Language used to describe medication review activities: Does it require standardisation? A Narrative synthesis

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Introduction

Medication review (MR) is a health care professional's systematic assessment of a patient's medications with recommendations for improvement (1).

To enable comparison between different evaluations of medication review-based interventions to determine whether the nature of activity differs, it is important that standardised language is used.

Currently, there is no accepted international taxonomy for describing medication review activities. Therefore, we undertook a systematic review of literature with narrative synthesis to determine whether standardisation may be appropriate.

Aim

To determine the range of terms used to describe medication review activities.

Methods

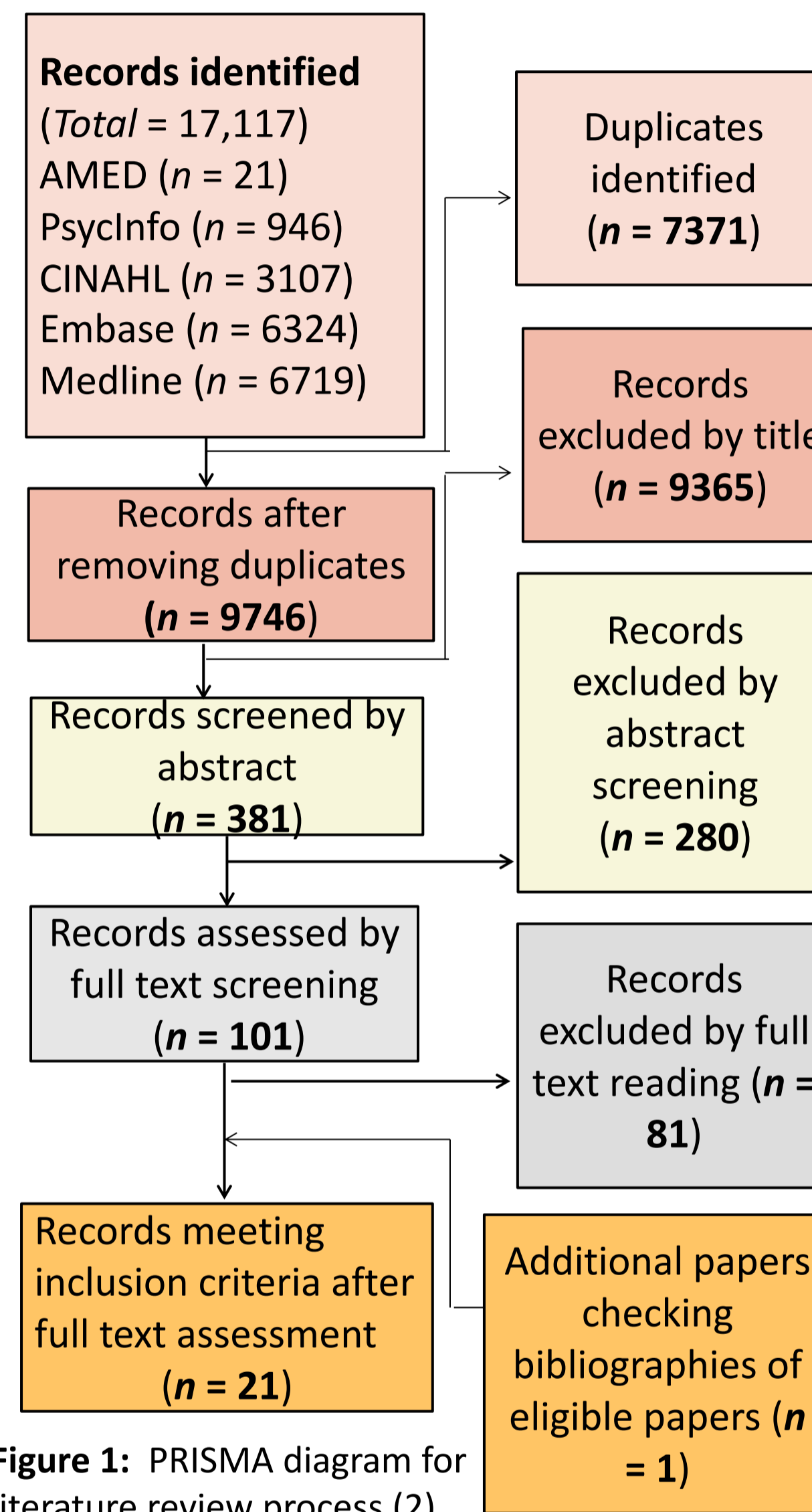|	
Search strategy	**A PROSPERO** registered systematic review was performed using search terms according to the Population, Intervention, Comparison and Outcome **(PICO)** framework. 'Population' & 'Comparison' were not used.
Keywords	Synonyms for medication review activities were used for both '**Intervention' and 'Outcomes**', e.g., stop, start, change, alter.
Inclusion/ Exclusion criteria	We included all papers reporting medication review activities in English with empirical data. Papers not using language to describe medication review activities were excluded.
Data extraction	Two researchers reviewed titles, abstracts, and full-text papers independently; discussion resolved any disagreement. It was conducted as per Cochrane Effective Practice and Organisation of Care **(EPOC)**
Quality assessment	The papers were assessed using the Mixed Method Appraisal Tool **(MMAT).**

