



# Virtual Journal Club Connects Evidence to Practice

## *An Analysis of Participant Responses*

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Advancing evidence-based practice in hospitals can be a challenge. To address this issue, a virtual journal club (VJC) was developed using available intranet technology. Research manuscripts are posted along with professional critiques and discussion questions. Comments from nurse VJC participants are reviewed by the hospital's nursing research council and analyzed for practice implications. Recommendations for practice change derived from the analysis are forwarded to the appropriate decision-making body for consideration. This process closes the loop ensuring that the VJC not only exposes the nursing staff to scientific evidence to support changing their practice but also may lead to institutional policy changes that are based on best practice evidence in the literature. The authors discuss the VJC and the outcomes of an evaluation project.

A rapidly changing healthcare environment makes it critical for nurses to have access to scientific literature and accurate analysis of research findings to provide best practice. Ensuring that nursing practice is current or cutting edge is a lofty goal that requires individual knowledge and skill of nurses, a strong organizational structure and practice model, and a

passion for continuous quality improvement and evidence-based practice. In this 263-bed Magnet®-designated pediatric hospital, nurses collaborate with faculty from the local university school of nursing, using a well-established governance model to connect research evidence to practice change through the online virtual journal club (VJC).

### **Journal Clubs**

Journal clubs have been used to promote evidence-based nursing practice, improve the quality of patient care, promote an increased awareness of research, and educate participants about research utilization.<sup>1-3</sup> Traditional journal clubs, in which nurses physically meet to discuss an article of interest, have some significant limitations. It is often difficult to find a day and time that are convenient for members of the club.<sup>4</sup> Nurses in different settings may require different approaches to accommodate their workflow and availability.<sup>5</sup> In addition, journal clubs that are limited in scope or membership, to a particular unit or shift, for example, may not benefit from the diverse discussion that could occur with a broader audience. Finally, members of a journal club may not be competent in all aspects of critical analysis of a research article. Multiple articles suggest that staff nurses have difficulty interpreting research articles because the articles have complex, academic, and statistical language.<sup>3,6,7</sup> Sometimes, the failure of a journal club is due to lack of a leader to teach, support, and coach members.<sup>8</sup>

To optimize the benefits of journal clubs, while minimizing the limitations, the VJC uses an online

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approach for delivery. The VJC is an intranet-based application that uses a blog format to post research articles and critiques, as well as invite text-based discussion among participants. Like traditional journal clubs, the VJC brings current research articles to a group of nurses for review, critique, and discussion. Nurses learn to understand research methods and terms by reading critiques and to focus on key ideas or outcomes through the discussion questions. They also have a forum for discussion of possibilities for improved practice with nursing peers from a variety of patient care areas. The VJC overcomes the usual limitations by being open to all nurses at the hospital, at any time, on any computer at work or at home, and offering expert critique by the endowed chair for nursing research or a seasoned member of the research council.

An article for the VJC is selected by a nurse based on current interest in a topic, a need to address a practice problem, or an opportunity to improve care. Articles are accessible to nurses through the Virtual Medical Library, an online subscription service, found on the desktop of all computers in the hospital. Only articles accessible through the online subscription service may be posted on the VJC. Occasionally, more than 1 posting may relate to an important topic, such as patient-centered care or developmental care. Sometimes articles are paired with other supporting evidence to provide depth to the topic. Postings are assigned to members of the research council as part of the council work, but may be submitted by any nurse, with coaching by the research council as needed.

The nurse who selects the article becomes the “owner” of the posting and is responsible for writing a critique using a standard article review template. The owner also develops questions about the article that attempt to stimulate critical reflection by the reader on the efficacy of the manuscript and how, or if, the findings could be applied to their practice. Nurse participants respond to these questions using a blog, generating an interaction between nurses regarding the utility of the research.

Three months after the article is posted, the owner analyzes the blog comments and brings findings to the research council for follow-up, to close the practice improvement loop. Often there are recommendations for changes in practice, additional education, or future research. A complete description of the implementation of the VJC and article review criteria is currently in publication.<sup>9</sup>

Participation in the VJC is voluntary. Nurses are not compensated for their time reading and commenting on research manuscripts, unless the activity is completed during their regular working hours.

