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Abstract

Healthcare practice is increasingly focused on delivering care that is based on published research evidence. Staff development nurses can institute journal clubs to teach nursing staff critical appraisal of research articles and ways to translate research findings into clinical practice. Unfortunately, attending meetings regularly is often a challenge for nurses, and relatively few have the knowledge and expertise to adequately critique research articles. One way to bridge the limitations of accessibility and limited research expertise of journal club members is to establish a virtual journal club. This article describes one hospital's experience with developing a virtual journal club.

Healthcare practice is increasingly focused on delivering care that is based on empirical evidence or research findings published in the literature. As the primary providers of direct patient care services, nurses need to use research evidence when developing guidelines, policies, and procedures in their individual practice settings (Seymour, Kinn, & Sutherland, 2003). Numerous authors have suggested that staff nurses have difficulty interpreting research articles because the articles have complex, academic, and statistical language (Beke-Harrigan, Hess, & Weinland, 2008; Seymour, Kinn, & Sutherland, 2003; Valente, 2003). The implementation of a journal club is one approach to help nurses integrate research findings into clinical practice or provide evidence-based care.

Advantages of a Journal Club

Journal clubs serve a useful purpose in both educating nurses and improving clinical practice. Journal clubs can be used to teach nursing staff critical appraisal of

research articles and how research findings can be translated into clinical practice (Seymour, Kinn, & Sutherland, 2003). Journal clubs offer the opportunity for lively discussion between participants regarding the quality of the research and possible application in their clinical agency (St. Pierre, 2005). This interaction and discussion of a manuscript during a journal club can enliven otherwise dry science (Wright, 2004). Journal club participants can use the discussion not only to learn and discuss clinical issues but also to exercise teambuilding (Luby, Riley, & Towne, 2006). Journal clubs can also be used to help nurses develop professionally by encouraging them to question traditional nursing practice and seek research-based solutions to clinical problems. Most importantly, nurses can use journal clubs to translate research findings into information that can improve the care of patients (Seymour, Kinn, & Sutherland, 2003).

Limitations of Journal Clubs

Implementing a journal club has some limitations. Getting a critical number of nursing staff to attend a journal club meeting has proven to be challenging (Dobrzanska & Cromack, 2005). In reality, nurses work around the clock, and nurses in the clinical setting often cannot find a convenient time and location for all interested clinicians to meet. Limited staffing makes it challenging for nurses on duty to leave patient care responsibilities to attend journal club meetings (Dobrzanska & Cromack, 2005). A second limitation of journal clubs is that the members, primarily nurses prepared at the baccalaureate or associate degree level, may not possess the research expertise to provide a sophisticated critique of a research-based manuscript. Without this expertise, a critical review of a research-based manuscript will be difficult and likely will not provide insight into clinical application of research findings.

Solution: Virtual Journal Club

One way to bridge the limitations of accessibility and limited research expertise of the attendee is to establish a virtual journal club (VJC). A VJC is offered via the institution's intranet, where members can read a manuscript and an expert critique of the manuscript and then discuss these materials with other members of the VJC at their convenience. The VJC uses a blog format, which allows for text-based interaction between participants.

The VJC at this institution was established by the Nursing Research Council within the institution in an attempt to reap the benefits of a journal club, including increased use of empirical evidence to support clinical practice for nurses, while addressing the limitations of a face-to-face journal club meeting. The VJC is not a “club” in the strict sense. Any nurse can participate in any VJC event at any time, so membership is always open and never restricted, and participants vary depending on the subject matter of the posted research.

How to Implement a VJC

To begin, nurses can work with information systems Web developers to determine the most efficient way to launch the VJC on the intranet portal. At this organization, Microsoft SharePoint was used for the VJC application because it allows for posting files and creating links and blogs. As Figure 1 indicates, there are a number of steps to developing a VJC activity.

Find an Article of Interest

The first step in the VJC process is for the Nursing Research Council to identify an area of clinical interest, which may come from a number of sources including clinical problems identified by the council members, issues identified by other practice-related committees in the institution, or initiatives identified by the institution’s administration. Some previous areas of clinical interest have included urinary infection related to indwelling catheter use, pain management of myringotomy patients, and management of verbal abuse of nurses by patients and family members. Once the area of clinical interest is identified, a member of the Nursing Research Council or another interested clinical nurse reviews the literature, identifies an appropriate research-based manuscript addressing the clinical area of interest, and completes a critique of the manuscript. This review of the literature can be facilitated by the institution’s medical library.

Critique the Article

To facilitate the critique and include key points of each manuscript, the Nursing Research Council developed a standard critique outline, which the critique author uses to evaluate the manuscript (see Figure 2). The nurse who submits a

manuscript and critique becomes the “author” of the critique and the discussion questions and the “owner” of the VJC learning activity. Prior to being posted on the Web site for other nurses to read, the manuscript and critique are reviewed by a research consultant who has expertise in research methods and statistics to evaluate the validity of the author’s critique and to assist the author in interpreting complex research-related concepts or statistical analyses. This consultation also teaches the author how to conduct a critical evaluation of a research-based manuscript. The consultant should hold a master’s or doctoral degree and be experienced in reading and critiquing nursing research manuscripts. This may be the hospital’s research coordinator, a clinical nurse specialist, or a nursing research consultant. Institutions that do not have in house research experts may wish to collaborate with a local school of nursing for this review service. The time commitment is minimal, and this activity offers both parties an opportunity to strengthen their working relationships.

