JMCP Peer Review Checklist and Guidelines

All articles and editorials in *JMCP* undergo peer review; articles undergo blinded peer review. If you would like to become a peer reviewer for *JMCP, please fill out the reviewer information page at* ***jmcp.msubmit.net***.

SUGGESTED GENERAL APPROACH TO PEER REVIEW

1. ***BE KIND.*** If you cannot be complimentary then at least be courteous. If you have to state facts that are not complimentary to the work of the authors then use a tone that is factual and pertains only to the paper and not to the authors.

2. ***BE SPECIFIC.*** It is infinitely more helpful to authors to explain why something is not understandable rather than to simply request a clarification. If you have a suggestion, be specific. The authors will then be better able to assess and respond to the suggestion.

3. ***PLAN TO SPEND SOME TIME.*** High-quality peer reviewers plan to spend between 4 and 8 hours on a single review. Direct experience in a subject area will likely reduce the amount of time necessary for a thorough review, but there is ultimately no substitute for adequate time spent in carefully reading the Abstract, looking at the tables to determine if the data are self-explanatory, and then reading the manuscript carefully and thoroughly.

4. ***TRANSPARENCY TRUMPS AGREEMENT.*** It is both possible and entirely acceptable that you or other readers will disagree with the authors' approach, methods, or interpretation. The most important goal of peer review is not maintaining adherence to particular ideas or conclusions; it is to ensure *clarity*. Study procedures should be clear, and unusual procedures should be explained. Descriptions and interpretations of results should clearly refer to the groups on which they were based (and not to other groups). Limitations should be fully disclosed.

The Pre-Review Process: Requirements *Prior to* Peer Review

After assessment of the appropriateness of the topic for *JMCP,* all manuscripts submitted to *JMCP* undergo pre-review by the editors or members of the Editorial Advisory Board before being sent to peer reviewers. The purpose of the pre-review process is to ensure that key features of the manuscript are sufficient—clear, transparent, and adequately reported—to facilitate a fair and informed evaluation by peer reviewers. Peer reviewers can do their job of assessing the quality of the work reported in a manuscript only if they are given sufficient information.
Manuscripts in which the objectives, methods, and results are clear advance more quickly to the peer-review stage than manuscripts that are not understandable. The following items are required prior to peer review and are always verified in pre-review.

1. *For studies that involve selection of a sample, JMCP requires (a) a sample selection flow chart*, such as the example shown on page 535 of **Stockl et al**. or page **W180 of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) standards**, and (b) a description in the Methods section that briefly explains the sampling criteria that were used. The flow chart should start with the population from which the sample was drawn (e.g., approximately 3 million health plan members) and show each step in the sampling process including the number (%) excluded by each criterion.

For systematic reviews and meta-analyses, JMCP requires a study selection flow chart, such as the example shown in page 248 of **Baker et al**. or Figure 1 of the **PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standards**.

2. *JMCP requires precise definitions of all variables and outcomes* measured in the study. For example: "Cost was defined as total payment to the provider, including both the plan cost and patient share." "Agreement with each statement about prescribing habits was defined as a rating of 4 or 5 (somewhat agree or strongly agree) on a Likert-type scale from 1 to 5." "The primary outcome measure, compliance, was measured as total days supply for Drug X summed across all prescriptions dispensed during the 6 months following the index date."

3. *For claims database analyses, JMCP requires specification of codes* used to represent diagnoses and procedures, and time periods during which each code was measured. (If the list is extensive, a table or appendix may be used.) For example: "Of members continuously enrolled with the health plan from January 1, 2001 through December 31, 2002, patients were selected for study if they had at least 2 claims for an antidepressant (GPI code beginning 58) *and* at least 1 claim with a primary diagnosis indicating depression (ICD-9-CM code=300.4 [dysthymic disorder]; 296.2X [major depressive disorder, single episode]; 296.3X [major depressive disorder, recurrent episode]; or 311 [depressive disorder, not elsewhere classified]) during 2001." Methods for identifying hospital events, including inpatient stays and emergency room visits, must also be specified.

