Twenty-five years ago, the American Nurses Credentialing Center (ANCC) Magnet Recognition Program® was developed.1 Magnet™ designation serves as a hallmark of excellence for nursing practice and is granted to health care organizations that excel in the development of professional practice environments.2 To attain Magnet status, hospitals must demonstrate quality nursing care through evidence-based practice (EBP). Evidence-based practice includes patient care delivery that is guided by

- the integration of best evidence,
- clinical care decisions based on critical thinking, and
- improved patient outcomes.

Magnet-designated hospitals promote a work environment in which nurses are valued and supported by nursing administrators. For new evidence to reach the nurses who deliver bedside care, there must be an organized and systematic approach to integrating EBP into clinical practice. Forming an EBP committee is one way to achieve this.3

Magnet™ status for a facility indicates excellent nursing practice, positive and improved patient outcomes, and professional working environments. To maintain Magnet status, hospitals must show improved outcomes and clinical practice based on current evidence. Evidence-based practice (EBP) committees provide a streamlined approach for improving clinical/bedside practice decisions based on current research.

The Magnet program is designed to guide nurses in clinical practice and making recommendations, and the EBP committee is a mechanism by which to do this. Participating in an EBP committee encourages professional growth and improved patient outcomes.

Key words: evidence-based practice, Magnet status, Magnet programs, nurse retention, professional practice, levels of evidence. AORN J 90 (August 2009) 205-213.
practice and the integration of new evidence into patient care. Research has shown that Magnet hospitals have improved patient outcomes because patients receive care based on the best and most current evidence.

In Magnet hospitals, nurses actively participate in clinical policy and procedure review and are encouraged to evaluate research on current clinical practice.

The new model also provides a framework for nursing practice and research for the future. For example, organizations that desire to improve leadership style or transform values, beliefs, and behaviors in their institutions (ie, Exemplary Professional Practice and Transformational Leadership) may want to investigate how Magnet institutions retain staff members, what are their continuing educational practices, and what are the qualifications and characteristics of their nurse leaders that positively influence professional nursing practice. Hospitals may choose to model their Organizational Structure and management style according to Magnet recommendations. Empirical Quality Results may provide guidance for nurses who find a more cost-effective way to perform a procedure that allows the patient to recover more quickly and be discharged a day earlier, thereby demonstrating an improved patient outcome.

Evolution of Evidence-based Practice

In the past, bedside nursing often was based more on tradition than evidence. Nurses relied heavily on personal experience and communication rather than formal sources of knowledge. Today, nurses at Magnet hospitals are encouraged to evaluate their own practice through inquiry or curiosity and question cost analysis by asking, “Why am I doing this; are there more cost-effective ways to perform this procedure?”

Magnet hospitals in which professional nursing is valued tend to attract nurses seeking the best clinical practice settings. Achieving Magnet recognition is a lengthy, costly process, but nurses appreciate hospitals that invest in this process and see them as organizations that promote higher levels of autonomy, collaboration with management, and quality nursing care.

Although it is advantageous for hospitals to obtain Magnet status, it is equally important for them to retain this much coveted and prestigious designation. In addition, Magnet hospitals attract quality nurses. More nurses and more highly educated nurses correlate to safe care and better patient outcomes. Attention to the workplace environment yields high dividends for everyone. According to Lacey et al, nurses from Magnet hospitals scored better on individual workload perception scales (eg, nurses sensed their daily nursing workload and responsibilities to be less than those of nurses working in non-Magnet institutions). In Magnet hospitals, nurses actively participate in clinical policy and procedure review and are encouraged to evaluate research on current clinical practice. Ultimately, supporting nurses in the workplace leads to greater employee satisfaction and helps retain nurses.

Bridging the Gap Between Research and Practice with an EBP Committee

Although EBP is emerging as the best option for change, only a small number of nurses practice within an EBP framework. The Magnet Recognition Program has identified quality indicators and standards of nursing practice that define excellence in nursing care. These indicators address the integration of research into practice and EBP into clinical practice. Forming an EBP committee is one way to integrate EBP into clinical practice and help ensure that new evidence reaches the nurses who deliver bedside care.

