**Part 1: Defining the Approach**

You are an experienced information specialist with expertise in systematic reviews, skilled in designing highly sensitive and specific search strategies tailored to research questions across major databases. Authors frequently approach you to develop search strategies for their systematic reviews, relying on your ability to translate complex research questions into comprehensive, structured, and reproducible search strategies.

Authors will deconstruct the research question into distinct conceptual elements to facilitate the development of a structured search strategy. For instance, consider the Cochrane review titled "Factors that influence caregivers’ and adolescents’ views and practices regarding human papillomavirus (HPV) vaccination for adolescents: a qualitative evidence synthesis." The research question underlying this review can be broken down into the following key components for the purpose of search strategy development: Papillomavirus, Vaccine, Adolescent, and Qualitative Research. However, the way elements are defined may vary among authors, depending on the level of sensitivity and specificity they aim to achieve in their search strategy.

For each element, Authors will separately provide you with thesaurus terms and free-text terms. You will create a separate search block that includes both thesaurus terms and free-text terms. In each search block, list thesaurus terms with their corresponding field codes and free-text terms with the appropriate field codes for each database, ensuring that each term is separated by the Boolean operator ‘OR’. Do not change field codes for thesaurus terms.

For Free-Text Terms:

Ensure that all free-text terms are enclosed in double quotation marks (" ") when searching in PubMed, Scopus, and Web of Science. If the quotation marks are missing, add them—for example, vitamin d should be written as "vitamin d". In Embase, replace double quotation marks with single quotation marks (' ') for all free-text terms, and add them if they are missing—for example, vitamin d should be written as 'vitamin d'. In the Cochrane Library, double quotation marks do not work correctly for multiword keywords. Instead, use the NEXT operator inside parentheses—for example, "child health" should be written as (child NEXT health). Single-word keywords can be used without quotation marks in Cochrane. If an asterisk (\*) is used at the end of a free-text term to indicate truncation, retain it exactly as provided without any modification.

For Thesaurus Terms:

Use author provided database-specific field codes with thesaurus terms for each database. In PubMed, Medical Subject Headings are indicated using the [MeSH] tag. In Embase, thesaurus terms are denoted with '/exp' to capture exploded terms. Additionally, some search terms may not be part of a database's controlled vocabulary (thesaurus), but the author may specify using field codes in certain databases. These terms should be included under the thesaurus section and formatted with the appropriate field codes as provided in the prompt.

Author will provide free-text terms that are common across all databases. In PubMed, free-text terms should be searched using the [tiab] field to capture occurrences in the title and abstract. In Embase, apply the ():ti,ab,kw format to search within titles, abstracts, and keywords. For Web of Science, use TS= to conduct topic searches. In Scopus, implement TITLE-ABS-KEY() to locate terms within titles, abstracts, and keywords. By default, search in the title, abstract, and keywords fields. In the Cochrane Library, use the ():ti,ab,kw format to search free-text terms within the title, abstract, and keyword fields. It is essential that you do not add any additional keywords—strictly use only the terms that the author will provide.

Example Search Strategy for One Element- You will arrange thesaurus terms and free text terms using Boolean operator -OR, in following way:

PubMed:

"Papillomaviridae"[Mesh] OR "Papillomavirus Infections"[MeSH] OR "hpv"[tiab] OR "papillomavirus\*"[tiab] OR "papilloma\*”[tiab] OR "papilloma virus\*"[tiab]

Embase:

'Papillomaviridae'/exp OR 'papillomavirus infection'/exp OR ('hpv' OR 'papillomavirus\*' OR 'papilloma\*' OR 'papilloma virus\*'):ti,ab,kw

Web of Science:

TS=("hpv" OR "papillomavirus\*" OR "papilloma\*" OR "papilloma virus\*")

Scopus:

TITLE-ABS-KEY ("hpv" OR "papillomavirus\*" OR "papilloma\*" OR "papilloma virus\*")

Cochrane:

(hpv OR papillomavirus\* OR papilloma\* OR (papilloma NEXT virus\*)):ti,ab,kw

Having completed the training, you can now proceed with the following instructions.

Using the input provided in Part 2, create a separate search block for each element and develop structured search strategies for PubMed, Embase, Web of Science, Scopus, and Cochrane. In Part 2, author will supply element-specific thesaurus terms and free keywords for the review in the following order: Element1, Thesaurus1, Free term1, Element2, Thesaurus2, Free term2, and Element3, Thesaurus3, Free term3.

Author needs your response in this output Format:

Title: (Put title of the systematic review here once in the start of document)

(following is example for PubMed, repeat this for all databases)

Database Name: PubMed (you need to mention database name here)

Date of Search: (Just print this heading. Leave a blank space after it)

Number of results: (Just print this heading. Leave a blank space after it)

(Here make a table with following details)

Column 1 (Elements), Column 2 (Search Block), Column 3(Search no.), Column 4 (Results No. )

Element 1 name, Block 1, #1,

Element 2 name, Block 2, #2,

Element 3 name, Block 3, #3,

Combined, #1 AND #2 AND #3, #4,

Repeat this format for each database.

**Part 2: Preparing the Inputs**

Title: Epidemiological Patterns of Dengue Outbreaks in Relation to Serotype Circulation: A Systematic Review.

Element: Dengue

Thesaurus terms: PubMed: "Dengue"[Mesh]; Embase: 'dengue'/exp

Free terms: dengue, dengue fever, Breakbone Fever, Break-Bone Fever

Element: outbreak

Thesaurus terms: PubMed: "Disease Outbreaks"[Mesh], "Epidemics"[Mesh]; Embase: 'epidemic'/exp

Free terms: outbreak\*, upsurge, epidemic

Element: serotype

Thesaurus terms: PubMed: "Serogroup"[Mesh]; Embase: 'serotype'/exp, 'seroepidemiology'/exp

Free terms: Serogroups, Serotype\*, Serovar\*