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Kim L. Scott BSN, RN earned her BSN from Salisbury State College (now Salisbury University). For seventeen (17) years, Kim worked as a nurse in Medical-Surgical, Operating Room and Maternal Child Health including NICU and Pediatric areas. She has also held Nursing Leadership roles varying from Charge Nurse to Interim Director. Led by her experiences as ‘Super User’ of early electronic systems, Kim decided in 2000 to pursue a career as a nurse in Information Services. She is currently a Nursing Informatics Analyst at Bayhealth Medical Center where she is involved in the Electronic Documentation Committee, the Surgical Services Executive Committee and Surgical Operations Workgroup. Kim is a member of ANIA, DNA and ANA. Commmitted to active participation in User Groups and Special Interest Groups, she has presented at National Conventions. Kim can be reached by email at kim_scott@bayhealth.org or at her office at (302) 744-6226.

Nursing and Technology continued on page 2

Executive Director’s Column

Sarah J. Carmody
Executive Director

Keep moving forward.

~ Walt Disney

Your Delaware Nurses Association is moving forward. So far this year, we have accomplished a lot. We had a successful Spring Conference with Becky Patton, ANA President as the keynote. We had a successful Cultural Competency Series and HIV educational program. We had a successful Medicine Take Back event at Christiana Hospital. In July, I know that we will have a beautiful and successful celebration recognizing Nursing Excellence. And, our legislative committee has introduced legislation to allow APNs to write for handicap placards and to pass title protection. As I write this I don’t know if these two pieces will pass, but I do know that we will keep moving forward.

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of responses—everything from sheer excitement and joy to incapacitating fear. Powerful phrase, huh?

But the real power lies behind the words. Gone are the days when "technology" meant moving from glass to digital thermometers. Gone are the days when 'Virtual Care' was a science-fiction scene on Star Trek—it's now science-fact, as we'll read about in an article on virtual intensive care. No longer reserved for big teaching centers, technology is being embraced everywhere. We’ll learn how Electronic Medical Records are employed in ambulatory care, home care, long-term and assisted-care settings as well as acute care facilities within our communities.

Skeptics argue, ‘What about the patient?’ (What a bizarre question!) Delaware nurses are combining the art of Nursing with the science of Technology. Read how Nursing Educators meet the challenge of teaching technological advances in Patient Education. The First State. Learn, too, the impact technology has had on patient outcomes and the quality of care afforded patients benefiting from Nursing and Technology.

Nursing has always been about the patient. I’m convinced reading this “Nursing and Technology” issue will add another chapter in our nurses’ storybooks. Of course, the book has already been written by our predecessors—remembering the days when “technology” meant moving from glass to digital thermometers. Gone are the days when ‘Virtual Care’ was a science-fiction scene on Star Trek—it's now science-fact, as we’ll read about in an article on virtual intensive care. No longer reserved for big teaching centers, technology is being embraced everywhere.

The ‘First State’ is once again leading the nation by developing a centralized health information network—the first state wide initiative of its kind. Learn how healthcare providers throughout the state are sharing information to improve health care in the First State. Learn, too, the impact technology has had on patient outcomes and the quality of care afforded patients benefiting from Nursing and Technology.

The new Delaware Nurses Association license plate was created to show pride in nursing. To move forward with production, we will need to have 200 applications to submit to the DMV. The DNA will reserve the numbers 1-20 to be raffled off in the near future. The cost of the license plate is $10 plus $40 for state and national healthcare decisions.

The Committee will be responsible for reviewing all matters relating to inmate healthcare services, inmate deaths and healthcare contracts that provide for inmate care. DNA was requested to submit representatives to the Governor to be approved by the Senate. Congratulations to Holly Wright! Holly will be representing nursing and the DNA on this committee. Thank you to all that applied. Without the dedication of our members, we could not move forward as an organization and have a voice on state and national healthcare decisions.

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To continue this positive forward movement, please consider participating on one of our committees. As the saying goes, many hands do make light work. Check the DNA website or call the office for information on committee meetings and conference events. Your ideas and energy are needed to keep moving nursing and the Association forward.
President’s Message

The Nominators are the Real Heroes & Where Would We be Without Technology

As I write this message we are preparing for the Excellence in Nurse Practice Awards which are co-sponsored by the DNA and DONE. These awards are inspiring in many ways... one is just the volume of nominations, this year we received approximately 60 nominations spread across the seven categories. But another that always touches my heart is the passion, commitment and follow-through of the nominators. This group of individuals ensures that excellence in nursing practice is recognized and promoted. They are the ones who pay attention to deadlines, the application process, and carefully word their nominee’s accomplishments so they are shown at their very best. Without them there would be no Excellence in Nurse Practice Awards. My thanks and heartfelt gratitude goes out to everyone who submitted a nomination this year!

Once again the use of technology in nursing has reached to the top of the priority list the DNA Reporter Themes. As I write this message we received approximately 60 nominations, this year we are excited to see where nurses both adapt to and craft the next generation of health care technology.

A role that has emerged from this invasion is that of the Informatics Nurse. In 1994, the DNA defined the scope of practice for nursing informatics as a specialty that is a combination of nursing science, computer science, and information science used in identifying, collecting, processing and managing data and information to support nursing practice, administration, education, research and the expansion of nursing knowledge and wisdom in nursing practice. I think you will enjoy this issue in which several informatics nurses will be sharing their work to help nurses both adapt to and craft the next generation of health care technology.

The Delaware General Assembly has created the Adult Correction Healthcare Review Committee. This Committee serves in an advisory capacity to the Commissioner of the Department of Correction. This Committee will advise the Commissioner on all matters relating to the provision of inmate healthcare services, the reviews of all inmate deaths and autopsies relating to those deaths, the construction of healthcare contracts that provide inmate healthcare services, and the review of all statistics relating to inmate healthcare.

The Committee will consist of seven members with one representative from each of the following organizations: the Delaware Nurses Association, the Delaware Medical Society, the Delaware Psychiatric Society, the Delaware Psychological Association, the Delaware State Bar Association, an expert in the field substance abuse treatment and the Bureau Chief of Correctional Healthcare Services. Congratulations to DNA member Holly Wright FNP-BC who was selected by the Governor’s Office to participate on this committee. Thank you to those who responded to the request to represent the Delaware Nurses Association on this Committee.

