

## **Journal Club Curriculum**

**Faculty Lead:** Chris Bernheisel

### **Goals:**

At the end of residency, the resident will be able to:

1. Lead a group lecture utilizing adult learning theory to provide an effective and interactive learning session.
2. Critically review studies and incorporate applicable results in their patient care.

### **Methods:**

Each first year resident will be assigned to lead a 45 minute Journal Club as part of the conference series. Prior to the year starting, the Conferences Chief in conjunction with the faculty lead will develop an overall schedule along with assigning a faculty mentor. Each resident will be assigned a date and the objectives they are to cover.

One month prior to the Journal Club, the intern is to contact the faculty lead and discuss the format of the journal club and begin searching for potential articles. One to two weeks prior to the JC, the intern should have identified an article and will write 2-4 objectives for the JC based upon the overall curriculum objectives. The faculty lead will provide feedback to the intern on the objectives and assist in developing a lesson plan for the JC. The intern is expected to review the final lesson plan with the faculty lead prior to the JC.

### **Feedback:**

Residents will receive informal, formative feedback during each step of the process and a written milestone based evaluation at the complete of the presentation by the faculty lead and also from the learners.

## **Objectives**

### **Goal 1: Teaching**

1. Create action based objectives that are content pertinent.
2. Develop an Educational Plan for the journal club which includes:
  - a. Measurable, actionable objectives
  - b. Methods that incorporate multiple senses and different learning styles
  - c. Formative assessments
3. Effectively use technology (such as powerpoint, nearpod, or prezzi) and/or the white board in a manner that enhances the presentation and learning opportunities for the audience.
4. Develop resources for future reference for the learners (handouts, evernote, etc).
5. Engage learners through a speaking style that demonstrates enthusiasm, clarity, and energy.

### **Goal 2: Evidence Based Medicine**

1. Identify the type of study, including whether it is observational, prospective, retrospective, and controlled.
2. Compares and contrasts the various study designs, describing the strengths, weakness, and potential bias.
  - a. Case Control Study

- b. Cohort Study
  - c. Randomized Control Study
  - d. Meta-analysis
3. Identifies pros and cons of various study designs, associated types of bias, and patient-centered outcomes
  4. Explain in simple terms the following:
    - a. Sensitivity
    - b. Specificity
    - c. Risk
    - d. Risk Ratio
    - e. Odds Ratio
    - f. Hazard Ratio
    - g. Absolute Risk Reduction
    - h. Relative Risk Reduction
    - i. Number Needed to Treat and Number Needed to Harm
    - j. Likelihood Ratio
    - k. Positive Predictive Value
    - l. Negative Predictive Value
    - m. Intention to treat
    - n. Confidence Intervals
  5. Use Bayesian Diagnostic Reasoning to provide post-test probability for a patient and apply in patient care.
  6. Describe the different types of outcomes reported, comparing their strengths and weaknesses:
    - a. Primary Outcome
    - b. Secondary Outcomes
    - c. Composite Outcome
  7. Compare and contrast non-inferiority studies vs equivalence studies vs superiority studies.
  8. Using resources available (apps etc) calculate the following:
    - a. Sensitivity
    - b. Specificity
    - c. Risk
    - d. Risk Ratio
    - e. Odds Ratio
    - f. Hazard Ratio
    - g. Absolute Risk Reduction
    - h. Relative Risk Reduction
    - i. Number Needed to Treat and Number Needed to Harm
    - j. Likelihood Ratio
    - k. Positive Predictive Value
    - l. Negative Predictive Value
  9. Without the use of a POC tool or calculator, calculate:
    - a. Absolute risk reduction
    - b. Number Needed to Treat
    - c. Number needed to harm
  10. Explain and defend why a study may or may not change your own personal practice.