

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



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Summary

- 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 patients carers and everyone coming into contact with them.
- 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.
 - To resample after six - twelve months.

Method

- Teams who interact with wheelchair users on a regular basis during June 2018 completed a contamination questionnaire for each wheelchair seen (Figure 1).
- Three measures were then put in place to encourage users and their carers to take more care of the wheelchair and seating equipment:
 - All callers requesting a wheelchair repair were asked to ensure that the equipment was cleaned before the field service technician arrived.
 - A collection of posters (Figure 3,4,5) were developed and displayed at the Posture and Mobility Centre (PMC), Treforest.
 - An A5 summary leaflet was developed to be passed to users by the field service technical staff and reception staff.

Measure of contamination		
Designation	Description	Example
1	Heavy contamination	Dirt encrusted, rust, sticky, evidence of hair in the wheels and unpleasant odour on the wheelchair, cushion or postural device.
2	Moderate contamination	Dirt encrusted, evidence of hair in wheels, and unpleasant odour on the wheelchair, cushion or postural device.
3	Contaminated	Up to half of it dirty and unpleasant odour on the wheelchair, cushion or postural device.
4	Good	Only a little dirt in the areas close to the ground and crevices, no odour.
5	Excellent	Very clean, no odour. Has it been used?

Name: _____ ALAS Team: FSE ☐ PMC Repair ☐ Reception ☐

Workshop ☐

Date	Asset number	Powered (P) or non-powered (NP)	Contamination description or number	Comments

Figure 1. Contamination questionnaire.



Figure 2. A contaminated wheelchair received back in to the PMC in June 2019.

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).
- 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 of the issued user guides and instructions.

Quick guide to help you keep your powered wheelchair in tip-top condition

Before each use check:

- Is the battery charged up?
- Does the horn work?

Every week check:

- The armrests for damage, if they are wobbly check your user manual for how to tighten them.
- The tyres are not damaged.
- Anti tippers are not wobbly.
- Your cushion for wear and tear.



Give the wheelchair some TLC: a wipe down with a damp cloth and gentle detergent. Don't use scouring agents or get any water near the electronics.



Don't forget to wash your cushion covers – just follow the manufacturer's instructions.

Help us to help the NHS:

Please look after your wheelchair!



Figure 3. Wheelchair cleanliness poster displayed within the PMC.

A regular wipe down

Top cleaning tips:

Wash cushion covers in the washing machine when they get dirty

(Always follow the manufacturer's instructions)

For particularly ingrained dirt, try scrubbing lightly with a soft brush.

Use tweezers to get hair or fluff out of the wheels



Can make all the difference!

How often is your wheelchair cleaned?

Just give it a wipe down with a damp cloth and a gentle detergent – don't use any abrasive or scouring agents. Cleaning can help to prolong its life and keep it in tip-top shape!

Help us to help the NHS:

Please look after your wheelchair!

Artificial Limb & Appliance Service

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Figure 4. Wheelchair cleanliness poster displayed within the PMC.