Upcoming Reporter Themes

- November/December/January 2010 Palliative Nursing
- February/March/April 2010 Health Care Economics
- May/June/July 2010 Environmental Impacts of Health Care
- August/September/October 2010 Long Term Care
- November/December/January 2011 Legislation

New ANA CEO

The Board of Directors of the American Nurses Association (ANA) takes great pride in announcing that Marla J. Weston, PhD, RN has been named chief executive officer (CEO), effective June 14, 2009. As CEO, Weston will be responsible for providing visionary, strategic, and progressive leadership for the ANA enterprise. In her new role, Weston will also serve as CEO of the American Nurses Foundation (ANF), the research, education, and charitable arm of ANA.
Delaware Nurses Association Consent to Run

Nominations are open for nominations for the following positions on the Board of Directors for the Delaware Nurses Association, Inc.: 1. President-Elect—This position serves concurrently as an elected ANA Delegate. The President-Elect works in close collaboration with the President and actively participates in committees of the DNA. This is a one (1) year term until the president position is assumed. The president’s term is for two (2) years with an additional one (1) year as past-president. 2. Treasurer. The Treasurer is required to monitor and report on the finances of the association to the Board. The treasurer also reports on the finances at the general membership meetings. This is a two-year term. 3. At Large Director/Alternate ANA Delegate (2 positions) The Alternate assumes the duties of the delegate in the event that the delegate is not able to attend the national House of Delegates. This is a two-year term.

Eligibility Requirements for Candidates
Each candidate must be a member of the Delaware Nurses Association in good standing. Interested members should have some experience participating in the organization. Full Members as defined in the Association bylaws is described as:
1. A person who has been granted a license to practice as a registered nurse in at least one state, territory, possession or the District of Columbia in the United States, and who does not have a license under suspension or revocation in any state, territory, possession or District of Columbia in the United States.
2. A person who has completed a nursing education program that qualifies the applicant to take a DNA-accepted nursing board examination for registered nurse licensure as a first time writer.
3. Membership is unrestricted by consideration of age, creed, disability, gender, health status, lifestyle, race, nationality, religion, or sexual orientation.
4. Minimum of one (1) year membership

Work of the Board of Directors
The Board of Directors, a corporate body composed of elected members, serves as the agent for members of the DNA. Each member of the Board must uphold the mission, vision and goals of the Association. The functions of the Board include but not limited to the following:
1. Exercise the corporate responsibility and fiduciary duties of the Association with applicable provisions of law.
2. Provide for implementation of action and directive of DNA membership.
3. Establish policies and provide for the transaction of business and coordination of association activities in the interim between the general membership meetings.
4. Provide for adoption of financial policies.

Role of the Board of Directors
Members of the Board of Directors are the leaders of the Association. They are responsible for ensuring that all decisions are made in the best interests of the Association. They must ensure that the Association will be handed on to succeeding generations with its strengths intact or improved, and its mission, vision and goals well supported.

Time Commitment
Meetings of the Board of Directors shall be held at least four (4) times annually at a time and place determined by the Board of Directors. Candidates should be able to attend board meetings as called by the president, general membership meetings, and national meetings (as applicable for the position). Special meetings and ad-hoc committee assignments would be in addition to those commitments. Added time commitments vary depending on the depth to which individual issues are pursued.

Nomination Procedure
Nomination forms are available on the Delaware Nurses Association website (www.dnurses.org). They are also available from the Delaware Nurses Association, 5586 Kirkwood Highway, Wilmington, Delaware 19808. To request a form by phone, call (302) 998-3141 or 888) 381-0929.

The onus is on the person nominated to submit a bona fide nomination form. That is, the candidate is responsible for ensuring that the form is complete and that the appropriate documentation has been provided. All nominations are subject to a verification process by the Chair of the Nominating Committee. A nomination will be certified as correct only if all the following criteria are fulfilled:
1. The Candidate is a member of the Association in good standing.
2. The nomination form includes the candidate’s name, his/her consent to run.
3. Candidate information is completed as instructed on the pages provided.
4. The completed nomination form is received by the Delaware Nurses Association 5586 Kirkwood Highway, Wilmington, Delaware 19808, by 4:00 p.m. on Friday, October 16, 2009. Forms received after that date will not be considered.

1. Special, Associate and Honorary Members are eligible for candidacy. Criteria for each membership are outlined in the Delaware Nurses Association bylaws under Article V, Section 2.
2. For full explanation of the functions of the Board of Directors can be found in the Delaware Nurses Association bylaws under Article VIII, Section 6.
## DNA Fall Conference

### Promoting Best Practices in the Nursing Profession

<table>
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<th>Conference</th>
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<th>Track 2</th>
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<td>Nursing's Role in Public Health Issues</td>
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<td>A Nurse Practitioner Perspective</td>
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### Conference Objectives
- Identify current trends in nursing practice
- Develop knowledge and skills regarding nursing leadership and community resources
- Network and Collaborate with peers

### Keynote Speaker—Rosemary Mortimer, MEd, MSN, RN

### Track 1

1. **Nursing's Role in Public Health Issues**
   - Kristin Bennett, RN, MSN

2. **Diabetes Management Update**
   - Christine Tuck, ACNP, BSN, CDE (pharmacology)

3. **CVD Prevention in Women**
   - Managing Allergic Rhinitis: Controlling Symptoms and Improving Quality of Life

### Track 2

1. **APN Legislative Update**
   - Janet Schuy, DNCS, CRNP, RN

2. **Interpreting Clinical Journal Articles**
   - Dr. Linda Scharf (pharmacology)

### Legislative Issues- 145th General Assembly

### Senate Level

#### Senate Bill #46

**AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO HEALTH AND SAFETY, INFORMATION CONSENT AND HIV TESTING.**

**Synopsis:** This Bill removes the stigma of HIV testing for pregnant women by excluding it in the list of mandated battery of tests administered for all pregnant women. It will have the added beneficial effect of decreasing the rate of neonatal infection of HIV. It will have the added beneficial effect of decreasing the rate of neonatal infection of HIV. It will have the added beneficial effect of decreasing the rate of neonatal infection of HIV.

**Current Status:** Senate Passed on 06/11/2009

#### Senate Bill #490 w/SA 2

**AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO TANNING FACILITIES.**

**Synopsis:** This Bill will regulate indoor tanning facilities in the State. It creates a total ban on indoor tanning for any minors under the age of 14, unless it is for medical purposes and prescribed by the patient's practitioner. In addition, minors between the ages of 14 and 17 will be required to submit a consent form, signed by the parent or legal guardian in the presence of the tanning facility operator, before they are allowed to tan. This consent form must contain the risks and benefits of tanning. The Act also lays out record retention requirements for these consent forms. The Act will be known as the "Michelle Rigney Act" in honor of the late 22-year-old Michelle Rigney of Newark, DE who lost her battle against melanoma on June 17, 2008.

