

How is Environmental Sustainability considered in Aseptic Services?

Research undertaken as part of the MSc in Pharmaceutical Technology and Quality Assurance at University of Manchester

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Introduction – Climate change and Healthcare

→ Climate change is a global crisis

→ The NHS is accountable for 4-5% of England's annual emissions.[1]

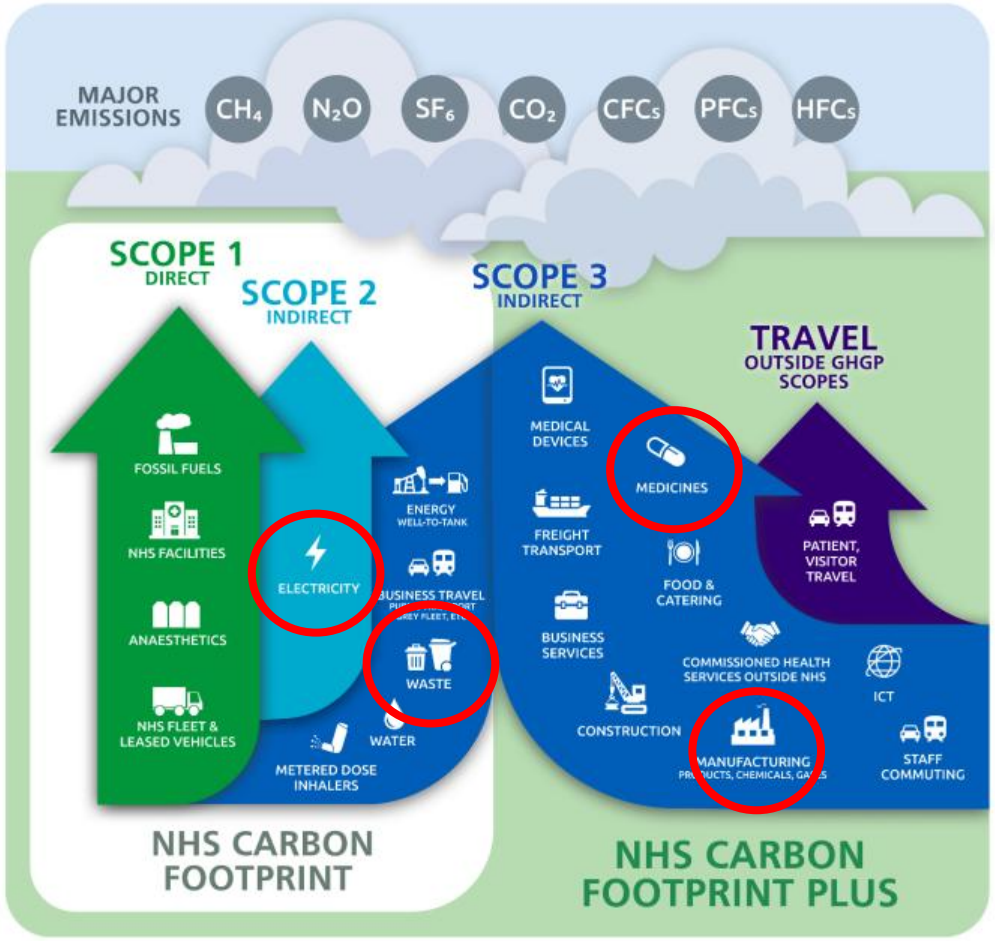


***Figure 1: NHS Carbon Footprint**, summarising the sources of NHS emissions. Taken from Delivering a 'Net Zero' National Health Service 2021.*[2]

Where is the data in Aseptic Services?

Awareness

Engagement

Views

Objectives

- To understand the importance of Environmental Sustainability (ES) in Pharmacy Aseptic Services (PAS) from the workforce point-of-view.
- To identify what the staff perceive as the opportunities for improvement.
- To understand how ES is embedded within formal systems of work in PAS, such as Pharmaceutical Quality Management (PQS) processes.
- To suggest recommendations for improvement.

Methodology

Survey (anonymous questionnaire)

Healthcare professionals working in either operational or production roles, or in quality roles, within a UK NHS PAS.

