

## Parents' knowledge, attitudes, and beliefs regarding influenza vaccination for children under five years of age in Australia: A mixed methods systematic review protocol

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### Citation

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### Review question

What are the parents' knowledge, attitudes, and beliefs about the influenza vaccine in children under five years of age in Australia?

### Searches

The preliminary search indicated that EBSCOhost (Academic Search Ultimate, APA PsycArticles, APA PsycINFO, CINAHL with Full Text, E-Journals, Health Source: Nursing/Academic Edition, Psychology and Behavioral Sciences Collection), MEDLINE via PubMed, Scopus, and Web of Science would be the most suitable databases for the full search.

The search for unpublished studies and grey literature will include Google Advanced Search, Open Access Theses and Dissertations (OATD), ProQuest Dissertations & Theses A&I (ProQuest Dissertations & Theses Global), and Trove.

In addition to database searching, the reference list of the included studies and conference proceedings will be manually screened to find further studies or any other ongoing studies.

Primary studies and grey literature published from 2008 to 2022 will be considered in the review. This publication year range is based on the year of commencement of the first influenza vaccination program for children aged six months to five years in Australia (NCIRS, 2019). Studies will be excluded if they investigate parents' knowledge, attitudes, and beliefs towards other childhood vaccines, published in languages other than English and are conducted outside Australia.

### Types of study to be included

This systematic review will consider quantitative, qualitative, and mixed method studies with no limitations based on study design including randomised controlled trials, cross sectional studies, quasi-experimental studies, cohort studies, phenomenology, ethnography, and grounded theory. Grey literature including theses and dissertations, research, committee, and government reports, unpublished studies, and conference proceedings, will be also considered to minimise publication bias. Primary studies and grey literature published from 2008 to 2022 will be considered in the review. This publication year range is based on the year of commencement of the first influenza vaccination program for children aged six months to five years in Australia (NCIRS, 2019). Publications written in languages other than English will be excluded, since this review is limited to the Australian literature.

## Condition or domain being studied

Parental knowledge, attitudes, and beliefs regarding influenza vaccination for children under five years of age in Australia.

## Participants/population

Studies will be included if the participants are parents of children under five years of age from studies within Australia. Studies extended to parents of older children will be considered, if they include the target age group under five years. Studies with parents of any gender, age, educational background, occupation, and socio-economic status will be included. Parents of children with or without medical comorbidities, or children hospitalised with influenza will be also considered. Studies will be excluded if they do not include parents of children under five years or are conducted in countries other than Australia.

## Intervention(s), exposure(s)

This review will consider studies that investigate parents' knowledge, attitudes, and beliefs about influenza vaccination in children under five years of age. Studies that report on the factors associated with influenza vaccine acceptance or hesitancy, barriers or enablers surrounding childhood influenza vaccines will be considered if they include the information about parents' knowledge, attitudes, and beliefs about the vaccine in children of the target age group. Studies that investigate parents' knowledge, attitudes, and beliefs about other childhood vaccines that are not influenza will be excluded.

## Comparator(s)/control

Not applicable.

## Context

Studies conducted in all regions of Australia (metropolitan, rural or remote) and any settings (primary or secondary healthcare, childcare centres or community) will be included if parents' knowledge, attitudes, and beliefs regarding influenza vaccination were investigated and include the children of the target age group. Studies conducted in countries other than Australia will be excluded, since the review is narrow in scope and is limited to the Australian context.

## Main outcome(s)

The proposed systematic review aims to better understand parents' knowledge, attitudes, and beliefs regarding paediatric influenza vaccines in Australia.

## Measures of effect

Not applicable.

## Additional outcome(s)

None.

## Measures of effect

Not applicable.

## Data extraction (selection and coding)

Data will be extracted by two reviewers independently of each other in JBI SUMARI. The data will be extracted from quantitative, qualitative, and mixed methods studies using the JBI mixed methods data extraction tool for a convergent integrated approach (JBI, 2020b). The data extracted will include specific details about the publication (authors, date of

publication), study methods (quantitative, qualitative, mixed methods), design (randomised controlled trials, cross sectional studies, quasi-experimental studies, cohort studies, phenomenology, ethnography, or grounded theory), population (parents, parents' characteristics including gender, educational level, socio-economic status, age of the children, children immunisation and health status, any comorbidities if present), the phenomena of interest (parents' knowledge, attitudes, and beliefs about paediatric influenza vaccine), context (location of the study, acute, primary, or secondary health care, or the community) and outcomes of significance to the review question (JBI, 2020b).