**Current Status:** House Health & Human Development Committee on 06/10/09

#### Senate Bill #138 w/SA 2

**AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO MEDICAL CERTIFICATION FOR LICENSE PLATES AND PARKING PERMITS FOR PERSONS WITH DISABILITIES.**

**Synopsis:** This Bill would permit physician's assistants who are supervised by licensed physicians and advanced practice nurses who are employed by or have cooperative agreement with a licensed physician, in addition to physicians, to sign applications and renewal applications for license plates, and temporary and permanent parking permits for persons with disabilities.

**Current Status:** Senate Passed on 06/11/2009

#### House Level

**House Bill #165 w/HA 1**

**AN ACT TO AMEND TITLES 11 AND 29 OF THE DELAWARE CODE RELATING TO THE ADULT ABUSE REGISTRY.**

**Synopsis:** This Bill creates the Department of Health and Social Services to provide access to the names and nature of the conduct conducted by those persons who are actually listed on the Adult Abuse Registry. It result of substantiated findings of abuse, neglect, or financial exploitation.

**Current Status:** House Passed on 06/04/2009

**House Bill #36**

**AN ACT TO AMEND TITLES 16 AND 29 OF THE DEPARTMENT OF HEALTH AND SOCIAL SERVICES RELATING TO NURSING FACILITIES AND SIMILAR FACILITIES.**

**Synopsis:** This Bill clarifies the role of the Community Legal Aid Society, Inc. (CLASI), designated for the past 30 years as Delaware's Protection and Advocacy System (P&AS) in protecting patients and residents in nursing and similar facilities. As a complement to the existing protective system operated by the Department of Health and Social Services, CLASI is authorized to solicit and investigate reports of abuse, neglect, and financial exploitation in nursing facilities. Finally, the Bill states that the patients and residents in nursing facilities.

**Current Status:** House Passed on 06/04/2009

**House Bill #37 w/HA 2**

**AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO THE MENTAL HEALTH PATIENTS BILL OF RIGHTS.**

**Synopsis:** This Bill adds provisions to the Mental Health Patients' Bill of Rights, including safeguards in administration of restraint and requirement of an enhanced patient grievance system for DPC patients. 

**Current Status:** House Passed on 06/09/2009

**House Bill #38**

**AN ACT TO AMEND TITLE 16 OF THE DELAWARE CODE RELATING TO THE DEPARTMENT OF HEALTH AND SOCIAL SERVICES RELATING TO LICENSING MEDICAL CARE FACILITIES.**

**Synopsis:** This Bill allows each competent adult patient to receive visits in a Hospital or Nursing Facility from whomever the patient or resident desires, subject to restrictions set forth in the Bill. In addition, this Bill ensures that hospitals and other healthcare facilities defined in the Bill can maintain a safe environment by restricting visitations by those who pose a threat to the patient or resident. It also eliminates any inconsistency with existing visitation rights in licensed long-term care facilities while explicitly requiring adherence to advance health care directives and powers of attorney.

**Current Status:** Senate Passed on 06/11/2009

**Sources:** [Sources](https://www.legis.delaware.gov)
Technology Improves Team Communication and Coordination of Care in Home Health

Gale Moore Bucher
RN, MSN, COS-C
Gale Bucher

Tom M. DelleDonne
AAS, RRT, BS
Leslie Kaczmarczyk, RN, BS, COS-C

Gale Moore Bucher earned her BSN and MSN from the University of Delaware. She has worked in critical care, nursing education, and home care for over 29 years. Gale is the Performance Management Coordinator at Christiana Care Visiting Nurse Association, New Castle, Delaware. Her responsibilities include performance improvement and accreditation. She is also a surveyor for the Commission on Collegiate Nursing Education, a national accreditation agency, and an adjunct instructor for the University of Delaware’s Department of Nursing in the College of Health Sciences. Gale can be reached by e-mail at gbucher@christianacare.org or by phone (302) 327-5341.

Leslie Kaczmarczyk
is a registered nurse with a BS in Business Administration. Leslie has over 20 years of home health care experience. Leslie has worked in various roles within Home health care and is also an independent consultant specializing in Home Health care informatics. She is currently employed by Christiana Care VNA as an informatics nurse. In this role she has implemented an automatic clinical record, trained clinical field staff in the use of the automated clinical record and is also involved with the development of the wound management program.

In 2000, a team of managers and clinicians at Christiana Care and the Christiana Care VNA (CCVNA) gathered to develop a wish list for an automated clinical documentation system. Field use of a laptop, PDA or tablet would document clinical information and care planning. The team agreed they wanted:

- Timely access to each disciplines’ assessments
- Pharmacology, and disease information
- Access to clinical procedures
- Less travel in and out of the office
- Reduction in use of paper

Nine years later, a significant effort in professional involvement, financial resources, and time produced a wish list that would transform technology. Lynn Jones, FACHE, President Christiana Care Visiting Nurse Association, affirms, “We are positioning for the future, to provide effective services for our patients at home, where patients prefer to receive their care.”

The agency’s new electronic medical record system software provides clinicians with electronic Point of Care patient information. This allows interdisciplinary collaboration to insure patient safety and appropriate care. For example, when the nurse admits a patient and assesses high mobility risk for falls, an electronic physical therapy referral is made. When a concerned patient calls at midnight, the on call nurse has immediate access to the patient’s clinical record. Point of Care efficiently provides what is clinically necessary and allows quality care with fewer resources. The VNA has been using the product for over eight years and recently added enhancements to its capability.

Automated clinical documentation impacts work behavior. A study by Banner and Olney (2009) suggests that automated documentation allows nurses more time for direct patient care. Administrative time is decreased, allowing more time to develop a complete patient record. Future studies are needed to measure the efficiency of nurses and other disciplines using automated documentation in home health.

Current Point of Care home care nurse productivity has not provided a Return on Investment (ROI) for most agencies (Jackson, 2008). However, other benefits including assessment accuracy and care coordination offset this disadvantage. Integration with other software also has potential to improve productivity. Assessment accuracy has benefitted many agencies. For example, care planning and Medicare reimbursement are dependent on the assessment. A nurse admits a following hospital discharge for heart failure and the patient demonstrates no dyspnea. Diuretic therapy was reduced and the patient has returned to her home environment and diet. The next day, the therapist visits and discovers the patient exhibits dyspnea with moderate exertion. Electronic communication occurs real time to the nurse, the physician is contacted and the initial assessment changed.