Results

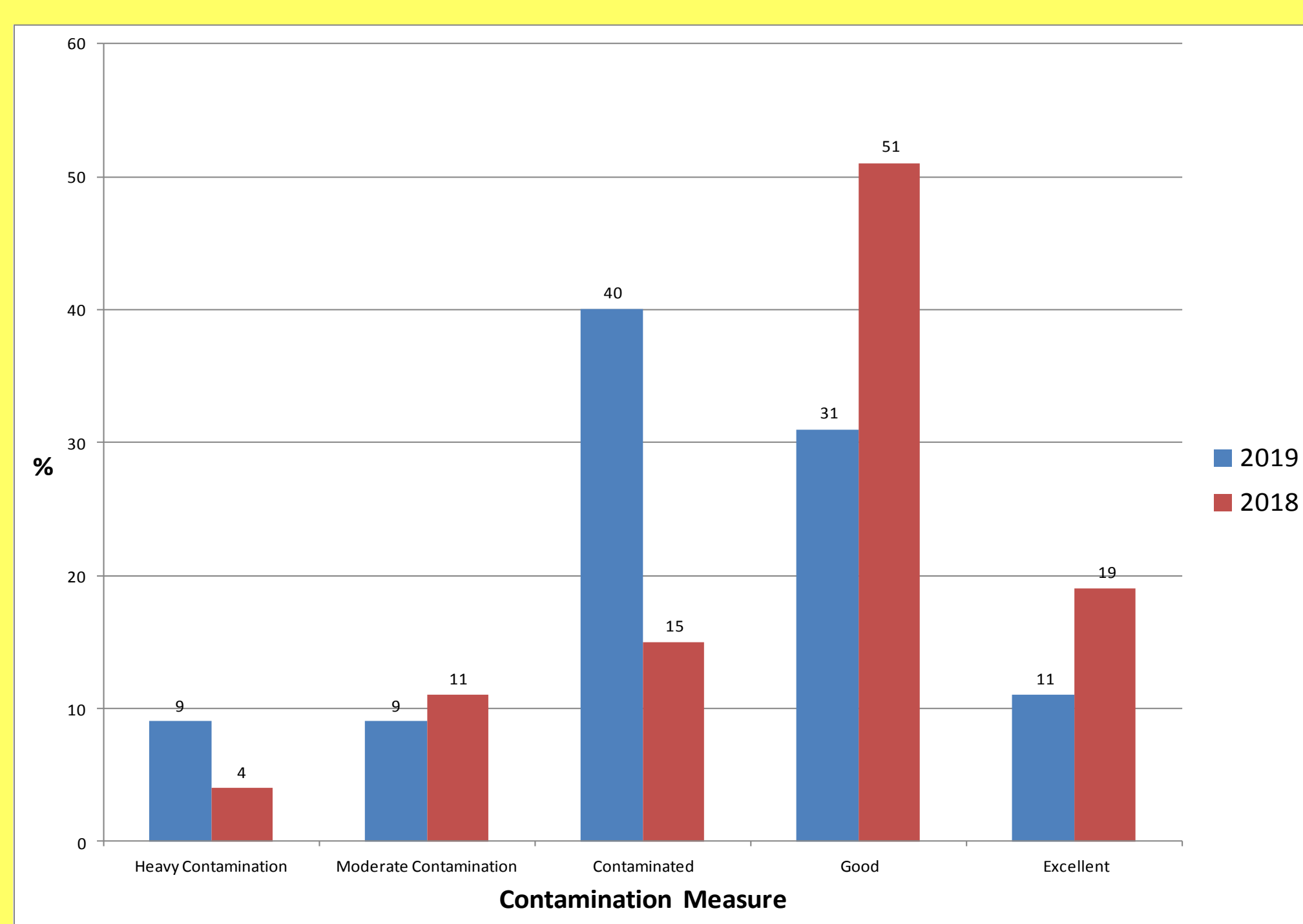


Table 1. Wheelchair contamination (percentage of sample).

