

Introduction

- Medication non-adherence is prevalent across all clinical conditions and causes major medical and economic challenges.
- Medication Adherence-Enhancing Interventions (MAEIs) have demonstrated proven benefits in improving outcomes
- No systematic review of assessment of these interventions
- Use of value frameworks in health technology assessment has been gaining popularity all around the world in the past decade
- Value framework for MAEIs could potentially improve the assessment by policy makers and other stakeholders, and ultimately could improve adherence

Objective

To systematically collect outcome measures used for the value assessment of MAEIs.

Methods

- Search of MEDLINE and PsycINFO (via OVID), Scopus, and CINAHL and Academic Search Complete (via EBSCO).
 - Search years 2018-2020
- Study registered in PROSPERO (CRD42021242934) and conducted in accordance with PRISMA guidelines
- The screening was conducted in two steps:
 - Abstract and title screening of all identified records by two independent reviewers
 - Full text screening of potentially relevant articles by two independent reviewers
 - Disagreements between reviewers were resolved by consensus
- Exclusion criteria included
 - No abstract
 - Article not reporting original data
 - Not evaluating an MAEI, or not presenting a value framework for pharmaceuticals or healthcare intervention programs
 - Not reporting relevant data
- Data extracted included
 - General characteristics of the study (e.g., study type, study population, country)
 - Data on MAEI
 - Data on value framework
 - Relevant value domains and elements with a definition and measurement method where available
- Data were categorized by type of outcome, type of intervention

Results

Figure 2. PRISMA Flow Diagram

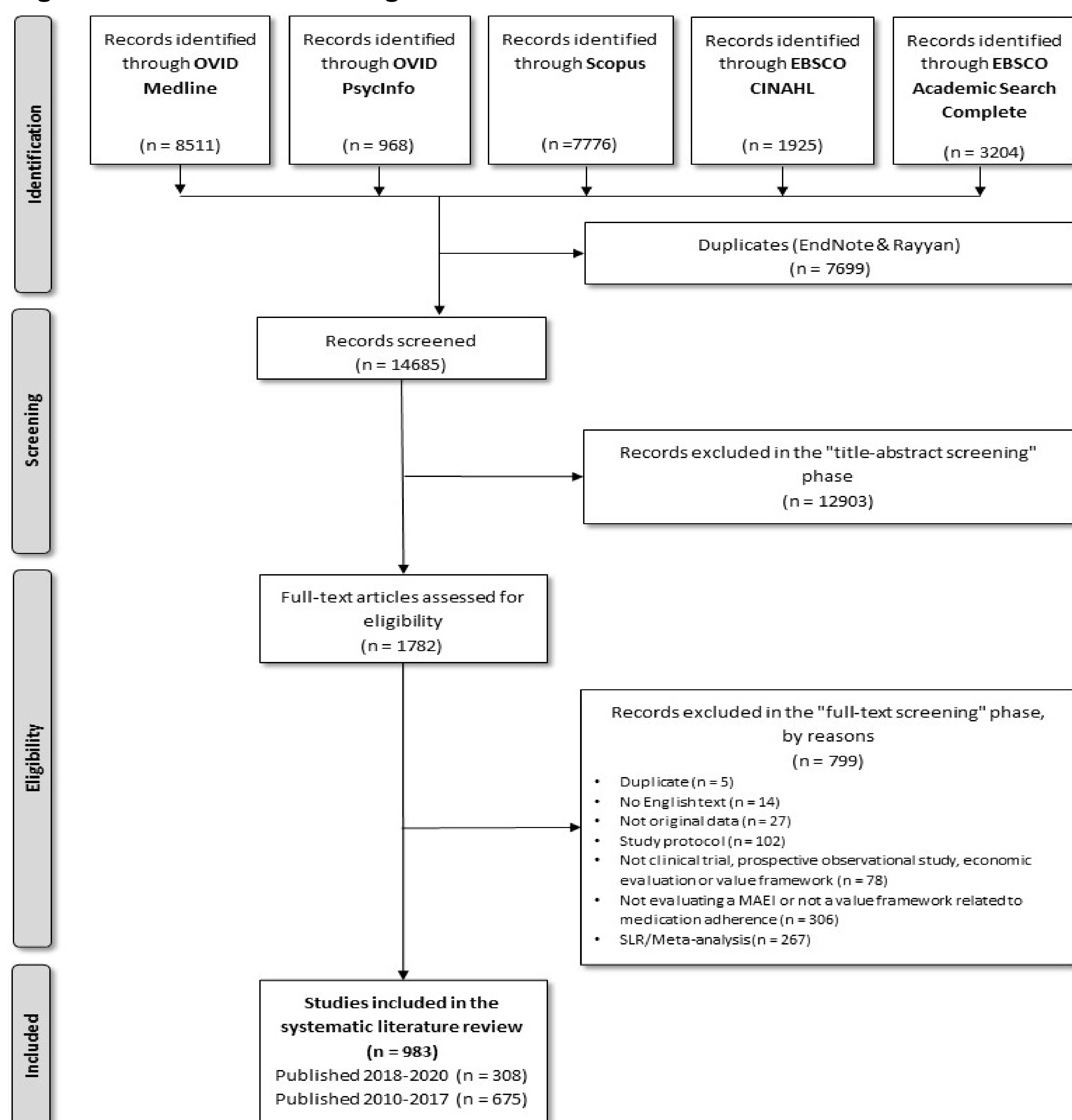


Figure 2. Distribution of Study Types (n=308)

