### Methodology

1. How was the study sample determined?
2. How many subjects were recruited to the study? How many subjects completed the study?
3. Was the final study sample representative of the target population?
4. Was the sample size sufficient to appropriately power the study results?
5. Was this a pilot study? If so, what was being piloted?
6. What were the independent variables? How were they defined and measured?
7. What were the dependent variables? How were they defined and measured?
8. Were the conceptual and operational definitions of the variables logically consistent?
9. Were there extraneous variables in the study? If so, how were they controlled?
10. Did the researchers provide reliability and validity estimates for the measurement instruments based on from populations similar to the study sample? Were the estimates within acceptable ranges?
11. What were the study results? Did the study results include a description of the sample characteristics and answer the research questions or hypotheses?
12. Did the tables and figures present information that complimented and was consistent with the article text?
13. Did the discussion compare and contrast the findings of the study to previous research or current practice?
14. What were the study limitations? How were they acknowledged?
15. What were the study conclusions? Was the data consistent with and sufficient to support the conclusions?

### Clinical Relevance or Application

1. Were the differences statistically significant? Clinically significant?
2. What is the calculated number needed to treat (NNT)? Number needed to harm (NNH)?
3. Can the conclusions be generalized to the target population? Why or why not?
4. What are the implications of the research for practice, education, administration, and/or research?
5. Were the patients in this study similar to our patients?
6. Do the benefits of the treatment outweigh the risks (and costs)?
7. Should we change our practice based on these results?
8. What will change in pharmacy practice based on these results?