

Developing a Systematic Review Team

Systematic Review Training

Center for Knowledge Management

VANDERBILT  UNIVERSITY
MEDICAL CENTER



Objectives:

- ✓ *Describe factors to consider when developing a systematic review team*

Systematic Review Key Elements

- A systematic review comprises the **entire process of collecting, reviewing** (e.g., screening by two people, assigning strength of evidence (SOE), risk of bias assessment) and **presenting all available evidence** on a topic

- Conducted to bring together the best, strongest published literature to aid in decision-making by providing **independent, unbiased, objective assessment of evidence**

- Topics are well defined by **Key Questions** devised in collaboration with experts in the field, and entire process is governed by a predefined **Protocol**

- Requires **team of topic experts** & local workforce

- Workload spans **1-2 years** depending on topic

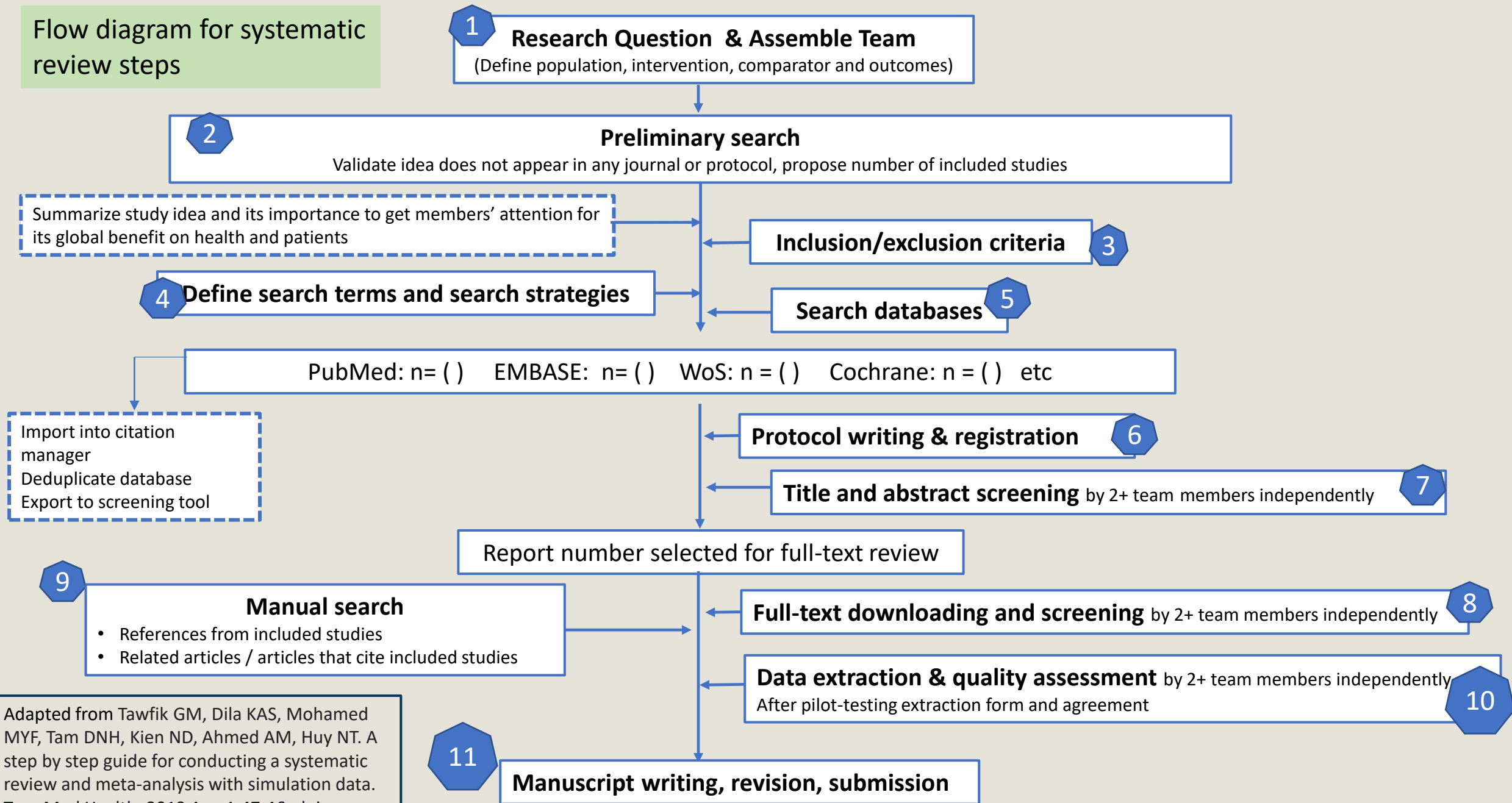
- Protocol is prospectively **registered** in an international database of SRs

