



Overcoming Barriers to Environmental Sustainability in Community Pharmacy

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Introduction

Internationally, there has been considerable research to identify more sustainable practices in pharmacy but this does not appear to be reflected in Irish community pharmacy practice. Previous research has mainly focused on developing sustainability measures, not investigating uptake, so barriers are unclear.

Objectives

This study was designed to:

- Identify potentially useful sustainability practices;
- Gather insights from community pharmacists in Ireland on the extent to which they are in use, the likelihood of future adoption, barriers to doing so, and practical measures that may address these barriers;
- Developing a guide from these insights for the benefit of community pharmacists in Ireland.

Methodology

A mixed methods approach was adopted.

- Ethics approval was granted by TCD School of Pharmacy and Pharmaceutical Sciences Research Ethics Committee (REAMS #4549).
- Preliminary literature review to identify appropriate recommendations.
- Anonymous SurveyMonkey questionnaire of community pharmacists in Ireland.
 - A total of 101 respondents recruited by email via a mailing list provided by the Pharmaceutical Society of Ireland (PSI).
 - Closed questions on demographics, engagement with specific sustainable practices, and barriers to doing so, with space for additional free-text comments.
 - Statistical analysis using SPSS Statistics v. 29.0.
- Semi-structured Zoom interviews.
 - Convenience sample of 6 community pharmacists, 1 hospital pharmacist and 1 general practitioner, recruited via PSI mailing list and personal contacts.
 - Digitally recorded and automatically transcribed via Microsoft Word, with manual correction.
 - Inductive thematic analysis with constant comparison in QDA Miner Lite v. 3.0.8.
- Synthesis of findings into guidance for community pharmacists.

Results

- The literature review informed the questionnaire and interview guide, leading to exploration of sustainability practices in the areas of patient counselling, choosing medicines, waste management, pharmacy equipment, and training/workplace, as well as barriers and facilitators to their uptake.
- These broad themes became the units of the guidebook.
- Questionnaires:



Fig. 1: Community pharmacist engagement with environmental sustainability measures

- Pharmacists are enthusiastic about engagement with these measures, with most choosing 'I do this already' or 'Maybe in the future'.
- Counselling on reducing medicine waste not a regular aspect of practice like counselling on medicine adherence and disposal.
- The 20% who would not favour medicines with a lower carbon footprint may reflect that patients are prioritised above sustainability.
- Superintendent pharmacists shared concern for the legal and financial implications of implementing measures.

