



SYSTEMATIC REVIEWS AND META-ANALYSES

Shelley Facente, PhD, MPH
Sara Durán, MPH

In-Person Session 2 of 5

A decorative graphic on the left side of the slide. It consists of a vertical rectangle divided into four horizontal sections: a grey top section, a red second section, a blue third section containing a white concentric circle pattern, and a grey hatched bottom section. To the left of this rectangle is a black triangle pointing downwards, and below it is a grey triangle pointing downwards, separated by a white diagonal line. A white circle is at the bottom right corner of the grey hatched section.

COURSE WEBSITE

- Slides and all other resources you'll need for the course are available at:

<https://facenteconsulting.com/srmacourse/>

CURRICULUM

Monday

Sensitivity analyses & stratified analyses

Understanding SRMA limitations

Interpreting and reporting results

Tuesday

Review and practice defining the review question and PICOS criteria to be used

Work time

Wednesday

Tips and Tricks with Covidence

Work time

Thursday

Deeper dive into evaluating bias

Publishing your review

Work time

Friday

Reviewing special types of SRs and MAs

Final chance for Q&A from the course

Group presentations

Virtual in October

Overview of SRs and MAs

PROSPERO and PRISMA

Defining the review question

Searching for records and studies

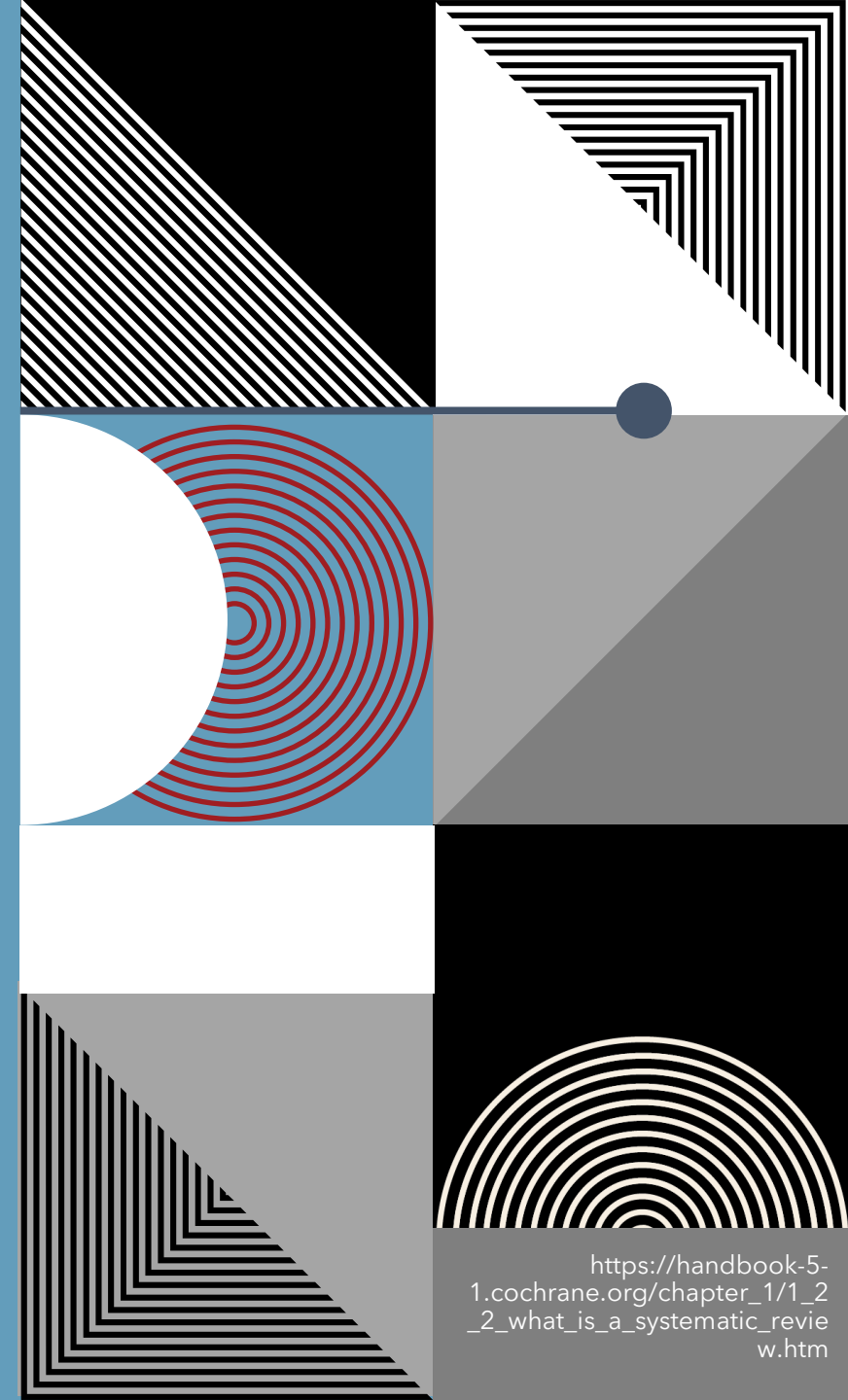
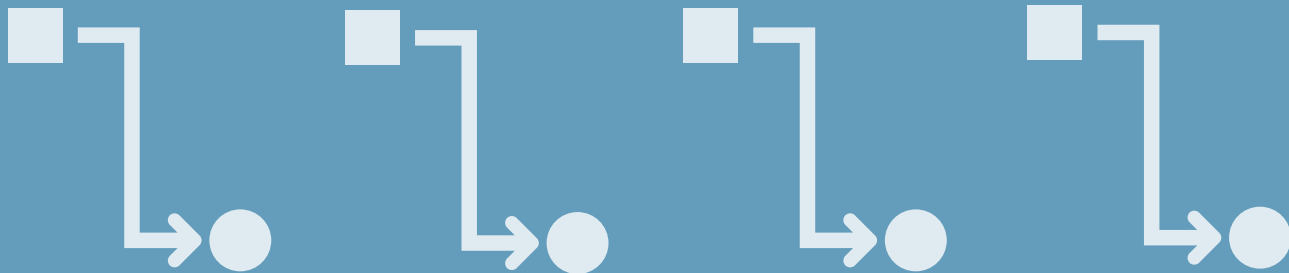
Extracting and organizing data