For quantitative studies, the main findings related to parents' knowledge, attitudes, and beliefs towards childhood influenza vaccination will be extracted including tables, graphs, diagrams and, if possible, statistically pooled (JBI, 2020b). For qualitative studies, themes or subthemes relevant to parents' knowledge, attitudes, and beliefs about influenza vaccination in children will be extracted and supported with direct quotation made by parents from the articles (JBI, 2020b). Each finding will be assigned the level of credibility such as unequivocal, credible, or unsupported based on the reviewers' assessment of the studies (JBI, 2020b). Unsupported data will be excluded from the synthesis, and all decisions on the allocation of the credibility level made will be presented in the review report. Any disagreements that arise between the first and second reviewers will be resolved through discussion or consensus involving a third reviewer. Original authors of studies will be contacted if further non-published data is required.

### Risk of bias (quality) assessment

Studies will be assessed for methodological validity and risk of bias by two independent reviewers in JBI SUMARI. Eligible quantitative studies (and the quantitative component of mixed methods studies) will be critically appraised using the JBI critical appraisal checklists for cross sectional studies, randomised controlled trials, quasi-experimental studies, and cohort studies (JBI, 2020a). Qualitative studies (and the qualitative component of mixed methods studies) will be critically appraised using JBI critical appraisal checklist for qualitative research (JBI, 2020a).

The quality of grey literature will be appraised using the ACCODS checklist (Tyndall, 2010). For studies requiring further information for clarification, the authors of papers will be contacted. Any disagreements between the first and second reviewer will be resolved through discussion and consensus with the third reviewer.

Following critical appraisal, the characteristics of the studies that do not meet a certain quality threshold will be discussed with the article reviewers. This threshold will be based on the quality of evidence and the risk of bias, which will be described as high, moderate, and low. The characteristics of studies with high risk of bias and no evidence of ethical approval by an appropriate body will be discussed in the review.

### Strategy for data synthesis

This review will follow a convergent integrated approach according to the JBI methodology for mixed-methods systematic review (MMSR) since the review question can be answered by both quantitative and qualitative studies (JBI, 2020b; Stern et al., 2020). The convergent integrated approach allows reviewers to combine the quantified data with the qualitative data (JBI, 2020b; Stern et al., 2020). The combined data will then be categorized and pooled together based on similarity in meaning to answer the review question (JBI, 2020b; Stern et al., 2020).

Following the integration of the data, reviewers will synthesise information by thematic analysis in line with meta-aggregative approach for qualitative synthesis as per JBI guidelines (JBI, 2020b; Munn et al., 2018). This data will be analysed in three overlapping stages including: the free line-by-line coding of the findings of primary studies, the organisation of these 'free codes' into related areas to construct 'descriptive' themes, and the development of 'analytical' themes (Lockwood et al., 2015; Thomas & Harden, 2008). The reviewers will use the purpose-built software program (NVivo) to support qualitative data analysis (Roberts et al., 2019; Woods et al., 2015).

### Analysis of subgroups or subsets

None planned.

### Contact details for further information

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### Organisational affiliation of the review

University of Southern Queensland  
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### Review team members and their organisational affiliations

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### Type and method of review

Systematic review

### Anticipated or actual start date

01 March 2022

### Anticipated completion date

01 December 2022

### Funding sources/sponsors

This systematic review will not be funded.

### Grant number(s)

State the funder, grant or award number and the date of award

Not applicable.

### Conflicts of interest

The authors report no conflict of interest in this systematic review.

None known

### Language

English

### Country

Australia

## Stage of review

Review Ongoing

## Subject index terms status

Subject indexing assigned by CRD

## Subject index terms

Australia; Child; Child, Preschool; Health Knowledge, Attitudes, Practice; Humans; Influenza, Human; Parents; Vaccination

## Date of registration in PROSPERO

14 May 2022

## Date of first submission

03 May 2022

## Details of any existing review of the same topic by the same authors

Not applicable.

## Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

## Versions

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14 May 2022

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