

Challenges and Opportunities in Using Real-World Data for Healthcare in the Middle East and North Africa Region: A Systematic Scoping Review

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INTRODUCTION

Real-world data (RWD) provide valuable insights beyond clinical trials, supporting evidence-based healthcare decisions. In the Middle East and North Africa (MENA), RWD use remains underdeveloped due to fragmented data systems, limited governance frameworks, and technical constraints. Nonetheless, regional digital transformation and national health initiatives offer promising opportunities to enhance data integration and research capacity. This review explores the current landscape, challenges, and opportunities of RWD utilization to strengthen evidence-informed healthcare in the MENA region.



OBJECTIVE

Real-World Data (RWD) has become vital for healthcare decision-making, providing useful insights beyond traditional clinical trials. In the Middle East and North Africa (MENA) region, economic, demographic, and systemic factors impact its use. This scoping review maps existing literature on RWD in MENA healthcare, identifying challenges, opportunities, and gaps to inform future research priorities and policy development.



METHODS

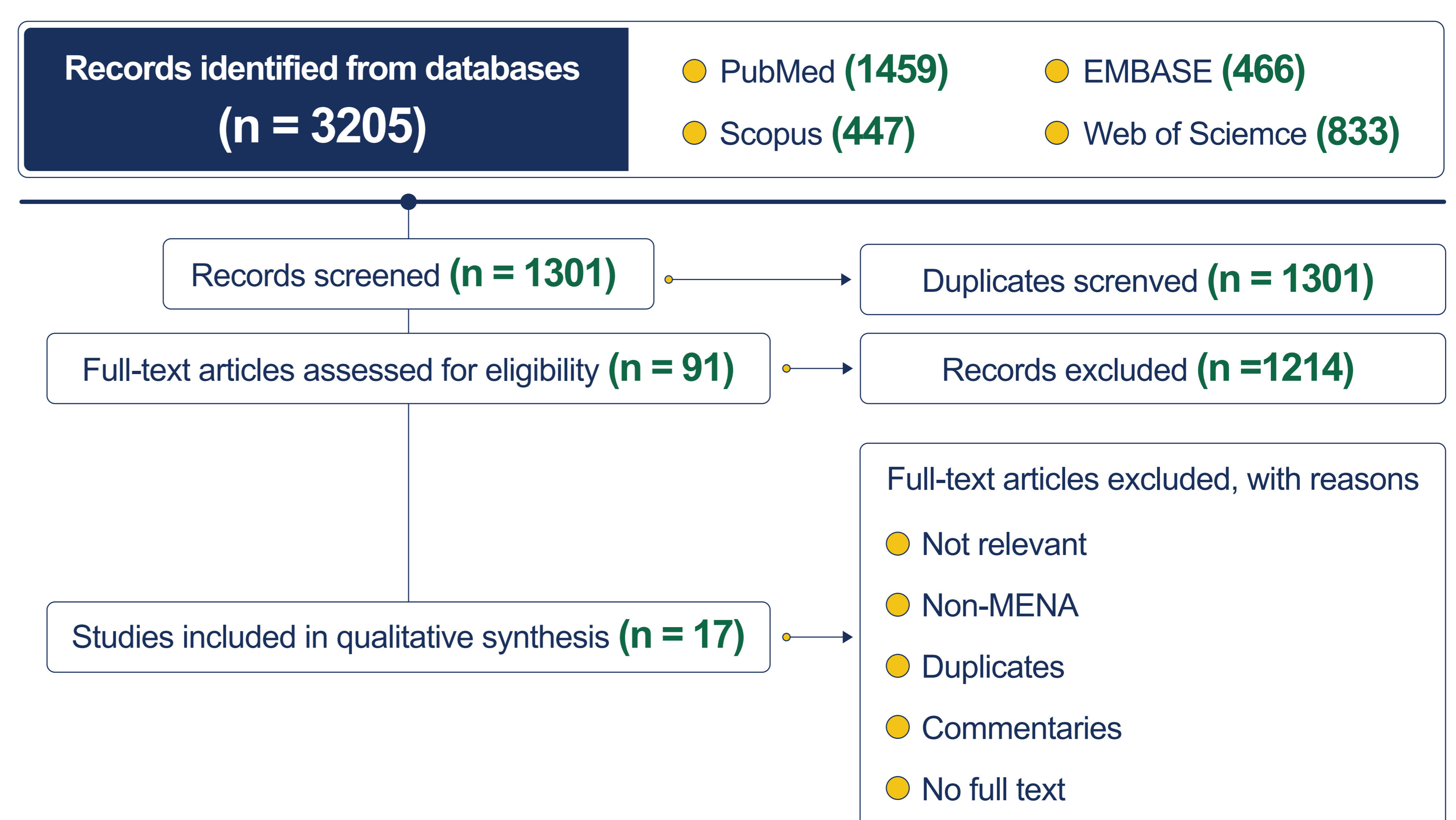
Following PRISMA-ScR guidelines and Joanna Briggs Institute methodology, we included original studies, regulatory reports, and grey literature published in English from January 2010 to June 2025. Eligible studies focus on healthcare in MENA countries and address RWD use, including barriers and facilitators. Excluded were animal/lab studies, non-English publications, and commentaries without full text. Searches were conducted in electronic databases including PubMed, EMBASE, Scopus, and Web of Science.