Summarizing data and meta-analysis

Evaluating Bias

SYSTEMATIC REVIEWS SHOULD HAVE:

- Explicit objectives with pre-specified eligibility criteria
- A method that can be reproduced
- A methodical search to identify every available study that meets eligibility criteria
- An evaluation of the validity of study findings, including assessing risk of bias
- An organized synthesis and presentation of included studies





DEFINING THE REVIEW QUESTION

- Select a topic
- Develop a question (that can be answered)
- Set the scope (PICO)
- Create the criteria (eligibility - both inclusion and exclusion)
- Write the protocol

PICO

	P (Patient or Population or Problem)	I (Intervention, prognostic factor, exposure)	C (Comparison)	O (Outcomes)
Intention	State the disease, age and gender, if appropriate, of the population.	State the intervention and specifics related to it.	A therapeutic question always has a comparator (even if it is standard care).	What is being looked for or measured?
Example (a therapeutic question)	Women who have experienced domestic violence	Advocacy programmes	General practice or routine treatment	Quality of Life (measured by the SF-36 scale)
	Research question: For women who have experienced domestic violence, how effective are advocacy programmes as compared with routine general practice treatment for improving women's quality of life (as measured by the SF-36 scale)?			
	Objective: The purpose of this review is to evaluate the effectiveness of advocacy programmes as compared with routine general practice on the quality of life of women who have experienced domestic violence.			
	Title: The effectiveness of advocacy compared with routine general practice treatment for women who are or have previously experienced domestic violence: a systematic review of women's quality of life.			

Reproduced from: Bettany-Saltikov, J, (2010). [Learning how to undertake a systematic review: part 1](#). Nursing Standard. 24(50), 47-55.