However, nurses receive continuing education credit for each VJC article, and consistent participation can earn the nurse credit toward progression in the Nursing Clinical Advancement Program (NCAP). Owning a posting on the VJC is equivalent to leading a journal club meeting and qualifies for a higher-level NCAP credit.

To evaluate the effectiveness of the VJC as a tool to connect research evidence to practice change, a retrospective content analysis was performed of the participant comments for a sample of articles over the past 2 years. Content analysis provided a way to view nurses’ synthesis of research literature for personal practice change as well as organizational implications.

### **Purpose**

The purpose of this evaluation project was to explore the comments of pediatric nurses who participated in the VJC regarding applicability of research findings to clinical practice and how the VJC could be used to make changes in nursing practice. There were 3 research questions:

1. How may participant comments inform leadership about nurse perceptions of existing practice issues?
2. How may participant comments foretell nurses’ responses to impending change?
3. How may participant comments provide direction for future nursing research or changes in nursing practice?

### **Method**

Content analysis was used to develop patterned regularities in VJC participant responses.<sup>10-12</sup> It was believed that the use of this analysis technique would support the emergence of participants’ thoughts into patterns that would then provide insight into the effectiveness of the VJC as a tool to connect research evidence to practice change (Table 1).

Fifteen pediatric peer-reviewed journal articles were posted for nurses’ review over a 2-year period. Participant responses from 7 articles met the inclusion criteria for data analysis. Inclusion criteria were that there were at least 25 individual responses to each article. It was believed responses from 25 individuals would be adequate for data saturation and for redundancy to occur. The 7 articles studied included: verbal abuse: a problem for pediatric nurses<sup>13</sup>; nurses’ perceptions of parental involvement in hospital care<sup>14</sup>; preoperative anxiety, postoperative pain, and behavioral recovery in young children undergoing surgery<sup>15</sup>; patterns of depressive symptoms in

**Table 1. Process for Content Analysis of Nurse Participant Comments**

- (1) Read and reread nurses' responses from 1 virtual journal club (VJC)
- (2) Develop preliminary codes
- (3) Sort nurses' responses into coded categories
- (4) Read and reread nurses' responses from second VJC
- (5) Develop second article analysis using preliminary codes established from first article
- (6) Revise coding schema as needed (eg, collapse or add categories)
- (7) Repeat process for nurses' responses from third through seventh articles
- (8) Examine first-level analysis of all articles by reading and rereading analysis across similar coding categories
- (9) Examine article analysis across articles
- (10) Summarize analysis across articles
- (11) Share findings with children's hospital nursing research council; incorporate any suggested changes
- (12) Meet with senior clinical nurse specialist (CNS) to examine suggested practice and research suggestions; develop summary statement for next steps
- (13) Discuss summary statement with children's hospital nursing research council
- (14) Dissemination of findings
  - (a) CNS takes practice suggestions to practice council
  - (b) CNS writes article summarizing suggestions and where findings were presented for children's hospital nursing newsletter
  - (c) Poster developed for local research day and national contests

children<sup>16</sup>; circle of excellence: does regular rounding by nursing associates boost patient satisfaction?<sup>17</sup>; facilitated tucking by parents in pain management of preterm infants—a randomized crossover trial<sup>18</sup>; and nurses' beliefs about family presence during resuscitation.<sup>19</sup>

For each of the 7 articles, there was an average of 35 participant comments (SD, 9), with a range from 25 to 45 comments. Articles were posted for an average of 484 days (SD, 130), with a range of 335 to 690 days (Table 2). The response categories are shown in Figure 1. To validate the content analysis, the university researcher shared the participant responses and emergent themes with the nursing research council, and the senior nurses on the council provided insight into the analysis. All participant names were deleted from the analysis to provide anonymity. This project was exempted by the institutional review board as it was an anonymous evaluation of existing comments with the findings being used for program change.

## Key Points and Practice Implications

### Preoperative Anxiety and Pain

Nurses' responses to the preoperative anxiety and postoperative pain article<sup>15</sup> revealed that the institu-

tion's current preoperative teaching and premedication practices are adequate in most cases in relieving preoperative anxiety in the patient and parent. One nurse wrote, "Most kids get premedication that sedates them prior to surgery, but for those who do not, couldn't we develop an arsenal of tools and techniques to employ pre-op to reduce the anxiety of both the child and the parent?" In addition, 2 key points that were recurrent in the comments were that parent anxiety has a strong impact on the child's anxiety and that attention should always be paid to adequate postoperative pain management. A summary of nurses' responses, developed by the research council, was forwarded to the Pain Task Force for information only.

