

INPLASY

Urinary Tract Infections and Delirium in Older Adults: An Umbrella Review of the Association, Diagnostic Challenges, and Clinical Implications

INPLASY202620062

doi: 10.37766/inplasy2026.2.0062

Received: 18 February 2026

Published: 18 February 2026

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ADMINISTRATIVE INFORMATION

Support - Not applicable.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202620062

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 February 2026 and was last updated on 18 February 2026.

INTRODUCTION

Review question / Objective The umbrella review aimed to synthesize existing systematic reviews evaluating (1) the association between UTI and delirium in older adults, and (2) the diagnostic value of clinical signs of UTI in this population.

Rationale Older patients with Urinary Tract Infection present with non-specific symptoms such as UTI. Accordingly, administering antibiotics is a challenge for this population.

Condition being studied Older populations (elderly patients) with urinary tract infection presenting with delirium.

METHODS

Search strategy Followed the Joanna Briggs Institute (JBI) methodology for evidence synthesis and adhered to PRISMA guidelines. Search

engines used: PubMed, Web of Science, Embase, Google Scholar, EBSCO, Cochrane Library, and Prospero.

Participant or population Not applicable.

Intervention Not applicable.

Comparator Not applicable.

Study designs to be included Systematic reviews, meta-analysis, scoping reviews.

Eligibility criteria Inclusion criteria were systematic reviews, meta-analyses, and scoping reviews evaluating adults aged ≥ 65 years.

Information sources Electronic databases.

Main outcome(s) (1) the association between UTI and delirium in older adults, and (2) the diagnostic value of clinical signs of UTI in this population.

Additional outcome(s) Not applicable.

Data management Not applicable.

Quality assessment / Risk of bias analysis

Quality assessment was done using the JBI Critical Appraisal Checklist for Systematic Reviews, and the study overlap was measured using the Corrected Covered Area (CCA) method.

Strategy of data synthesis No pooled size effect was done.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction English was the primary language used in the manuscript.

Country(ies) involved United States.

Other relevant information Not applicable

Keywords older adults; delirium; urinary tract infection; elderly population, umbrella review.

Dissemination plans To be presented in American Geriatrics Society and the American College of Physicians. Publication in progress.

Contributions of each author

Author 1 - Francisco Mercado - Conceptualized the research design, mainly participated in the search strategy, screening of articles, and results analysis, drafted and edited the manuscript, and supervised the whole project.

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Author 2 - Joshua Garcia - Participated in the screening of articles, results analysis, drafting and editing the manuscript, and approval of the final draft.

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Author 3 - Sage Holkup - Drafted and edited the manuscript. Analyzed the results and produced the tables. Approved the final manuscript draft.

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