HelpDesk Answer
Author Handbook

October 2019
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Selecting the Best Available Evidence

- Direct your efforts at finding the best evidence:
  - Valid – as high on the evidence pyramid as possible.
  - Current – for most questions this means within the last five years.
  - Pertinent – PICO elements (patients, intervention, comparison, outcomes) match the question.
  - Practice guidelines are acceptable to contrast what the latest evidence is showing to what practice guidelines are recommending. They should not be the only references.
  - HDA style is to avoid referencing narrative reviews (review articles without a pre-specified search strategy and study inclusion/exclusion criteria).

- HDAs must have at least two references, but no more than five.
- The references must contain data that directly answers your question. Avoid using references that require extrapolation to answer your question.

What if you are unable to find references that contain data to directly answer your question?

- If you are unable to find references that contain data to directly answer your question, discuss with the HDA manager.
  - Next steps are:
    1. Enlist the assistance of your medical librarian to help with your literature search. Sometimes the experts can find pertinent evidence.
    2. Change your question to something that can be answered with our current evidence base. We can leave your original question in waiting until evidence is available. Remember, any changes to questions must be discussed with the HDA manager prior to proceeding.

What if you are unable to find at least two references?

- HDAs are a synthesis of at least two evidence sources so must have at least two references.
  - If you are only finding one reference, here are your options (in order of preference):
    1. If only have one meta-analysis/systematic review, include a study published subsequently.
    2. If only have one meta-analysis/systematic review, include a study published before but not included because didn’t meet study inclusion criteria.
    4. If only have one meta-analysis/systematic review, include an individual study from the review/meta-analysis if there is a reason to summarize separately such as the largest study that drove the results of the meta-analysis or a study reporting a different outcome or subgroup analysis than the review/meta-analysis.
    5. Broaden the question. You could include a broader population or intervention or an additional outcome in order to bring in another reference. Any changes to questions must be discussed with the HDA manager prior to proceeding.
What if you are finding more than five high-quality, current, and pertinent references?

- HDAs are also concise so the question must be narrow enough to be answered with five references or less.
  - If finding more than five references, you may need to narrow your question by narrowing the population, intervention, comparison, and/or outcomes. Again, any changes to questions must be discussed with the HDA manager prior to proceeding.
  - Critically review the references you found to see if there is a “top five” (or fewer) best references from the group.
    - Is there a meta-analysis/systematic review that contains an RCT that you have listed separately such that you could forego using the RCT?
    - Are there two or more meta-analyses/systematic reviews that have similar research questions and overlapping studies within them? For example, two meta-analyses may contain 80% of the same trials — does it make sense to include both or should just the more recent/higher quality one be included?
HDA Template
Microsoft Word document
FONT: TIMES NEW ROMAN, 12PT, SINGLE SPACE

Title: [insert short title for HDA question here. Eg, Best Treatment for Cough]
Word Count: Total including Evidence-Based Answer AND Evidence Summary = 450–900 words

HDA Question

Evidence-Based Answer (35–75 words)
The bottom-line conclusions based upon the best-available evidence as summarized in the Evidence Summary. Strength of recommendation indicators (SOR) based on the appropriate SORT grade are included in parenthesis after each statement with a different SOR. Each SOR is followed by a brief description of the type of study/studies the statement is based on, eg (SOR: C, [insert type of study/studies here])

Evidence Summary (250–825 words)
Concise discussion of each piece of evidence used to answer the question. Each reference should be discussed in a separate paragraph and include enough information to allow readers to apply the results clinically. Important information to include:
1. A description of the study so readers know how strong or weak the evidence is,
2. Enough information on the patients and interventions so readers know who to generalize the results to and how to replicate the protocol or treatments,
3. Description of the outcome measures with numerical results and statistical analysis so readers know what to expect from the intervention and can counsel patients.

While the details of a full appraisal are not required (or desired), important validity considerations should be discussed, and the results should be presented with conversions to user-friendly statistics. P values alone are not informative unless the numerical results are also provided. Present evidence from highest to lowest level. Reference numbers are placed as superscripts after the first sentence summarizing the respective study, and must match the reference section. P values must be upercased and italicized.