Develop Discussion Questions

Once the consultation is completed, the author develops three to four questions to stimulate thought and discussion. The discussion questions are unique to each article and are designed to stimulate discussion about the manuscript and clinical application of the findings. These questions might include the following: (a) How would you apply the findings of this manuscript in your clinical area? (b) What were some of the limitations of the study? (c) How would you replicate the study in your clinical area? (d) Is the evidence strong enough to suggest a change in practice at the hospital?

Post the Article on the VJC Site

The portal administrator posts the manuscript and the critique, along with the discussion questions, on the institution’s password-protected VJC intranet Web site, which only nurses employed at the institution can access. All nurses receive an e-mail announcing the posting of a new manuscript and critique on the VJC site. Fliers are developed, and advertisements are placed in the nursing newsletter to further promote the new VJC posting. Once posted, nurses can read the manuscript and the critique and participate in the blog discussion of the questions. They can post their own comments or respond to the comments of other participants. Often, the

comments spark lively debate between participants and generate creative ideas about how practice might be changed.

Follow Up and Evaluate

The author of the critique becomes the owner of the VJC posting and is responsible for monitoring the comments and forwarding suggestions for evidence-based changes in clinical practice to the appropriate decision-making body (e.g., leadership, council). Approximately 6 months after the initial posting of the manuscript and critique, these materials and all comments on the blog are reviewed for continued viability and interest and are either reposted or archived on the institutional Web site.

There are incentives for nurses to participate in the VJC. Virtual journal club members who read the manuscript, review the critique, post comments on the blog, and complete the course evaluation receive continuing education credit for participating. In addition, VJC members who participate in a significant number of VJC postings and those who write critiques and own postings receive credit toward achieving their desired Nursing Career Advancement Program career ladder level. Finally, as a result of the VJC, the Research Council can document a specific method that results in evidence-based clinical practice, which is an important component of applying for and maintaining the American Nurses Credentialing Center Magnet designation.

Implications for Staff Development

The VJC has several advantages over a traditional face-to-face journal club as a staff development strategy:

1. It is accessible anytime and anywhere, so nurses from all areas and on all shifts and schedules can participate. It is frequently a struggle for staff development specialists to find efficient and effective ways to get education to off-shift and part-time employees. The VJC solves that problem by being accessible from home as well as from work, whenever the nurse has time to participate.
2. The VJC is appealing to both nurse generalists and specialists. Articles are categorized by clinical interest area when posted so that VJC members can

quickly find articles of interest. Articles of interest are solicited from nurses in all areas, representing all specialties to provide exposure to, and to increase knowledge in, a broad range of clinical topics.

3. The VJC offers a nonthreatening environment for nurses to learn to read and interpret clinical research at their own pace. They can take advantage of the critiques written and/or reviewed by an experienced researcher and learn the process of critical appraisal of research. This approach attempts to demystify research jargon and statistical information for the VJC members without requiring formal training in these topics.
4. The VJC offers nurses the opportunity to share their opinions and ideas with others who have similar interests but who might be on different units or shifts. This broadens their perspectives, provides connectivity with others, and offers a variety of ways to view the material. This exchange of ideas affords nurses the opportunity to explore new ways of looking at pertinent nursing issues while challenging old thinking.
5. The VJC offers a self-study option for continuing education. Because the nurse must make a meaningful entry to the blog that addresses the discussion questions, as well as the comments of others, there is evidence of critical thinking and active participation in the learning activity. This is in contrast to many self-learning activities that include little or no demonstration of actual learning. The nurses must also complete an evaluation of the VJC posting, thus providing feedback as to the efficacy of the article and the VJC as both a learning tool and an avenue for discussion about evidence-based practice.
6. The VJC appeals to younger nurses who find blogs an appealing means of communication. Engaging younger nurses in the active review of the literature, and then discussing it with colleagues, develops their clinical reasoning skills and helps them develop a questioning approach to their practice in the future. A VJC is a viable way of addressing intergenerational learning differences in educational planning. Furthermore, it allows for multigenerational discussion of topics without intimidation or prejudice. Educators can discover much about the topic and the culture of the organization by reading the comments of the participating staff.
7. When bedside nurses agree to write a critique and own a posting on the VJC,

they receive a great deal of personal mentoring and professional education. They learn how to critically evaluate a research article with direct assistance from a research expert and to transform the article into a teaching tool by developing discussion questions and writing objectives. Over the next several months, the owners are mentored to systematically evaluate the quality of the posting as well as to monitor the commentary for opportunity to influence practice. They learn firsthand the process of taking an idea through the evidence-based practice process, often seeing change occur. They emerge from the experience feeling proud and confident in their new skills.