Assessing Current Knowledge. Before establishing an EBP committee, it is important to assess current knowledge about EBP and research
data bases. With the help of one advanced practice nurse (APN) at the Lancaster General Women and Babies Hospital, Lancaster, Pennsylvania, I conducted a survey (Table 1) during the 2008 spring semester of my graduate program to assess

- nursing staff members’ understanding of EBP,
- whether they currently researched nursing topics,
- where they found research,
- nurses’ comfort level with reading and interpreting nursing research articles, and
- what would prevent nurses from participating on an EBP committee. Nurse managers from several units identified nurses who were interested in EBP and then asked them to form a new committee on EBP.

Before the first EBP committee meeting at our facility, we offered an educational session with our health sciences librarian, who instructed the EBP committee members about how to conduct computerized literature searches and allowed them time to practice by researching topics that interested them. Health science librarians and those in academia can offer invaluable assistance with literature searches by suggesting different subject headings or concepts. Our institution librarian compiled an instructional packet for the nurses on the EBP committee to give them detailed directions for literature searches. Lastly, the first education session was evaluated through the use of a survey tool (Table 2) to determine the usefulness of the educational session with the librarian and to evaluate any increase in knowledge of computer database searches that current research participants had achieved.

**Administrative Support.** Not all nurses are involved in research. For this reason, it is recommended that nursing administrators and APNs facilitate the EBP program to give support and provide expert guidance. A supportive nursing administration fosters creative thinking and builds an environment in which staff members and students learn to collaborate and continually challenge the quality of the clinical care they provide. Unit nurse managers

| TABLE 1 |
| Survey to Assess Nurses’ Knowledge of Evidence-Based Practice |

1. What is evidence-based nursing practice (EBP)?

2. How well do you understand EBP? Rank your knowledge:
   - Expert
   - Intermediate
   - Novice

3. Do you currently research nursing topics?

4. If yes, what online resource do you use? Please choose all that apply:
   - Google
   - EBSCOhost
   - CINAHL
   - PubMed
   - Medline

5. How comfortable are you with using the computer database searches? Please rate your response:
   - Extremely comfortable
   - Comfortable
   - Somewhat comfortable
   - Minimally comfortable
   - Uncomfortable

6. If you wanted to join the EBP committee, what one thing would hold you back?

7. Here at our institution, what topics require further exploration?
may be in the best position to identify nurses who are interested in research, motivated to change current nursing practice, or experienced in computerized literature searches. In addition, nurses who are enthusiastic about EBP and appreciate patient care based on current nursing research are able to inspire other nurses. Magnet hospitals encourage self-governance. They also provide nurses with time out of clinical work for education and committee work; therefore, adequate staffing is required for an EBP committee to be successful.

At the Lancaster General Women and Babies Hospital, nurses with varied skills are encouraged to participate in the EBP committee. The participants include nurses who
- question the relevance or cost of current clinical practice;
- are new graduates educated in computerized literature searches; and
- are on the clinical practice council, nursing protocol committee, or the performance improvement committee.

Nurses with all levels of experience are welcomed, and those with knowledge in computerized literature searches provide support and assistance to other nurses who need it.

Participation in the EBP committee is a good opportunity for nursing instructors and college educators, as well as nurse educators in the clinical environment, to involve undergraduate and graduate students in the process of practice improvement. Graduate and undergraduate students are often in the best position to facilitate clinical projects and look for opportunities to fulfill course requirements that simultaneously contribute to improvements on the clinical units. Students can be involved with staff members on unit-based projects and may be valuable in helping set new guidelines or creating posters that demonstrate the process of clinical change. Furthermore, by having students facilitate new projects into their course work, they relieve the hospital nurses of some of the burden. These school projects can benefit both the student and the Magnet hospital, and participation in EBP projects may foster educational advancement and inspire colleagues.