Author 1, including credentials
Author 2, including credentials
Program Name
City, State

References
HDAs must have at least 2 references but no more than 5. The references should represent the best available evidence to answer the question. Levels of Evidence (STEPs) must be assigned to each reference according to the Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence. References are listed in the order presented in the Evidence Summary. Be sure to cite references in the Evidence Summary. Format follows the AMA Style Guide, using “Article from Journal”.

Example of how a reference list should be formatted:
1. Raux H, Coulon P, Lafay F, Flamand A. Monoclonal antibodies which recognize the acidic configuration of the rabies glycoprotein at the surface of the virion can be neutralizing. Virology 1995; 210(2):400–408. [STEP 3]
Evidence Based Answer: (35 – 75 words)

- The bottom-line conclusions based upon the evidence presented in the Evidence Summary.
- The conclusions from each of the references are included and synthesized into 1 to 2 sentences.
- All the important outcomes in the Evidence Summary are represented in the EBA
- All the conclusions in the EBA are supported by evidence in the Evidence Summary
- The EBA directly answers the question
- The EBA is written in the present tense
- The EBA is presented in the same sequence as the data in the Evidence Summary
- The EBA includes some quantification of the magnitude of effect
  - eg “Achilles tendon ruptures treated non-operatively have a 5% higher risk of re-rupture than surgical treatment.” or “Acetaminophen moderately improves function in patients with osteoarthritis of the knee.”
- SOR indicators (using the SORT criteria) are placed after each conclusion of differing SOR
- Each SOR indicator is followed by a brief explanatory phrase (SOR: B, single RCT)
Evidence Summary: (250 – 825 words)

Written in unique HDA style. Consider the following:

• Rarely is an introductory paragraph needed; just jump into the evidence summary (occasionally allowable if the treatment/test is not very common and some additional explanation is needed).

• The Evidence Summary is written in the past tense

• The style of HDAs is to answer a clinical question using the most relevant and highest quality original evidence. Use of narrative reviews is generally discouraged. Use of guidelines is acceptable but should not be the only references.

• There needs to be at least two references, but no more than five. HDAs must be a synthesis of at least two evidence sources so must have at least two references.

   Options for at least one more reference (in order of preference):
   1. If only have one meta-analysis/systematic review, include a study published subsequently.
   2. If only have one meta-analysis/systematic review, include a study published before but not included because didn’t meet study inclusion criteria.
   4. If only have one meta-analysis/systematic review, include an individual study from the review/meta-analysis if there is a reason to summarize separately such as the largest study that drove the results of the meta-analysis or a study reporting a different outcome or subgroup analysis than the review/meta-analysis.
   5. Broaden the question. You could include a broader population or intervention or an additional outcome in order to bring in another reference. Discuss this with the HDA manager.

• HDAs are also concise so the question must be narrow enough to be answered with five references or less. If finding more than five references, may need to narrow your question. Discuss this with the HDA manager.

• Each reference should be summarized in a separate paragraph.

• Generally, the paragraphs should be sequenced with the highest quality of relevant evidence first OR according to the order in which the conclusions are sequenced in the Evidence Based Answer. If 2 or more studies are of the same relevance and quality, the most recent study should be summarized first.

• Studies are referred to by their design, not by lead author or catchy acronym; the latter do not give readers any information about the study.

   o Most studies can be categorized into one of the study designs listed below.
   Researchers may not abide by these categories so you may have to translate the researchers’ description to one of these types.
   
   ▪ Systematic review – report on two or more studies, contain a methods sections with a pre-specified, comprehensive, literature search strategy and pre-specified study inclusion/exclusion criteria.
   ▪ Meta-analysis – data from two or more studies is combined and pooled results reported, usually part of a systematic review.
- Randomized controlled trial – patients randomly assigned to two or more groups, each receiving a different intervention/comparison.
- Randomized crossover trial – all patients receiving all interventions/comparisons but in random order, usually separated by a washout period.
- Cohort study – patients non-randomly assigned to two or more groups, each receiving a different intervention/comparison, can be prospective or retrospective.
- Diagnostic cohort study – patients undergoing testing with a ‘new’ test and a reference test to determine the test characteristics of the ‘new’ test.
- Case control study – two groups of patients (‘cases’ who have a condition and ‘controls’ who do not) who are evaluated retrospectively for some sort of previous exposure.
- Case series – outcomes reported on a group of patients with the same condition who receive the same intervention.
- Cross sectional study – population assessed at a point in time for a condition(s) and relevant exposures or risk factors.
- Longitudinal study – population assessed serially for a condition(s) and relevant exposures or risk factors.
- Case report – description of a single patient.
- For more information, refer to the Centre of Evidence-Based Medicine website: https://www.cebm.net/2014/04/study-designs/