SEARCHING THE RECORDS FOR STUDIES - DEVELOP AND SEARCH WITH KEY TERMS

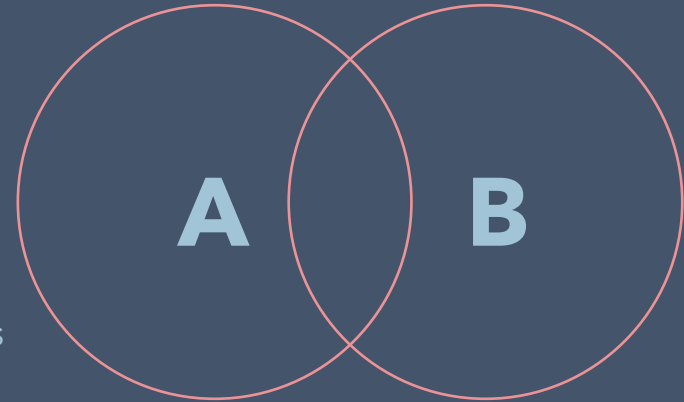
- Add terms by specifying terms that answer:
 - Geography (Where should studies have taken place?)
 - Population (Who is the population of focus/key populations?)
 - Method (What method/intervention are you interested in?)
 - Health condition (What is the health condition of interest?)
 - Social determinant of health (Are you interested in a specific social condition, such as economic status, housing status, or resource access?)
 - Time period (When should studies have taken place? All time, last 10 years, post-COVID?)
 - And more!

