 2022:
    - Carbon emissions reduction through reuse (t CO2 e) = 83.52 tCO2e
    - When taking into account the number of ferrules replaced on the walking aids the carbon emissions reduction is 83.4 tCO2e
    - Return rate = 28% of all aids issued
    - Reuse rate = 94% of all aids returned (1,899 walking aids)
    - Recycling rate = 6% of all aids returned (114 of these aids were re scrapped and sent for scrap metal recycling)

- 2023:
    - Carbon emissions reduction through reuse (t CO2 e) = 97.3 tCO2e
    - When taking into account the number of ferrules replaced on the walking aids the carbon emissions reduction is 97.2 tCO2e
    - Return rate = 33% of all aids issued
    - Reuse rate = 95% of all aids returned (2,117 walking aids)
    - Recycling rate = 5% of all aids returned (106 of these aids were scrapped and sent for scrap metal recycling)

The NHS England target is for Trusts to refurbish and reuse 40% of their provided walking aids. In 2023, with data only provided from the BNHH site we had a return rate of 33% and 95% of the returned aids were reused. We know reusing walking aids is happening at the other sites, but this has not been recorded. Therefore, it is possible we are already achieving the NHS England target and could do much better than this.

If RHCH & Andover combined to reuse the same number of aids as BNHH we would double our carbon emissions reduction, which gives an estimated total of 194.6 tCO2e, based on 2023 data.

If our new scheme increased the return at BNHH by just 10% of aids combined, this would have an emissions saving impact of 107.03 kg CO2e across 1 year.

Economic sustainability:
HHFT spent an average of £68,449 annually on walking aids over the last two years (£68,891.09 in 2023 and £68,006.56 in 2024).

If we can increase the return of walking aids it would follow that we would have a greater stock to issue and therefore need to procure fewer new aids. Just a 10% reduction in our annual procurement of walking aids could see an estimated saving of £6,844.88 per year.

With just an initial investment cost of £805.14 and an estimated annual saving of £6,844.88 per year this gives a 750% return on investment. The return on investment period will be less than two months.

We do not have data on the number of ferrules used when refurbishing the aids ready for reuse, although are planning to collect this going forwards. We do know the Trust spends a yearly average of £785 on ferrules for an average order of 1,886 ferrules annually. The cost of the ferrules is

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included in the total amount spent on walking aids shown above. We are aware that by increasing the return of walking aids there will be an expected increase in the number of replacement ferrules required and this will influence the estimated savings above, although this is likely to be small in comparison to the expected savings.

Social sustainability:
We anticipate increased feelings of satisfaction from both patients and staff, due to the positive impact of doing their bit for the planet and sustainability.

While we have not directly engaged patients during this project, there is literature to suggest that patients are concerned about waste in the NHS from both an environmental and financial perspective[4]. Reducing unnecessary expenditure is also in patients interests so that NHS resources can be better invested in patient care. Patients have also directly expressed concerns about environmental issues and waste during clinic consultations.

Staff may have increased job satisfaction when aligning to the sustainability values of the Trust.

Discussion:

We have shown there can be a significant reduction in both financial and environmental costs to HHFT by implementing a consistent Trust wide return, reuse and recycle process at the Trust.
HHFT spend a large amount on walking aids annually. By increasing return rates, we can reduce the spend and use this as a cost improvement plan or spend the funds on much needed equipment for patient rehabilitation, thereby improving patient care.

Issuing a new walking aid produces far greater carbon emissions than reissuing a used one. We can have a significant reduction in our carbon footprint by increasing returns of walking aids.
Challenges we have encountered are staff awareness of whether aids can be returned and what the process is to return them. Lack of understanding of how to check and clean aids, and difficulty in funding appropriate return bins. We have now sourced the funding but still have work to do on advertising the scheme and educating staff regarding the process or returning, cleaning and reusing.

We have engaged with therapists across all three sites. All are keen to be involved in setting up a robust system to ensure that the return and recycling can happen in the same way at all hospital sites.