RESULTS

- Preliminary searches retrieved 1,459 records from PubMed, 466 from EMBASE, 447 from Scopus, and 833 from Web of Science, totaling 3,205 records. Following screening and full-text review, 17 articles met the eligibility criteria.
- Thematic analysis identified challenges to RWD use in the MENA region across legal and regulatory, technical, and acceptability domains.
- Legal and regulatory barriers included data ownership issues and inconsistent requirements across jurisdictions.
- Technically, databases were often incomplete or not designed for research, with a high data-input burden on healthcare professionals.
- Acceptability-related barriers included assumptions of bias and resistance to change.
- Opportunities identified included developing policies to facilitate data sharing, interjurisdictional alignment, improvements in IT infrastructure, standardization of data entry, and greater transparency to demonstrate the value of real-world evidence.

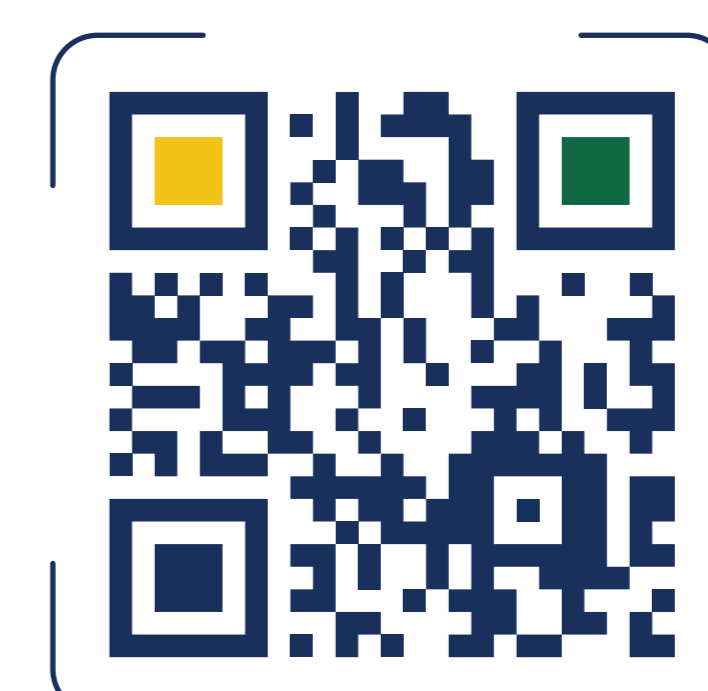
Figure 1. Flow of information through the study selection process following PRISMA-SCR guidelines.



CONCLUSIONS

This review synthesized how RWD is used in MENA healthcare, highlighting legal, technical, and cultural barriers. Despite these challenges, notable opportunities exist to enhance infrastructure and data use. Findings support developing context specific policies and capacity building efforts to strengthen RWD's role in evidence-informed healthcare decision-making across the region.

References



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