

Safer for you, safer for us: encouraging patients to care for their wheelchair

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Summary

Cleaner wheelchairs and seating should reduce infection risk to patients, carers and healthcare professionals. This project sampled the physical state of on-issue wheelchair and seating equipment before and after introducing measures to encourage greater compliance with agreed loan equipment responsibility.

Aims & Objectives

The aim is to encourage wheelchair users and their carers to care for their wheelchair and seating equipment to improve their experience of using it, to reduce their risk of infection and the risk of infection to healthcare staff at assessments, reviews, repairs and servicing.

- sample the physical state of wheelchairs in the fleet
- develop methods to improve awareness of wheelchair care
- resample after six months

Background

Patients meeting the service specification of the Artificial Limb & Appliance Service (ALAS) Posture and Mobility Service, are eligible for loan of posture and mobility equipment funded by NHS Wales. This service provides both powered and non-powered wheelchairs and postural support equipment. The service is run in-house, including all deliveries, collections, refurbishment, repair and maintenance (ALAS, 2019). Anecdotal evidence suggested that a high percentage of wheelchairs seen by field service technical staff, repair staff, healthcare professionals and reception staff were contaminated by body fluids, decaying food, mud and general dirt, indicating that they were an infection risk to everyone coming into contact with them. Therefore, there is a risk of pathogenic bacteria cross-contamination and possible reduced wheelchair safety.

At delivery of a new wheelchair and seating equipment, patients and their carers are required to sign a loan agreement taking on responsibility for the equipment on loan from the NHS; they agree to care for it and comply with carrying out basic cleaning and maintenance to ensure that it is safe for each use, and to read all the issued user guides and instructions.

Previous literature has indicated the potential risks of bacterial and infection cross-contamination to patients, carers and healthcare professionals coming into contact with contaminated wheelchairs. One study looking at whether wheelchairs spread bacteria within a hospital setting (Peretz, et al., 2013) found that they were contaminated by several pathogenic organisms, including Methicillin-resistant *Staphylococcus aureus* (MRSA), Methicillin-susceptible *Staphylococcus aureus*, and antibiotic resistant strains such as *Acinetobacter baumannii*.

A wheelchair contamination report (Maley, 1980) looked into why there was an increase of health care acquired infections (HCAI) in a burns unit, since conventional wisdom at that time was that: diseases could not be transmitted by wheelchairs. An examination of the wheels from different chairs evidenced that there could be a pattern of floor to wheel to patient to staff contact.

The extent of contamination of a sample of ALAS wheelchairs seen during June 2018 by the field service technical staff, repair staff and reception staff was recorded. Three measures were then put

in place to encourage users and their carers to take more care of the wheelchair and seating equipment:

1. all callers requesting a wheelchair repair were asked to ensure that the equipment was cleaned before the field service technician arrived
2. a collection of posters was developed and displayed at the Posture and Mobility Centre, Trefforest
3. an A5 summary leaflet was developed to be passed to users by the field service technical staff and reception staff

As this study is a service evaluation, it is not defined as research according to the Research Ethics Service (RES) (Health Research Authority, 2019). Therefore, an ethical review or research approval was not required.

Results

- a total of 182 wheelchairs were examined, of which 109 were powered wheelchairs and 73 non-powered wheelchairs.
- 30% of the wheelchairs examined were in a contaminated state: (15%) classified as contaminated, (11%) as moderately contaminated and (4%) as heavily contaminated.

Discussion

Wheelchair users are generally in poorer health than the general population and so it is postulated that they are at greater risk from infections and contaminated equipment, including their own wheelchairs, whether in hospital or in the community.

The number of contaminated wheelchairs in the 2018 sample was lower than expected from anecdotal reports. It is postulated that the effects of the project to raise awareness of compliance will be indicated by the results of the 2019 sample.

While it may be considered a lower risk for patients to be exposed to their own contaminants on their equipment, in engaging with their environment they will be exposed to a wider range. Their families and carers and the healthcare workers coming into contact with their equipment will be exposed to the infection risk of contaminated equipment. Encouraging compliance with prescribed cleaning regimes aims to reduce the infection risk to all, and make the equipment safer and more enjoyable to use.

Although the actual prevalence of infection attributable to contaminated equipment is very difficult to measure, we can encourage users to reduce the risk by caring for the equipment on loan to them.

References

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