New Knowledge Innovation and Improvements

Evidence Based Practice

NK6: Describe and demonstrate the structure(s) and process(es) used to evaluate existing nursing practice, based on evidence.

The culture of inquiry is present and growing among the nurses at York Hospital. That inquiry extends from simple tasks to complex procedures in the day to day care provided. Direct care clinical nursing staff are encouraged to ask why and offered opportunities to find the answers through their participation in both practice council where existing nursing practice questions are asked and EBP and NR council where those questions are asked with a spirit of inquiry in mind. Because there is a commitment from nursing leadership and clinical staff to provide excellent, evidence-based care to our patients, those values are included in the York Hospital Nursing Vision, Mission and Philosophy statements and the York Hospital Professional Practice Model as described in EP1.

This spirit of inquiry provides the nursing staff at YH with the empowerment to make practice changes in an environment where there are resources in place to guide these initiatives. We have been fortunate to have had Dr. Linda Pugh as our Director of EBP and NR on a part time basis for the last several years and guide our nursing staff with their clinical practice questions. Her knowledge and expertise with the JHNEBP model (having been one of the book’s authors) has been a tremendous benefit. Her easy approachable style and enthusiasm for the quest for new knowledge is transferrable to our staffs, who become inspired with their ideas by just being around her and it not seeming so difficult to try. Change is difficult and perhaps even more difficult with tenured nursing staff who may be set in their “ways of doing”. Yet, the JHNEBP model provides the nursing staff the structure to review the literature and be guided through sources of evidence which support changing practice if there is enough evidence to support this practice change. Below we describe the structures and process we have in place to evaluate existing nursing practice.

Department of Nursing Bylaws

Expectations for the evaluation of existing nursing practice, based on evidence are supported throughout the SDM Bylaws of the Professional Nursing Staff at York Hospital. First within our nursing vision and again within the mission stating that “Nurses at York Hospital ascribe to the highest standards of professionalism, safety and quality, autonomy, integrity and evidence-based practice.” In addition, within article 2 the philosophy of the professional nurses includes the expectation that nurses ensure that their practice is based on nursing theory and research based evidence.

YH Nursing Professional Practice Model

The Bylaws also include the York Hospital Nursing Professional Practice Model. Within the model are eight guiding principles of which one is Evidence Based Practice (EBP). The definition of EBP is based on the Johns Hopkins Nursing EBP model. EBP is “a problem-solving approach to clinical decision-making within a health care organization that integrates the best available scientific evidence with the best available experiential (patient and practitioner) evidence, considers internal and external influences on practice, and encourages critical thinking in the judicious application of such evidence to the care of the individual patient, patient population or system” (Newhouse, Dearholt, Poe, Pugh and White, 2005).

John Hopkins Nursing Evidence Based Practice Model

The JHNEBP model and guidelines uses three phases in the EBP process that includes Practice question, Evidence appraisal, and Translation (PET).
Steps related to the practice question are:
1. Identify an EBP question
2. Define the scope of the practice question
3. Assign responsibility for leadership
4. Recruit a multidisciplinary team
5. Schedule a team conference
Steps related to evidence appraisal are:
6. Conduct an internal and external search for evidence
7. Appraise all types of evidence
8. Summarize the evidence
9. Rate the strength of the evidence
10. Develop recommendations for change in the process or systems of care based on the strength of the evidence.

The steps related to translation of the evidence will be discussed in NK7.

The model recognizes five levels of evidence.
- **Level I** Experimental study/randomized controlled trial (RCT) or systemic review of RCTs, with or without meta-analysis
- **Level II** Quasi-experimental study or systematic review of quasi-experimental studies with or without meta-analysis
- **Level III** Non-experimental study, qualitative study or systematic review of non-experimental or qualitative studies
- **Level IV** Opinion of respected experts/committees/consensus panels based on scientific evidence (clinical practice guidelines)
- **Level V** Based on experimental and non-research evidence (case reports, literature review, organizational experience, quality improvement)

The JH evidence appraisal tools include a series of questions which assist nurses to determine if the evidence is of High (A), Good (B) or Low/Major flaw (C) quality. Only high or good quality evidence is included in practice recommendations. Additional forms assist in the organization of evidence. The practical nature of this model’s tools makes thoughtful evaluation of multiple sources of evidence a reality for the clinical staff nurse. A copy of *Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines* was placed on each nursing unit in the spring 2008 as a resource to all YH's nursing staff and the 2nd edition of this book is available within the library as discussed in NK4. All of the tools have been reproduced with permission and are available on the YH EBP/NR Council INET portal to assist with each step of the EBP process.

**Director of EBP and Nursing Research**
The position of Director of EBP and Nursing Research provides a structure to assist nurses to become knowledgeable and effectively use the JHNEBP model and tools to evaluate and change existing nursing practice. The full-time director position provides Dr. Barbara Buchko with the opportunity to more fully support and develop the structures and processes to recognize problems the nursing staff may be having while using the model. Barbara not only provides support for the EBP/NR Fellowship, but also has extensive availability for exchange with nurses at all levels to provide educational offerings formally and informally, facilitate EBP teams, coach nurses in team facilitation and through one-on-one or group consultation. The director is also the advisor to the EBP/NR Council where these clinical practice questions may come to as well through the shared decision making structure.
To foster mentoring on changes to nursing practice using evidence, our directors had an opportunity to impart knowledge about the JHNEBP model and its use by YH nurses to colleagues in Kenya, Africa at Aga Khan University Hospital (AKUH) in August 2010. The invitation was the result of a conversation with Barbara and the CNO of AKUH during their doctoral nursing program studies at Johns Hopkins University. The YH CNO met with the AKHU CNO to identify how YH could support their desire to begin the Magnet journey. Arrangements were made for Dr. Linda Pugh, the director of EBP/NR at the time and Barbara to provide the AKHU nurses (AKU faculty, AKUH nurse leaders and direct care clinical nurses) with 6 days of education regarding the EBP process and the use of evidence to change nursing practice. Barbara and Linda provided information on how to build the infrastructure for EBP and Nursing Research, as well as, integrating EBP into the university’s nursing curriculum. More in-depth education about EBP was provided to direct care nurses and their leaders and nurses were guided to “jump start” two EBP projects. Medical Surgical nurses asked: Is 2 hour turning and use of a pressure reducing mattress the most effective method of preventing pressure ulcers in immobile adult medical surgical patients. Maternal Child and Emergency Department nurses asked: Is changing the IV cannula at 72 hours more effective than changing the IV cannula greater than 72 hours in reducing the number of blood stream infections and phlebitis? This education impacted over 100 nurses.

