

Delphi approach to defining and contextualising medicines wastage in the Maltese population

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Background

- Reducing medication wastage is paramount in promoting appropriate utilisation of finite resources¹.
- We have recently completed a systematic review of the methodological quality and findings of the published research on medication wastage.
- Of note, the evidence base around strategies to reduce wastage is weakened by the lack of standard terminology and definitions.

Method

- The Delphi technique, a multi-staged survey attempting to achieve consensus² was employed.
- An expert panel comprising 26 professionals and 6 patients recruited and communicated by email.
- Round 1: open-ended questions on panel's understanding of the term 'medication wastage' along with views on factors likely to be associated with wastage. Responses analysed thematically.
- Round 2: respondents requested to rank 8 definitions of 'medication wastage' in order of preference. Themes related to associated factors presented as 5-point Likert statements for agreement.
- Round 3: statements not achieving consensus (< 75% respondents rating strongly agree/agree) during round 2 were presented, along with detailed feedback, during round 3.
- Approvals obtained: Robert Gordon University and Maltese University Research Ethics Committees.

Objective

- To apply an expert panel consensus based approach to achieve consensus in relation to defining 'medication wastage' in the context of the Maltese population.



Table 1: Panel of experts composition

Expert Panel	Academics	Practitioners (Health Department & Medicines Authority)	Government Officials (Members of Parliament)	Non-Governmental Professional Organisations	Patients
Total = 27	1	4	3	13	6

Results

- Out of 32 individuals invited to participate as expert panel members, 27 members consented (Table 1).

Definition of 'medication wastage'

Round 1:

Content analysis of definitions provided by participants to aid synthesis of a definition

- Ten themes

- Four key headings: utilised/expired medications; inappropriate medication; healthcare setting & factors associated with wastage; implications for the individual and society

Rounds 2:

- The definition below was ranked highest
- It was chosen by 16 out of 23 expert panel members

Round 3:

- Consensus for the definition of medication wastage presented below achieved **86% AGREEMENT**

Table 2: Response rates for the three Delphi process rounds

Delphi Process	n	%
Round 1	23	85
Round 2	23	85
Round 3	18	67

'Medication wastage refers to any medication which expires or remains unused throughout the whole medicines supply chain. Medication wastage also refers to the unnecessary or inappropriate consumption of medications by patients, or the unjustified non-adherence to treatment guidelines by healthcare professionals. Medication wastage poses a financial burden on patients themselves and the state's economy and requires adequate education of all people concerned.'

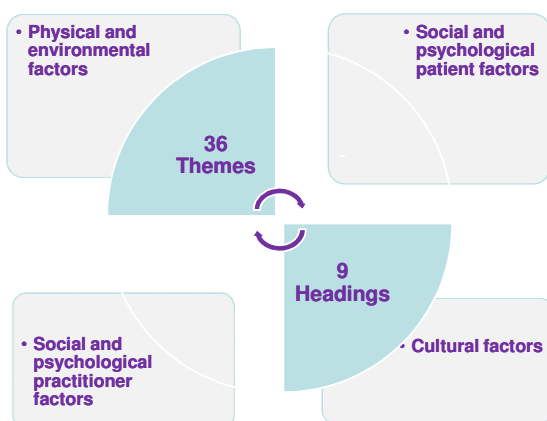


Figure 1: Possible factors that give rise to medication wastage

Conclusions

- A consensus definition for 'medication wastage' was synthesised and agreed upon by 86% of the expert panel members.
- To our knowledge, this is the first study to generate a definition for 'medication wastage' using a consensus approach. Further research is required to improve on this definition and finalise it.
- It is likely that causes and factors associated with wastage are complex and multifactorial.
- The consensus approach is highly transferable across other countries and settings, particularly hospital pharmacy practice.

References

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