SEARCHING THE RECORDS/STUDIES

- Search terms and operators
- Boolean Operators
 - And, Or, Not

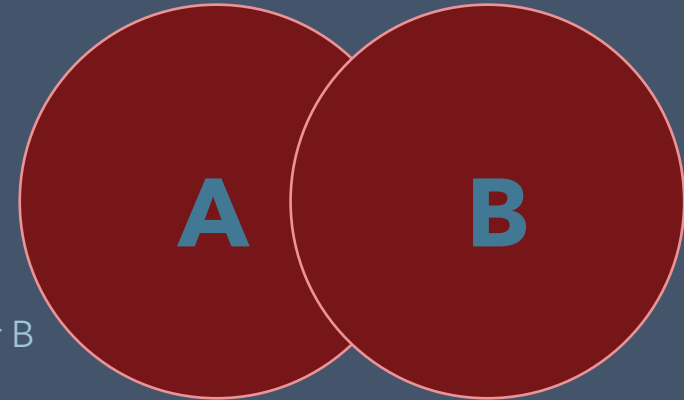
AND

Only results that contain both keywords



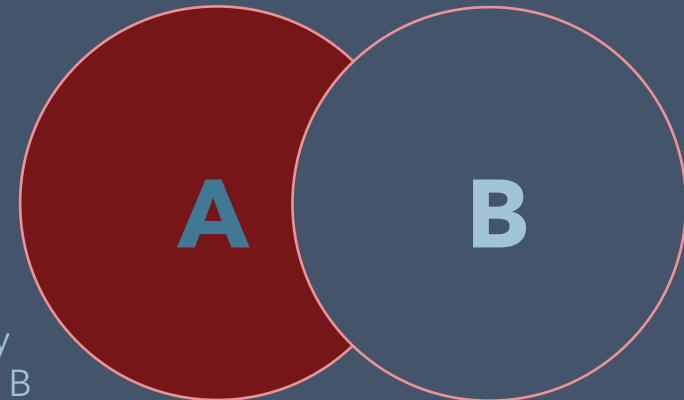
OR

Results containing keywords A or B



NOT

Results containing keyword A, excluding any with keyword B



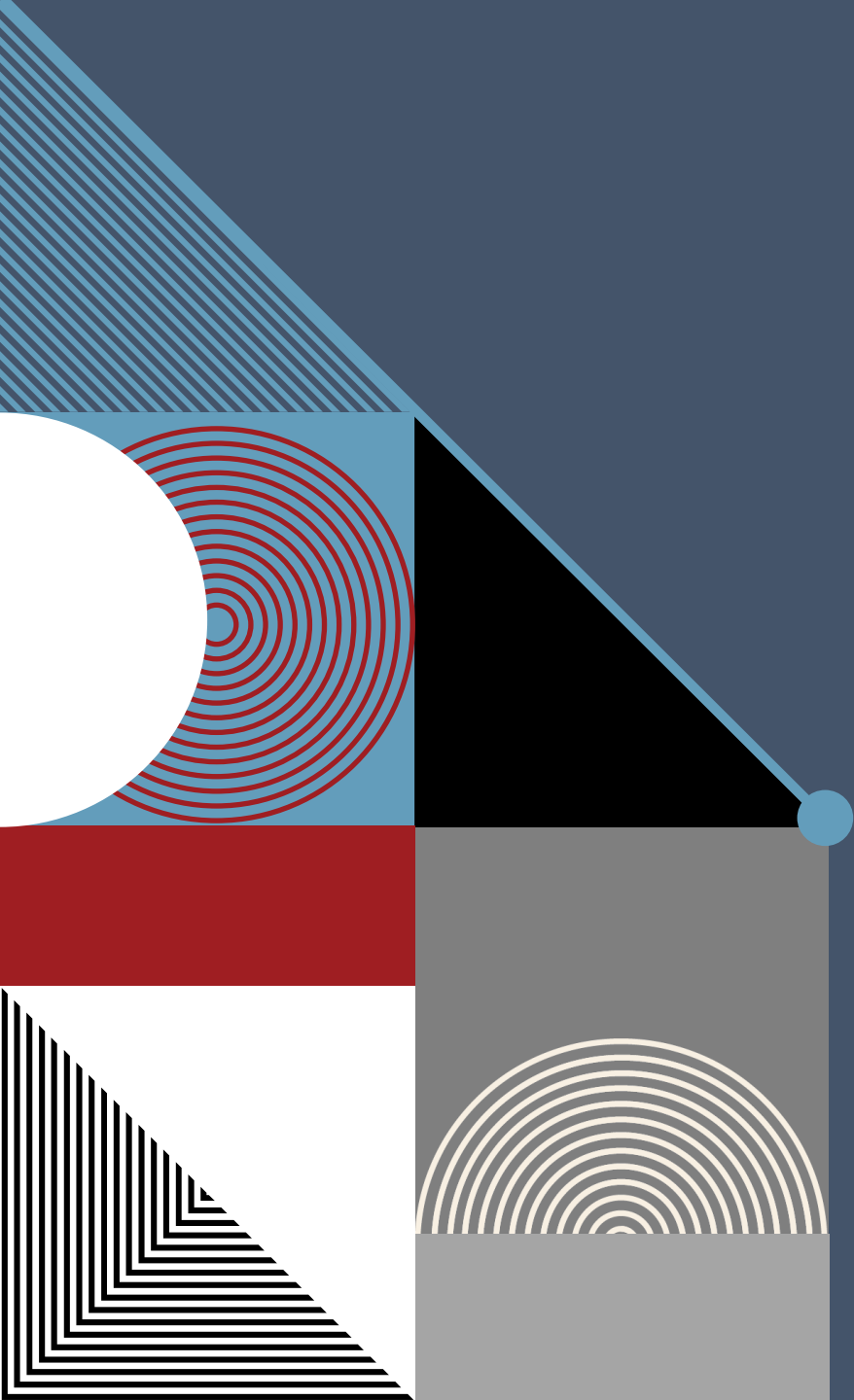
DEVELOPING THE SEARCH SET

First decide what you want your search sets to be, in plain language.

What main terms?
How else might researchers have referred to them?
What Boolean operators do you want to use?

Search terms to be included in searches of titles, abstracts, and MeSH terms/author keywords.

Location	Type of study	Intervention focus
Appalachia or Appalachian OR Rural AND West Virginia or Alabama or Georgia or Kentucky or Maryland or Mississippi or New York or North Carolina or Ohio or Pennsylvania or South Carolina or Tennessee or Virginia	Trial or Randomized or <u>Randomised</u>	Smoking or Tobacco or Smoker or Smokers or Cigarette or Cigarettes or E-cigarette or E-cigarettes or Electronic cigarettes or Electronic cigarette Vaping AND Cessation OR Anti-smoking



HOW WAS THIS FOR YOU?

What questions came up as you worked on your own reviews?