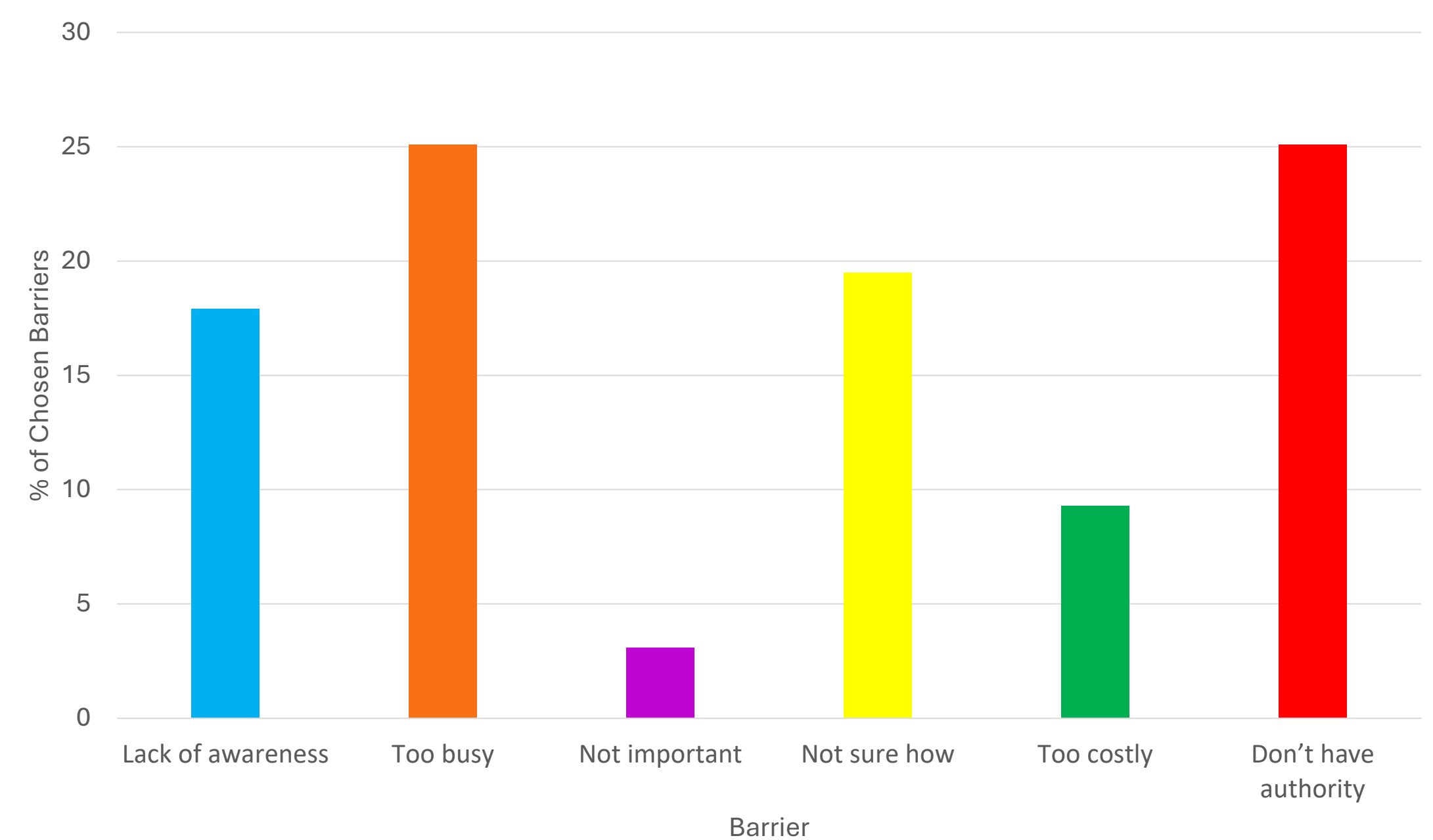


Fig. 2: Frequency of common barriers to environmental sustainability in community pharmacy

- The most common barriers 'too busy' and 'don't have authority' align with the busy nature the profession, frequent understaffing, and employee status of many pharmacists.
- Environmental sustainability is still a priority for pharmacists as 'not important' was the least frequently chosen barrier