It is likely we will experience some logistical challenges. For example, if our return rates significantly increase, we may not have the space to store all returned items either before cleaning or after. We also may not have sufficient staff time, as increased returns increases the time required for checking and cleaning equipment, which is time away from patient facing activity for our assistants. This will be offset as the time required to unpack new equipment, add stickers and information sheets to these items, store them appropriately, and discard packaging, will reduce as our ordering decreases. Having also looked at how other trusts are managing the increase in returned aids, we will liaise with our volunteer teams and see if there would be scope to involve our brilliant volunteers too.

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Conclusions:

It has been rewarding to take part in this project, as we were able to identify a need for an improved returns system for walking aids and can show what a positive impact we could have with this new streamlined system. We still have work to do, including setting up the new bins at all sites and ensuring these are well signposted as well as educating staff on the full process and advertising the returns service to all in the community.

The key learning was that communication with stakeholders is key, to ensure we are implementing the changes required by all to ensure lasting effects. We will continue to log all data, update the carbon foot printing calculator and get procurement data regular to monitor what effects our project has had, especially in the next 3 years. We will review our progress in 1 year to see if there are any required revisions or if we can expand our project for greater gains. We plan to use questionnaires to assess the effect of this project on both staff and patients, to see if it has been received positively.

References

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4. Carn J. (2022) *Patient Engagement on Sustainability,* Pearl Research And Strategy, A sustainable NHS for the future – Pearl Research & Strategy (pearl-research.co.uk)
5. England, N.H.S., 2022. Walking aid return and reuse planning support pack. London NHS England.
6. NHS England walking aid reuse information https://www.england.nhs.uk/ahp/greener-ahp-hub/specific-areas-for-consideration/walking-aid-reuse/
7. SusQI Report Template
8. Sustainably supporting mobility - Developing a walking aid re-use scheme at GOSH | Sustainable Healthcare Networks Hub

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Mobility Aid Checklist for suitability for reuse

All aids can be cleaned using mild detergent

Check each aid for the following	Action if fails checks
Check that the handles are not loose	Condemn
The adjustment holes should not be elongated or oval in shape	Condemn
Check the ferrules for wear or splitting	Replace the ferrules and reuse
Check for bent or damaged tubes or cracks at the tube joints	Condemn
Check that both buttons of the spring clips or horseshoe clips are present and not loose or worn	Replace horseshoe clips if able. If unable or spring clips missing, condemn.

M Broach and K Cartwright August 2024 Information taken from manufacturers website

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Appendix 2 –Communications and Media Resources

Social Media Resources

A3 Poster

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Return Reuse Recycle

NHS
Hampshire Hospitals
NHS Foundation Trust

Walking Aids
Return and Reuse
Scheme

Please return all metal walking aids when no longer required

Collection bins are located at all our three hospitals Basingstoke, Winchester and Andover just inside in the main entrances and in the Therapies departments

Thank you for returning your equipment, it will then help other patients

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Critical success factors

Please select one or two of the below factors that you believe were most essential to ensure the success of your project changes.

People	Process	Resources	Context
☐ Patient involvement and/or appropriate information for patients - to raise awareness and understanding of intervention x Staff engagement ☐ MDT / Cross-department communication ☐ Skills and capability of staff ☐ Team/service agreement that there is a problem and changes are suitable to trial (Knowledge and understanding of the issue) ☐ Support from senior organisational or system leaders	☐ clear guidance / evidence / policy to support the intervention. ☐ Incentivisation of the strategy – e.g., QOF in general practice ☐ systematic and coordinated approach ☐ clear, measurable targets ☐ long-term strategy for sustaining and embedding change developed in planning phase ☐ integrating the intervention into the natural workflow, team functions, technology systems, and incentive structures of the team/service/organisation	☐ Dedicated time ☐ QI training / information resources and organisation process / support ☐ Infrastructure capable of providing teams with information, data and equipment needed ☐ Research / evidence of change successfully implemented elsewhere ☐ Financial investment	x aims aligned with wider service, organisational or system goals. ☐ Links to patient benefits / clinical outcomes ☐ Links to staff benefits ☐ 'Permission' given through the organisational context, capacity and positive change culture.

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