In February 2012, the opportunity for further exchange was provided as two nurses from AKUH (Diana Kassaman, BScN, RN and Eunice Tole, BScN, RN) came to YH to learn how change in nursing practice could occur. Diana gave a presentation to the EBPNR council about changes in practice they adopted using the JHNEBP model and guideline. Hearing how our mentoring efforts provided advancement in nurses’ practice across the globe, provided YH nurses with confidence in their practice changes and encouraged more nurses to become involved in our EBP Forums.

Nursing Shared Decision Making at hospital and unit levels

The Shared Decision-Making Councils of York Hospital are responsible for the domains of nursing practice, quality, professional development, leadership and EBP/Research. Parallel functions occur in unit-based committees as part of the SDM model. Each Council recommends changes in nursing practice and standards based on sound evidence.
Within each council there is a process for receiving data and information, evaluating evidence and changing practice based on sound inquiry. Council accountabilities are described within the SDM Bylaws.

**Nursing Shared Decision Making – Practice Council**

Practice Council reviews and approves all policies and procedures related to patient care. In addition, they monitor trends and outcomes via the RBC scorecard and patient satisfaction data. The York Hospital Nursing Policy and Procedure Manual link is readily available to nurses on the Nursing intranet site. Policies and procedures are grouped in 17 categories. A process is in place in which every policy and procedure is reviewed yearly by a subject content expert to ensure current practice standards. Changes to existing policies or new policies are reported through the Nursing Shared Decision-Making Council structure which has approval authority for that policy. If changes are required to the policy, it is the expectation that the policy owner has reviewed the literature and ensured that the practice remains current, and if not makes recommendations to the council for change to occur with or through EBP forum with their colleagues from EBP/NR council or independently within the practice council themselves. Policies with major or significant changes must be personally presented to the council by the policy owner. Education of staff regarding new policies or significant changes will be done by the approving council using multiple means of communication such as council minutes, Nursing News or mass e-mails.

In 2012, the York Hospital Policy and Procedure Manual was supplemented by Mosby’s Nursing Skills. Mosby’s Skills are based on the most current evidence including recent research, national standards and clinical practice guidelines and are updated at least once a year. This reference includes a short summary of the steps to perform a skill, a longer, detailed explanation and a demonstration video or illustration. Specialties covered in Mosby’s Skills include:

- Adult acute and critical care nursing
- Emergency nursing
- Maternal-newborn nursing
- Mental health nursing
- Oncology nursing
- Pediatric nursing
- Perioperative nursing

**An example of a change in existing nursing practice based on evidence:**

*Safe Transportation of Patients Requiring Continuous Cardiac Monitoring*

Patients being transported within the hospital are at increased risk for potential complications. During transport a patient experiences additional physiological stress which creates the potential for adverse hemodynamic, respiratory, neurologic and psychological events. Equipment may malfunction or there may be unforeseen delays during the transport. In addition, transport of acutely ill patients throughout the hospital can be potentially unsafe and place the patient at an increased risk for complications, morbidity and mortality.

Nurses from the YH Surgical Service Line SDM committee were concerned for patient safety during transport because of wide variation in practice for transporting telemetry patients and patients being transferred to a higher level of care. Some patients were transported with portable monitors and had an RN in attendance while others were transported by non-licensed personnel. Others concerns included the availability of portable monitors and wireless reception in various procedural areas and the
ease with which physicians provides orders to remove telemetry from a patient requiring continuous cardiac monitoring during transport. It is well recognized that the transport of critically ill patients requires special considerations, but there are no guidelines for the transport of the non ICU patient who may also require increased monitoring during transport.

Two nursing policies existed to address transport. One policy provided guidelines for staff from the monitored patients. To determine the extent of the problem the team reviewed a snapshot of transport department and volunteers while the other policy gave direction for the transport of cardiac monitored patients. To determine the extent of the problem the team reviewed a snapshot of transport issues from the organizations Safety Reporting System for July and August 2010 (table below). The team was able to determine that this was an organization wide problem.

<table>
<thead>
<tr>
<th>Event Date</th>
<th>Care Area Name</th>
<th>Location</th>
<th>Describe the Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/06/10</td>
<td>3PCT-Ortho/Neuro</td>
<td>YH-PACU</td>
<td>Patient was sent to cardiology for an echocardiogram with a portable telemetry box and no RN in attendance. No order was written to transport without telemetry. The patient was then sent from Echo to the holding room for carotid surgery with the same portable telemetry box attached and no RN in attendance. The patient had a CVA on Sunday, July 4th and was admitted to the hospital on Monday, July 5th. There are orders for continuous telemetry for 48 hours on the chart. The patient was held in the holding room until the results of the echo were read and reported to the anesthesiologist in order to determine if the heart was the source of the stroke. The nurse in the echo area said that most patients come to them with the portable box and no nurse in attendance unless the patient comes from a unit.</td>
</tr>
<tr>
<td>07/19/10</td>
<td>Imaging-CT</td>
<td>YH-Emergency Dept.</td>
<td>Imaging’s RN's called to CT stat for pt. 'not breathing well' after contrast given IV. Pt. was sitting up with 02 on with increased breathing, and then pt. stopped breathing suddenly, and passed out. Ambu bagged pt. and then she started to have a seizure. Called ED stat for code. IV fluids started stat and flushed IV, b/p checked and connected to monitor, ED staff arrived and pt. taken immediately back to ED.</td>
</tr>
<tr>
<td>07/22/10</td>
<td>5 Main Medical</td>
<td>YH-Patient Transport</td>
<td>Transporter was dispatched to take patient to x-ray. Patient was on 10 liters of oxygen and had a face mask. Nurse turned patient down to 6 liters and removed mask so she did not have to go along with transporter.</td>
</tr>
<tr>
<td>08/09/10</td>
<td>4 Southwest</td>
<td>YH-OR-Holding Room</td>
<td>Pt. was brought to the OR with tele box on anad no nurse in attendance. No order on chart that stated pt. may be transported without tele</td>
</tr>
<tr>
<td>08/20/10</td>
<td>Labor/Delivery</td>
<td>YH-4PCT-Maternity/Newborn</td>
<td>Newborn delivered to a gestational diabetic mother. Baby brought to newborn for admission 3 hours after birth. Initial chemstrip done by LH staff at 2 hours of age. Per protocol initial chemstrip for an infant with a gest. Diabetic mother is to be done within 30 minutes of birth, then every hour till first feed.</td>
</tr>
<tr>
<td>8/21/10</td>
<td>Emergency Dept.</td>
<td>YH-4 Southwest</td>
<td>Pt. transferred to RM 4105B with nurse escort from ED due to Amiodarone gtt. Receiving nurse was unable to look up much info about pt. in the computer, since pt. was on the unit within 15 minutes of her getting his name. Nurse did obtain a very quick brief verbal report from the RN with pt.</td>
</tr>
</tbody>
</table>
Upon order review pt. was to go to CT prior to coming to floor and note on front of chart stated same. According to RN Allison Wright pt. did go to CT but CT dept. said no, pt. did not come and therefore pt. had to go back down to CT within minutes of coming to floor because it was not done at the scheduled time. This caused a great inconvenience to the patient who was not feeling well.

