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**ADMINISTRATIVE INFORMATION****Support** - None.**Review Stage at time of this submission** - Data extraction.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202650084**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 May 2026 and was last updated on 15 May 2026.**INTRODUCTION**

**Review question / Objective** Map the breadth of available evidence for Knowledge, Awareness, Attitudes, Acceptance, and Uptake of the Herpes Zoster Vaccine in Saudi Arabia:

**P (Population):** The primary focus is on adults residing in Saudi Arabia, specifically those aged 50 years and older (the standard eligibility age) and immunocompromised adults aged 18 years and older. This includes Saudi citizens and expatriates across various regions (e.g., Riyadh, Qassim, and the Northern Border).

**I (Intervention):** The Herpes Zoster Vaccine, specifically the Recombinant Zoster Vaccine (RZV/ Shingrix), which has been integrated into the Saudi Ministry of Health's national immunization schedule as a two-dose series.

**C (Comparison):** Evidence is mapped by comparing demographic variables (age, gender, and education level), regional differences within the

Kingdom, and the distinction between healthcare provider recommendations versus patient self-initiation.

**O (Outcome):** The primary outcomes measured are Knowledge (awareness of the shingles virus and vaccine availability), Attitudes (perceived severity of the disease and vaccine safety), Acceptance (the intention or willingness to get vaccinated), and Uptake (documented or self-reported vaccination rates).

**Rationale** The urgent need to bridge the gap between public health policy and actual community uptake.

Since the Saudi Ministry of Health introduced the Herpes Zoster vaccine (Shingrix) into the national immunization schedule in 2022, it has been provided free of charge. However, despite its availability, uptake remains critically low. This study is essential to:

**Address the Aging Population:** As the number of elderly citizens increases, so does the risk of shingles and its debilitating complications like chronic nerve pain.

**Identify Barriers:** Pinpoint why eligible adults remain hesitant, whether due to low perceived risk, lack of awareness, or misconceptions about vaccine safety.

**Empower Healthcare Providers:** Investigate why clinical recommendations—the strongest driver of vaccination—are not happening consistently in Saudi clinics.

**Support Vision 2030:** Align with the Kingdom's "Health Sector Transformation Program" by shifting focus from treating disease to prevention, ensuring that government-funded vaccines actually reach the people who need them.

**Condition being studied** The condition being studied is Vaccine hesitancy in Herpes Zoster, commonly known as Shingles.

## METHODS

**Search strategy** A comprehensive electronic search will be conducted across medical and public health databases, selected for their relevance to epidemiology, vaccination, and regional health research. These included might include PubMed, Scopus, Web of Science, Embase, CINAHL, Google Scholar, and regional sources such as the WHO Eastern Mediterranean Index and Arab World Research Source.

The search strategy will combine controlled vocabulary (e.g., MeSH terms) and free text keywords. Search terms included:

- "herpes zoster," "shingles," "post herpetic neuralgia"
- "herpes zoster vaccine," "HZV," "shingles vaccine"
- "knowledge," "awareness," "attitudes," "acceptance," "hesitancy"
- "Saudi Arabia," "KSA," "Riyadh," "Jeddah," "Al Ahsa," "Makkah"

Boolean operators (AND/OR) and phrase searching were applied to refine results.

**Participant or population** Saudi Adult aged 50 Or above.

**Intervention** Vaccination against hepes zoster.

**Comparator** None.

**Study designs to be included** Cross-sectional studies, cohort studies, retrospective analyses, surveys, protocols.

**Eligibility criteria** Eligibility criteria will use the Population–Concept–Context (PCC) framework recommended for scoping reviews.

**Inclusion Criteria**

- Population: Adults, older adults ( $\geq 50$  years), or healthcare workers residing in Saudi Arabia.
- Concept: Knowledge, awareness, attitudes, perceptions, acceptance, hesitancy, barriers, or utilization of the herpes zoster vaccine.
- Context: Studies conducted exclusively in Saudi Arabia.
- Study Design: Cross sectional studies, retrospective analyses, cohort studies, surveys, and protocol papers.
- Language: English.
- Publication Period: 2000–January 2025.

**Exclusion Criteria**

- Studies conducted outside Saudi Arabia
- Studies not addressing HZ or HZV
- Grey literature, conference abstracts, editorials, commentaries
- Qualitative studies without measurable outcomes
- Articles not published in English.

**Information sources** PubMed, Scopus, Web of Science, Embase, CINAHL, Google Scholar, and regional sources such as the WHO Eastern Mediterranean Index and Arab World Research Source.

**Main outcome(s)** The primary outcome of this scoping review is to map the extent, range, and nature of the available evidence concerning the knowledge, awareness, attitudes, acceptance, and uptake of the Herpes Zoster vaccine in Saudi Arabia.