qualtrics XM

General
Views towards ES in PAS

Managers
ES in PAS systems of work

Pharmacy Aseptic Services Group (PASG) forum

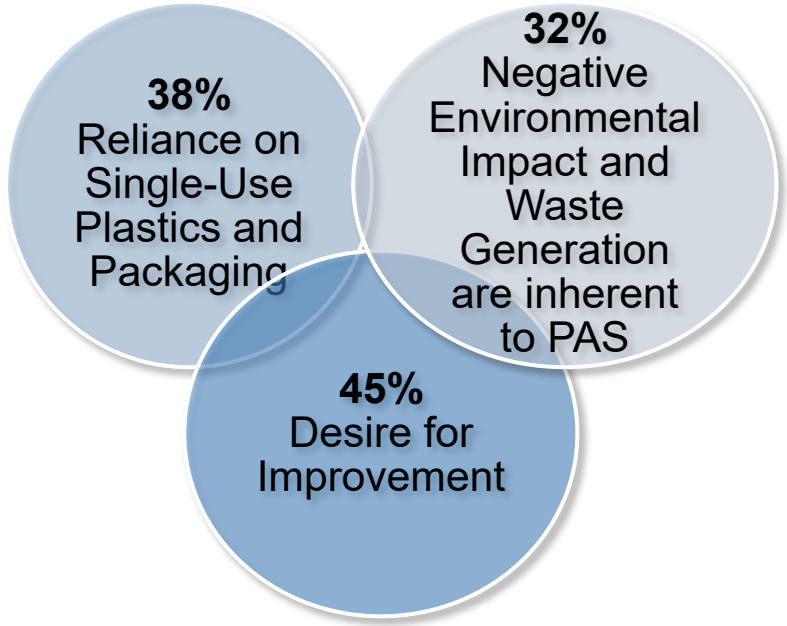
Thematic analysis
(Braun and Clarke, 2022)

Study findings

→ ***A total 85 responses were analysed, covering across the UK and including both types of PAS unit (Section 10 and Licensed).***

63% of respondents that believed ES has limited importance in PAS.

69% of respondents believe more focus should be given to ES in PAS



Study findings

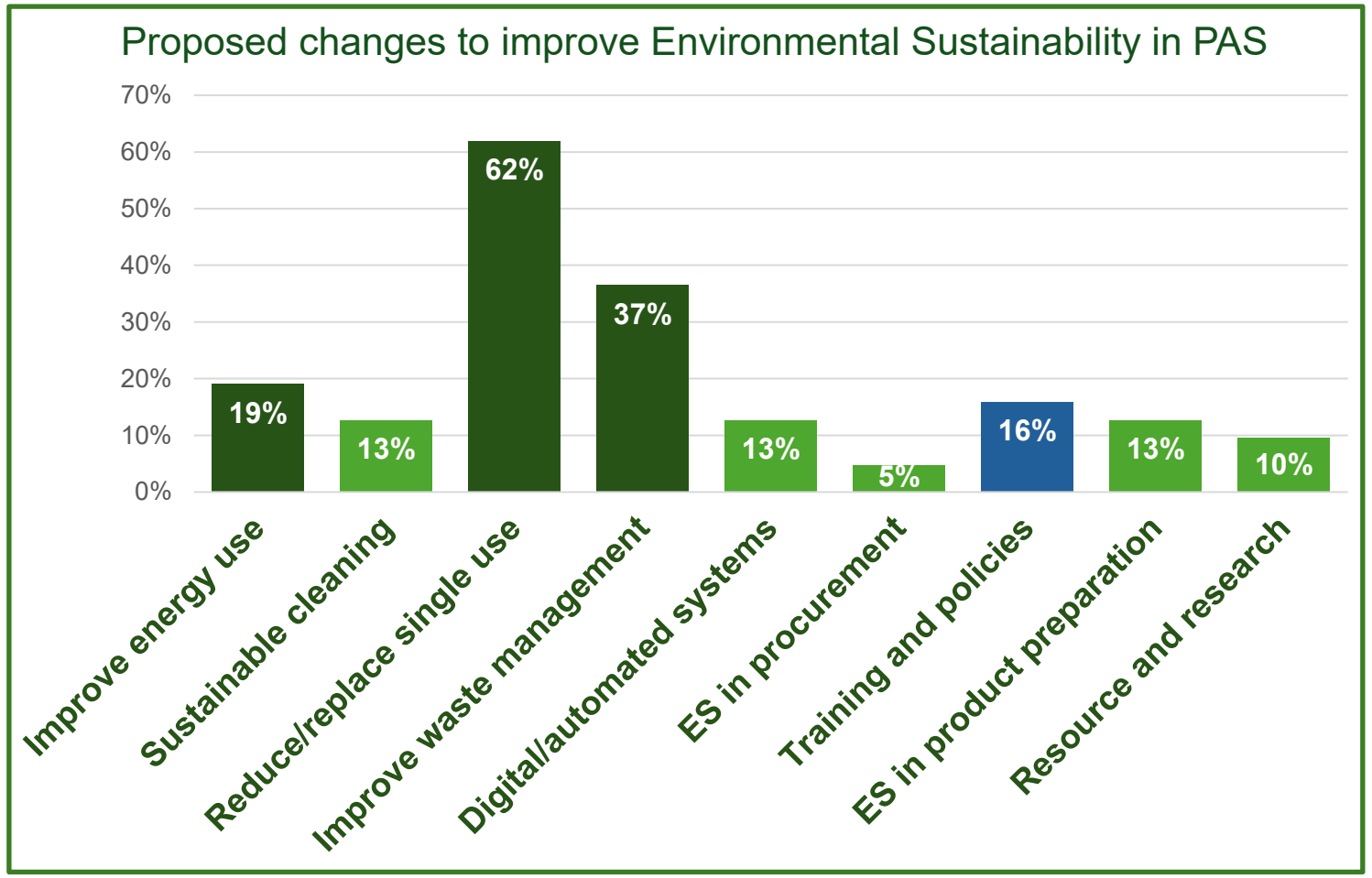


Figure 4: Themes reflecting the open-text responses to question "What changes not yet in place would you suggest to improve Environmental Sustainability in your aseptics department? (List up to 3 suggestions)" (n=63).