<table>
<thead>
<tr>
<th>Date</th>
<th>Department</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/27/10</td>
<td>Emergency Dept.</td>
<td>YH-3PCT- Ortho/Neuro</td>
</tr>
</tbody>
</table>

Patient arrived to floor from ED no report given patient was a trauma patient and no information was called for report. Patient was also to be on telemetry and was transported without monitor spoke with charge nurse in ED who informed Tower 3 Charge Nurse that the nurse was new.

An interprofessional team was led by Cindy Stermer, MS, ACNS-BC RN-BC and included Brenda Artz, MS, RN, CCRN; Suzan Brown, MSN, RN, CCNS, CCRN; Emily Cooper, MSN, RN, ACNS-BC; Christine Kenrick, BSN, RN; Jennifer Manifold, BSN, RN; Mary Jane McKee, BSN, RN, CCRN; Emily Redding, BSN, RN; Elizabeth Riche, RN, CPAN; Tony Ruppert, RT; Maria Smith, RN, ABN; Margaret Winemiller, RN, CRN, CCRN; and Sandra Young, MS, RN. The team reviewed the literature to answer the question “what are the best practices for intrahospital transport of acutely ill patients?” An initial search of the literature identified **100 pieces of evidence** resulting in 27 articles with relevant content. Twenty-two articles were of good quality to provide **recommendations** for a change in practice.

The practice recommendations that emerged incorporated the necessary components of safe patient transport to include:

- **Intrahospital transport poses many risks; the decision to transport should be balanced between benefit and risk**
- **Patients being transported are still acutely ill and should be treated as such by receiving the same physiological monitoring during transport; therefore, the continuum of care needs to be maintained. A patient who is ordered telemetry should not be transported off telemetry for a procedure or test. Monitoring during transport may also include continuous pulse oximetry, oxygen therapy, or intermittent blood pressure.**
- **Evidence-based policies and protocols should be strictly followed and include specific details regarding pre-transport coordination, transport personnel, transport equipment, monitoring during transport, communication and documentation. Policies should address communication between the sending and receiving departments and notification of ancillary services. Policies should identify each type of transport personnel and specify the training required by each. There should be standardized equipment exclusively for transport and it should be well maintained. Minimum requirements for continuous monitoring should be addressed as well as documentation and verbal handoff communication.**
- **Using checklists, algorithms, or scorecards ensures appropriate resources are provided for transport.**

Based on recommendations from the evidence the RN’s on the EBP project team developed a plan to change existing practice. The nurses reviewed and revised existing policies, evaluated available monitoring equipment on the nursing units, and developed resources to create safety and efficiency for transport of patients requiring monitoring.
**Policy change:** Suzan Brown, MSN, RN, CCNS, CCRN; Cindy Stermer, MS, ACNS-BC RN-BC; Emily Cooper; MSN, RN, ACNS-BC and Sandy Young, MS, RN content experts for the two patient transportation policies chose to combine the policies into one standard of care that addressed patient transport with or without a cardiac monitor using recommendations from the evidence. The team also clarified and defined the qualifications and training that was required for staff to transport a patient requiring telemetry. The new policy provides detailed descriptions and criteria for:

Patients receiving telemetry should continue to be monitored during transport

1. **Staff members’ qualifications to transport monitored patients** – for licensed staff they are appropriately trained if they have successfully completed the EKG I and EKG II course. It provides examples of when a qualified licensed staff member is required to accompany the patient and clarifies staying with the patient and/or proper handoff. Criteria were also included for transport department staff that transport patients with oxygen and the specific types of patients that volunteers may transport.
2. **Equipment required for transport of the cardiac monitored patient.** Including the use of a transport box and portable phone according to patient condition.
3. **Communication that should take place prior to and during the transport in preparation for implementation of the new policy.**

**Equipment availability:** Cindy and Sue sent an equipment survey to unit nurse managers to identify the type of portable monitoring equipment available throughout the hospital. This helped them to identify that three nursing units did not have portable monitors available (6 Main, 6 South, and 7 South). These units were provided with information about where they could obtain portable monitors for transporting patients to more easily adhere to the policy and provide safe patient transport.

**Transport box and checklist:** A transport box was developed by Suzan Brown, RN, MSN, CCNS, CCRN and Donald Gerhart, PharmD pharmacy. The transport box was placed on each unit. It contains the necessary equipment that may be needed during a transport, such as an ambu bag, mask, oral airways and emergency medications. In addition, many of the articles in the literature search encouraged the use of checklists to ensure the appropriate preparation was taken prior to transport, appropriate personnel were accompanying patient and that the proper technical equipment were being utilized; therefore, the team developed a checklist to coordinate transports and provide consistency. This checklist was placed on the transport boxes to ensure necessary equipment and personnel were in place.