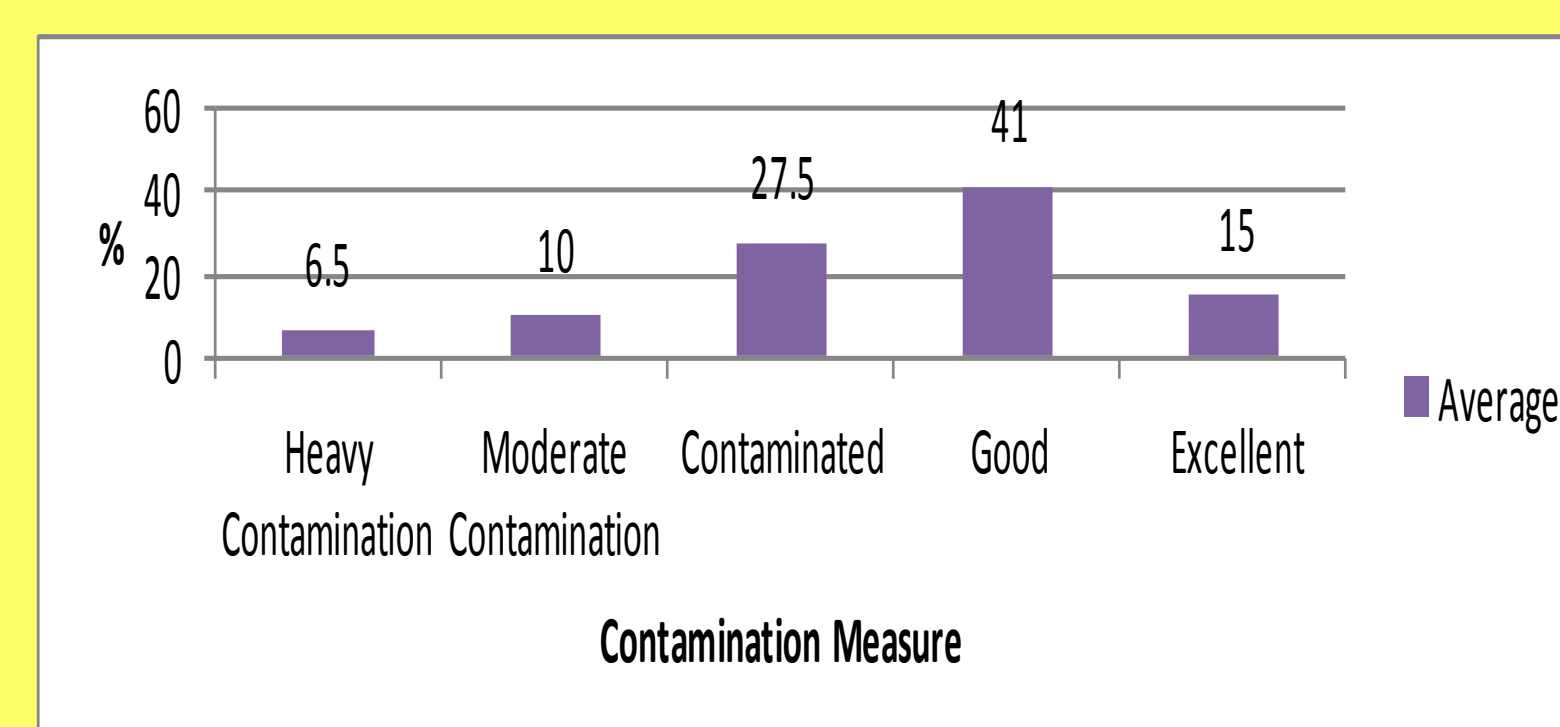


Table 2. Average wheelchair contamination (percentage of all samples).

- 70% of wheelchairs were seen in a good or excellent condition in June 2018 compared to 42% during May 2019.
- Over the two samples, an average of 56% of wheelchairs were in a good or excellent condition whilst 44% were in a contaminated, moderate and heavy contaminated condition..

Discussion

- The number of heavily contaminated wheelchairs in the 2018 sample was lower than expected from anecdotal reports. It was postulated that the measures to encourage users to care for their equipment would have reduced the number of contaminated wheelchairs in the 2019 sample. The results, however, showed an increase in contaminated wheelchairs in the later sample.
- There are a number of factors which may have influenced our study:
 - A limited sample size. Our total sample was 249 wheelchairs out of a total of 59,740 (June 2019) wheelchairs in service throughout South Wales. No wheelchairs were seen more than once.
 - Not enough awareness – Not all users may have visited the PMC and seen the collection of posters or the leaflet.
 - Weather differences – Wheelchairs are more likely to get muddy and dirt encrusted when the weather is wet.
 - Non-consistent encouragement to clean the wheelchair.
- 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 results show that just under half (44%) of all wheelchairs seen were in a contaminated condition. 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.

Future Work

- Increase the awareness campaign to further promote wheelchair equipment cleanliness by consistently sharing information, extending and supporting user training at equipment handover and displaying posters in other areas, for example, care homes, day centres and hospitals.
- Investigate the feasibility of microbiological testing of patient issued wheelchairs.
- Sharing good cleaning practice with other service areas.
- Development of a patient forum to learn more about the patients' views and to discuss the benefits of keeping wheelchairs and seating clean.
- Assess if any progress has been made by sampling wheelchairs again in 2020 with a larger sample.

References

- ALAS (2019) *Wheelchair Service*, ALAS. Wales. [Online] Available at: <http://www.alas.wales.nhs.uk/wheelchairs> [Accessed 13 January 2019].
- Maley, M. (1980) Wheelchair wheels as a source of contamination. *American Journal of Infection Control*, 8(2), pp. 62-63.



Figure 5. Wheelchair cleanliness poster displayed within the PMC.