Coordination of care with more accurate assessment of patient needs and care planning leads to improved clinical outcomes and reduced visit frequency. In a Prospective Payment System with the agency serving a majority of Medicare patients, coordination of care that reduces visit frequency is a deal-breaker! In addition, CCVNA staff report satisfaction with Point of Care and team communication. Trish Preston, RN, WCN, says, “It was well worth the wait for Point of Care and time spent. I will never go back to paper!”

Improve Patient & Staff Safety, Track Visit Time with Telephony
CCVNA Home Health Aides, Homemakers and Private Duty nurses use Telephony. The field staff use a touch tone phone to dial in at the beginning and end of each visit. This provides documentation that the visit was completed as well as documentation related to the visit. Recently a Telephony Messaging module was added allowing short messages to be sent to the field staff as they dial-in. This enhances timely communication with field staff related to important employer and patient issues. Rhonda Combs, RN MSN, Sr. Vice President of Home Health and Community Services, reports, “This technology allows us to track real time activity, enabling us to know if our field staff have arrived as scheduled. Telephony is valuable for patient and staff safety, saving time and paper.”

Telehealth is Changing Care Delivery
Christiana Care VNA has been using home telemonitoring since 2005. Telehealth includes telephone, communication, telemonitoring, and teletriage. The telemonitor is a device placed in the home to transmit vital signs and other information via a telephone line or internet to a health care provider. Teletriage is using monitoring information to plan an action on trend information showing declines that previously went unrecognized. The technology changes home care delivery from scheduled visits to visits clinically indicated.

Present equipment provides a home care patient’s vital signs through a central monitoring station. The patient is guided by audio to use the blood pressure cuff, pulse oximetry, and scale properly allowing timely telephone line transmission. In addition, the telemonitor asks the patient “yes/no” questions about their symptoms. Patient information is transmitted to the telemonitor. The telemonitor evaluates the information. The nurse may telephone the patient to insure accuracy of results as well as communicate information about their symptoms, therapeutic diet or medications. The nurse can also use the data for clinical decisions including contacting the physician to discuss a plan of care change. The nurse can improve the outcomes of many more patients than she could physically visit, and the patient is empowered to self monitor by partnering with the nurse.

The VNA is evaluating a new generation monitoring system that provides interactive disease management questions with branching logic to enhance patients’ understanding of their disease process. New monitors utilize high speed wireless technology, including video. Use of two way synchronous video enhances patient communication, lowers hospitalization and emergent care visits according to Danasky, Vasey and Bowles (2008). Technology is rapidly increasing our ability to stay connected to our patients, improving self efficacy and quality of life.

Like other technology, telemonitoring is an enabling tool and must be applied appropriately.

Technology Improves continued on page 7
Walk down the hallways of any long term care facility today and what you see might surprise you! In an Activities Center, you may see a group of residents watching a special program on a large flat screen TV, munching snacks and enjoying the atmosphere. A resident who might have done nothing since their former homes. In another wing, you may see a short term rehab patient, taking a break from physical therapy and surfing the internet on his laptop, connected to a wireless system. As you walk through the facility by change culture and a growing diverse population, is transforming the traditional nursing home.

The long term care industry has been undergoing a time of tremendous growth and change. Although this new technology has brought with it many positive changes, the challenges of implementing and maintaining these systems are far from small. Initially it is important to know what experience your staff has had with computers and keyboards. In order to complete documentation timely, a high level of comfort with basic skills such as typing, drop down menus and using a mouse is important. These skills may seem easy to the computer savvy staff member but quite challenging to those who may never have used a computer before. Tutorial CDs and training classes can help with these tasks. For those new to using computers, there is a tutorial option available to learn how to use a computer. The nurse visits the patient at home, allowing wound certified nurses (WCN) to visit patients because previously, only the most complex patients were seen by the WCN.

Advance Nursing through Technology

As nursing moves to evidence-based practice, nurses are using computer database information to guide their decision-making. With technology investment comes the potential for huge rewards in improved care delivery. CCVNA has realized improvements in:

- Reduced hospitalization and emergent care
- Efficient use of nurse specialists in wound and cardiac care
- Team communication
- Reduced manual administrative tasks
- Efficient use of nurse specialists in wound and cardiac care
- Reduced hospitalization and emergent care
- Availability of reports for performance improvement

When the right technology is successfully implemented, efficiency is increased, reducing burden on nurses. They are free to concentrate on direct care. Technology, when at its best, improves home care delivery. It improves staff efficiency and increases work fulfillment for home care nurses.

References:

- Banerjee T, Oleyo C. Automated clinical documentation: Does it allow nurses more time for patient care? CN: Computers, Informatics, Nursing. 27 (2), 75-81, March/April 2009.
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Linda G. Darling

Linda G. Darling earned her Diploma in Nursing from McQueen Gibbs Willis School of Nursing and her Bachelor of Science in Nursing from the University of Maryland Baltimore Campus. Over the last 18 years, Linda has been an active member of the association. She has also been involved in the implementation of these systems.

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technology, nursing has responded by enhancing the basic skills of nursing. Importantly, as nursing blood pressures have long been used to reinforce nursing to meet this challenge. Simulation and technological innovation that will allow column will discuss the current and future use of (Decker, Sportsman, Puetz, & Billings, 2008). New mannequins and the associated teaching strategies. Few innovations in nursing education have created challenges with the technologies in the ambulatory care setting. When our office first started talking about going to EMR (electronic medical record), I thought to myself how will I do my job, I hardly even know how to turn the computer on let alone use it. Our saying in the office was ‘EMR will fix everything’. However, little did we know, it would create a whole new set of problems. Change is always difficult, but does present its rewards.

In the beginning there was a lot of comparing different computer systems. The one thing that we wanted was an EMR that would allow us to do our doctors’ way of practicing medicine. We wanted to enable EMR to work around us. After choosing a system, we had to learn how to set it up to work for our office. You don’t just get instructions for buttons and everything is there. It is kind of like building a house: you start with the plans, then foundation, framing, plumbing/electric, drywall, down to the final touches. When you finally move in, there are still always things to adjust and improve. One of our sayings was “garbage in, garbage out” so the initial set up was very important. Then followed: inputting, inputting, and even more inputting. We had to supply the machine with all the patient information and history. There are a lot of benefits and tribulations to using EMR. Before there was EMR, everything would be running around looking for a particular chart, lab, or x-ray. Now all of that information is at your fingertips, that is, until there is a failure in technology and the system shuts down. Instead of telling someone “we can’t find it”, we now say “sorry our system is down”. The documentation is better and much more reliable.