<table>
<thead>
<tr>
<th><strong>Transport Checklist</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Order to transport?</td>
</tr>
<tr>
<td>Transport to higher level of care? <strong>CALL HELP Team!</strong> #2869</td>
</tr>
<tr>
<td>Portable Monitor: ECG, pulse ox</td>
</tr>
<tr>
<td>Oxygen: Delivery device and tank</td>
</tr>
<tr>
<td>Transport Box</td>
</tr>
<tr>
<td>Staff in attendance RN/MD, transporter</td>
</tr>
</tbody>
</table>

When the policy and equipment survey was complete Sue presented the revisions to Practice Council where it was approved. Information about the new policy and procedure was disseminated to nurses by e-mail and from members of the Practice Council to Service Line RN representatives to their assigned
units by means of Service Line meetings. The revised policy and procedure was implemented in May 2011.

Along with policy revision and the addition of supporting resources (monitoring equipment availability, transport box and checklist), we realized that not all areas of the hospital had the ability to monitor patients; therefore, the team sought to assess the locations that patients were transported to, and if monitoring was occurring on those patients throughout the transport process. A transport tracking survey was completed to determine if telemetry patients were being transported on telemetry to their destination and if a qualified RN was accompanying them. Cindy Stermer and Sue Brown provided informal staff education on the use of the form to unit charge nurses and unit secretaries on all units with telemetry monitoring except the ICU’s. The data from the survey was collected for one week in June of 2011 on all shifts, as a snapshot of what was occurring on the units. This graph depicts the frequency that identified locations received patients with telemetry monitoring.

The survey also identified areas in the hospital that were capable of remote monitoring. Procedural areas such as Cardiology and the Cath Lab were able to have patients monitored from their home unit. What was concerning was that the majority of patients were transported to the Imaging department where there is no remote monitoring; therefore, based on the evidence, these patients should be transported with a portable monitor. Our results demonstrated that patients transported with telemetry to all locations were accompanied by an RN 80% of the time (see bar graph below-June 2011).

In February of 2012 the transport tracking survey was completed and again data was collected for one week on all shifts to provide a snapshot. Our results demonstrated an improvement for patients transported with telemetry to all locations accompanied by an RN to 91% (see bar graph below-February 2012).

Patients requiring continuous cardiac monitoring who are transported to procedures, to diagnostic studies or to the operating room are escorted by an ACLS-trained RN and transport personnel (with the exception of those patients who have an order to travel without telemetry as per policy). These patients have a portable cardiac monitor, oxygen availability and the
transport box. If the patient requires transport to a higher level of care, the unit RN and rapid response team personnel escort the patient utilizing all necessary equipment and monitoring. Outcomes from this evidence-based quality improvement project have been shared at the annual Collaborative Nurses Research day in April, 2012 and at the Summer Institute on Evidence Based Practice in San Antonio, TX in July 2012.

**Nursing Shared Decision Making – Quality Council**

Members of the Nursing Quality Council evaluate existing nursing practice using internal evidence which is crucial to determine the outcomes of our nursing practice. At WellSpan Health, and consequently at YH, we use a green light/ yellow light/ red light analogy to demonstrate compliance with various benchmarks. The actual benchmarks are set by various entities, disciplines or a group depending on what the variable is that is being measured, and may come from professional organizations, national quality initiatives, etc. If external benchmarks are not available, the organization sets an internal benchmark.

The **YH Nursing Dashboard** is a widely used tool which displays clinical, human resource, cost performance, and workload measures. The Dashboard reports are distributed by way of a nursing web portal which is accessed by the OOP, the VP-PCS, clinical directors, nurse managers, service line leaders and administrators and other department leaders (e.g., HR, Infection Control, Pulmonary Services, etc.) as well as the SDM Council members and clinical staff. The SDM Nursing Practice Council, Quality Council and Leadership Council all share the responsibility of evaluating and disseminating internal evidence. Reports from the Dashboard are available by unit, division, or overall hospital results. As discussed in the EPP section, there are numerous ways the data and corresponding information and discussion from the dashboard can be used to generate potential EBP related projects or questions to impact nursing practice at YH. Numerous bodies are responsible for the evaluation of internal metrics.

An example of Quality Council evaluating existing nursing practice based on evidence:

The Quality Council identified an increasing patient fall rate in October 2010 and partnered with the Fall Prevention Task Force (FPTF) to develop a plan to change existing clinical practice to decrease the rate of patient falls. Quality council set the expectation that nursing units with rate of patient falls above the benchmark would present an action plan to council. In addition, quality council made a flyer called Fall Prevention Fast Facts available to each unit. This flyer encouraged the use of purposeful rounding (an evidence-based intervention) every hour during the day and every 2 hours at night. During “purposeful rounding” a nurse addresses the patient’s needs surrounding pain, positioning, and various personal needs. In addition, shift reports were to include a patient’s fall precaution status. Quality Council supported the rollout of Purposeful Rounding in January 2011.

The rate of patient falls continued to remain above the benchmark and further action by the FPTF was supported by the Quality Council. Translation of new knowledge developed by the FTF is described in NK7.

**Nursing Shared Decision Making – EBP/Nursing Research Council**

Although every nurse may have a question related to clinical practice, every nurse may not have the skills necessary to answer the question. The York Hospital Evidence-Based Practice and Nursing Research Council take a lead role in teaching and mentoring nursing staff about the EBP process. EBP may be a new concept for some nurses; therefore, the EBP/NR Council’s provides monthly educational sessions with topics that include evidence appraisal, translating recommendations to actions and using
PI data to evaluate practice. A list of these classes can be viewed in NK4. Educational offerings are publicized in mass e-mailings, newsletters and website formats. The educational sessions provided by the council can assist the clinical RN at the bedside increase her knowledge and understanding regarding how to change existing nursing practice. Some of these educate the nurse about the JHNEBP model itself, others more recently revolve around the topic of translation of new knowledge. Our new Director of EBPNR has a strong background in her DNP program in translation, and has been seeking opportunities to bring in additional experts and lecturers on this topic with a variety of settings and topics.

Education alone may not fulfill the goal of teaching and using EBP to change existing nursing practice. Sometimes nurses can learn from one another asking a real nursing practice question in a forum with their other nursing peers in the clinical care areas. Based on the findings, in the past this forum has been a great place for nurses to work through their questions and develop the confidence to make changes to existing nursing practice based on the evidence the forum provides.