• Citation numbers go after the first sentence of the paragraph describing the reference

Each reference is summarized fully
Studies are described first and then results are presented so readers can put the results into context.
• For a single study include:
  o the study design (RCT, cohort study, case-control study, case series, etc.)
  o number of patients
  o the research question of the study
• For a systematic review or meta-analysis include:
  o the design of included studies
  o total number of included studies
  o total number of included patients
  o the research question of the systematic review/meta-analysis
• For a practice guideline include:
  o the developing organization
  o a statement clarifying if it is evidence-based or consensus opinion-based
  o year of publication
any strength of recommendation or level/grade of evidence indicators for the recommendations, include a brief description of what the “strength” or “grade” means
guidelines are generally lowest level of evidence and summarized last
should be written in the past tense

- The PICO elements:
  - Summary of the patients so readers will know to whom the results generalize
    - demographics, criteria for diagnosis/inclusion, disease severity, recruitment
  - Description of the intervention(s) or test(s) so readers can replicate clinically
    - For medications - summarize dose, frequency, route, and duration of therapy
    - For other treatments/therapies – summarize treatment protocol with frequency and duration
    - For diagnostic tests – describe the test and summarize the testing protocol
  - Description of the comparison(s)
    - For medications and other treatments/therapies – similar to above
    - For diagnostic studies:
      - describe the reference standard and if all patients received the new test and the reference standard
      - include the prevalence of disease in the study population
  - Summary of the outcome measures so readers will know what to expect
    - When outcomes are given according to a scale or scoring system:
      - describe the parameters the scale is measuring or assessing
      - provide the range of scores (for continuous data) or summarize the categories (for categorical data) so the readers can see the magnitude of effect (is it a 1–10 or 1–100 scale?)
      - make sure it is clear if higher or lower numbers indicate improvement

- Duration of trial or follow-up period
- Any pertinent limitations

Results are presented transparently
- Need to show the actual numerical data so the readers can see the magnitude of effect, ie “How much better?”
  - Definitely for outcomes that are positive (significant difference)
  - For outcomes that are negative (no significant difference), showing the numerical data is not mandatory. Decision can be based on:
    - importance of the negative outcome
    - is it a primary or secondary outcome?
    - is the negative outcome definitive or marginal?
    - is it expected or a surprise?
• manuscript length
• manuscript readability (ie ‘number clutter’)

• Avoid “floating P values”, ie P values that are not associated with numerical data
  o may show statistical significance, but do not show magnitude of effect, always provide the actual numerical data that the P value compares (remove the P value if numerical results are not reported).

• For pooled outcomes of a meta-analysis, authors should provide the number of trials and patients that were pooled: (6 trials, N=567; OR 8.7; 95% CI, 7.0–9.8) or the number of trials/patients should be included in the text

• Make sure the description of the outcome measure (continuous/discrete vs. dichotomous outcome) matches the numerical result (continuous/discrete vs. dichotomous variable)
  o Continuous variable
    ▪ Measured along a continuum
    ▪ Measured not counted
    ▪ Example is weight loss
  o Discrete variable
    ▪ Only integer values
    ▪ Counted not measured
    ▪ Example is number of recurrent UTIs
  o Dichotomous variable
    ▪ Only 2 categories
    ▪ Response or no response, cured or not cured, dead or alive
    o Risk ratio, odds ratio, number needed to treat – used to report dichotomous outcomes
    o Mean difference, standardized mean difference – used to report continuous/discrete outcomes