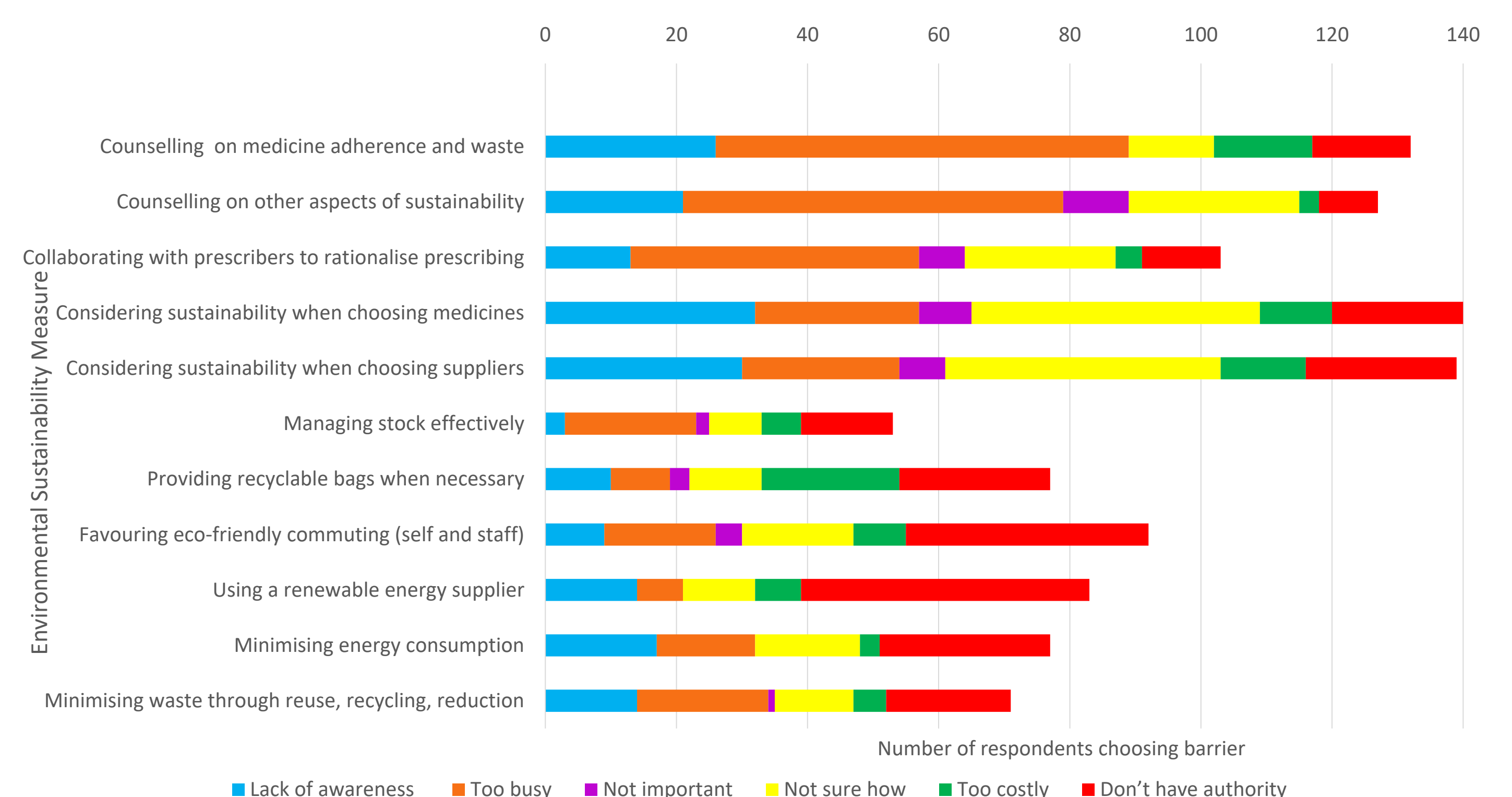


Fig. 3: Frequency of common barriers to different environmental sustainability measures in community pharmacy

- Considering sustainability criteria when choosing medicines and suppliers was the most difficult to implement, mainly because pharmacists were 'not sure how'.
- The least difficult to implement was effective stock management so patients would not need to travel to other pharmacies for medicines.
- Interviews: four main themes arose, informing the guidebook produced,
 1. Sustainability efforts: utilising technology to avoid printing, segregating waste, counselling patients on rational medicine use, encouraging return of unused medicines.
 2. Sustainability issues: lack of easily accessible guidance, legal requirements for printouts, patients stockpiling medicines at home.
 3. Barriers: patient behaviour (e.g., collecting medicines unnecessarily), lack of education, legislation, lack of time/staff, excess packaging.
 4. Facilitators: top-down support, financial incentives, reduced or reusable packaging alternatives, training, patient awareness campaigns, staff sustainability leads, collaboration with prescribers.

Conclusions

- Community pharmacists in Ireland have an interest in environmental sustainability
- There was a demand for further education for pharmacists as well as endorsement by professional bodies to emphasise importance,
- An added priority may seem like a shift away from patient health and safety.
- The guide produced allows for the requirements placed on pharmacists in Ireland.
- Research will be required to assess the functionality of sustainability measures, and to quantify the negative impact of practices, medicines, waste and other stakeholders in community pharmacy.

Acknowledgements

This project was funded by the 'Laidlaw Undergraduate Leadership and Research Programme'.

Further Information

Please contact me at morria12@tcd.ie with questions or comments.