**Additional outcome(s)** Knowledge Levels: Prevalence of awareness regarding the vaccine and its 2-dose schedule.

**Attitudinal Barriers:** Identification of common misconceptions, perceived risk, and vaccine hesitancy factors.

**Uptake Rates:** Reported vaccination coverage percentages across different Saudi regions and demographic groups.

**Facilitators:** The role of healthcare provider recommendations and Ministry of Health (MOH) initiatives in driving vaccination.

Knowledge Gaps: Identification of under-researched areas (e.g., specific high-risk groups or rural populations) to guide future primary research.

#### **Data management** 1. Search and Organization

All search results will be saved in a reference manager (like EndNote or Zotero).

Duplicates will be removed automatically before screening begins.

#### 2. Screening and Tools

Two researchers will independently screen titles and abstracts using a tool like Rayyan or Excel.

Any disagreements on whether to include a study will be settled by a third researcher.

#### 3. Data Extraction

A standardized Excel sheet (Data Charting Form) will be used to collect information from the studies.

The data collected will include: Author, year, city/region in Saudi Arabia, study type, number of participants, and main findings (knowledge, attitudes, or uptake rates).

#### 4. Storage and Security

All files and spreadsheets will be stored on a secure, password-protected cloud (like OneDrive or Google Drive).

Only the research team will have access to the data to ensure privacy and organization.

#### 5. Reporting

The selection process will be clearly shown using a PRISMA flow diagram, and the final findings will be summarized in a table for the final paper.

#### **Quality assessment / Risk of bias analysis**

Assessment Approach: Since this is a scoping review focused on mapping the breadth of evidence, a formal risk of bias assessment will not be used to exclude studies.

Tool: The JBI (Joanna Briggs Institute) Critical Appraisal Tools will be used to evaluate the methodological quality of the included studies.

Process: Two reviewers will independently assess each study. If they disagree on a quality score, a third reviewer will make the final decision.

Reporting: The quality of the evidence will be summarized in a table to show the strengths and weaknesses of the current research in Saudi Arabia.

#### **Strategy of data synthesis** Descriptive Analysis:

We will use a descriptive approach to summarize the data. This includes basic statistics (like frequencies and percentages) to report on the number of studies, years of publication, and geographic locations within Saudi Arabia.

Thematic Grouping: The findings will be organized into the following categories based on the study objectives:

Levels of Knowledge and Awareness.

Common Attitudes and Beliefs.

Vaccine Acceptance and Intention.

Actual Uptake (Vaccination) Rates.

Barrier Identification: We will list and categorize the reported barriers to vaccination (e.g., lack of doctor's advice, fear of side effects, or cost concerns).

Visual Presentation: The results will be presented using:

A PRISMA flow diagram to show how studies were selected.

Summary tables to compare findings across different regions of Saudi Arabia.

Charts or graphs to highlight the most common trends in the data.

Narrative Summary: A narrative report will accompany the tables to explain the current state of evidence and identify where more research is needed.

#### **Subgroup analysis**

If the data allows, we will analyze the results based on the following subgroups to identify specific patterns in Saudi Arabia: Geographic Regions: Comparing results between different provinces (e.g., Central, Western, Eastern, Northern, and Southern regions). Participant Type: Comparing findings between the general public (adults  $\geq$  50\$) and healthcare workers (to see if their knowledge/attitudes differ). Demographics: Comparing results by Gender (male vs. female) and Education Level (e.g., high school vs. university degree). Health Status: Comparing healthy adults vs. those with chronic diseases or immunocompromised conditions. Note: Since this is a scoping review, these analyses will be descriptive (summarizing

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what the literature says about these groups) rather than using complex statistical tests.

**Sensitivity analysis** N/A.

**Language restriction** English and Arabic.

**Country(ies) involved** Saudi Arabia.

**Other relevant information** None

**Keywords** Herpes zoster; Shingles; Post herpetic neuralgia; Herpes zoster vaccine; Vaccine uptake; Vaccine hesitancy; Adult immunization; Healthcare workers; Public health; Awareness.

**Dissemination plans** Journal Publication: The final results will be submitted for publication in a peer-reviewed, open-access journal specialized in public health, infectious diseases, or pharmacy practice.

Conference Presentation: Findings will be presented at national and international conferences (such as the Saudi Pharmaceutical Society or public health forums) to reach healthcare professionals and researchers.

Stakeholder Briefing: A summary report will be prepared to share with policymakers and health authorities in Saudi Arabia to help improve future vaccination campaigns.

Academic Sharing: The review will be uploaded to academic repositories and shared on professional networks (like ResearchGate) to increase its visibility and impact.

**Contributions of each author**

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