### Depressive Symptoms

The article on depressive symptoms in children<sup>16</sup> generated much discussion about the increased incidence of depression in children and adolescents. Key points from the article that were repeated often in the comments were related to depression being more common in girls than boys, worse in the age group of 10 to 12 years, and manifested differently in girls and boys. Most echoed the article's point that screening for depression is an important part of the health assessment in children. One nurse said, "The article suggests screening for depressive symptoms during assessment to catch depression early. I feel that this is very feasible as we screen for problems in our current med/surgical assessment, but adding questions to be more inclusive of symptoms may allow us to catch even more symptoms of depression for treatment." Another nurse added her insight: "I feel a lot of times as nurses and healthcare providers we overlook depression in children as bad parenting or bad choices on the kid's part when a lot of times it could be the child's way of asking for help. Mental health is such a complex part of people's lives and is often overlooked."

#### Response categories identified from the content analysis

- Key points
  - Points made in the article
  - Points derived from nurses' experiences
- Importance of information to nursing practice
  - Validation of current practice
  - Suggestions for change or future practice
- Research Implications

Figure 1. Response categories.

**Table 2.** Characteristics From 7 Posted Virtual Journal Club Articles

Articles	Days Posted, n = 3,385	Participant Comments, n = 245
Verbal abuse	540	45
Preoperative anxiety and postoperative pain	690	44
Patterns of depressive symptoms	600	26
Parental involvement in care	380	25
Facilitated tucking	335	25
Family presence during resuscitation	450	38
Hourly rounding	390	42
Average (SD)	484 (130)	35 (9)

Another less prominent theme was the lack of comfort of nurses in properly assessing for depressive symptoms and a desire for education. A summary of the nurses' comments was forwarded to the education council for possible development of a nursing grand-rounds session on how to deal with the children and their family having psychological problems (eg, depression, suicide risk, and acting out behaviors) and risk factors and signs of depression in children and adolescents. The issue of the quality of the depression screening tool was forwarded to the practice council for discussion. This resulted in a review of the current policy and depression screening tool with the conclusion that the current tool was an adequate screen and met The Joint Commission standards.

### Verbal Abuse of Nurses

The article on verbal abuse of nurses by patients and families<sup>13</sup> stimulated much commentary on the incidence and severity of this problem in the hospital, some of which was emotionally charged. The perception of nurses that they were being abused by family members had been expressed through manager rounds and small group meetings, and responses to this posting validated that the problem was common and widespread. Of the 45 comments reviewed, 37 (82%) reflected the belief that verbal abuse by patients and/or families is a problem at this hospital. Some blamed the increased emphasis on patient satisfaction for the rise in abusive behavior, and many felt they would benefit from receiving education on de-escalation techniques and dealing with difficult people.

One nurse summed up what most of the others included by saying: "Through the years I have been a

nurse, it seems that the verbal abuse has increased, so I was not surprised by the high percentage of nurses who reported being victims of it. ...Parents can be stressed and take it out on those of us who are trying to make their child better. We are easy targets... Sometimes we are too focused on customer satisfaction—we allow families to dictate what times meds will be given, treatments will be done, refuse assessments and vitals and even personal care, and to speak to us in an abusive manner. This, in turn, leads to poor job satisfaction and a decline in our ability to think clearly. I would be interested to learn how to de-escalate these situations...."

To better explore this issue, a research project was undertaken to survey staff about the incidence and impact of verbal abuse by patients and families. In addition, education was provided related to dealing with difficult patients and families, including de-escalation techniques, and each unit received a book written for nurses about dealing with difficult patients and families. Additional interventions are being planned in response to the research findings.

### Parent Involvement in Care

Three themes were identified in the comments on the article on parent involvement in the care of their child while in the hospital<sup>14</sup>: (1) that parental involvement aids in the child's recovery and improves the child's psychological well-being, (2) that the experience of the nurse may impact the nurse's comfort with having parents involved in patient care, and (3) that everyone on the team must communicate openly with parents for the benefit of the child.

