



QUESTIONS TO GUIDE REPORTING

WHAT IS THE FINDING?

What is the distinct exposure - or treatment - in each group?

If it is a lifestyle exposure (diet or exercise), how does it translate into what you have to eat or do?

What is the outcome under consideration?

If the outcome is a surrogate (e.g. cholesterol test), is it strongly linked to patient outcomes (e.g. heart attack)?

If the outcome is a composite (e.g. combining multiple components such as heart attack, stroke, or death), can you learn about the role of each component?

If the outcome is a score (e.g., Hamilton Rating Scale for Depression), can you learn what constitutes a clinically important difference (that patients can notice) and what proportion in each group experienced it?

How big is the finding?

What is the chance of the outcome (over what time period) in each group?

Just knowing the relative risk ("0.75 times the risk") or the relative risk reduction ("25% lower") without knowing the absolute risk is insufficient. Remember that a relative risk of 0.75 can represent an infinite number of combinations (e.g. 0.003% vs. 0.004%, 3% vs. 4%, 30% vs. 40%)

Guidelines for presenting absolute risks

- Present an absolute risk – both the numerator (how many outcomes) and the denominator (how many could have had the outcome) – for each exposure group
- When the chance of outcome is < 1%, use frequencies (e.g. 1 in 1000) rather than percents (e.g. 0.1%)
- Avoid "1 in x" - which makes comparisons harder (e.g. use 2% or 20 in 1000 not 1 in 50)
- Provide context for the absolute risk

How dangerous is the disease (compare chances of getting and dying from disease)?

How does this risk compare to other risks (e.g., chance of dying from cancer vs. heart disease)?

What are the downsides of intervention: life threatening harms, bothersome side effects, inconvenience, cost?

When reporting on a beneficial treatment, make sure you look for associated harms. And report the absolute risks for these harms in the same format, for the same time frame, and the same dose.

Special case: Odds ratio overstate effects when outcomes are common (>20%).

Always ask: What are the absolute risks in each exposure group?

WHAT DOES THE FINDING MEAN?

How does the finding fit in with what is already known about this topic?

Is the finding clinically important or just "statistically significant" (i.e., $p < 0.05$)?

Is the outcome something people directly experience or really care about? Are the findings big or small?

Try avoiding the word "significant". Refer to clinical significance as "important", and statistical significance as "unlikely to be due to chance".

COULD THE FINDING BE WRONG?

If an observational study, consider how likely it is that confounding -- differences between the people in the exposure groups—might explain the finding?

How different are the exposure groups in terms of age, sex, income, illness level, behaviors like smoking?

Did the investigators attempt to deal with confounding? How much did adjustment change the finding?

If it is a negative study (i.e. findings are not statistically significant), ask whether the confidence interval includes a clinically important effect?

Special case: 5- (10-) year survival rates of patients diagnosed by different methods tell you nothing about the benefits of early detection. Don't take higher 5-year survival as evidence that early detection saves lives.

BOTTOM LINE If you can't get answers, consider skipping the story.
Use numbers (and put them in tables) and highlight cautions