Review for common pitfalls:
• Studies that are included in a systematic review/meta-analysis should not be summarized separately unless there is a good reason such as the single study presents a different outcome or subgroup analysis
  o If summarized separately, you must explicitly state in the text why the study is being singled out and presented separately
  o If a study was published within the search dates of the systematic review/meta-analysis but was not included in the review, you should clarify why the study was not included

• When 2 or more systematic reviews/meta-analyses with similar research questions are summarized, it is important to look at how much overlap exists among included studies.
  • If there is considerable overlap, you should briefly explain what unique information the older systematic review/meta-analysis provides and why it should be included
  • It may not make sense to include the older systematic review/meta-analysis if it provides no unique information (such as different outcome measures, different subgroup analyses, etc.).
  • If there is very little overlap and this is unexpected, you should briefly explain why. A comparison of the study inclusion criteria may reveal reasons why this occurred and this should be briefly summarized. If no reason can be found, it should be stated
• For diagnostic studies:
  • The reference standard used to determine which patients actually have the condition must be clearly identified
  • In discussing clinical tests, include likelihood ratios (LR+/LR–) with any sensitivity/specificity data. You may need to calculate them.
  • Predictive values (PPV/NPV) are not as useful as likelihood ratios for diagnostic tests and are discouraged
  • Predictive values are appropriate for population-based screening tests (mammography, Pap smear)
• Limit use of the passive voice – the subject of the sentence is not performing the verb
  • Avoid starting a paragraph with passive voice
  • Avoid excessive use elsewhere but occasional use is acceptable
• Numbers with decimals are rounded to 2 significant digits
  • 0.324 becomes 0.32
  • 2.45 becomes 2.5
  • 12.7 becomes 13
  • 136 remains 136
Template for an Evidence Summary paragraph for an individual RCT:

Evidence summary:

Sentence 1: Set up the study design/study aim/research question
For example: “A multicenter RCT (N=X) examined the effectiveness of Y intervention for x disease compared to control.”

Sentence 2: Describe population and disease of interest. Include any important patient characteristics, disease type, duration, severity so readers can get a sense of whether the population reflects their own patient populations. List any important exclusions.
For example: “Patients were immunocompetent, non-pregnant, adult women recruited from US inner city, STD clinics presenting for XXX. The mean age was X and all participants had disease Z (define the disease). Patients requiring hospitalization were excluded.”

Sentence 3: Describe the interventions and comparisons. Provide enough information so readers could replicate the intervention in their clinical practice if appropriate and know if the control is the relevant comparison or appropriate alternate treatment.
For example: “The intervention group received X (list treatment protocol or drug, dose, route, frequency) for X weeks while the control group received Y (placebo, usual care, etc).”

Sentence 4: Describe primary/secondary outcomes (including how the outcomes were measured/assessed)
For example: “The primary outcome was X and secondary outcomes were Y, Z measured at X time follow-up.”
You should also explain scales here. Define the scale and the minimum and maximum score so readers can interpret if statistically significant findings are clinically meaningful. For example: “Researchers assessed outcomes using a 0 to 100 visual analog pain scale and the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) which assess pain, stiffness, and function. Scores range from 0 to 96 with higher scores indicating greater symptoms and disability; a change of X is considered clinically relevant.”

Sentence 5: Give the results in one to three sentences. Include the numerical results and statistical information for all primary outcomes and statistically significant secondary outcomes. If a secondary outcomes is not statistically significant, numerical results and statistical information are not mandatory and the numbers can be omitted to reduce “number clutter”. For pooled results from a meta-analysis, report the number of studies and patients that were pooled for each outcome.
For example: “Drug X reduced myocardial infarctions by 50% compared to placebo (RR 0.50; 95% CI, 0.30–0.63; NNT= 10). Drug X did not reduce cardiovascular mortality (RR 0.99; 95% CI, 0.93–1.1) or all-cause mortality (RR 0.80; 95% CI, 0.77–1.3).” Pooled example: (X trials, N=X; RR 0.XX; 95% CI, 0.XX–0.XX; NNT X)

Sentence 6: Harms of the intervention
For example: “Side effects were minimal and included throat irritation and mild cough (give % of participants in each group reporting side effects).”