Which PQS elements consider ES the most? (n=55)

- **53%** **Contamination Control** (e.g. laundered garments and mops)
- **36%** **Documentation** (e.g. electronic PQS)
- **25%** **Validation** (e.g. validations scheduled together)
- **25%** **Training** (e.g. reusable training materials)
- **24%** **Deviation** (e.g. investigations include wastages)
- **22%** **Maintenance** (e.g. same supplier to calibrate equipment)
- **20%** **Audit Management** (e.g. waste management audits performed)
- **13%** **Change Control** (e.g. sustainability is part of impact assessments)
- **11%** **Supplier Control** (e.g. "greener" suppliers preferred)
- **9%** **Periodic/Product Review** (e.g. includes wastage, energy, etc.)

Conclusion

→ **ES was recognised by staff as important**.

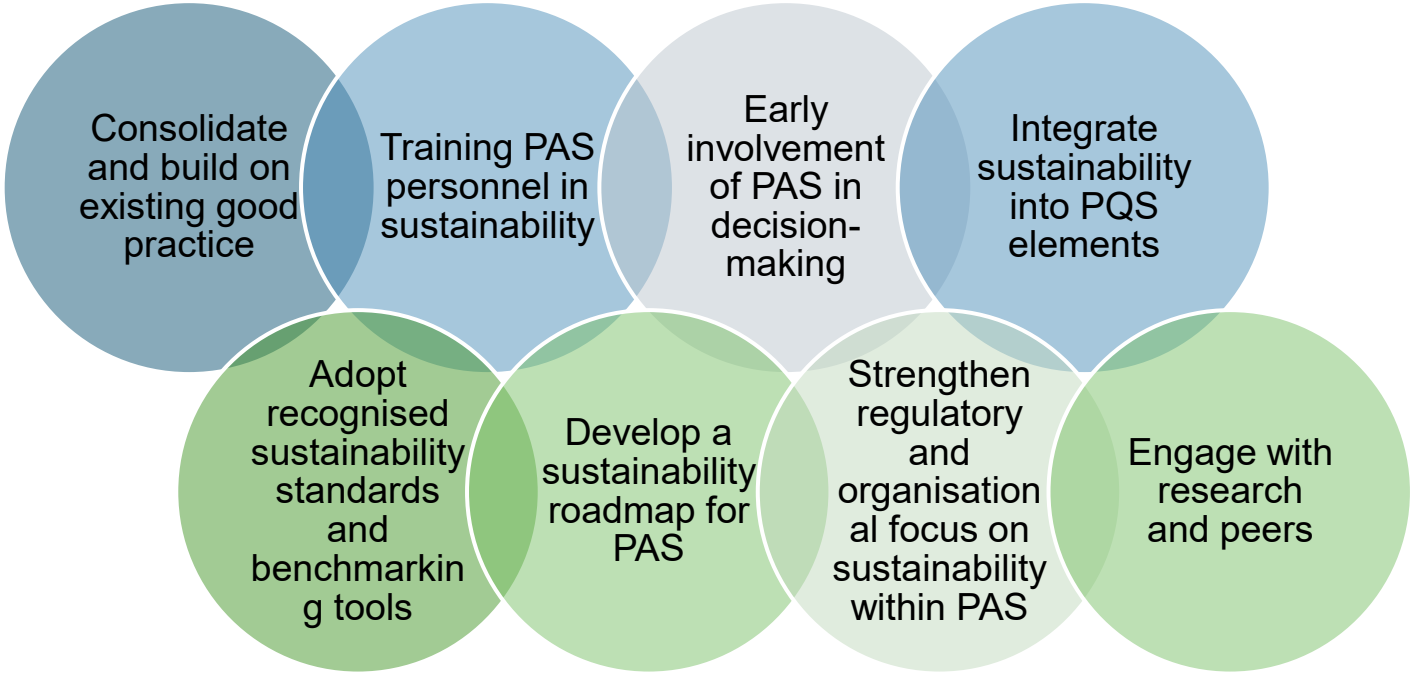
→ Analysis of PQS elements demonstrated that ES is more effectively embedded where it aligns **with operational quality and efficiency.**

→ Achieving meaningful progress will require explicit recognition of sustainability within **regulatory** guidance and **organisational** governance.

Acknowledgements

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Recommendations for Improvement



References

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2. NHS England. Delivering a 'Net Zero' National Health Service. [Internet] 2021. Available from: https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf

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