**FUNCTIONS OF AN EBP COMMITTEE**

Integrating EBP into clinical practice recommendations also provides a way to monitor patient outcomes and improvements. The first

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**TABLE 2**

Survey Tool to Evaluate Increase in Computer Database Knowledge

1. How informative did you find the literature research session? (scale of 1 to 10)

2. How comfortable would you be researching an idea or topic based on the information given to you during the session? Scale:
   - 1—not comfortable
   - 5—comfortable
   - 10—very comfortable

3. Was the amount of time adequate? Yes/No

4. In the future, would you prefer more individual practice time? Yes/No

5. Did you find the computer room to be adequate for the learning experience? Yes/No

6. Were you able to understand and follow the instructions for choosing databases and the items or search phrases to find articles? Scale:
   - 1—difficult to understand
   - 5—somewhat easy to understand
   - 10—easy to understand

7. What could we have done to improve the educational experience? ____________________________________
meeting of the committee can begin with identifying questions about the relevance of a specific clinical practice or the review of a specific protocol, or members can introduce a topic that interests them. For example, one nurse manager told me that a perioperative nurse was interested in conducting a circulatory assessment of patients in the lithotomy position. In conducting a literature search on this topic, nurses may ask themselves the following investigational questions:

- What does current literature suggest as the appropriate circulatory assessment for patients undergoing surgery in the lithotomy position?
- How frequently should pedal pulses be assessed perioperatively?
- What is the current clinical practice for this?
- Is there evidence to support that circulatory assessment prevents a disruption in the circulatory function in patients undergoing surgery in lithotomy position?

The committee is actively working on this investigation through literature searches and has not yet reached a conclusion.

**Evaluating Research Articles**

When collecting articles for best evidence, committee members should rely on primary reference sources, which are descriptions of studies written by the researchers who conducted them. A secondary source is an article or source that presents information about the original research or topic in which the original authors are cited, but that is not written by the authors of the original article. Meta-analyses and systematic reviews are considered the strongest evidence, and randomized controlled quantitative studies are next in reliability.13 Written materials vary considerably in their quality and the kind of information they contain.14 Although literature reviews are secondary sources, they may still provide a good summary of research studies or expert opinions and lead the nurse back to the primary source. The size of the study also affects the strength of the research, with larger study populations providing greater reliability. In addition, it is helpful for the reviewers to determine whether the practice setting and population of the study match their institutional setting. Many hospitals provide access to reference libraries and librarians, and may offer free article retrieval to assist with literature reviews. Computerized literature searches can be time consuming for less experienced nurses, especially if the topic is not widely researched.

If an EBP committee were to conduct a literature review of perioperative hair removal or the hazards associated with surgical smoke, Table 3 may offer some guidance for the evaluation of the evidence. This table is an example of how committee members might organize and structure the evidence or research articles they find.

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**If an evidence-based practice committee is assessing protocols, sources cited for each protocol should be evaluated by publication date.**

**Articles about clinical practice should be no older than five years.**

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If an EBP committee is assessing protocols, sources cited for each protocol should be evaluated by publication date. Articles about clinical practice should be no older than five years. If the article is not current, then a computerized literature search should be conducted for evidence that is more current.

Evidence-based practice guides clinical practice; therefore, recommendations for change are usually passed through a nurse practice council, performance improvement council, or nursing research committee. Evidence-based practice projects also may go through the policy and procedure committee to facilitate practice changes. In many cases, the clinical practice change adapted may be specifically applied to
a particular clinical area before it is passed to the policy and procedure committee and adopted throughout the institution. Each organization has different committee and council structures. If the EBP committee members find limited or no research on their topic and they are questioning current clinical practice, members can refer the topic to the nursing research committee.

At our institution, the EBP committee meets once a month for four to eight hours, but committee meeting times vary and are based on staffing restrictions. Longer, less frequent meetings seemed to be more productive for us. The total amount of time required to complete individual projects can vary from several weeks to several months.

