Session Outline

• Systematic Review Overview
• Tools for each steps of the systematic review process
Objectives

By the end of this session, you will be able to:

• Identify three systematic review tools
• Access two (freely available or from UNMC) tools to use with your systematic review
What is a Systematic Review?

"attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question"

Characteristics of Systematic Review

- Clearly stated set of objectives
- Explicit, reproducible methodology
- Attempts to identify all studies that meets eligibility criteria
- Assessment on validity of findings of included studies
- Systematic presentation and synthesis of characteristics of findings of included studies

Question Frameworks

- PICO (Patient, Intervention, Comparison, Outcome)
- SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type)
- SPICE (Setting, Perspective, Intervention, Comparison, Evaluation)
- ECLIPSE (Expectation, Client group, Location, Impact, Professionals, Service)

https://guides.mclibrary.duke.edu/sysreview/question
In school-aged children, what is the effect of at-school dental clinic visits on a reduction of dental caries compared with no at-school dental clinic visits?

https://unmc.libguides.com/ebm/ask
Previously known as "What Review is Right for You?"

This tool is designed to provide guidance and supporting material to reviewers on methods for the conduct and reporting of knowledge synthesis.

Select the type of review:

- Quantitative
- Qualitative

https://whatreviewisrightforyou.knowledgetranslation.net/
PRISMA

- Rationale and objectives
- Eligibility criteria
- Information sources
- Draft on a search strategy
- Data management
- Outcomes and prioritization
- Data synthesis

https://www.equator-network.org/reporting-guidelines/prisma/
Equator Network

https://www.equator-network.org/
Protocols
Why create a Protocol?

- 1\textsuperscript{st} thing your team completes
  - "Blueprint" of your systematic review
  - Describes rationale, hypothesis, and planned methods for review
  - Prepared before beginning systematic review
  - Protocols made publicly and registered
Systematic Review Registries

- Prospero
  - International prospective register of systematic reviews
  - Review protocol recorded and maintained
  - Reviews available on open access database
  - Transparency in review process
- Open Science Framework (use the pre-registration template)
- Publish in a Journal
Registering a review is easy. Please read the guidance notes for registering a systematic review of human studies or a systematic review of animal studies relevant to human health, then just follow the five step process below.

**Step 1**  
Check the inclusion criteria to make sure that your review is eligible for inclusion in PROSPERO

**Step 2**  
Ensure that your review protocol is in its (near) final form and that no major changes are anticipated at this stage - e.g. if your protocol will be peer reviewed it will usually be sensible to wait until this is complete before registering.

**Step 3**  
Search PROSPERO to ensure that your review has not already been registered by another member of your team

**Step 4**  
Search PROSPERO to ensure that you are not unnecessarily duplicating a review that is being done by another team or has been registered previously

**Step 5**  
Start registering your review

Register a systematic review of health research studies (study participants are people)  
Register a systematic review of animal research studies (study subjects are animals) that is of direct relevance to human health
United States health inequities in disaster health planning and response

Sara Donovan, Abigail Lowe, David Brett-Major, Claire Figi, Danielle Westmark, Shelly Schwedhelm, James Lawler, Nellie Darling

To enable PROSPERO to focus on COVID-19 submissions, this registration record has undergone basic automated checks for eligibility and is published exactly as submitted. PROSPERO has never provided peer review, and usual checking by the PROSPERO team does not endorse content. Therefore, automatically published records should be treated as any other PROSPERO registration. Further detail is provided here.

Citation

Review question
The objective of this study is to identify and elaborate on health equity issues in disaster preparedness and response through systematic review of literature.

We will examine how health inequities in disasters have been highlighted; extents to which the disaster exacerbated such health inequity, and reported strategies adopted to prevent or mitigate impact from the disaster through pursuing improved health equity.

Searches
Search strategies will be designed and conducted by an experienced systematic review librarian. Studies will be identified via the following databases: MEDLINE, Embase, Cochrane Library, CINAHL, and Scopus. The search will include controlled vocabulary terms and free text words related to disasters and health inequities, incorporating MESH terms. The search will be limited to articles published in English from 2007 to 2022 and limited to the United States. If the full text of a study that may meet inclusion criteria is unavailable, the corresponding author will be contacted. Bibliographies of relevant articles will be reviewed to identify relevant articles not returned by the search.
Open Science Framework

You are submitting to OSF Registries. Click here to learn more about other hosted registries.

STEP 1
Do you have content for registration in an existing OSF project?