Results

Figure 1: PRISMA diagram for literature review process (2)

- Records identified (Total = 17,117): AMED (n = 21), PsycInfo (n = 946), CINAHL (n = 3107), Embase (n = 6324), Medline (n = 6719)
- Duplicates identified (n = 7371)
- Records after removing duplicates (n = 9746)
- Records excluded by title (n = 9365)
- Records screened by abstract (n = 381)
- Records excluded by abstract screening (n = 280)
- Records assessed by full text screening (n = 101)
- Records excluded by full text reading (n = 81)
- Records meeting inclusion criteria after full text assessment (n = 21)
- Additional papers checking bibliographies of eligible papers (n = 1)

Table 1: Terms used to describe medication review activities

Term	Description	Term	Description
Stop term	Withdraw of drug	**Dose increase**	Dose increase
	Stop medicine		Change dose
	Discontinue medicine		Alter dose
	Stop drug		Adjust dose
	Cease a drug		Dose adaptation
			Consider rise dose
	Treatment stop	**Dose decrease**	dose reduction
Start term	Start medicine		alter dose
	Add drug		adjust dose
	Treatment start		change dose
	Initiate therapy		dose adaptation
			reduce dosage
Change term (for medication	Switch medicine	**Change term (for formulation)**	Alter formulation
	Change drug		Switch dose form
	Replacement of drug		Change dosage form
	Switch drug		
Change term (for timing)	Alter timing	**Monitor term**	Test to monitor medicine
	Synchronise medication		Provide monitoring
	Change timing		Monitor drug use
	Change schedule		Laboratory tests
	Consider change dosage regimen		Consider evaluation of therapy
	Frequency changed		Monitor therapy
			Evaluation of drug therapy

conclusion

- Various authors reported ambiguous medication review activities terms.
- **'Alter' and 'adaptation'** are examples of ambiguous terms. Determining whether actions are related with activities to **reduce or increase doses** is difficult due to such terminology.
- Determining whether actions are related with activities to reduce or increase doses is difficult due to such terminology.
- As a result, comparing process evaluations for medication review interventions to examine the mechanism of impact may be difficult.
- A taxonomy to describe and define medication review activities, thereby standardising MR reporting, should improve the presentation of data from process evaluations and the ability to compare activity between studies.

References

(1) Christensen M, Lundh A. Medication review in hospitalised patients to reduce morbidity and mortality. Cochrane Database Syst Rev [Internet]. 2016 Feb 20; Available from: https://doi.wiley.com/10.1002/14651858.CD008986.pub3

(2) Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med [Internet]. 2009 Jul 21;6(7):e1000097. Available from: https://dx.plos.org/10.1371/journal.pmed.1000097

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