Individually, nurses related that they would change their practices by being less hurried when involving parents in patient care activities and by mentoring less experienced nurses in promoting parent involvement. Suggestions for future practice included standardizing what to teach parents regarding hospital care routines and how they may help in the care of their child, as well as having discussions in preceptor classes and new nurse orientation on how to orient parents to the hospital environment.

### Hourly Rounding

The article on the impact of hourly rounding on patient satisfaction<sup>17</sup> generated several comment themes. Of the 42 comments reviewed, 31 (74%) were favorable toward the practice of hourly rounding. Key points included that hourly rounding decreases patient and parent anxiety; there is decreased use of the call light; patients and families perceive they are receiving better care; and patient satisfaction and safety are improved with hourly rounding. The most common barrier cited in the comments was nurse workload.

## Facilitated Tucking

The article on facilitated tucking<sup>18</sup> stimulated discussion of both benefits and concerns about the practice. Most nurses expressed that facilitated tucking would be positive for both children and parents, by providing comfort for the child and allowing the parent to be involved in care. Five nurses commented that they felt this practice would complement other nonpharmacological pain management techniques that they use, such as skin-to-skin contact, Kangaroo care, swaddling, positioning, patting, pacifiers, and sucrose. A few nurses expressed concern that a high level of parent anxiety could have a negative effect on the child's comfort. Because of the evidence to support this practice, facilitated tucking has recently been included in a care bundle at this hospital for babies less than 1,000 g and is encouraged for other neonates.

## Family Presence

The article on family presence during resuscitation<sup>19</sup> generated diverse comments. Twenty-five nurses were supportive of having parents present during resuscitation, whereas 15 were not. Thirteen could see both benefits and drawbacks, and 8 felt that parents should be able to choose if they want to be present during resuscitation. Twenty-six felt there needed to be a designated person to support parents during the resuscitation. Family presence during resuscitation is allowed at this hospital, and no policy change is anticipated at this time.

## Future Research

Although sometimes prompted by the discussion questions to explore future research opportunities, few nurses included this perspective in their comments. There were only 3 suggestions for implementing research at this hospital. From the article on preoperative anxiety,<sup>15</sup> one suggestion was to compare differences in preoperative pain and anxiety scores to postoperative pain and anxiety in 3 groups of children undergoing surgery: those having an education intervention (preoperative teaching), those having child life intervention, and those receiving no intervention (control group). Variables could be age, sex, race, type of surgery, postoperative medication use, and pain and anxiety scores on age-appropriate instruments.

From the article on parent involvement in care of their hospitalized child,<sup>14</sup> the suggestion was made to examine change in new nurses' perceived confidence over time and how that relates to their ability to involve and inform parents in the care of their

child while in the hospital. It was also suggested to monitor unit patient satisfaction scores during the same period to assess if a relationship exists between nurse self-confidence, involvement of parents, and parent perception of quality of care.

From the article on verbal abuse,<sup>13</sup> a nurse commented on the small sample size in the study and suggested conducting similar research within this hospital. As previously mentioned, a survey of nurses was conducted to determine the frequency of verbal abuse and nurses' responses to being verbally abused.

## Discussion

The purpose of this evaluation project was to explore the comments of VJC participants to determine how nurses viewed research findings in terms of their practice and how the VJC could be used to make changes in nursing practice. In answer to the first of 3 research questions—"How may participant comments inform leadership about nurse perceptions of existing practice issues?"—content analysis suggested that participants used the forum to reflect on the research topic, incorporate their experience, and express their thoughts. Participant comments from the articles on preoperative anxiety,<sup>15</sup> verbal abuse,<sup>13</sup> depressive symptoms,<sup>16</sup> and parent involvement<sup>14</sup> all provided insight into nurses' views about current practice issues.

In answer to the second research question—"How may participant comments foretell nurses' responses to impending change?"—findings indicated that nurses express their opinions and feelings, both positive and negative, regarding the research topic, thus informing leaders and change agents of potential problems or obstacles to successful implementation in advance. This was demonstrated in the comments in the articles on family presence during resuscitation,<sup>19</sup> facilitated tucking,<sup>18</sup> and hourly rounding.<sup>17</sup>

The final research question was: "How may participant comments provide direction for future nursing research or changes in nursing practice?" Future research opportunities were rarely identified, as previously mentioned. However, nurses more readily provided suggestions for practice changes such as improving depression screening among children and adolescents, identifying a key person to attend to parents during resuscitation, and teaching parents about hospital routines and how to assist with care. Several comments were suggestive of a need for staff education and support. These included improving staff education related to managing verbal abuse, identifying suicide risk and depression, and orienting new nurses on how to involve parents in care of their child.