Some of the tribulations of the EMR system are that it is really easy to make one wrong click of the mouse and make a mistake for example. When choosing prescriptions, the “click” for once daily and four times/day are directly beside each other and are often clicked wrong. This could cause a patient to be prescribed the wrong medicine.

Some of the benefits of EMR include that information in the medical record is now traceable: who did what and when. This is a great feature that was not available in the past. The flow charts of the patients’ histories are available at a quick glance: cholesterol levels; vital signs; glucose levels; growth charts; etc are all on one page. One of the things the 21st century has brought us is speed. EMR has increased the speed of communication with EMR. The actions taken in a patient’s EMR chart are in real time. The minute that something is sent into the EMR, the nurse, nurse practitioner, or physician can get that information instantly.

Education for the patient is also only a few clicks away instead of finding it in a book and making a copy; when you order, it can be sent over with just a few clicks. Another nice feature is that important reminders and/or warnings can be highlighted. When you are dealing with a patient in pain, this can be a real blessing when you are working around us. After choosing a system, we had to learn how to set it up to work for our office. You don’t just get instructions for buttons and everything is there. It is kind of like building a house: you start with the plans, then foundation, framing, plumbing/electric, drywall, down to the final touches. When you finally move in, there are still always things to adjust and improve. One of our sayings was “garbage in, garbage out” so the initial set up was very important. Then followed: inputting, inputting, and even more inputting. We had to supply the machine with all the patient information and history. There are a lot of benefits and tribulations to using EMR. Before there was EMR, everything would be running around looking for a particular chart, lab, or x-ray. Now all of that information is at your fingertips, that is, until there is a failure in technology and the system shuts down. Instead of telling someone “we can’t find it”, we now say “sorry our system is down”. The documentation is better and much more reliable.

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The 21st Century offers many advances and challenges with the technologies in the ambulatory care setting. When our office first started talking about going to EMR (electronic medical record), I thought to myself how will I do my job, I hardly even know how to turn the computer on let alone use it. Our saying in the office was ‘EMR will fix everything’. However, little did we know, it would create a whole new set of problems. Change is always difficult, but does present its rewards.

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One great value of simulation education is exposure allowing for videotaping of scenarios for later viewing. Nursing invest in sophisticated camera equipment for exercise. Some authors support written and oral scenarios in the simulation laboratory. Key to the process is the patient scenario, computer programming to simulate patient changes, and critical thinking activities to encourage thoughtful exploration of patient issues. Scenarios include signs and symptoms, status changes, and data which are programmed into the software of the HPS. Simulations create real-life situations that students move through that can take them through different aspects of patient care. For example, they could admit a child into the ER, assess for possible appendicitis, determine she has an appendicitis, appendectomy is performed, perioperative care, deal with complications including sepsis, and discharge the client. During this process the students are learning to prioritize, remain calm, and deal with a variety of emergencies.

Another valuable learning opportunity provided by scenarios is group interaction, learning, and prioritizing. During scenarios students are assigned active roles such as primary nurse, medication nurse, family members, and other healthcare professionals. They are given preparatory information and held accountable for key knowledge prior to the scenario. During the scenario students perform psychomotor skills and are asked to address key clinical decision-making problems. Scenarios provide unique opportunities for safe clinical practice, lessons in delegation, and performing in the interdisciplinary team.

One of the great assets of simulation education is the relation to the potential application across all levels of nursing education and experience. Novice nursing students may learn to take vital signs, provide basic care, and practice early decision-making skills. Physical assessment and medication administration skills may be fostered and maintained in the model setting. Students practice therapeutic communication techniques with patients, observe client safety principles, and respect the client as if it were a real person. Lab instructors do not follow the procedures “by the book.”

In addition many schools of nursing have endeavored to create hospital-like appearances in the labs. Nursing stations, medication rooms, real-life bedside, intensive care units, labor and delivery rooms, and operating room are created to portray the workplace. Some schools create apartment-like settings to simulate the home environment. Students watch videos involving actual hospitalizations, students about the home visit or psychosocial nursing skills (Feingold et al., 2004). In some settings students are able to metaphorically recognize real clients, observe client safety principles, and respect the client as if it were a real person. Lab instructors do not follow the procedures “by the book.”

Perhaps the greatest value of simulation scenarios and mannequins may be associated with the development of “cause and effect” situations and the absence of clinical judgment skills. Students gain critical skills in assessing a patient, providing a nursing intervention or administering a medication. However, the patient response to the intervention or medication.”

Many simulation education programs are based on peer teaching, wherein students work together to learn skills, mentor each others’ progress, and more senior students assist students to learn the basic skills. This provides a unique opportunity to learn the cooperation, team work, and collaboration inherent of nursing practice.

There are disadvantages to simulation laboratory teaching methods. Obviously, the costs associated may often be prohibitive. State of the art simulation mannequins may cost many thousands of dollars, in addition to the equipment, supplies, warranties, and upkeep which compound the initial purchase. Space issues are often daunting for schools of nursing. Faculty may be reluctant to learn new strategies and adopt new methods of nursing education when nursing curricula are perceived as “full” and having little room for innovation. Finally, nursing faculty grapple with the artificial nature of simulation and the role simulation can play in nursing education.

Although sometimes faculty assume students who are more technologically adept will embrace simulation teaching strategies, some students may not excel in this kind of a setting. The simulation philosophy demands active student participation and thorough preparation. For students who are shy and not as assertive, they may always be in the background or easily drowned out by more aggressive learners. As research continues to evaluate the role of simulation in nursing education, studies will explore how simulation may be adapted to individual learner needs, the impact of simulation on clinical confidence and competence, the role of scenarios in developing clinical decision making skills, and the transferability of skills learned in the lab to clinical nursing practice.

It is important to note that simulation does not replace quality teaching or clinical exposure to clients. Nursing faculty must work hard to ensure that simulation experiences are objective based and have true value for students as they gain in proficiency. As noted by Starkweather and Kardong-Edgren (2008), “It is not solely the use of simulation, but the techniques employed with simulation that can improve the teaching experience for faculty and students” (p. 1). In addition, most schools of nursing have remained committed to the time spent in clinical practice in actual agencies involved in actual patient care. Some states have developed percentage formulas that allow simulation to replace some clinical hours, attractive in some areas due to limited clinical sites and faculty. As simulation gains more importance and replaces some clinical hours in many states, this is an important aspect in helping students buy into the reality of simulation.