Sentence 7: Limitations of the study that are not already apparent from the preceding PICO description of the study (no need to mention that a study is limited by small sample size when “N=7” is included in the first sentence of the paragraph. For a meta-analysis this should typically include an assessment of the quality of the included studies and may include information such as heterogeneity and publication bias.
For example: “This RCT was limited by the lack of blinding and allocation concealment and was underpowered to detect the primary outcome so conclusions about Y should be cautiously interpreted.”
Tables

- Tables should be used when they communicate the numerical results significantly more clearly than a textual description of the results. As a general guideline, paragraphs which contain more than 3 or 4 statistical outcomes may be clearer when the results are moved to a table.
- The evidence summary provides information regarding the validity and generalizability of the data in the table, but readers should generally understand the take home point of a table without relying on the information in the evidence summary.
- The title should be complete enough to orient the reader to the table independently of the rest of the manuscript
- Citation numbers should be in the title or the left-most column
- Column headings are typically number of trials (for meta-analyses), number of patients, and outcome measures (RR, OR, MD, SMD, LR+, LR-, etc.)
- The left-most column and the top-most row should contain the text
- Put only numbers in the other boxes
- Put only 1 or 2 numbers in each box
- Rows to be compared should be next to each other
- Consider shading or bold type to draw the eye (eg statistically significant outcomes)
- Abbreviations and other clarifications should be placed in footnotes below the table
- In the text of the paragraph, refer readers to a table using “(TABLE)”
- A single table does not need to be numbered so “(TABLE 1)” is only used when there is also a “(TABLE 2)”
- Generally, numerical data provided in the table should not be repeated in the text of the paragraph. Rather, the results sentence in the evidence summary should summarize the results and/or provide more details about the studies (especially weaknesses). Example: “The intervention improved all outcomes versus the control except for the secondary outcome of X (TABLE).”

References

- Each study in the Evidence Summary is cited in the reference section
- References are numbered in order of appearance
- The references are formatted according to the AMA Style Guide (list first three authors, then et al.)
- Each reference is followed by the level of evidence indicator (based on the CEBM table) in the STEP format “(STEP 1).”
- Please do not use “End Notes” or similar apps to insert references
**Text standards**

**Number usage:**
- Generally, spell out integers from one to nine; numerical form for integers 10 and higher
  - spell out all numbers at the beginning of a sentence
  - use numerical form for all numbers when reporting results
  - use numerical form for all non-integers (eg 1.1)
- Hyphens between numbers and descriptors, eg ‘5-year risk’, ‘3-fold’
- No spaces between symbols and digits, space between numbers and labels (>3 cm)
- 1 to 4 days in text (1–4 days in parentheses). Note use of ‘en-dash’ instead of hyphen for ranges
- Use commas for numbers 1,000 and higher
- “greater than 40 mg” in text (“>40 mg” in parentheses)
- Fractions in text are generally spelled out, eg ‘one-third’
- For reporting pooled results in a meta-analysis - (3 trials, N=26,244; …)
- Use en-dashes for minus signs (–2.5, LR–) (Note: the en-dash is created by pressing Ctrl and (-) key on the number key pad, not the dash key on the keyboard)
- Round numerical results with decimals to 2 significant digits (4.56 should be 4.6)

**Presentation of results and statistical analysis:**
- (relative risk [RR] 0.67; 95% CI, 0.46–0.84; number needed to treat [NNT] 43)
- (absolute risk reduction [ARR] 3.8%;...)
- (odds ratio [OR] 0.54;...)
- (hazard ratio [HR] 0.09;...)
- For subsequent use of same outcome, can use abbreviations (RR 0.67; 95% CI, 0.46–0.84; NNT 43)
- The treatment group had 15 less hospitalizations than the control group (P<.0001). Note the lack of leading zero when reporting P values
- For complex meta-analysis: outcome A (7 trials, N=7,500; odds ratio [OR] 2.5; 95% CI, 1.5–3.1) and outcome B (5 trials, N=6,300; OR 5.9; 95% CI, 3.2–7.2)
- Use the en-dash for CI ranges (95% CI, 3.5–27), unless there’s a negative number, in which case use "to" for denoting the range (95% CI, −23 to 120)
- If a confidence interval is presented, no need to provide a P value.
- Level of evidence in references
  - [STEP 2]
  - [STEP 3]
- LR+ for positive likelihood ratio; LR– for negative likelihood ratio
- “We found that 13% (3 of 23) of patients”.... rather than “We found that 13% (3/23) of patients....”
• For reporting P values, use \( P = .02 \) (upper case italic P, no space between symbols and letter/digits, no leading zero)
• "greater than or equal to" in text \( (\geq) \)