The EBP/Research Council uses the EBP Forum as one opportunity for staff RNs to complete an EBP project in a group setting. A clinical question that has a broad target audience is developed by the EBP/Research Council members. Examples of the nursing practice questions include:

- What is the most effective agent for skin care in the hospitalized patient to prevent or treat skin breakdown?
- What are the best strategies to promote nurse-physician collaboration on med-surg units?
- What are the most effective strategies to promote rest in hospitalized patients?
- What is the best practice for hospitalized patients requiring NG tubes related to insertion, flushing, securing and checking placement?
- What are the best tactics to allow RNs to recognize and respond to bullying from other RNs?

Success for this type of project requires planning. The director for EBP and Nursing Research developed a timeline to guide the planning process. An e-mail invitation is sent by the council chairperson to the nursing staff at large approximately 3 months prior to the start of the Forum to allow scheduling for attendance. All staff is paid hourly wages for participation. Below is an example of this invitation sent by Emily Cooper the chair of the EBP/NR Council.

From: Cooper, Emily  
Sent: Monday, June 06, 2011 9:38 AM  
Subject: Fall EBP Forum... Family Visitation

Have you ever wondered if open or structured visitation is better for our patients and families? Do you have concerns about the impact of less structured visitation would have on nursing staff? Then come join us for the fall EBP forum! The question we will be investigating is:

"What type of visitation policy (open versus structured) best promotes patient safety and rest, as well as patient, family and nurse satisfaction in medical-surgical units?"

Forum is held on the first Thursday of each month from August-November, from 0830-1030. The dates for the fall forum are: August 4, September 1, October 6, and November 3. Please plan on attending all 4 sessions if you wish to participate. We also offer an education session on an EBP or research-related topic from 0730-0830--so please consider coming and making a morning of it!

If you are interested in participating, please respond to this email. You can expect to receive articles to read in July in preparation for our first meeting. Thanks for your interest in providing the best care for our patients!

Emily Cooper, RN, MS, ACNS-BC, CCRN  
Clinical Nurse Specialist, Cardiovascular Services, York Hospital  
Chair, Evidence Based Practice and Nursing Research Council
When the EBP Forum was first started in 2006, masters prepared nurses were the leaders of the projects. Starting in the fall of 2010 the leader has been a clinical RN who is paired with a masters prepared nurse as a mentor. One of the responsibilities of the leader is to compile the evidence. The project leader reviews the abstracts and decides which articles or other evidence will be included in the evaluation. Dividing the work for a large project makes it manageable for all involved. Forum participants include council members and all respondents to the e-mail invitation. The participants are divided into small groups. Each group has both experienced and novice nurses in the EBP process. Each small group receives three to six articles to review depending on the overall amount of evidence and the length of each article. All members of the small group receive the same articles. The articles are sent to the participants approximately one month prior to the first meeting with the expectation that all materials will be read prior to attending the first meeting. Nurses inexperienced in the EBP process will also receive written guidelines for evidence evaluation as well as the evidence appraisal forms. Typically a note of encouragement also is sent to the novices suggesting they not be intimidated by the evidence they receive.

At the first EBP Forum meeting the background of the question will be shared as well as the PICO process that developed the question. Then the small groups begin their evidence evaluation using the JHNEBP tools. During this first session the groups will determine if the piece of evidence is helpful in answering the question. Next the group discusses the quality of the evidence. All low quality evidence is eliminated. During the second meeting the same small groups meet again to review their high and good quality evidence. The goal of this session is to identify practice recommendations or findings that help to answer the question. At the end of the meeting those findings are collected by the leader and sorted by the level of evidence. All recommendations from Level I will be grouped together, all Level II recommendations will be grouped and so on through Level V. At the third Forum meeting the small groups are reconfigured so that each new group will review recommendations from a particular level of evidence. At the fourth meeting final practice recommendations are formulated as well as an action plan to change existing practice.

The EBP/NR Council Forum Table provides information about the clinical practice questions that have been evaluated, names and credentials of nurses leading the forum, recommendations found in the evidence, and changes made to existing practice. In addition, EBP Forum leaders report the progress of each EBP Forum project several times a year during EBP/NR Council business meeting. Outcomes are recorded in meeting minutes and reported in the monthly Nursing News for dissemination to nurses at all levels.

York Hospital/York College of Pennsylvania EBP Collaborative

The EBP Forum uses broad-based topics that may appeal to the nursing staff at large in YH Hospital. A clinical question of a more narrow focus may be an excellent question to use in the York Hospital /York College of Pennsylvania EBP Collaborative. The objective of the experience is to provide junior level baccalaureate students with the opportunity to work with direct care clinical RNs at YH to find solutions to real life clinical problems using the Johns Hopkins Nursing EBP process. Hospital staff may attend a 4 hour preparatory course. The nurses commit to meet with the students during four sessions lasting 75 minutes each throughout the semester. Two RNs work with a group of three to five students. Session meeting sites alternate between York Hospital and York College. During the first session, the nurses tell the nursing students about their nursing unit and provide them with a background of a clinical concern, as well as the current practice surrounding the clinical problem.
The goal of the first session is for the nurses and students to collaboratively write a practice (PICO) question and identify key words in order for the students to search the literature. Each student must find at least 4 articles to present at the next session. The nurses and students meet at York College for the second session. The students bring their reference list, copies of the articles with completed JHNEBP appraisal forms. The students share their findings with their YH nursing counterparts. The nurses and students discuss if the articles answer the question and are of good quality to base recommendations for change in practice. At the third session the students provide the nurses with a revised copy of the individual evidence table and completed overall summary of the evidence. From these findings, the clinical nurses and students collaboratively develop the practice recommendations. The clinical nurses share how recommendations could be implemented so the nursing students can begin to understand the complexities of practice change. The fourth session is held at the college and the students present their project in a poster format with an oral presentation.

**Collaboratives** are offered for the Spring and Fall semesters.

Findings from the YH-YCP EBP Collaborative have not often changed existing practice because the appraisal of evidence is limited either by the requirements of class assignment (only 4 articles per student) or because there is truly not good and compelling evidence. When the evidence is good and compelling (as per the JHNEBP guidelines) then existing practice can be changed. An example of this is a change in existing nursing practice to influence fall prevention described below.