The technologies involved in simulation learning are evolving daily. Creating virtual clinical experiences, patient encounters with avatars in “Second Life,” and enhancing student learning through replications of the electronic medical record are all new avenues being explored. In addition the licensing board is looking at a simulation component to the nursing exam. Importantly, nursing faculty and healthcare professionals endeavor to incorporate simulation methods with other teaching learning strategies to encourage students to “think like a nurse” and to enhance the quality and safety of nursing care.

References
The Centers for Medicare and Medicaid has charged Quality Improvement Organizations (QIOs) with improving the quality and efficiency of care for Medicare beneficiaries and to be a catalyst to utilize for quality improvement initiatives by healthcare setting. For hospitals, Data for Annual Payment Update (RHQDAPU) not only provides quality of care information, but provides a financial incentive for hospitals to report the quality of their services. For FY 2010, which begins October 2009, there will be a total of 42 quality measures that represent specific evidence-based processes of care. In the home health setting, the Outcome and Assessment Information Set (OASIS) is a set of elements for patient assessment and measuring outcomes for the outcome-based quality improvement. The Minimum Data Set (MDS) is the clinical assessment process required upon admission in nursing homes and is the Minimum Information Set (OASIS) is a set of elements for healthcare setting.

The QIOs contract with CMS to work with specific providers using evidence-based best practices and strategies to improve quality including the use of technology to improve outcomes. The QIO quality improvement programs, typically managed by RN project managers, facilitate further analysis of the data and processes contributing to the data set. The result of these interventions might be that the patient may receive the right antibiotic at the right time, or have less pain or pressure ulcers, or avoid going to the emergency room for cardiac care.

The RN project managers are able to retrieve and drill down performance data to the patient level. We can identify providers who are outliers in quality measure and indicators at both high and low ends of the spectrum and compare them with state and national levels. For instance, if a nursing home has a high pressure ulcer rate, we might also review performance in other areas that potentially influence those rates, such as prevalence rates for physical restraints, pain, or weight loss.

In the CMS 8th Scope of Work from 2005-2008, CMS and the QIOs promoted several health information technologies (IT) as tools that address these issues: the use of telehealth for reducing acute care hospitalizations in the home care patient, computerized physician order entry (CPOE) or medication bar coding to transform hospital care, and HIT adoption in adult primary care practices. One home health agency in Delaware reduced their rehospitalization rate for heart failure patients to 50% of the CMS risk-adjusted predicted rate for their case mix by using telehealth monitors that notify the telehealth nurse of changes in heart failure indicators.

QIOs also assisted nursing homes in setting performance targets and tracking their progress on selected measures using a web-based tool called STAR (Setting Targets-Achieving Results). (NHQI_Star 2008) By utilizing this technology, nursing homes are able to set targets in one of several performance areas: physical restraints, pressure ulcers, depression, and pain. Nursing homes are able to view their quarterly performance and select a method to improve: state average, national average, percentile ranking, percent improvement or Achievable Benchmarks of Care (ABC) method. (www.NHQI_Star) Setting targets has shown to correlate with improvement over time; approximately 44% of nursing homes that set targets in 2006 improved almost twice as much as those that did not set targets. (Adler 2006)

According to the Commonwealth Fund, (2008) investing in our weak primary care system through information technology will make it easier to gather the information necessary to track performance and monitor performance improvement. However, Dr. Carolyn Clancy, Director of the Agency for Healthcare Research and Quality, once said that simply automating our current system only allows us to do the same thing faster. Although technology facilitates efficiencies, technology alone is not sufficient to improve performance and quality of care.

In the CMS 9th Scope of Work that began in August of 2008, QIOs are working with physician practices to improve the health information technology of this technology through analysis of a readiness assessment. Organizations that have information systems often do not take full advantage of the capabilities of these systems. This assessment is used by the QIO to develop recommendations for changes and strategies to improve HIT adoption and outcomes.

Especially important in the chronic care patient, physician office nurses will have a pivotal role in disease prevention and patient flow where the EMR becomes a real time continuity of care record. Physician practices will submit monthly data to the QIO which will report to identify patients who should have documentation they have received specific care. Office nurses can use electronic alerts for follow-up phone calls, visits, or refills. Using digital mammographies, mammograms, and colorectal screening. Many studies show that alerts and reminders improve adherence to treatment recommendations.

The critical challenge will be to integrate patient assessments and clinical pathways across settings to move care from traditional to real-time information technology. Currently, we do not have the interoperable information technology to document performance and monitor our improvement efforts. But envision the patient with congestive heart failure managed by his primary care physician through clinical pathways integrated into the EMR, with alerts by his primary care provider to initiate care through admission to the hospital bypassing the ER, and discharged to home care with telehealth monitoring.

CMS is also currently funding the improvement of care across settings in 14 U.S. communities led by QIO community using the CARE (Continuity Assessment Record & Evaluation) instrument. The internet-based patient assessment uses state-of-the-art interoperable technology to document changes in the level of care needs of patients through the measurement of the health and functional status of the patient.

Take a long way since our paper and pencil days to using spreadsheets, databases, and software tools to collect and analyze quality of care data, electronic measurement and monitoring of care. Technology facilitates efficiencies, technology alone is not sufficient to improve performance and quality of care.

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Better Communication for Better Health Care

Prue Albright, RN, MSN

Have you ever needed a patient’s test result and could not find it? Have you ever been asked to pick up and carry reports from provider to provider? Have you ever been in the emergency room and struggled to recall details about prior tests and medications? If you can relate to any of these scenarios, Delaware’s health information exchange, the Delaware Health Information Network (DHIN), can help you professionally and personally.

These are exciting and challenging times in the healthcare industry. President Obama’s economic stimulus package includes funding for health information technology as a means to create healthcare efficiencies, decrease costs, and increase job creation. This package provides incentives to get more electronic medical records in physician practices, but if all of these individual systems are not able to communicate then the full benefit of health information technology will not be achieved. DHIN provides this critical connectivity between data senders (laboratories, radiology facilities and hospitals) and data receivers (healthcare practices).

On May 1, 2007 DHIN went live, becoming the first statewide operational health information exchange in the nation. Delaware can attest to the efficiencies derived from health information technology as one of few states on the cutting edge of healthcare reform. DHIN leads the nation in creating an interoperable healthcare system where a patient’s data follows them from provider to provider.