**Abbreviations**
• Define abbreviations the first time they are used (except from the approved list below)
  • ...standardized mean difference (SMD)...
• Minimize use of idiosyncratic abbreviations
  • Occasional use is okay—especially for long, complex phrases that are used repeatedly (like WOMAC or USPSTF)
  • avoid for 1 or 2-word phrases or phrases that only appear 2 or 3 times
  • avoid more than 2 or 3 abbreviations in a paragraph

**Approved abbreviations: (do not need to be defined the first time)**

<table>
<thead>
<tr>
<th>Approved abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE-I</td>
<td>Angiotensin-converting enzyme inhibitor</td>
</tr>
<tr>
<td>ACL</td>
<td>Anterior cruciate ligament</td>
</tr>
<tr>
<td>ADHD</td>
<td>Attention deficit hyperactivity disorder</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired immune deficiency syndrome and</td>
</tr>
<tr>
<td>ALT</td>
<td>Alanine aminotransferase</td>
</tr>
<tr>
<td>AST</td>
<td>Aspartate aminotransferase</td>
</tr>
<tr>
<td>BID, TID, QID, PO, IV, IM</td>
<td>Dosing frequencies and routes of administration</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence interval</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>dL, mL, mm, cm, mmHg, etc.</td>
<td>Units of measure</td>
</tr>
<tr>
<td>DNA</td>
<td>Deoxyribonucleic acid</td>
</tr>
<tr>
<td>DTaP</td>
<td>Diphtheria, tetanus, and acellular pertussis vaccine</td>
</tr>
<tr>
<td>DTP</td>
<td>Diphtheria, tetanus, whole-cell pertussis</td>
</tr>
<tr>
<td>eg, ie (no periods)</td>
<td>For example, in other words</td>
</tr>
<tr>
<td>HbA1c</td>
<td>Glycosylated hemoglobin</td>
</tr>
<tr>
<td>HDL</td>
<td>High-density lipoprotein</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>LDL</td>
<td>Low-density lipoprotein</td>
</tr>
<tr>
<td>MMR</td>
<td>Measles, mumps, rubella</td>
</tr>
<tr>
<td>MRI</td>
<td>Magnetic resonance imaging</td>
</tr>
<tr>
<td>NSAID</td>
<td>Nonsteroidal anti-inflammatory drug</td>
</tr>
<tr>
<td>Q4H, Q6H, etc.</td>
<td>Dosing frequencies</td>
</tr>
<tr>
<td>RCT</td>
<td>Randomized controlled trial</td>
</tr>
<tr>
<td>RNA</td>
<td>Ribonucleic acid</td>
</tr>
<tr>
<td>SSRI</td>
<td>Selective serotonin reuptake inhibitor</td>
</tr>
</tbody>
</table>
### Approved terms and abbreviation styles (need to be defined on first mention)