**Prompted voiding**

The YH Falls Task Force identified that > 49 % of patient falls involved issues surrounding toileting. Brenda Artz, MS, RN, CCRN, a member of the Falls Task Force and Cindy Stermer MS,RN-BC,ASCNS-BC sought the assistance of the YCP nursing students to answer the clinical question “Would prompted voiding decrease falls in patients over 65 on medical surgical floors?”

The nursing students found that evidence supported the use of prompted voiding to decrease falls. Cindy and Brenda reported the findings at the Falls Task Force (FTF). The FTF initiated “purposeful rounding” in 2011. Purposeful rounding includes addressing personal needs such as asking patients about their need to void. The members of the task force chose to expand this intervention to include prompted voiding along with providing assistance to patients with toileting. This change in practice was announced through e-mails, Nursing News, and through one-on-one education when three masters prepared nurses from the Falls Task Force conducted Fall Rounds on all patients who fell. This change in practice was also validated during competency assessment with NA’s throughout the hospital and for all RNs within the Surgical Service Line in 2012.

**EBP/Research Fellowships**

The Nursing EBP/Research Fellowship, which began in 2007, provides 192 hours of protected time for a staff nurse to complete an EBP and/or research project over a 12 week period. The Fellowship is paid out of the Nursing EBP/Research budget described in NK4. Two Fellows are chosen per year. An e-mail is sent by the Director of Nursing EBP and Research which outlines the **requirements** for the position in addition to the application process. Candidates are asked to write an essay detailing why they would like the role and the question they wish to answer. The Fellow is chosen by the CNO, the Director of Nursing EBP and Research and the chairperson of the EBP/Research Council. The Fellow selects a committee of staff RNs and other discipline colleagues if appropriate to assist with the project and oversees all aspects of the project during the 12 week period.
York Hospital EBP/Research Fellowships are listed in the table below:

### 2010, 2011 and 2012 YH EBP/NR Fellows/Project Titles

<table>
<thead>
<tr>
<th>Date</th>
<th>Nurse</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2010</td>
<td>Theresa Tomlinson, BSN, RN</td>
<td>Is structured visitation in the ICU setting more effective than open visitation in promoting patient safety and rest, and nurse, patient and family satisfaction?</td>
</tr>
<tr>
<td>Spring 2011</td>
<td>Terri Gisher AD, RN</td>
<td>What are the best practices to prevent falls with injuries in the hospitalized patient?</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>Tina Malec BSN, RN-BC</td>
<td>Does providing nurses’ education regarding pain management change their attitudes and improve adult, acute care patient satisfaction with pain management?</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>Rebecca Miller BSN, RN</td>
<td>Will changing peripheral IV sites in hospitalized, adult patients when clinically indicated have comparable complication rates as scheduled routine IV site changes?</td>
</tr>
</tbody>
</table>

Since 2007, 10 nurses have completed the EBP Fellowship. They have disseminated their scholarly work as poster and podium presentations at local, state, national and international conferences, received awards, and have published.

- 9 Local /State poster presentation (Excellence Award received)
- 2 National poster presentations (Excellence Award received)
- 6 Local /State podium presentations (Excellence Award received)
- 3 National podium presentations
- 2 International podium and poster presentation
- 3 Publications; including a chapter in a book that includes guidelines developed by a Fellow from their EBP project “Guidelines for Collection of Forensic Evidence in Virginia Lynch’s 2nd edition of the Forensic Nursing Science Textbook”

Below is an example of how the EBP Fellowship was used to evaluate and change existing practice based on evidence.

**Open Visitation in ICU**

Theresa Tomlinson, BSN, RN was the EBP Fellow in Fall 2010 and led a team of nurses representing the various YH ICU’s in a review of evidence to answer the clinical practice question “Is structured visitation in the ICU setting more effective than open visitation in promoting patient safety and rest, and nurse, patient and family satisfaction?” The synthesis of evidence demonstrated that open visitation in ICUs is safe for patients and preferred by families and patients over structured visitation policies. In addition, open visitation is supported by regulatory agencies such as the Joint Commission as well as supported by the YH nursing PPM which speaks to shared decision making for patients and families. The autonomy for them to make decisions about their care was in alignment, and offered the nursing staff the support to incorporate this change to their practice.

There are four units on the third floor at YH where patient transfers occur. Inconsistent visitation policies between units created problems with patients and families; therefore Theresa presented recommendations to the ICU Clinical Effectiveness Team (CET). The ICU-CET is made up of
representatives of administration, medicine and nursing from all WSH ICUs. The ICU-CET supported implementation of consistent open visitation guidelines for all ICUs and transitional care units (TCU).

The team members who implemented this change in existing practice included:

- Lynne Moul, RN, BSN, RN, NEC-AC nurse manager MSICU, team leader
- Deborah Lampo, RN, MSN, NE-BC, CNML nurse manager MTCU
- Lori Hubler, BSN, RN, staff nurse STCU
- Teresa Helwig, RN, staff nurse MSICU
- Doris Lentz, RN, staff nurse MSICU
- Tanya Manning, RN, staff nurse MTCU
- Renee Pruner, RN, staff nurse MTCU
- Sheree Seben, RN, MSN, CCRN, CMC staff nurses and clinical educator CCU
- Maria Smith, RN, staff nurse STCU
- Emily Cooper, MS, RN, ACNS-BC, CCRN and chair of EBP/Research Council
- Suzan Brown, MS, RN, ACNS-BC, CCRN, CNS Medicine
- Barbara Buchko, DNP, RNC-MNN, Director of Nursing EBP and Research
- Christine Foore, MS, CPHQ Director of Customer Relations
- Bruce Veseth, Operation Manager for Security

The team began meeting in September 2011 to develop the action plan for implementation of open ICU visitation. Lynne Moul was the leader of the team while the director for EBP and Nursing Research provided consultation to guide the process. The goals of change in the visitation policy were to: 1) improve patient and family satisfaction, 2) maintain safety and security of staff and visitors, and 3) provide staff education and obtain staff buy-in. The first action by the team was to develop visitor guidelines. One team member attended the Cardiovascular Patient Advisory Board meeting for patient and family input to the concept and guidelines. In January 2012 staff nurses from each of the units involved in the project met to create scripting for nurses to support the change in practice. Input from behavioral health counselors assisted with scripting for stressful situations. A pre-implementation patient and family satisfaction survey was conducted in February 2012, as well as a Survey Monkey staff satisfaction survey. Staff education was provided in March and implementation of the guideline began April 1, 2012. The waiting area was refurbished and signage changes were made. Visitor guidelines are displayed in patient rooms and an individualized visitation plan was displayed outside the room. A post-implementation patient and family satisfaction survey will be conducted when the program is in place for 6 months.

