

Inova Fairfax Hospital
Journal Club: Evidence-Based Medicine and Clinical Research
2023-2024

Course Directors:

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Overview:

An understanding of evidence-based medicine and clinical research are vital competencies of today's medical students and physicians of all experience levels. This Journal Club will not only teach residents how to understand medical literature, but also improve critical interpretation of the medical literature. Evidence-based medicine concepts are explored and this course will serve as an introduction on how to properly design and carry out clinical research as an investigator.

Journal Club Objectives: Upon completion, the resident will be able to:

1. Define evidence-based medicine while understanding its terminology and concepts. (session 1)
2. Articulate a well-structured clinical question. (sessions 1, 9 and 10)
2. Apply knowledge of study design and statistical methods to critically appraise the medical literature. (sessions 2, 3, 5, 6, 7, 8)
4. Appropriately interpret results expressed as likelihood ratios, sensitivity, specificity, absolute risks, relative risks, odds ratios, confidence intervals, risk reductions, number needed to treat, and effect sizes. (sessions 2, 3, 5, 6, 7, 8, 9 and 10)
5. Accurately identify sources of bias and their impact on studies' conclusions. (sessions 2, 3, 4, 5, 6, 7, 8, 9 and 10)
6. Appraise the quality of systematic reviews and meta-analysis while gaining an appreciation for the challenges associated with performing and interpreting these types of investigations. (sessions 9 and 10)
7. Integrate and apply evidence within a clinical setting. (session 11)
8. Succinctly present an article with assessment of its validity. (all sessions)

Sessions:

Session	Date	Topic
1	July 19	Overview of Evidence-Based Medicine
2	August 16	Treatment – Randomized controlled trial (medication-based)
3	September 20	Treatment – Randomized controlled trial (behavior-based)
4	October 18	Patient-Reported and Functional Outcomes
5	November 15	Diagnosis – Diagnostic Testing
6	January 17	Diagnosis – Screening
7	February 21	Harm – Exposure
8	March 20	Prognosis – Risk Factors
9	April 17	Scoping/Systematic Reviews
10	May 15	Meta-Analysis
11	June 19	Clinical Practice Guidelines and Summary