Outcomes

Since the inception of the VJC in 2008, 24 articles have been posted covering perioperative, critical care, neonatal, psychiatric and general pediatric nursing. Initially, the VJC was advertised in the monthly nursing newsletter, in monthly e-mail messages to staff, and in verbal reports at various council and leadership meetings. Inclusion of the VJC as an avenue for meeting Nursing Career Advancement Program career ladder requirements boosted participation significantly. To date, the 24 posted articles have generated 715 nurse comments. Comments posted per article ranged in number from 4 to 52 (M =30 comments). Content analysis was conducted reviewing the comments on seven of the posted articles in order to assess the effectiveness of the VJC in facilitating practice change (Lehna, Berger, Truman, Goldman & Topp, 2010). The study concluded that comments from the VJC can be used to gain insight about issues important to the staff and concerns they have about practice change. Knowing this can help change agents anticipate and address concerns before they become barriers to change.

Nurses who report high satisfaction with the VJC have expressed an appreciation of the opportunity to participate on their own time and at their own pace. Participants consistently report value in reading other nurses' comments and state specific ways that they plan to use the information in their daily practice. To date, several of the articles have provided evidence to support a practice change, and another led to a more extensive research project at the hospital.

Future of the VJC

The popularity of the VJC continues to increase as more articles of interest are posted. There is great opportunity for advancement of evidence-based practice and engagement of nurses in reviewing and discussing nursing literature through this venue. The key to success will be in introducing more nurses to the blog, systematically evaluating its effectiveness, and ensuring that evidence-based practice change occurs as appropriate. Goals for the future include increasing the number of participating staff, soliciting articles and critiques from other governance councils related to current issues or impending practice changes, and mentoring bedside nurses in the development and of a posting to the VJC.

Conclusion

Nurses are striving to provide better patient care through basing their practice on research-related evidence. One method of facilitating this process has been through establishing a journal club using a face-to-face format. Although effective in other healthcare professions, this approach to using research to improve clinical practice has met with limitations in nursing. Developing a VJC is one approach to addressing these limitations and to facilitating critical review of research to change nursing practice based upon empirical findings.

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Appendix

Figure 1:

Steps to Virtual Journal Club

Step	Activity	Approximate Time
1	Nursing Research Council identifies a clinical area of interest.	1 hour
2	Member of the Nursing Research Council volunteers to identify and critique a research manuscript which will address the clinical area of interest.	5 minutes
3	The Nursing Research Council member reviews the literature and identifies a research-based manuscript relevant to the clinical area of interest.	1 hour
4	The Nursing Research Council member reads the research-based manuscript and completes a critique of the manuscript (see Figure 2).	3 hours
5	The manuscript and the completed critique are evaluated by a research expert (Director of Education & Research or Outside Consultant) in cooperation with the Nursing Research Council member who created the critique. Revisions are made to the critique as appropriate.	1 hour
6	The Nursing Research Council member creates 3-4 questions to stimulate discussion of the research and its applicability to practice at the hospital.	30 minutes
7	The continuing education administrator creates a file, assigns a number, and completes required documentation to provide CE credit for the VJC activity.	2 hours
8	The research-based manuscript and the critique are posted on the VJC, along with discussion questions and continuing education information. The VJC is a password protected intranet site hosted by the hospital.	30 minutes
9	Nurses are notified by e-mail, flier, and notice in the nursing newsletter that a new research-based manuscript and critique are available for review.	30 minutes
10	All nurses who are interested in the clinical area or the content of the manuscript can choose to read the manuscript and critique and consider the discussion questions.	30 minutes
11	Participants can post comments regarding clinical application of the manuscript on a comments blog below the critique. VJC members can also respond in this blog to previous VJC member's comments. Comments serve as a means of discussion of the research and its applicability.	30 minutes
12	Participants who wish to receive continuing education credit for the self-learning activity can complete an evaluation of the offering and be awarded up to 1 hour of credit.	10 minutes
13	Six months following the initial posting of the manuscript and the critique, all materials related to the manuscript are reviewed and either kept active for another six months or archived on the site.	30 minutes

VJC = virtual journal club; CE = continuing education.

Figure 2:

Critique Outline For Research Manuscripts

- I. Title: population, variables, intervention
Authors: names, titles, departments, and professions
Institution: location
- II. What is the problem being addressed?
- III. What are some conclusions from the literature, theory &/or personal experience of the investigators?
- IV. Purpose of the study:
Describe, Relate/associate/correlate/predict, or Determine if groups are different
- V. Research Questions/Hypotheses/Aims
- VI. Methods
Sample includes/excludes
Data collection
 - What was collected and how?
 - How many times was it collected?
 - Validity/reliabilityIntervention
 - Was an intervention administered?
 - What was done by whom, to whom, where and how many times and why?
- VII. Analysis
 - Describe
 - Relate/associate/correlate/prediction
 - Determine if groups are different
 - Statistical significance ($p < .05$)
- VIII. Conclusion
 - Was the problem addressed?
 - Were the questions, hypotheses or aims answered?
 - Recommendations for further study or for practice
 - Are there any limitations?
- IX. What is the personal relevance or potential impact of the knowledge for my practice?