Clinical Nurse Specialists and masters-prepared Advanced Clinical Nurses and Clinical Nurse Educators

The support and enthusiasm within the Department of Nursing at York Hospital for evidence-based practice have spread its adoption beyond the formal structures described above. Clinical Nurse Specialists (CNS) or masters-prepared nurses in roles of Advanced Clinical Nurse or Clinical Nurse Educators are employed by each nursing division because of their value in improving care and professional development. They guide clinical staff by stressing the importance of using evidence in the decision making that affects our daily practice.
Below are examples of the influence of master’s prepared nurses in collaboration with direct care clinical nurse to evaluate and change existing nursing practice.

**T2 Vascular core team**

Tower 2 is a 60 bed cardiovascular step down unit which includes both cardiac medical and cardiac surgical patients. Emily Cooper RN, MS, ACNS-BC, CCRN and Sandy Young MSN, RN, CVRN developed six core nursing teams that targeted specific high volume patient populations: Acute Coronary Syndrome, Arrhythmia, Heart Failure, Open Heart Surgery, Thoracic Surgery and Vascular. Each team was responsible to review current practice recommendations, identify opportunities for staff education and complete a peer review regarding an issue related to that patient population.

The purpose of the teams is for team members to be a resource to other nurses. First the nurses on the team developed their expertise by joining a professional organization and attending conferences and educational sessions. The team members evaluate existing practice through informal needs assessment and identification of problem prone areas and have provided multiple education sessions for staff to improve nursing practice. The team has also changed existing practice by developing and providing nurses with resources to improve the “teach back” process. These teams also review and revise standards of care.

**Collaboration Fosters Communication: A Multidisciplinary Evidence-based Practice Project to Ease Communication for Patients in the Trauma Intensive Care Unit**

The Wellspan Trauma Patient and Family Advisory Council were created to provide the highest standard of patient and family-centered health care to our trauma patients. The group met six times during the summer and fall of 2011 with the goal of improving care for our trauma patients. The multidisciplinary group included three patients, three family members, a trauma physician, a clinical nurse educator, a clinical nurse specialist, and the Wellspan trauma program director. We started our journey on May 5, 2011 by posing a simple question to our patients and families: “What were your concerns during your hospital stay?”

Fortunately, all patient advisors were open and honest when answering this question. While many issues were discussed, several concerns involved communication between patients, families, and health care providers. These included concerns about how patients who were intubated could communicate with family members, which health care professionals were caring for the patients, updates about patient condition, and daily goals of care. While several of these issues were addressed during our time together, communication with intubated patients evolved into two projects. The first was the development of an augmentative and alternative communication (AAC) tool by the advisory council to assist intubated patients to communicate more effectively. This, in turn, led to an evidence-based practice (EBP) project to more closely investigate best practice related to communication with intubated patients.

The council enlisted the help of a speech-language pathologist to facilitate development of the most appropriate tool. Kelly Birzes MA, CCC-SLP, came to our meeting armed with information on a variety of AAC devices ranging from simple picture boards to complex voice-output communication aids. She explained the tools and we discussed which device would be most appropriate for intubated trauma patients. The council decided on picture boards for ease of use with patients with limited mobility and those who were receiving sedation and analgesia. The advisors looked at a variety of options for messages and chose those which they felt would be most helpful. A picture board was then created based on their suggestions.
To substantiate their planned change in practice with evidence, a team of five trauma nurses and our speech language pathologist evaluated the literature to answer the question: What is the best AAC method for communicating with intubated patients in the intensive care unit environment? Over a course of several months the team led by Kelli Eldredge, MSN, RN, CCRN, conducted a literature search, read and evaluated articles, and made recommendations for practice. The evidence supported their planned change practice. Recommendations from the evidence suggested:

- development of a communication board as a supplement to other methods of communication,
- collaboration with speech-language pathologists to develop effective communication methods,
- education of nurses in proper use of AAC devices and methods to facilitate communication with intubated patients

Education was conducted for nurses prior to implementation. The communication boards were placed in all rooms in the trauma unit for use by patients, families, and health care providers in 2012. Patients and especially families verbalize that the boards are very helpful when communicating with their loved ones. Other units have borrowed the communication boards and there are plans to disseminate the use of this highly effective tool for ventilated patients throughout YH. By collaborating with our patients and families, we can identify areas for improvement, develop appropriate EBP projects and implement our findings to improve patient care. This project resulted in a method to ease anxiety and frustration by providing an avenue for patients to express their wants and needs. The team presented their scholarly work at the 17th annual Challenges in Critical Care conference.

Clinical Effectiveness Teams

The Clinical Effectiveness Teams (CETs), which have been in operation for approximately seven years, are WellSpan Health’s organizational structures designed to improve the quality of care and standardize the patient’s treatment plan across the WellSpan System. These teams are comprised of care providers from a variety of disciplines (physicians, nurses, pharmacists, and others) who are recognized as having knowledge and expertise regarding a particular clinical condition or disease entity across the WellSpan Health System. Nurses are included in the leadership groups for each of these teams. In addition, these teams have the formal support of WellSpan's administration and clinicians to carefully analyze and implement the best processes of care to assure our patient’s receive appropriate, effective health care services.

The members of each CET meet regularly to:

- Review the clinical literature and the experience of other organizations in the management of certain disease processes, and research regarding evidence-based “best practices” in the care of the particular condition that is the focus of that CET;
- Develop standardized processes and systems designed to achieve care that conforms to these “best practices”;
- Assist in the implementation and consistent use of these processes and systems;
- Assist in the measurement and evaluation of clinical outcomes.