## Conclusion

The VJC has become an effective tool for introducing or facilitating practice change. The online conversations reflect knowledge, experience, and critical thinking about the topics of the research and can be used to gain insight about issues the staff deem important and concerns they have about practice change, so these can be addressed during the change process.

The VJC can be used to educate nurses about current best practice or impending practice change by providing the “why” behind the “what.” The generation of discussion promotes critical thinking, while the blog allows for transfer of knowledge and wisdom from more experienced nurses to their eventual successors. Through review of articles and critiques, nurses learn about the research process, research terminology, and various research methodologies.

Nurse leaders and educators can maximize the usefulness of a VJC by purposefully selecting articles related to current practice or impending change, encouraging participation by many nurses from a variety of areas, and analyzing the content of blog comments to inform decision making and planning for change.

Nurse executives at this Magnet-designated hospital have been very supportive of the VJC as a tool for advancing evidence-based practice and helping nurses access current nursing research literature. The VJC is a resource nurse executives can use to meet several of the requirements for Magnet designation within the components of new knowledge, innovations, and improvements (NK), exemplary professional practice (EP), and structural empowerment (SE).<sup>20</sup> It provides a structure and process to evaluate existing nursing practice, based on evidence, and to translate new knowledge into nursing practice (NK6 and NK7). It can also provide a mechanism to develop, expand, and advance nursing research (NK4). It provides one way to demonstrate that nurses have ready access to, and routinely use, current literature to support autonomous practice (EP19). It is also an innovative way to develop and provide continuing education programs for nurses at all levels and settings (SE5).<sup>20</sup>

The role of the nurse executive in supporting and facilitating the VJC begins with removing barriers and providing resources. The first hurdle to overcome may be gaining permission for nurses to upload information to the intranet. The information services (IS) department at this hospital system was eager to build the VJC, as one of their goals was to stimulate use of the intranet. However, some IS departments are reluctant to allow others to post to their portal sites or

may have strict usage guidelines. Through collaboration with intranet development personnel, and assignment of ownership of content to a qualified nursing leader or group, development and management of the VJC can become a vehicle for establishing trust among both departments and may open doors for other innovative applications. Easy access by VJC participants is critical to the success of the VJC. Information services must provide access to the portal from computers on the nursing units and in computer laboratories for participants. When possible, remote access from home should also be arranged.

The nurse executive can play an important role in facilitating access to organizational resources, both internal and external, such as library services, researcher consultation, and time and incentives for nurse participation. The librarian can provide tremendous support to nurses seeking research articles on topics of interest and ensuring adherence to copyright laws.

Access to a skilled researcher ensures that critique of the research literature is accurate. Whether this person is employed by the hospital, or accessed through joint appointment or other collaborative agreement, the researcher coaches the nursing staff regarding translation of research evidence into practice and educates the VJC owners and research council members about research process, methodology, and analysis.

One of the most important ways the nurse executive can support nurses in the development and management of a VJC initiative is by providing paid time for council involvement and incentives for participation. At this hospital, direct-care nurses comprise 70% of the membership of the research council and are allowed 2 hours of paid time per month for meetings and related activities. Owning a posting is usually not covered by this paid time, so other incentives, such as career advancement credit, should be considered. Incentives for nurses to participate in the VJC activities are also important. This hospital offered continuing education credit for each activity, but this was not incentive enough to achieve widespread use. An appeal to the NCAP board resulted in acceptance of VJC participation as an alternative to attending traditional journal club meetings to meet career advancement requirements. This had a positive impact on nurse participation.

In 2008, 7 articles were posted, and 44 nurses participated, posting 92 comments. In 2009, 8 articles were posted, and 68 nurses participated, posting 205 comments. The research council set goals to increase participation by at least 50% in 2010, increase the postings to at least 12 articles, and mentor nurses from other councils to create and own postings. As a

result of the success of the VJC at this hospital, a VJC is being implemented by research councils in all the hospitals in the system, and at the system level, to

allow nurses anywhere in the system to have online discussions with colleagues in other hospitals, units, and specialties.

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