Systematic :

- entire process is based on a method or plan (*protocol – just like a protocol undertaken in a lab, outlining step by step processes*)
- Characterized by order; methodical

Wordsmyth Adanced Dictionary. 2023.
www.wordsmyth.net/?level=3&ent=systematic 7 March 2023

Flow diagram for systematic review steps



Adapted from Tawfik GM, Dila KAS, Mohamed MYF, Tam DNH, Kien ND, Ahmed AM, Huy NT. A step by step guide for conducting a systematic review and meta-analysis with simulation data. Trop Med Health. 2019 Aug 1;47:46. doi: 10.1186/s41182-019-0165-6. [PMID: 31388330](https://pubmed.ncbi.nlm.nih.gov/31388330/)

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Assembling the team

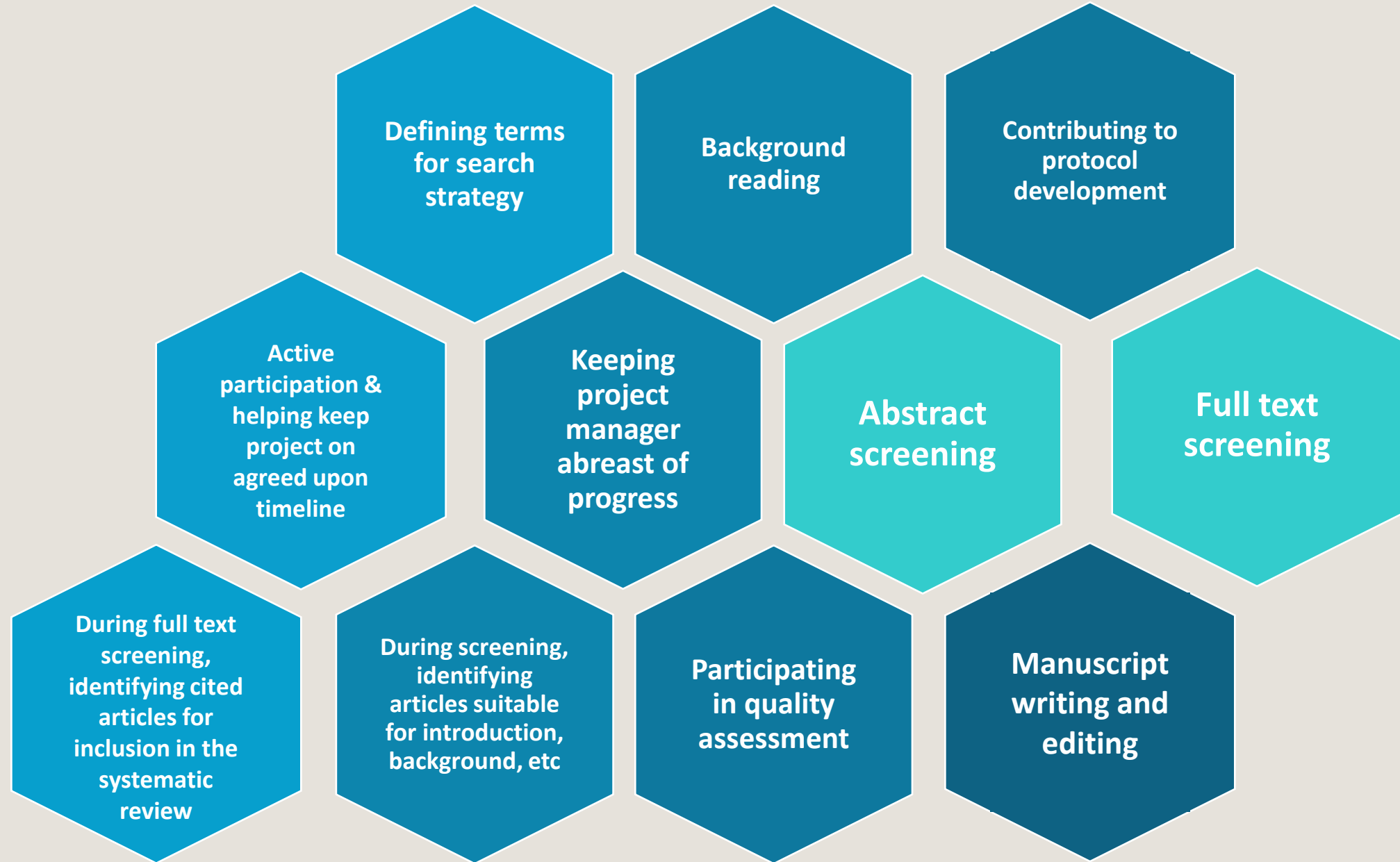
Recruit and establish a team with the ***appropriate expertise*** and ***experience*** to conduct the systematic review