DHIN connects hospitals, healthcare providers and laboratories in real-time for the secure and reliable exchange of health information—creating better communication for better healthcare. DHIN provides secure delivery of laboratory and pathology results, radiology reports and admission face sheets from the following sources:

- BayHealth Medical Center
- Beebe Medical Center
- Christiana Care Health System
- Doctors Pathology Service
- LabCorp
- Quest Diagnostics

(Coming soon... St Francis and other data senders)

DHIN. With the rollout of a new version of DHIN adoption and usage are expected to increase to 50% by the end of June. Currently over 30% of practicing physicians in Delaware are enrolled, accounting for over 2,600 users of the system in practices statewide.

DHIN is currently launching an enhanced version, free to enrolled providers, that includes a new patient record search capability that makes clinical history available through DHIN on a need to know basis. Patient search provides doctors the ability to retrieve information on a patient in seconds. No more calling other providers or the lab; no more waiting for a fax to arrive. This means better health care for patients, greater efficiencies for providers and potential cost and life savings to the patient due to avoidance of duplicative treatments and therapies.

Coming soon, DHIN will allow for a 12-month medication history available to providers, including those in the emergency room. Hospital emergency departments in Delaware will also have access to patient health information through DHIN. Patients who enter the emergency room and their families are typically under stress and often are unable to accurately recall details of their health history. Emergency physicians will now have the ability to review medications and results from recent tests that can help them make critical and life-saving decisions much faster and more effectively than ever before—leading to better patient outcomes and potential cost savings.

DHIN also provides electronic reporting of chief complaint data from the hospital emergency rooms to the Delaware Division of Public Health (DPH) and several other counties for the implementation of laboratory reporting for public health reportable diseases. This will enhance the state’s bio-surveillance system and lead to better outbreak investigation and disease control efforts. There are several other DHIN–DPH collaborations on the horizon.

DHIN is working now with Long Term Care Facilities and Home Health Care Agencies to assess how DHIN can support patient care by identifying potential processes that would enable DHIN to facilitate communication of critical patient data as patients move across the health care continuum. We anticipate being able to create these links next year. From the consumer perspective DHIN provides unique features. DHIN has a strong Consumer Advisory Committee that has developed privacy policies. They are committed to a system that allows the network to be available to improve care and reduce costs while assuring patient privacy. To that end, consumers will be able to request from DHIN, a report of who has accessed your record. Also, if a consumer really does not want their information available to providers using the query function, patients can choose to not to participate. Once a person requests this, their identity is verified and then their information is not available to other providers via query. Patients may choose to participate again at any time. Future consumer enhancements are considered that may allow patient access to their information, and provider reminder for screenings and appointments.

This is an exciting project in a time of national change. As providers look toward securing stimulus dollars for health information technology adoptions, DHIN provides the necessary connectivity to sources of information that enable meaningful use. DHIN continues to lead the nation on the cutting edge of health information technology implementation.

Again, DHIN is available at no cost for practices—all that is needed is Windows-based computer with high speed Internet! DHIN is a public/private partnership funded by federal, state and private sources.

For more information about connecting your practice to DHIN or to learn more, please contact Prue Albright at 302-678-0220 or prue.albright@dhin.org. If you are interested in working with DHIN on any of our various committees please call to discuss. We need your valuable input.

Visit us on the web at www.denurses.org

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Engaging Patients through Interactive Care Technology

Katherine Pereira-Ogan, a Registered Nurse, is presently employed with Christiana Care Health System. She has held positions from Staff Nurse to Nursing Coordinator. Nurse Manager, and presently serves as the Director of Service Excellence. Katherine holds a Bachelor’s of Nursing Degree from Immaculata University and is a graduate of Neumann College with a Master’s of Science Degree in Strategic Leadership. She also holds a Board Certification in Medical/Surgical Nursing, Katherine also serves on the Board of Directors for Exceptional Care for Children in Newark, Delaware and is a member of the Advisory Board to Neumann College.

In hospital rooms in Delaware and across the country, patients are experiencing an interactive patient care (IPC) system that informs, alerts, and empowers the patient at the bedside. This leading edge technology, developed by GetWellNetwork, turns the patient’s in-room television into an interactive resource that allows patients to become more active participants in their healthcare process. These tools provide customized education, medication information, patient safety, pain management, health and wellness information, relaxation and entertainment, and internet access. In addition, patients can provide feedback about their hospital experience and can request a range of non-clinical services directly through the system, freeing nurses to focus on clinical duties. The system is a total patient experience designed to benefit patients and family members by increasing nursing efficiency, patient satisfaction, and enhancing patient education.

Recognizing that communication between patient and caregiver is an integral part of the healthcare process, the IPC system has become a valuable tool for patients and offers several methods to enhance this communication. Patients are able to submit compliments, suggestions and safety concerns, providing staff real-time feedback. While not taking the place of a translator, the system also provides links to online translation services for the ease of communicating non-clinical and social conversations. During periods of system non-activity, a slide show presents the patient with hospital and unit specific information such as visiting hours, unit activities, and safety messages.

Using a patient and family centered approach to care, patients are able to participate in diversional activities at the bedside. In addition to television, patients and their visitors have the opportunity to tune in to the news, check weather, access health information, and communicate through internet and e-mail. Over 60 video games are available and patients can select from a list of on-demand movies which are updated on a quarterly basis. Relaxation and restorative therapy is available through scenic imagery and natural ambient sounds, creating a relaxing, therapeutic environment. Patients can also use the system to create their own website, known as Care Pages, to provide updates to their friends and family. For patients who are unable to verbally communicate, a communication tablet text box is also available which allows patients to enter free text using keyboard.

The system also provides a number of features enhancing patient education. Available at the touch of the screen, patients can access health libraries and health education resources. In addition, patients can research post-discharge care facility options from a database of 200,000+ post hospital services located throughout the country. This allows patients to locate services close to their home and specific to their care needs. It also empowers the patient to be involved in their health care decisions by being fully informed of the services available to them.

The system also allows hospitals to focus on specific patient satisfaction goals by providing targeted survey questions. Following a HCAHPS-style questionnaire, the system asks the patient to complete a patient satisfaction survey to assess their overall experience. Should the patient answer “sometimes” or “never”, the nurse manager or designee is automatically notified so that immediate service recovery can be provided. In addition, there is a unit specific question of the day that is provided to the patient that targets that unit’s specific goals. By utilizing this system approach to service recovery, the healthcare organization is able to achieve new levels of service, patient satisfaction, quality outcomes and compliance, and nursing efficiency. The return on investment is both clinical and financial.

