**Journal Club Outline**

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| ***Background and Overview*** | | |
| **Study Citation** | Cite your article using proper formatting. | |
| **Purpose/Background** | Give a brief summary about why this study is important. You should also provide a short background on the drug, disease state, or procedure that is being evaluated.  What other related trials have been done prior to this study? Discuss any other relevant literature on the subject here. Be sure to cite these below in the reference list. | |
| **Study Objective** | What do the authors define as the major study objective, aim, or goal? | |
| **PICO Question** | What is the PICO question for this study? | |
| ***Methods*** | | |
| **Study design** | Things to consider -   * Retrospective vs. prospective * Case control vs. RCT vs. meta-analysis * Multicenter vs. single site * Sampling (type and method) * Allocation concealment * Randomization (type and method) * Blinding (type and method) * Superiority vs. non-inferiority   *This is not an all-inclusive list.* | |
| **Population** | **Inclusion Criteria** | **Exclusion Criteria** |
| List the major and noteworthy inclusion criteria. | List the major and noteworthy exclusion criteria. Consider if exclusions are appropriate. The reason does not need to be included here, though should be a point of discussion. |
| **Funding** | Who funded the study? Are there any real or potential conflicts of interest? How are potential conflicts of interest minimized/managed? | |
| **IRB Approval** | Was this study approved by the IRB or another ethics board? | |
| **RCT-Related Methods** | Identify the methods used to complete the randomization process. Were the methods appropriate? Did the authors use stratification or blocked randomization, and were these appropriate?  Leave blank if the study is not a RCT. | |
| **Observational Study-Related Methods** | What was done to ensure similarity between intervention and control groups (reduce confounding bias)?  Were groups clearly defined and were there clear inclusion/exclusion criteria?  How did the authors handle missing data?  Leave blank if the study is not an observational study. | |
| **Intervention** | What was the intervention?  What was the dosing regimen for the study drug (e.g., dose, route)?  What were the characteristics of the medication – smell, taste, visual appearance, etc. (if applicable to blinding)  What additional rescue therapies or other treatments were given and what were the parameters to give these treatments?  Was adherence measured (how)?  How long was the intervention period?  What was the timing of follow-up? | |
| **Outcomes** | What was the primary outcome? Secondary outcome(s)?  Was the outcome(s) patient-oriented or disease oriented?  Were surrogate endpoints, tools or scales/scores used? If so, were these validated or a reasonable measure of the primary problem? | |
| **Statistical Analysis** | What statistical tests were used and were they appropriate for the population (e.g., is the data nominal/ordinal/interval/ratio, how many arms are there, is the data normally/not normally distributed). You can use a statistical flow chart to evaluate if a test is appropriate for a given outcome measure.  A priori data should also include a power analysis and information about pre-determined thresholds for statistical testing, including p-values, α/β, and thresholds for non-inferiority if applicable.  Did the study include a sample size calculation? What power was chosen and what difference(s) was that power used to detect?  (Observational studies) Was confounding controlled for? | |
| ***Results*** | | |
| **Sample** | **Sample size** | **Baseline characteristics** |
| How many participants were enrolled in each arm?  Did the authors provide reasons for patients excluded from the study and were these appropriate?  Were patients lost to follow up? | Are they well matched between treatment groups?  Are there any noteworthy characteristics of this sample that stand out to you?  Highlight any potential confounding variables if this is a non-randomized study. |
| **Results** | You may include tables and/or bullet points to describe and summarize the main results.  Be sure to include how many patients dropped out of the study and why.  Be sure to include the results of the primary and secondary endpoints, statistical significance (e.g., p-value, confidence interval, etc.), and clinical significance (e.g., HR, RR, NNT).  Address noteworthy adverse event rates (if applicable). | |
| ***Discussion*** | | |
| **Evaluation of Study Quality** | Highlight key strengths and limitations relevant to the study design. Considering using an appraisal tool (e.g., CASP, Jadad, JBI) to guide your review of the study methods. | |
| **Authors Discussion/Conclusion** | Summarize the authors’ conclusions and key takeaways. | |
| **Strengths** | What strengths did the authors identify? What additional strengths did you identify (e.g., external validity, patient-oriented outcomes)? | |
| **Limitations** | What limitations did the authors identify? What additional limitations did you identify (e.g., underpowered, lack of blinding)? | |
| **Your analysis** | **This is the most important section of your journal club. A good journal club does not just summarize the study but provides your analysis of the study!**  Write out your conclusions. You may reference other articles and how findings from those might play a role in interpreting this study. Your conclusions may be different from the authors’ conclusions, just be sure to explain/justify why they are different.  To support your conclusion(s) you should highlight key points you included elsewhere in your journal club (e.g., high internal validity, external validity/generalizability, concerns about the methods or statistics, key results).  Would you have done anything differently to conduct this study? What are potential questions to answer with future research? | |
| **Application to patient** | How would you apply these findings to patient care? What recommendations would you make based on these findings?  *Sample statement: Based on the article’s findings and findings from similar studies, most patients with an in-hospital cardiac arrest should be treated with methylprednisolone and vasopressin in addition to standard treatment to increase their likelihood of ROSC. Patients with an out-of-hospital cardiac arrest should continue to receive standard treatment. Further research is needed to evaluate the impact of these treatments on survival with good neurological outcome and their role in patients with out-of-hospital cardiac arrest. (GRADE – Moderate / Level-of-Evidence – 1b)* | |

**References:**

1. [citation for the study your journal club is focused on]
2. [citation for additional study(ies) included]