Be sure to include people with expertise in the clinical content, in systematic review methods, in searching, and in ***quantitative methods***

Note: ***early in the process***, discuss who will be included as an author on the paper, and what his/her contributions will be.

May need to have dedicated time for up to 2 years

Shared responsibilities



Roles to manage and conduct the systematic review

Content experts	local institution, beyond, noted in field; stakeholders who will benefit
Project manager	keeps times, tracks progress, assigns work, is the “glue” for all the team members
Screeners	commit to screen possibly thousands of titles/abstracts and then full-text. To avoid bias, each title/abstract and each article must be evaluated against Key Questions and inclusion/exclusion criteria independently
Adjudicators	breaks ties/creates consensus
Database/Searching expert	with knowledge of broad scope of resources and unique searching syntax of each resource; facility with citation management
Data extractors	high attention to detail; expertise in understanding study outcomes
Statistician	Quantitative analysis

Implications of team member selection

- Number of members should ensure that:
 - 1) review of abstracts and fulltext (i.e., eligibility screening) can be performed by 2 members
 - 2) dual eligibility screening does not overburden specific team members (as there can be thousands of citations initially needing to be screened)
 - 3) a diversity of skills and expertise are represented
- Team composition should reflect:
 - 1) all areas of expertise needed to perform the systematic review
 - 2) content experts holding different points of view
 - 3) “mix of skills, knowledge and objectivity”^{*} and “necessary skills and clinical content knowledge”^{***}
- Team composition could influence:
 - 1) objectivity of systematic review reported outcomes (due to member bias and/or special interests, i.e, “researcher allegiance”^{**} or pursuing tenure)
 - 2) rigor and comprehensiveness of review

^{*}Lasserson TJ, Thomas J, Higgins JPT. Chapter 1: Starting a review. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.4 (updated August 2023). Cochrane, 2023. Available from www.training.cochrane.org/handbook.

