Journal club as a tool to facilitate evidence-based practice in critical care

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ABSTRACT

Background: A journal club is a forum to debate and review clinical practice using a number of models to gauge the strength of evidence associated with the clinical practice. A large body of evidence supports the importance of journal clubs as a method to improve patient outcome by enhancing the implementation of evidence-based practice and professional development in the clinical setting¹–³. Journal club activities have been recommended by the Hamad Medical Corporation (HMC) Critical Care Nursing Network (CCNN), Qatar, and started in the critical care areas of Hamad General Hospital for different critical care specialties such as trauma, surgical, and medical ICUs since 2014.

Methods: The journal club is a 1-hour monthly critical care educational activity for HMC critical care nurses. A flyer promoting the article to be discussed is shared with the critical care nurses one week prior to the scheduled date and each session is attended by 15–20 nurses. Participants gain continuing professional development (CPD) credits for each session they attend. The articles discussed cover patient safety and critical care clinical practices. A structured review of the selected articles is facilitated by an expert educator with a research background. The strength of the evidence to
change current clinical practice will be evaluated in a group discussion format (Table 1). At the end of each journal club activity, the facilitator summarizes the learning points, recommendations, and the action plan if the group believes changes to current clinical practice are recommended. Results: Around 50 journal clubs have been conducted in the critical care units of HMC with a total attendance of 1100 nurses. The journal club activity encouraged critical care nurses to establish the first nursing clinical research team in critical care areas of HMC (Table 2). Additionally, it had a positive impact on improving the professional

Table 1. Journal club clinical article review form.

| Article review questions:                                                                 |
|-----------------------------------------------------------------------------------------|
| o  What is the purpose of the article? Is it clearly described? Identify the research     |
|   questions, objectives, or hypothesis(es)?                                              |
| o  Is the literature review comprehensive and current? Does the content of the review    |
|   relate directly to the research problem? (evaluate the research cited in the literature|
|   review and the argument developed to support the need for this study)                  |
| o  Does the research report use a theoretical or conceptual model for the study? Does     |
|   the model guide the research and seem appropriate?                                     |
| o  How did the researchers obtain the sample for the study?                              |
| o  How were the data collected?                                                          |
| o  Are the data collection instruments clearly described?                                |
| o  Were the instruments appropriate for the measures of the variables under study?      |
| o  Describe and evaluate the reliability of the instruments (reliability refers to the  |
|   consistency of the measures). Will the same results be found with subsequent testing?|
| o  Describe and evaluate the validity of the instruments (validity refers to the ability |
|   of the instrument to measure what it proposes to measure).                              |
| o  How did the researchers analyze the data? Were the methods appropriate to answer the   |
|   research question(s)?                                                                 |
| o  What were the findings of the research?                                               |
| o  Are the results presented in a clear and understandable way?                          |
| o  Are the findings, discussion, and conclusions of the study supported by the data     |
|   presented in the article                                                               |
| o  Are the interpretations consistent with the results?                                  |
| o  Were the conclusions accurate and relevant to the problem the authors identified?    |
| o  Were the authors' recommendations appropriate?                                        |
| o  Are study limitations addressed?                                                     |
| o  Should the findings and conclusions be applied in your setting? If not, what work     |
|   needs to be done?                                                                     |
| o  What resources and processes are needed to implement any proposed changes in your    |
|   setting?                                                                              |
development and competency level of the critical care nurses which were assessed and evaluated by HMC critical care competency assessors through applying the specialty critical care competency checklist. Finally, implementation of the journal club activity and reviewing best available evidence and research literature led to improvements in clinical practice (Table 3).

Conclusion: Implementation of the journal club activity helped in developing critical care nurses’ awareness on current research studies and best available evidence, in addition to keeping them up-to-date with new findings, practices, and critical care trends. The journal club with its structured review questions has proven to be an effective way of evaluating the strengths of the evidence presented in the reviewed articles and sometimes led to changing our critical care clinical practice. It also contributes to improving nurses’ ability

Table 2. Learners’ feedback about the journal club activity (n = 1100) and Critical Care Nursing Network, scientific and planning committee, and critical care experts recommendations and actions.

| Journal club CPD activity feedback results: |
|-------------------------------------------|
| - 93% of the learners were satisfied with the duration of the journal club activity |
| - 99% agreed that the journal club review form was comprehensive |
| - 90% agreed that article topic is related to critical care clinical practice |
| - 95% agreed that journal clubs had a positive impact on their professional development and competency level |
| - 100% would advise others to attend the journal club activity as they believed it is very beneficial |

| Recommendations and actions pertaining to the journal club CPD activity: |
|---------------------------------------------------------------|
| The peer review process revealed that: |
| - The HMC Critical Care Nursing Network (CCNN) recommended to establish the first nursing critical care research team across HMC |
| - Many ideas for improvement (IFI) to change aspects of clinical practice have been reported to the corporate critical care nursing board |
| - Anecdotal evidences of improvements in clinical practice from Head Nurses across HMC have been obtained |
| - HMC critical care competency assessors reported significant improvement in knowledge and skills of critical care nurses who attended the scheduled journal clubs |

Table 3. Examples of improvements in clinical practice emerging from the journal club sessions.

| - Establishing clinical research teams in the critical care clinical settings |
| - Establishing clinical practice guidelines for all critical care procedures |
| - Designing a training program for prone positioning ventilation |
| - Enhancing the role of unit-based council committee in the critical care clinical facilities |
to critically appraise research articles. Furthermore, it promotes the implementation of new knowledge gained in clinical practice which is expected to improve patient safety and outcomes.

Keywords: Evidence-based practice active learning, patient safety, professional development

**Ethical approval**
The reporting of this data has been accepted as an educational quality improvement project by the Nursing Continuing Professional Development Committee of Hamad Medical Corporation, Qatar and therefore is exempt from Institutional Review Board approval.

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