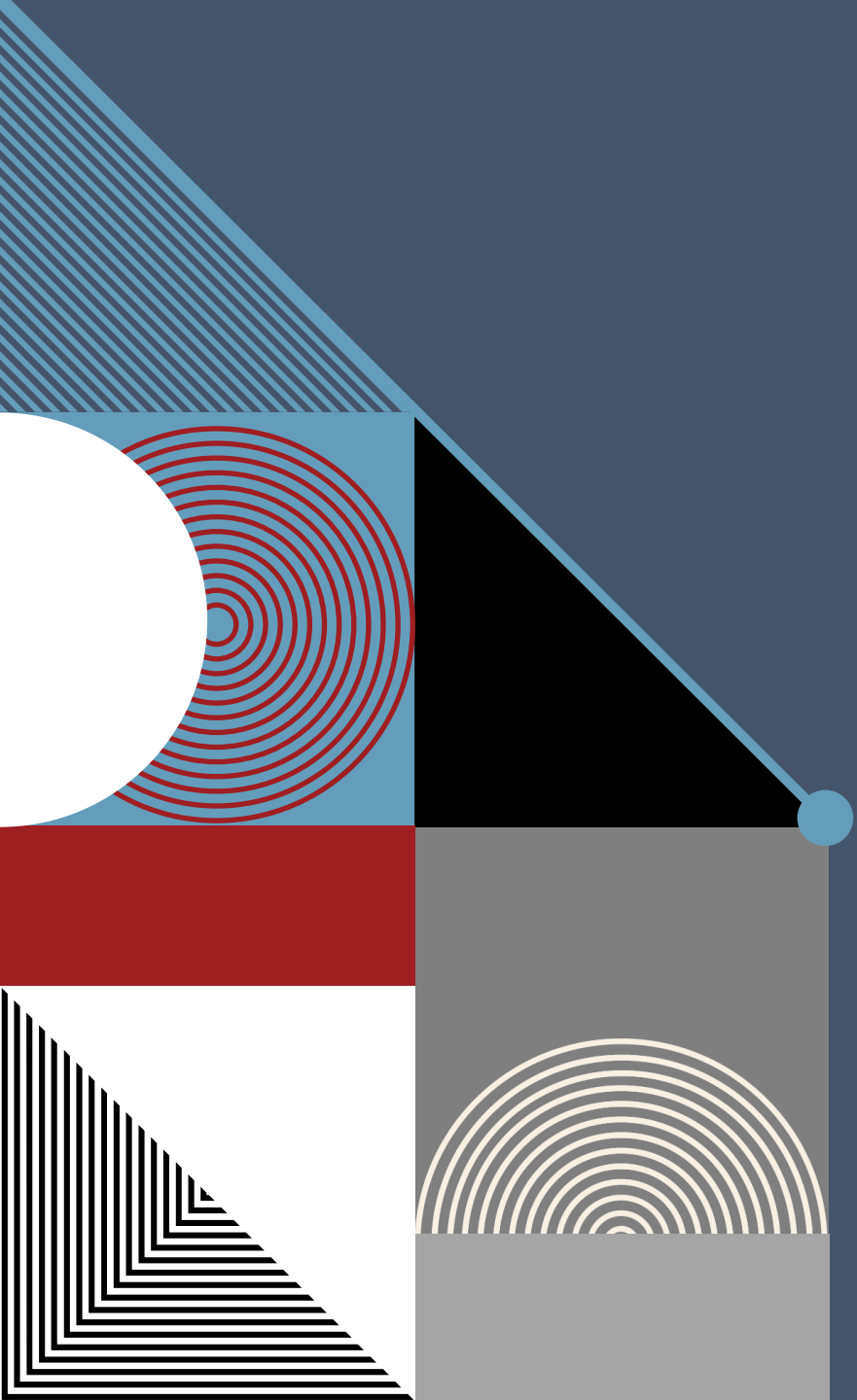
What challenges did you encounter?

Any great tips or tricks you want to share?

When poll is active respond at PollEv.com/shelleyf800

Send **shelleyf800** to **22333**





WORK TIME TOGETHER

Keep working on your systemic reviews and
we'll circulate and help troubleshoot.