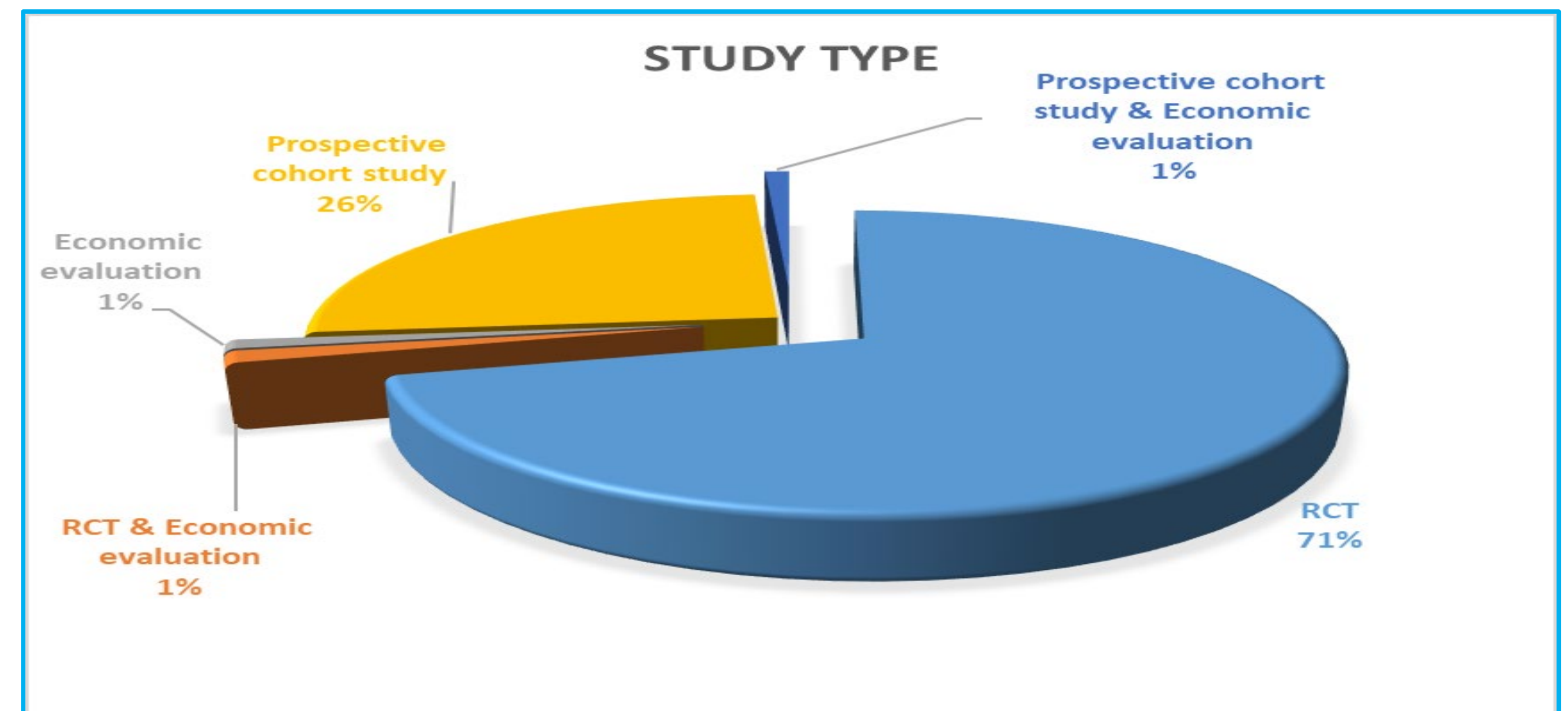


Table 1. Number of studies/outcome category

Outcome	N of studies (%)
Medication adherence/persistence	286 (93%)
Clinical outcome	155 (50%)
Quality of life	57 (19%)
Resource use	43 (14%)
Patient satisfaction	31 (10%)
Economic outcome	18 (6%)
Other outcome	76 (25%)

Table 2. Type of MAEIs per intervention category

Type of MAEI	N of MAEIs (%)
Behavioral intervention	143 (44%)
Reminders (e.g., mail, telephone, email)	48 (35%)
Adherence monitoring with or without feedback	18 (13%)
Follow-up (e.g., home visit, scheduled clinic visit)	12 (8%)
Tailoring (routinization)	19 (7%)
Skill building (supervised, group)	8 (6%)
Multi-compartment pillbox/calendar pack/compliance aid	5 (3%)
Reminder chart/medication list	5 (3%)
Other	37 (26%)
Educational intervention	110 (34%)
Mixed behavioral & educational intervention	73 (22%)

Discussion

- A variety of outcomes were used to assess MAEIs but many were considered secondary outcomes of study
- Limited studies reported on impact of MAEIs on economic outcomes
- Behavioral interventions dominate MAEIs followed by educational interventions. However, most of the behavioral interventions were also reminder-based interventions
- Though mixed interventions are considered the most effective to improve medication adherence, only 22% of studies used them.
- Among the types of outcomes, medication adherence/persistence dominated followed by clinical outcomes
- Several relevant "other" type outcomes were identified. Further qualitative analyses may be needed to identify the relevance of these outcomes

Conclusion

- There are many studies examining MAEIs, with nearly half behavioral interventions alone and only 22% using combined methods
- Further studies would be warranted to select and rank the most relevant outcome measures for the value assessment of MAEIs

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