

Medicines wastage and its association with adherence, beliefs about medicines and locus of control in patients suffering from chronic conditions

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BACKGROUND

- Non-adherence is considered to be one of the factors leading to medication wastage.
- Whilst the literature supports the influence of patients' beliefs on non-adherence, the influence of beliefs on medicines wastage is lacking.

OBJECTIVE

- To determine adherence, awareness, beliefs and behaviours regarding medicines and their relationship to medicines wastage in patients suffering from chronic conditions.

METHOD

- Survey methods were employed - Pre-piloted questionnaire was developed based on a previous questionnaire used amongst the general public in Malta.
- Questionnaire distributed amongst 300 patients having a confirmed diagnosis of asthma, cardiovascular conditions or diabetes attending out-patients' clinics
- Questionnaire sought to determine presence of unused medicines in households, awareness about medicines wastage using a 5-point Likert scale, adherence to medicines using the 'Tool for Adherence Behaviour Screening' (TABS),¹ health locus of control using 'The Multidimensional Health Locus of Control Scale' Form C (MHLC-C)^{2,3} and beliefs about medicines using the 'Belief about Medicines Questionnaire' (BMQ) Specific and General.^{4,5}
- Analysis: Chi-square test to analyse relationship between two continuous variables, logistic regression to ascertain the effects of MHLC-C, BMQ and demographics in relation to presence of unused medicines. P-values ≤ 0.05 considered significant.
- Approvals obtained: Maltese University Research Ethics Committee.

RESULTS

- Preliminary results - A total of 300 patients were recruited (58% male; mean \pm standard deviation age: 61 \pm 15 years): 100 asthma, 100 diabetes and 100 cardiovascular.
- 74.3% agreed that they were fully aware of the issue of medicines wastage.
- 48.7% agreed that they fill their prescriptions for chronic medicines regularly, whether they have run out of them or not.

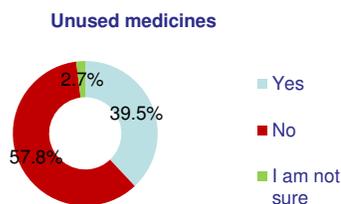


Figure 1: Unused medicines at home (n=294)

Adherence

There was a significant association between non-adherence and presence of unused medicines in households ($\chi^2=7.014$, $p = 0.008$)

Storage

37.9% store medicines in in the kitchen; 42.0% in a cupboard in the bedroom
76.2% claimed that no one gave them information on how to store medicines

Disposal

79.3% claimed that no one gave them information on how to dispose appropriately of medicines

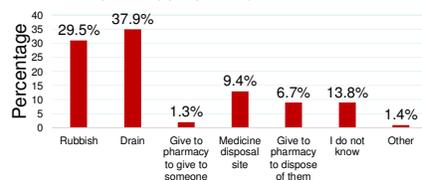


Figure 2: Disposal of unused medicines (n=296)

Relationship with presence of unused medicines

Table 1: Odds coefficients of logistic regression for presence of unused medicines

Variable	Presence of unused medicines	
	Odds (CI 95%)	p-Value
Male	-	0.038
Level of education	0.697 (0.539-0.901)	0.005
'General-Benefit' beliefs	0.870 (0.769-0.985)	0.028
'Doctors' beliefs	0.824 (0.736-0.923)	0.001
'Internal' beliefs	0.956 (0.918-0.997)	0.035
'Chance' beliefs	0.954 (0.916-0.993)	0.021
'Other people' beliefs	1.158 (1.084-1.238)	0.000

CONCLUSIONS

- Presence of unused medicines in households is significantly associated with lower beliefs that the medicines are of benefit and with health locus of control beliefs. Therefore, interventions targeting medicines wastage need to recognise these beliefs to influence a change in wastage behaviours.

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