YES  NO

STEP 2
Which type of registration would you like to create? *

OSF Preregistration
Create draft
Searching
Systematic Review Toolkit

http://systematicreviewtools.com/
Systematic Review LibGuide

Resources & Tools for conducting an exhaustive literature search

https://unmc.libguides.com/systematicreview
Screening Tools
Screening Tools

- Streamlines systematic reviews
- Import citations
- Screen titles/abstracts
- Upload references
- Screen full text
- Data extraction
- Risk of bias
- Export

https://unmc.libguides.com/systematicreview/tools
Better systematic review management
Rayyan

- Up to 3 active reviews
- Unlimited reviewers
- De-duplication
- Filtration facets
- Mobile app
- Standard support
<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>2023-01-14</td>
<td>Congestive Heart Failure</td>
</tr>
<tr>
<td>2022-01-01</td>
<td>In-hospital Outcomes of Chronic Total Occlusion Percutaneous Coronary Interventions in Heart Failure Patients</td>
</tr>
<tr>
<td>2022-01-01</td>
<td>Low-dose spinal block combined with epidural volume extension in a high-risk cardiac patient: A case-based systematic literature review</td>
</tr>
<tr>
<td>2022-01-01</td>
<td>Infective endocarditis of a left atrial appendage closure device: a case report and literature review</td>
</tr>
<tr>
<td>2021-01-01</td>
<td>Clinical Importance of Myocardial T2 Mapping and Texture Analysis</td>
</tr>
<tr>
<td>2021-01-01</td>
<td>Successful Treatment of Steroid-Refractory Checkpoint Inhibitor Myocarditis with Globulin Derived-Therapy: A Case Report and Literature Review</td>
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<tr>
<td>2021-01-01</td>
<td>Stress Urinary Incontinence: Slings, Single-Incision Slings, and Nonmesh Approaches</td>
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<tr>
<td>2021-01-01</td>
<td>Meta-analysis of retrospective studies suggests that the pre-operative opioid use is associated with an increased risk of adverse outcome</td>
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<td>2021-01-01</td>
<td>Diabetes as a Predictor of In-Hospital and One-Year Outcomes After Decompensated Heart Failure</td>
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<tr>
<td>2021-01-01</td>
<td>Digital Health in Peri-Cardial and Peri-Stroke Prevention: A Systematic Review</td>
</tr>
</tbody>
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**Infective endocarditis of a left atrial appendage closure device: a case report and literature review**

Background: Due to advances in interventional cardiology in recent years, more and more patients are currently receiving cardiac devices, with a subsequent increase in the number of patients with device-associated endocarditis. Device-associated endocarditis is a life-threatening disease with special diagnostic and therapeutic challenges. Interventional devices for left atrial appendage (LAA) closure have been available for several years. However, there have been very few case reports of LAA closure device-associated endocarditis. Case summary: An 83-year-old woman presented with fever and fatigue. She had a history of permanent atrial fibrillation and recurrent bleeding on oral anticoagulation. Consequently, the patient underwent interventional LAA closure ~20 months earlier. Blood cultures grew Staphylococcus aureus. Transesophageal echocardiography revealed an LAA closure device-associated mobile, echo-dense mass that was consistent with infectious vegetation in this clinical context. Intravenous antibiotic therapy was started, and our heart team recommended complete removal of the device, which the patient refused. The patient subsequently died as a result of progressive endocarditis and multiple pre-existing co-morbidities. Discussion: Left atrial appendage occlusion device-associated endocarditis has rarely been reported. Due to the increase in LAA closure device implantation, device-associated endocarditis is expected to increase in the future. Transesophageal echocardiography is required for correct diagnosis. Our case report suggests that an infection can occur long after implantation.

**Authors:** Al-Terki, H.; Mügge, A.; Gotzmann, M.;

**Journal:** European Heart Journal - Case Reports - Volume 6, Issue 11, pp. - published 2022-01-01

**Publication Types:** Journal Article

**Topics:** left atrial appendage closure device; atrial fibrillation; infective endocarditis; Staphylococcus aureus; endocarditis; hospital admission; clinical article; clinical feature; case report; transplantation; diabetes mellitus; hypertension; obesity; systemic review; hypertension; adult; heart failure; case report; atrial fibrillation; heart failure; obesity; hypertension; diabetes mellitus; obesity; hypertension; heart failure
Citation Tools
Citation Managers


Zotero Research Guide: https://unmc.libguides.com/zotero

• Create Folders to Organize Key Articles/Findings
• Removes duplicates
• Use the note field to keep track of research notes
• Allows for highlighting and marking attached PDF’s
• Export citations to Microsoft Excel