4. *JMCP requires that descriptions of statistical methods and results be complete and specific. Descriptive analyses:* Specify the groups analyzed and the test used. For example: "Student's *t*-tests assessed the statistical significance of differences in pre-intervention days supply, comparing the cohorts treated with Drug A and Drug B." Descriptive tables of results should show both percentages and counts. For variables measured on a continuous scale (e.g., cost, follow-up time), tables should show mean, standard deviation, median, and range. *Multivariate analyses:* Specify the procedure, dependent variable, and independent variables. Examples: "A generalized linear model with log link and gamma distribution assessed the relationship between index treatment and total medical cost, controlling for age, insurance type (HMO or PPO, with indemnity insurance as the reference category), and Charlson comorbidity score." "A logistic regression analysis in which occurrence of hospitalization (measured as a binomial) was the dependent variable was performed; predictor variables included age, insurance type (HMO or PPO, with indemnity insurance as the reference category), and Charlson comorbidity score."

The following items are spot-checked during pre-review. If errors are found, a more extensive check is typically performed:

1. Citations to previous work should be primary, not secondary, references and should support the statement made in the text. For example, for the statement that "in Disease A, Drug X is more efficacious than Drug Y," the editors will verify that the source(s) cited for the statement investigated Disease A and produced finding(s) that Drug X was superior to Drug Y.

2. Mathematical calculations should be accurate, both within tables and comparing tables to text. For example, numbers should sum to totals. Percentages should be verifiable (cell counts should be shown) and accurate. Statements in the text should match to the tables (e.g., if the text indicates that a rate is 20% higher for a group, the editors spot check to make sure that the numbers in the tables reflect a 20% difference).

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JMCP PEER REVIEW CHECKLIST

ABSTRACT

1. Are the Background and Objectives clear and consistent with what is already known about this topic?
2. Are the Objectives achievable given the data used by the authors?
3. Are the study population/sample and outcome measures consistent with the Objectives?
4. Do the Results match the outcome measures? All outcome measures that are reported in the Abstract Results should be defined clearly and succinctly in the Abstract Methods.
5. Do the Results include absolute as well as relative values (e.g., “rates of 20.0% and 30.0%” instead of simply “50% higher”)?
6. Is the Conclusion supported by the Results, and does it match the Objectives?

BULLET POINTS

7. Do the bullet points represent pithy, quantitative, key takeaway messages?
8. Are the “what is already known” bullet points accurate, quantitative, and thorough?
9. Do the “what this study adds” bullet points represent key findings of the present study, stated in a quantitative manner that informs the reader?

TABLES AND FIGURES

10. Are the tables and figures understandable without reading the manuscript?
11. Are the study group characteristics quantified clearly (generally Table 1), including the use of statistical analysis and *P* values to show differences between subgroups?
12. Does the primary data table (generally Table 2) show the key outcome measures with the results of statistical analysis reported for each of the between-group differences?

INTRODUCTION

13. Is the problem described clearly in light of what is already known about the study topic?
14. Do the authors justify the need for this study, and does this research address that need?
15. Is this need relevant to managed care?
16. Are the references accurate and in agreement with the statements made in the manuscript? "Single Citation Matcher: under "PubMed Services" at the National Library of Medicine is a tool that can be used to confirm the accuracy and relevance of the references: http://www.ncbi.nlm.nih.gov/entrez/query/static/citmatch.html.
17. Are the references primary or secondary? The references should generally be the original studies rather than narrative or other reviews or journal supplements.

METHODS

18. Are the study population/sample and outcome measures consistent with the Objectives?
19. Is a randomized control group used? If not, is there an adequate comparison group (a group that is equivalent to the study group of interest except for the key independent variable or intervention)?
20. Are there potentially confounding factors that might affect study outcomes? Has the design controlled for them? If not, are study results invalidated or can the problem be addressed with a Limitation?
21. Are the methods described clearly and in sufficient detail to permit a knowledgeable reader to replicate the study?
22. Are the inclusion and exclusion criteria presented clearly, and can you determine how many subjects were excluded for each criterion?
23. For decision-analytic modeling studies, are all model assumptions transparent (preferably shown in a table)? Are you able to determine the quality of the evidence that was used in developing the model assumptions?

RESULTS

24. Do the authors describe the key findings in the text and rely upon the tables and figures to present less important data?
25. Are the findings presented in the results both statistically significant and substantively meaningful? (For example, a medication possession ratio difference of 0.87 versus 0.88 is not important, even if it is statistically significant.)