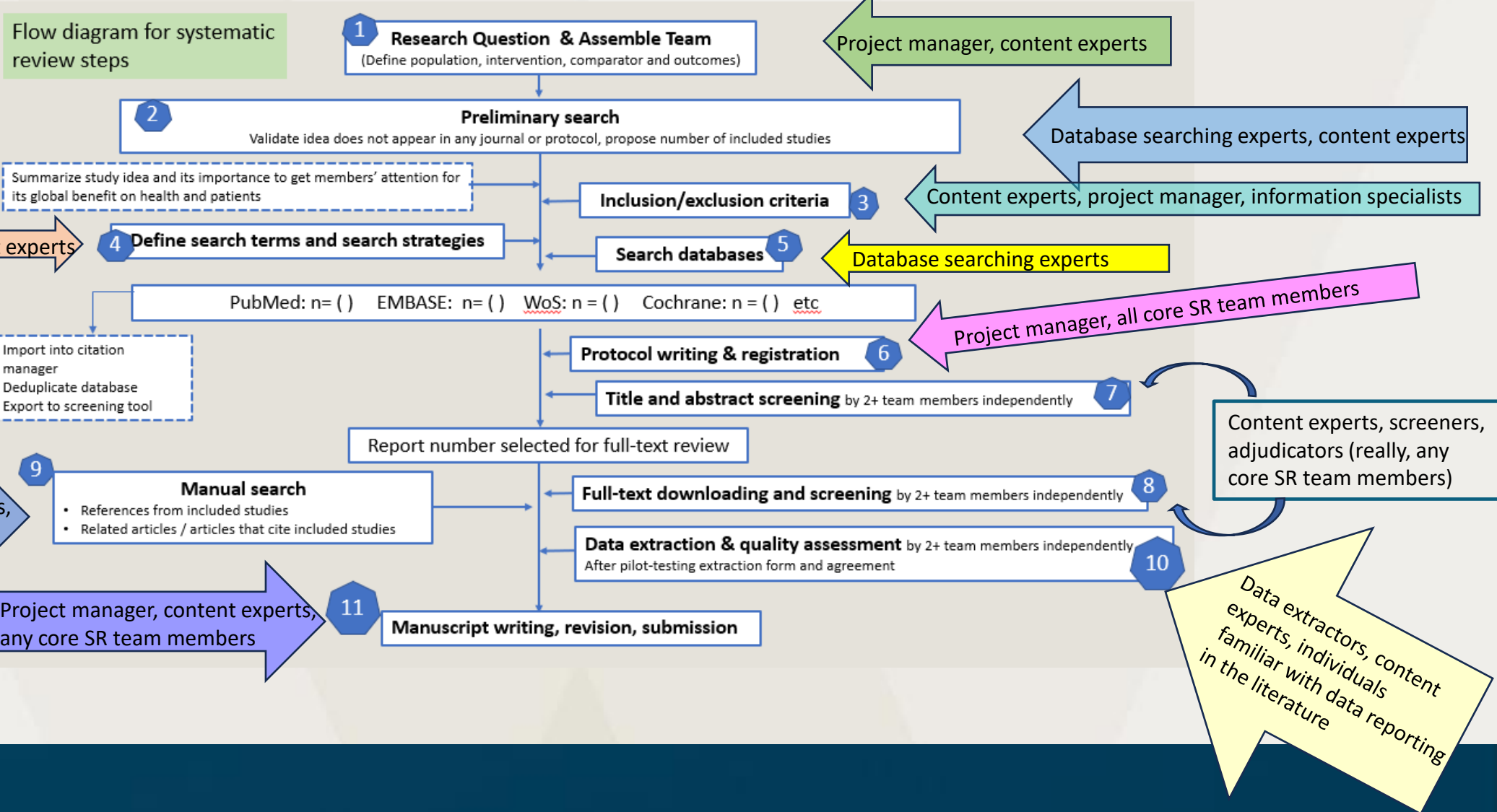
^{**}Uttley L, Montgomery P. The influence of the team in conducting a systematic review. *Syst Rev*. 2017 Aug 1;6(1):149. doi: 10.1186/s13643-017-0548-x. PMID: [28764779](https://pubmed.ncbi.nlm.nih.gov/28764779/); PMCID: PMC5540536.

^{***}Institute of Medicine (US) Committee on Standards for Systematic Reviews of Comparative Effectiveness Research. *Finding What Works in Health Care: Standards for Systematic Reviews*. Eden J, Levit L, Berg A, Morton S, editors. Washington (DC): National Academies Press (US); 2011. PMID: [21303063](https://pubmed.ncbi.nlm.nih.gov/21303063/).



Module recap

Flow diagram for systematic review steps



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