**PROBLEMS AND PITFALLS**

Sometimes, EBP committees encounter difficulties. Studies that have focused on explaining barriers to establishing and maintaining EBP committees consistently find similar obstacles,

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**Table 3**

**Evidence-based Practice Review of Literature**

**Levels of evidence (LOE)**

<table>
<thead>
<tr>
<th>LOE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Systematic reviews (eg, Cochrane reviews), including multidisciplinary research, meta-analysis of relevant randomized controlled trials (RCTs), and evidence-based clinical practice guidelines based on systematic reviews of RCTs and nursing research.</td>
</tr>
<tr>
<td>II</td>
<td>Evidence from at least one well-designed RCT.</td>
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<tr>
<td>III</td>
<td>Evidence from one or more well-designed controlled studies/trials without randomization.</td>
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<tr>
<td>IV</td>
<td>Evidence from well-designed case-control or cohort study.</td>
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<tr>
<td>V</td>
<td>Systematic reviews of descriptive and qualitative studies.</td>
</tr>
<tr>
<td>VI</td>
<td>Single descriptive or qualitative study.</td>
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</table>

**Preoperative hair removal: clipping versus shaving**

**Special report issued by the Centers for Disease Control and Prevention (CDC) on the recommendations on prevention of surgical site infections (SSIs)**

According to the CDC guidelines, preoperative shaving the night before surgery is associated with significantly higher risk than either the use of depilatory creams or no hair removal. The increased SSI risk associated with shaving has been attributed to microscopic cuts that cause bacteria to multiply on the skin. Shaving immediately before a surgical procedure results in fewer SSIs compared to shaving the night before. Clipping hair immediately before surgery has been associated with fewer SSIs than shaving or clipping the night before.

**Joint Commission**

In 2008, the Joint Commission issued a National Patient Safety Goal to reduce the risk of health care-related infections. The Joint Commission has determined that to reduce the risk of SSIs, clippers should be used instead of razors because razors leave microscopic cuts on the skin that are entry points for bacteria. Clippers should only be used by properly trained staff members.

**Recommended practices**

The AORN Recommended Practices Committee developed what is believed to be an optimal level of practice. Practice settings and/or clinical situations will determine to what extent the recommended practices can be implemented. The goal is to reduce the risk of SSIs by removing soil and transient microorganisms from the skin and inhibiting rebound growth.

* If the presence of hair will interfere with the surgical procedure and removal is in the best interest of the patient, the following precautions should be taken:
  * Hair removal should be performed the day of surgery, in a location outside of the operating or procedure room.
  * Only hair interfering with the surgical procedure should be removed.*
including time; staffing; and limited access to resources such as libraries, computers, and nursing articles.6,15 According to Munroe et al,15 studies show that a lack of skill in reading and interpreting research findings is a barrier to clinical practice change.

Experienced and inexperienced nurses may be intimidated by computer technology and need assistance in conducting computerized literature searches. They may become easily frustrated and discouraged at their inability to accomplish their committee tasks within the designated time frame and resign from the committee. Partnering with colleges and schools of nursing can be valuable in providing resources for literature searches and access to librarians, computers, current nursing literature, and research conferences.6 Furthermore, hospitals affiliated with universities have multiple resources for conducting and disseminating nursing research. Most patient care, however, occurs in smaller hospitals without these