The current Clinical Effectiveness Teams focus on care in the intensive care units, acute myocardial infarction, congestive heart failure, diabetes, chronic pain, surgical care, pneumonia, and perinatal care. Core measure metrics are reviewed. Evidence evaluation may take the form of national guideline review, internal evidence-based practice projects or collaboration with experts. Practice changes that are recommended by the CETs are communicated via Practice Council. An example of this is the change in clinical practice from using sliding scale to basal bolus treatment for patients with...
diabetes. Practice Council meeting minutes from February 2012 highlight the recommendations and process for change by the Diabetes CET. Although the efforts to change the use of sliding scale insulin may seem to be a change focused primarily on physician practice, nurses played a significant role in creating the practice change as well as collaborating with physicians in the clinical care of patients.

**Leaping Away from Sliding Scale Insulin (SSI): A System-Wide Initiative**

Since 2006, WellSpan Health's Diabetes Clinical Effectiveness Team has actively worked to improve the care of the patient with Diabetes Mellitus. The Society of Hospital Medicine estimated that 1 of every 3 hospitalized patients have hyperglycemia. Numerous studies have identified the limitations and inadequacy of the use of sliding scale insulin (SSI) alone or as adjunct to oral hypoglycemic agents to correct hyperglycemia. Studies have supported that basal/bolus insulin therapy is the standard of care. Despite this evidence, SSI continued to be widely used throughout hospitalizations at York Hospital. Baseline data demonstrated that the SSI alone protocol was ordered on over 80% of the diabetes patients. Basal bolus was underutilized at 10-14%. The average glucose per stay at this time was >299 mg/dl for 20% of the patients hospitalized for diabetes at York Hospital.

As a result of these findings, in July 2011, a subgroup of the Diabetes CET was formed. The sub-group included a pharmacist and 2 advanced clinical nurses. The goal was to move treatment away from SSI and to provide better standardization for the patient with diabetes throughout the system. The purpose of this clinical practice improvement project was to eliminate the use of SSI as a stand-alone order, and instead, offer diabetes type 1 and diabetes type 2 protocols. These protocols are weight based basal/bolus insulin and are recommended as a better method to provide improved glycemic control for the patient with diabetes.

The aims of the clinical practice improvement were:

- Influence behavior to attain evidence-based standard of care.
- Reduce the use of correctional alone insulin from 60% to <30% by June 30, 2012
- Increase the use of basal-bolus insulin from 16% to 32%

In order to reach our goal of decreasing patients' average daily glucose during hospitalization to less than 299mg/dl, we implemented a 3 step change. These changes included:
Step 1: Add basal-bolus powerplan (standard order set) to admission order set (December 2011)
Step 2: Retire SSI powerplan (February 29, 2012)
Step 3: Evaluate basal-bolus versus correctional (SSI) alone use (Spring 2012)

Recognizing that changing practice requires multiple strategies, member of the sub-committee provided communication about the change through various means such as: physician grand rounds, letters to healthcare providers, newsletters, internet blog, division/leadership meetings, staff meetings, resident conferences, and a media-blitz and campaign buttons to remind everyone of the change.

The sub-group worked with the Informatics Department to eliminate the SSI stand-alone protocol as an option in the electronic orders on February 29, 2012. This forced physicians to select the correct protocol for the type of diabetes for a specific patient. The system-wide educational campaign focused on increased awareness of basal-bolus protocol, the difference between correctional and bolus insulin, and to optimize blood glucose control (the goal for blood glucose for hospitalized patients is <180mg/dl). Educational sessions were provided by the pharmacist and the two advanced clinical nurses. Education about the campaign was provided to all nursing units as well as Medical, Family Practice, and Surgical Residents and Hospitalists. Education about the care of patients with diabetes was provided at Nursing and Physician Grand Rounds as well as to individual nursing units.

The two advanced clinical nurses, Susan Dayhoff, MS, RN, CPHQ and Brenda Artz, MS, RN, CCRN monitored all patients admitted to the hospital who were prescribed medications for glycemic control and/or monitored for POC glucose to monitor success of our campaign and recognize opportunities for improvement. They collaborated with an applications analyst for extraction of this information from the electronic medical record. Susan and Brenda reviewed the protocols that were ordered, POC glucose measures, and medications given. They were able to see a reduction in the use of correctional alone insulin, identify basal insulin being ordered via protocol or medication reconciliation, and reviewed changes made to basal bolus insulin.

- Correctional (SSI) alone use decreased by 42% (60% to 18%, p < 0.05)
- Basal-bolus insulin use increased by 16% (16% to 32%, p < 0.05)
- Rate of severe hypoglycemia(<40mg/dl per patient stay) is <2.5%
We are increasing our well controlled glucose level and beginning to make improvements to decrease our severe hyperglycemia level in all of our patients. Despite the common use of SSI for the last 90 years, an interdisciplinary approach influenced this significant change in practice with education, pre-determined implementation strategies, and sharing of data.

**York Hospital Performance Improvement Committee (PIC)**

Since the September of 2012, this committee has been co-chaired by the chair of the Nursing SDM Practice Council Ann Proctor MSN, RN, OCN and Dr. Stephen Dilts, past president of the YH Medical Staff. Both have had significant success during their tenure as chair of their respective professional groups. As such both were approached by the VP-PCS and VP-Medical Affairs previous co-chairs of this committee and asked if they would consider taking the lead moving forward. The committee is tasked with YH’s performance improvement oversight. This diversified, multidisciplinary team includes all clinical directors as well as the chairperson of the SDM Nursing Quality Council. The PIC reviews pertinent clinical and organizational information at each of its monthly meetings. The information reviewed which affects nursing practice includes the following:

- Patient events, interventions, and results
- Patient satisfaction (NRC reports and other surveys)
- Medication use and errors
- Operative and other procedures
- Use of blood and blood components
- Restraint use
- Staff opinions and needs
- Infection control data
- Research data
- Resuscitation results
- Staffing effectiveness

As such this is a venue whereby nursing can be asked to incorporate practice changes based on evidence which is brought to this meeting. Having a clinical nurse as the chair of a hospital based committee has been a strong testament to the work Ann has done to develop trust with her registered nursing colleagues, in leading them with structure and purpose as well as with the best of evidence to guide their way.