TIPS ON REVIEWING A PAPER

As a reviewer you do not need to function as a copyeditor (i.e., grammar, punctuation). There is a copyeditor that will address these items. Your role is to 1) evaluate and assess content; 2) make recommendations to the authors that will strengthen their paper; and 3) to make recommendations to the Editor about suitability of the paper for publication in JPPT.

Before you begin the review you may want to read the paper in its entirety. This will give you a general sense of the paper, its content, and ultimate conclusions. Once you are done, you can read it again carefully in order to offer more specific comments.

One often begins with a General Comments section that tries to offer the authors some positive information. For example, thank you for sharing you experiences; the paper is important to practice; the content adds to the existing literature; the Table and Figures helpful; the paper is well written and easy to understand. Of course these have to be true. Sometimes you have to provide constructive criticism or points of concerns, but you can always thank them for taking the time to share their experiences. This if followed by more specific information designed to help the authors strengthen their submission. Negative general comments often include tips on how to improve readability, presentation of the information or sections that would benefit from more or less explanation.

Title. After reading the paper, ask yourself 'Is the title clear, does it reflect the content, and would it allow a person to accurately select the paper in a PubMed listing?

Abstract. Once you have critically read the paper, you should definitely read the abstract again. Make sure that the abstract aligns with the paper, its results, and that the conclusions are appropriate. Again, if someone reads the abstract in PubMed would they download the paper.

Example (Research article):

> **OBJECTIVE** Although acetaminophen has emerged as a therapeutic option for treating hemodynamically significant patent ductus arteriosus (PDA) in preterm infants, limited data exist on pharmacodynamics. The objective of this research is to report serum acetaminophen concentrations at steady state in infants treated with intravenous acetaminophen for PDA and to examine associations with clinical outcomes.
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> **METHODS** This retrospective study evaluated all infants admitted during the study period who received intravenous acetaminophen for the treatment of PDA. Acetaminophen dosing was 15 mg/kg every 6 hours. A serum acetaminophen concentration was obtained 4 hours after the eighth dose. Associations between serum concentrations and efficacy, assessed by ductal constriction on echocardiograms, and safety, assessed by serum creatinine and hepatic transaminases, were explored using simple linear regression.
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> **RESULTS** A total of 36 infants were included, with a median birth weight of 720 g (IQR 585–895 g) and a median gestational age of 25 weeks (IQR 24–26 weeks). The median acetaminophen concentration in the cohort was 12.3 mg/L (IQR 6.7–16.5 mg/L; range, 1.1–29.0 mg/L). Serum acetaminophen concentrations did not correlate with infant demographics, hepatic transaminases during treatment, or duct size at treatment completion. We observed ductal closure across a wide range of serum acetaminophen concentrations.
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> **CONCLUSIONS** We did not identify an association between acetaminophen serum concentrations following intravenous therapy and ductal response or hepatic toxicity.

Example (Case Report):

> *Staphylococcus aureus* is the most common bacteria associated with the development of osteomyelitis in pediatric patients. Osteomyelitis caused by methicillin-resistant *Staphylococcus aureus* (MRSA) can be difficult to safely and effectively treat. Vancomycin, linezolid, and clindamycin are commonly used to treat osteomyelitis caused by MRSA. While adult studies suggest intravenous (IV) daptomycin may by beneficial for the treatment of MRSA osteomyelitis, it is not approved by the US Food and Drug Administration for use in pediatrics, and minimal data are available related to its use in this population. This case report describes the successful use of daptomycin (8 mg/kg/dose IV daily) combined with rifampin for 5 weeks, followed by 5 weeks of oral sulfamethoxazole/trimethoprim, for treatment of acute bilateral osteomyelitis caused by MRSA in an 8-year-old male. The patient did not initially respond to the combination of vancomycin plus rifampin and gentamicin; neither did he respond to ceftaroline treatment. After initiation of daptomycin, his fever quickly subsided, his pain rapidly improved, and his inflammatory markers significantly decreased. While daptomycin was effective in this patient, additional research is needed to determine the true safety and efficacy of this drug for treatment of osteomyelitis caused by MRSA in pediatric patients.

Abbreviations. Are all abbreviations used in the paper, including tables and figures, defined.

Keywords. If you are doing a search in PubMed would you find the paper using these terms? Are there any MESH terms or keywords you would recommend the authors add? Authors are limited to 7 words.

Introduction. Does this section introduce the topic? It should not be a review of the literature, but an introduction to why this paper matters. It should close with the intent or statement of the objective(s) or hypothesis that lead to the study or to writing of the paper. For example, we retrospectively investigate the association between; We describe a 2-year old….

Methods. (Research) Do the authors provide you with enough information and sufficient detail to understand what they did? If appropriate, could you recreate the study? Are statistics included and are they appropriate? If statistical analysis was provided, did the authors use the correct tests? If you are unsure about the statistical analysis or that it supported the author's conclusion, be sure to alert the editor who asked you to review the paper.

Results. Are the finding clear and organized? Are they appropriately described and have confounding variables been considered? *Results should not be* contextually explained *in this section, but should be deferred to the discussion section*. Are tables and figures necessary, are they used in a way that enable you to better understand the results, and not duplicative of data? Have the data presented in the tables and figures been highlighted in the results section? If the paper would benefit from tables or figures, suggest the type of data that would be better interpreted if presented graphically.

Case. Is appropriate information included: history of disease and therapy, reason for admission, patient demographics, comorbidities, medications, dose and dose units, test (positive and negative findings)? Are outcomes noted? If an ADR is being reported was the Naranjo adverse reaction probability scale reported? Are there other validated tools (e.g., FACES, WAT1) that should be referenced?

Discussion. This should always be written from the context of what we already know or don't know and what was found/reported. How does the paper relate to previous publications. How do the result / case report confirm or refute previous finding? What does the paper add to the literature and what do the authors suggest as next steps to further evolve their conclusions.

Conclusion. Does this section support the authors findings? Often authors attempt to stretch their findings or minimize the importance of their finding. When possible they should make specific recommendation (i.e., dosing, monitoring) that the reader would find useful to practice or suggest additional research to be done.

References. Are the citations appropriate? You should do a brief PubMed search to determine if any important references are missing? This may require a focused search of papers published in the past 5 years.

Article Information. The main issues in this section relate to Disclosure of Conflicts of Interest, IRB approval and informed consent. Are there are concerned about financial or other conflicts of interest that might introduce into bias? Do the authors note institutional committee approval and informed consent/assent for the project?

Tables. Are they clear and understandable? Do they add to the paper? Do the numbers in the table 'add up' correctly and are they the same numbers found in the results section and abstract. Should they be included in the paper or be Supplemental items that is discoverable?

Figures. Are they clear and understandable? Do they add to the paper? Some authors will use a figure to describe demographics (number considered, number enrolled, number excused, number in each group) - does this figure add to the paper or are the author repeating information; could this information be included in the body of the paper? Should they be included in the paper or be Supplemental items that is discoverable?