<table>
<thead>
<tr>
<th>Definition</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute risk reduction</td>
<td>ARR</td>
</tr>
<tr>
<td>Diabetes mellitus type 2</td>
<td>DM-2</td>
</tr>
<tr>
<td>Food and Drug Administration</td>
<td>FDA</td>
</tr>
<tr>
<td>Forced expiratory flow</td>
<td>FEF</td>
</tr>
<tr>
<td>Forced expiratory volume in 1 second</td>
<td>FEV1</td>
</tr>
<tr>
<td>Forced vital capacity</td>
<td>FVC</td>
</tr>
<tr>
<td>genus and species: <em>Escherichia coli</em></td>
<td><em>E coli</em> (no period)</td>
</tr>
<tr>
<td>Negative predictive value; positive predictive value</td>
<td>NPV, PPV</td>
</tr>
<tr>
<td>Number needed to treat; number needed to harm</td>
<td>NNT, NNH</td>
</tr>
<tr>
<td>Positive likelihood ratio; negative likelihood ratio</td>
<td>LR+, LR–</td>
</tr>
<tr>
<td>Relative risk reduction</td>
<td>RRR</td>
</tr>
<tr>
<td>Risk ratio; hazard ratio; odds ratio; mean difference; adjusted mean difference</td>
<td>RR, HR, OR, MD, aMD</td>
</tr>
<tr>
<td>Standardized mean difference</td>
<td>SMD</td>
</tr>
<tr>
<td>United States</td>
<td>U.S.</td>
</tr>
<tr>
<td>Ultrasound</td>
<td>US</td>
</tr>
</tbody>
</table>

### Military Disclaimers

**Air Force:**

The opinions and assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the US Air Force Medical Department, the Air Force at large, or the Department of Defense.

**Navy:**

The opinions and assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the US Navy Medical Department, the Navy at large, or the Department of Defense.

**Army:**

The opinions and assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the US Army Medical Department, the Army at large, or the Department of Defense.

**Combination:**

The opinions and assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the US Navy Medical Department, the Navy at large, the US Air Force Medical Department, the Air Force at large, the US Army Medical Department, the Army at large, or the Department of Defense.
Author Checklist

Evidence Based Answer:
- All the important conclusions in the Evidence Summary are represented in the EBA
- All the conclusions in the EBA are supported by evidence in the Evidence Summary
- The EBA directly answers the question
- The answer is presented in the same sequence as the data in the Evidence Summary
- As appropriate, the answer includes some quantification of the magnitude of effect
- SOR indicators placed after each conclusion of differing SOR
- SOR indicator followed by a brief explanation explanatory phrase

Evidence Based Summary:
- No introductory paragraph unless needed to explain an uncommon treatment/test
- At least 2 references and no more than 5
- Each reference summarized in a separate paragraph
- Paragraphs sequenced with the highest level of evidence first or according to the order in which the conclusions are sequenced in the Evidence Based Answer
- Studies are referred to by their design, not by lead author or acronym
- Citation numbers placed after the first sentence of the paragraph describing the reference
- Studies are described first and then results are presented
- For a single study, the following are present:
  - the study design
  - number of patients
  - the research question of the study
- For a systematic review or meta-analysis, the following are present:
  - the design of included studies
  - total number of included studies
  - total number of included patients
  - the research question of the systematic review/meta-analysis
- For a practice guideline include:
  - the developing organization
  - evidence-based or consensus opinion-based
  - strength of recommendation or level/grade of evidence indicators including a brief description
- The PICO elements are present:
  - Summary of the patients
  - Description of the intervention(s) or test(s)
• For medications - dose, frequency, route, and duration of therapy
• For other treatments/therapies – treatment protocol with frequency and duration
• For diagnostic tests – description of the test and the testing protocol
□ Description of the comparison(s)
  • For medications and other treatments/therapies – similar to above
  • For diagnostic studies, description of the reference standard and the prevalence of disease in the study population
□ Summary of the outcome measures and description of any scales or questionnaires
□ Duration of trial or follow-up period
□ Numerical data given for all positive outcomes
□ For studies on diagnostic tests, LR+ and LR– are reported as appropriate
□ For meta-analyses, the number of trials and patients that were pooled are reported
□ Description of the outcome measure matches the numerical result
□ Pertinent limitations
□ Use of passive voice is limited
□ Numbers with decimals are rounded to 2 significant digits
□ Word Count (EBA & EBS) does NOT exceed 900 words

Tables:
□ Descriptive title
□ Abbreviations and other clarifications are defined in footnotes below the table
□ Citation numbers present
□ Table stands alone (understood without reading the text)
□ In the text of the paragraph, readers are referred to the table

References:
□ Each study in the Evidence Summary is cited in the reference section
□ Citations numbered in order of appearance
□ References in AMA style
□ Each reference has a level of evidence in the STEP format

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□ Author #2, including credentials, etc.
□ Program Name
□ City, State