26. Is the description of the results consistent with the study methodology (e.g., authors refer to the specific group, time period, or other key details in describing the study findings, so that readers understand the findings clearly)?
27. Do the authors present absolute values for the outcome measures, rather than referring only to relative differences? (For example, “from 20% to 30%” is much more informative than “50% higher.”)
28. To what populations are the results generalizable? Does the data presentation accurately reflect those populations, or does it over-extend?

DISCUSSION

29. Does the discussion briefly review the principal findings of the current study?
30. Is the reader informed about how these study results compare qualitatively and quantitatively with the results of other similar and relevant studies?
31. If applicable, do the authors provide possible explanations why the results of the present study do not comport with findings from other relevant studies?
32. Do the authors describe the implications of their findings? If so, are the implications consistent with the study sample, methods, and results, or do the authors “stretch” the results beyond what the study actually found?
33. After reading the discussion, does the manuscript pass the "So what" test?

LIMITATIONS

34. What other factors or variables could explain the findings and are these factors and variables addressed by the authors?

CONCLUSION

35. Does the conclusion succinctly but completely sum up the key takeaway points of the study? Does the conclusion match the objective?

TITLE

36. If the title does not clearly or adequately describe the intent of the study, suggest alternate language for the title.

OTHER CRITERIA

1. **INTEREST AND READABILITY:** The manuscript should capture and hold the reader's attention.

2. **ORDER AND LOGIC:** The manuscript should be easy to follow. The central idea is clear and supported. The organization is orderly. The manuscript flows smoothly and logically, with the sentences, paragraphs, and sections fitting together and carrying the reader forward comfortably.

3. **CLARITY AND ACCURACY:** Syntax is correct and appropriate. Technical terms are defined clearly, and jargon is minimized or absent.

Toolkit: Resources for Authors and Reviewers

In assessing the quality and transparency of a manuscript, reviewers and editors commonly refer to the following sources, on which the *JMCP* pre-review and peer review procedures are based.

Summary of guidelines for research publications	Summary of Key Guideline Documents: Standards for Conducting and Reporting Research," available in Table 3 at this link: http://www.amcp.org/data/jmcp/661-674_FairmanCurtiss-Final.pdf
Claims database studies	A Checklist for Retrospective Database Studies http://www.ispor.org/workpaper/healthscience/FinalReportRetroR.pdf
Decision analytic models	Principles of Good Practice for Decision Analytic Modeling in Health-Care Evaluation http://www.ispor.org/workpaper/research_practices/PrinciplesofGoodPracticeforDecisionAnalyticModeling-ModelingStudies.pdf
Nonrandomized studies of interventions	Transparent Reporting of Evaluations with Nonrandomized Designs (TREND) http://www.ajph.org/cgi/reprint/94/3/361
Observational studies	Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) http://www.annals.org/cgi/reprint/147/8/W-163.pdf
Randomized controlled trials	Consolidated Standards of Reporting Trials (CONSORT) http://www.bmj.com/content/340/bmj.c869.full
Statistical analyses	Miller J. *The Chicago Guide to Writing About Numbers.* Chicago, IL: University of Chicago Press; 2004. Miller J. *The Chicago Guide to Writing About Multivariate Analyses.* Chicago, IL: University of Chicago Press; 2005.
Systematic reviews and meta-analyses	Preferred Reporting Items for Systematic Reviews and Meta-Analyses: the PRISMA statement http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000097 (Note that assessment of the risk of bias in individual studies will not apply to all systematic reviews, but the quality of the studies should be taken into consideration in interpretation.) Meta-analysis Of Observational Studies in Epidemiology (MOOSE) http://jama.ama-assn.org/content/283/15/2008.long
Reporting quality improvement studies	Standards for Quality Improvement Reporting Excellence (SQUIRE): http://qualitysafety.bmj.com/content/17/Suppl_1/i13.full.pdf
Reporting results of Internet e-surveys	CHEcklist for Reporting Results of Internet E-Surveys (CHERRIES): http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1550605/?tool=pubmed
Library for health research reporting	Comprehensive lists of the available reporting guidelines maintained by Enhancing the QUAlity and Transparency Of health Research (EQUATOR): http://www.equator-network.org/resource-centre/library-of-health-research-reporting/