<table>
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<th>Table 3 (continued) Evidence-based Practice Review of Literature</th>
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<tbody>
<tr>
<td><strong>Preoperative hair removal: clipping versus shaving</strong></td>
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<tr>
<td>• Hair should be clipped using a single-use electric or battery-operated clipper, or a clipper with a reusable head that can be disinfected between patients.4,5,9,13</td>
</tr>
<tr>
<td>AORN recommends leaving hair in place at the surgical site whenever possible. If hair must be removed, personnel skilled in hair removal techniques should perform the removal using an electric or battery operated clipper. The clipper should have a disposable head or be disinfected between uses on patients.5</td>
</tr>
<tr>
<td><strong>Studies</strong></td>
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<tr>
<td>A prospective randomized clinical study (N = 789) showed that shaving the incision site immediately before spinal surgery may increase the rate of SSIs (P &gt; .01).4 This study indicates that shaving the incision site with a razor immediately before surgery may increase the rate of postoperative infection. This article identified that SSIs are probably underestimated and almost half of these infections are caused by organisms originating from the skin of the patient or surgical personnel.</td>
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<tr>
<td>A Cochrane Systematic Review7 of preoperative hair removal found strong evidence to show that clippers were better than razors.</td>
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<tr>
<td><strong>Conclusion</strong></td>
</tr>
<tr>
<td>The increased risk of postoperative infections should discourage routine perioperative shaving. Shaving the incision site immediately before surgery may increase the rate of postoperative infections.</td>
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<tr>
<td><strong>Hazards associated with surgical smoke</strong></td>
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<tr>
<td><strong>Studies</strong></td>
</tr>
<tr>
<td>Authors reviewed five quantitative studies conducted on smoke plume in the OR. Previous studies were laboratory simulations and animal studies. Although not RCTs, they were still strong studies. There is inherent danger with exposure to smoke plume. The authors suggest the consistent use of smoke evacuators in the OR. This article indicates that further research is necessary, and the research should be conducted under authentic surgical conditions instead of using animal studies.5</td>
</tr>
<tr>
<td>The objective of one nonrandomized pilot study4 was to compare a free-standing HEPA unit, commonly used in the OR to evacuate smoke plumes, to a new, portable anteroom evacuation system. The objective was to prevent the transmission of infectious microorganisms such as Mycobacterium tuberculosis. Although this study did not directly relate</td>
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Table 3 (continued)

<table>
<thead>
<tr>
<th>Evidence-based Practice Review of Literature</th>
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<tr>
<td><strong>Hazards associated with surgical smoke (continued)</strong></td>
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<tr>
<td>LOE</td>
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<tr>
<td>to electrocautery smoke, smoke plumes were released during testing, and the pattern of travel was studied. The study suggests that there may be an increased potential for occupational exposure to an airborne infectious agent and possibly contaminants at the surgical site.6</td>
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<tr>
<td>VI</td>
</tr>
<tr>
<td>The authors of another article6 used a simple Likert scale to conduct a web-based demographics survey (N = 623) of AORN members to evaluate smoke control practices. Survey respondents indicated their level of compliance with surgical smoke control measures. Very few respondents used effective respiratory protection for surgical smoke. Results suggest that facilities are not adequately protected against exposure to surgical smoke.</td>
</tr>
<tr>
<td>V</td>
</tr>
<tr>
<td>Studies indicate that surgical smoke may be hazardous and the National Institute for Occupational Safety and Health recognizes that laser and electrosurgical plumes contain toxins.11 Smoke evacuation units should be used to prevent acute and chronic health problems.</td>
</tr>
</tbody>
</table>

**Conclusion**

Hospitals should adopt smoke precautions based on regulatory agency mandates.6-11

nurse satisfaction and better patient outcomes. Improved patient outcomes may be related to a shorter hospital admission for a particular treatment or the use of collaborative rounds. Organizational outcomes may be evident by an increase in nurse retention, the recruitment of high-quality nurses, or patient care that is more cost-effective for the institution.

**CONCLUSION**

The value of a designated EBP committee is that its members are nurses interested in current research who compare best evidence to current nursing practice and implement change that benefits patients and hospitals. Magnet status identifies excellent nursing care, quality nurses, and improved patient outcomes, and Magnet hospitals attract quality nurses looking for the best clinical practice settings. Magnet hospitals demonstrate higher nurse retention. The Magnet program encourages nurses to guide their clinical practice and make recommendations, and the EBP committee becomes the mechanism by which to do this. By integrating best evidence into clinical practice settings, nurses are actively involved in improving patient outcomes.

**Editor’s note:** ANCC Magnet Recognition is a registered trademark and Magnet is a trademark of the American Nurses Credentialing Center, Silver Spring, MD.

**REFERENCES**


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