

Journal Club 102: Enhancing Evidence-Based Medicine Learning Using a Virtual Journal Club

We developed a virtual journal club (VJC) for internal medicine residents and faculty as an alternative to the regularly scheduled journal clubs. We expected the VJC to increase journal club participation by overcoming time and geographic barriers to attendance resulting from duty hour limits and dispersion of residents across multiple clinical sites, and to enhance evidence-based medicine skills.

The VJC is part of the department's intranet website and is managed by the chief medical residents. The VJC users read, review, and post comments on a blog-like feature. Each month, a senior resident prepares a critical appraisal of a recent article following the user guide format from the *Journal of the American Medical Association*¹⁻⁵ with the mentorship of a faculty member. Once the appraisal and a link to the original article are posted to the website, residents and faculty are notified by e-mail. Educational goals are determined depending on the type of article and are discussed in detail in the critical appraisal, with links to definitions and explanations in the file and on the website's main page.

We monitored VJC website usage from July 2008 through November 2009, including the number of visits, comments on the blog, and downloads of articles and critical appraisals. To evaluate user perceptions of the VJC, we surveyed internal medicine residents (n = 116) and faculty (n = 31) on whether the VJC achieved its educational goals.

Results showed VJC website visits of approximately 307 per month (range 31–570), blog comments of 10 per month, article downloads of 97 per month (range 20–140), and critical appraisal downloads of 114 per month (range 20–120). As typical for new technology, the VJC received an initial enthusiastic response. However, after 3 months, enthusiasm faded, and indicators of participation decreased. To achieve our goal of maintaining a successful VJC, starting in January 2009, we made the VJC a part of the academic hour, a block of protected time in the ambulatory clinic used for didactics. The VJC participation rates increased to approximately 100 downloads per month for articles and critical appraisals, and that rate was maintained for the remainder of the tracking period.

Survey respondents from 27 residents and 5 faculty physicians showed that most agreed the VJC discussion was educationally valuable (84% agreed or strongly agreed),

that the VJC helped keep them up to date with recent medical literature (78% agreed or strongly agreed), and that the VJC improved their critical appraisal skills (72% agreed or strongly agreed).

Since incorporating the VJC into the ambulatory curriculum and dedicating specific time to review with the faculty, it has been very popular. Residents and faculty review articles before the educational session and spend the hour discussing the methodology, statistical concepts, and how to incorporate that knowledge into daily practice. Blog comments have been robust, with nearly every preceptor group commenting with each monthly session. Awarding continuing medical education credits to faculty who participate via the blog has helped with that.

This virtual setting for education complements the traditional journal club in residency training and helps enhance the evidence-based medicine learning experience, which may lead to improvement in skills.

EYAD KAWAR, MD

Former Chief Medical Resident at Henry Ford Hospital; currently a Teaching Fellow in pulmonary and critical care medicine, Alpert Medical School of Brown University

ENRIQUE GARCIA-SAYAN, MD

Former Chief Medical Resident at Henry Ford Hospital; currently a Cardiology Fellow at Rush University Medical Center in Chicago.

KIMBERLY BAKER-GENAW, MD

Internal Medicine Residency Program Director at Henry Ford Hospital

SEAN DRAKE, MD

Internal Medicine Residency Associate Program Director at Henry Ford Hospital

SCOTT KAATZ, DO

Internal Medicine Residency Associate Program Director at Henry Ford Hospital

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