While the system allows patients to search for information of relevance to their condition or select movie options of their choice, the system goes far beyond passive, on-demand resources. A unique advantage is the realization of a fully integrated care approach that uses the system’s architecture to deliver a personalized care experience to each patient. This is accomplished through a variety of coordinated, automated workflows, called ‘patient pathways’ that display messages on the patient’s monitor inviting the patient to learn more about his/her care, condition, safety, and other important aspects of the hospital stay. One such pathway is a “flu season” alert, reminding patients to get their flu vaccine before discharge.

In an effort to further improve patient safety, accurate documentation and nursing efficiency, a system interface was developed between the IPC system and the hospital clinical documentation system, Cerner PowerChart. Nurses are able to prescribe specific education videos to individual patients at a designated date and time through PowerChart. The education order is sent to the IPC system, displaying an alert on the patient’s television monitor notifying him/her of the recommended video. Patient response to the prescribed education is captured and sent back to PowerChart, allowing nurses to monitor the status of videos. This includes information on whether the video was completed or partially completed and at what time the video was viewed. In other words, who watched the video (patient, family member, or other), and any other videos watched that were not prescribed.

Additionally, some videos are automatically prescribed based on specific patient information entered into PowerChart. For instance, when nurses indicate in PowerChart upon admission that a patient is a smoker, the system automatically triggers a Smoking Cessation Pathway in the IPC system and sends an alert to the patient’s television screen recommending a video on smoking cessation.

By automating the patient education process and effectively tracking education compliance, the IPC system relieves nurses from administrative tasks as well as provides a more accurate means of documentation. In response to HCAHPS-driven goals, a new initiative is underway that will offer personalized medication information and education, linking a patient’s personalized medication list in PowerChart to a medication database and video education in the IPC system.

Down the road, the system will continue to grow and expand with nursing efficiency and patient satisfaction in mind. New features will offer the ability to communicate with physicians, display test results at the bedside, and assist with financial management and discharge instructions. Also on the horizon is an on-screen white board, dietary requests, pharmacy services, interactive games, satellite radio, and gift shop and e-commerce purchases.

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Down the road, the system will continue to grow and expand with nursing efficiency and patient satisfaction in mind. New features will offer the ability to communicate with physicians, display test results at the bedside, and assist with financial management and discharge instructions. Also on the horizon is an on-screen white board, dietary requests, pharmacy services, interactive games, satellite radio, and gift shop and e-commerce purchases.
One of the most important tools in healthcare is the patient record. Within hospital settings, nurses are the primary data collectors and users of the patient record. EMR offers opportunities to enhance, consolidate, and streamline patient records. Professional nurses are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The changes are prime to lead tremendous organizational change. The nurse understands the workflow for nursing practice. A nurse led EMR committee will ensure a successful EMR implementation. The professional nurse is a natural leader, nurses are poised for the challenge of leading EMR implementation. The professional nursing role incorporates the role of coordinating a multidisciplinary team to accomplish a goal, whether that goal is restoring or maintaining the health of a patient or successfully implementing a multimillion dollar EMR system that will change the face of nursing documentation as it has been known for over a century.

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1. Angeline C. Dewey, BSN, RN, CCRN. Nursing Led EMR Implementation. DNA Reporter, August, September, October 2009

Nursing Led EMR Implementation
Angeline C. Dewey

Healthcare today is demanding increased technology to ease the burden of more acutely ill patients in conjunction with streamlining data collection. There is also great pressure from regulatory bodies including the federal government to transition to electronic medical records (EMR). The time is now and the leaders to best guide hospitals through this transition is the core bedside nursing staff. EMR introduction will change bedside nursing practice, documentation and education.

One of the most important tools in healthcare is the patient record. Within hospital settings, nurses are the primary data collectors and users of the patient record. EMR offers opportunities to enhance, consolidate, and streamline patient records. Professional nurses are prime to lead tremendous organizational change such as EMR implementation as evidenced by the Standards of Professional Performance. The qualities inherent to the professional nurse including collegiality, collaboration, resource utilization and enhancing the quality of practice and effectiveness of nursing practice. The success of nurse driven EMR implementation will not alter the standards already established. Nurses can develop policies if necessary which will mirror current workflow and redesign processes if necessary. Through collaboration with IT, additional policies on downtime and catastrophic failure can be developed to meet the needs of end-users as well as support systems and provide a clear understanding of necessary action should these breakdowns occur.

Plan for education and training. Nurses in the role of Clinical Educators (CE) lead staff development departments within many hospitals and therefore are prime to coordinate the massive amount of training required for all end-users. The collaboration between Nursing Informatics Analysts and CEs will strengthen the ongoing teamwork at the bedside along with the EMR committee. The CEs are very influential in fostering positive attitudes for the EMR. They are able to recognize the variances in baseline computer knowledge enabling them to provide additional education as necessary. Mandating EMR education reflects the institution’s support and value of the project along with assuring the necessary competence required of the staff. Cross-referencing the staffing lists for the first week of Go Live with the listing of who has completed the EMR education is an additional tactic to ensure all employees scheduled have attended the required training. Lastly, working with the CEs to have an EMR class the first day of Go Live eliminates the worry of the one employee showing up unprepared for EMR.

Designate superusers. The superuser concept is key to successful EMR implementation. The superuser becomes the champion on each unit for the successful adoption of the EMR. They also build the confidence of all end-users. Superusers campaign and persuade the end-users in accepting the EMR while creating enthusiasm and excitement. When Go Live occurs, have a central command center where IT staff is located 24/7 for several weeks. This provides a central contact area for EMR implementation. During the go live period, hold a shift meeting where all superusers meet to receive updates from the command center staff. It is important to disseminate superusers to areas where their area of expertise is best matched. Equip the superusers with tools for reporting application problems, tip sheets, reference materials, and a listing of important phone numbers including the hotline to the command center. The superusers need to be reachable and willing to work on each unit as if they were the core staffing for the day. This means dressed in appropriate nursing uniforms, prepared to assist in the bedside care of the patient or stand side by side the new EMR user coaching. Appropriate budget planning is essential as well to allow for around the clock superusers on all units during Go Live as well as increasing staffing ratios. This decreases anxiety among end-users and assures business as usual while this monumental change in practice is occurring.

Have end-users test, test, and test the system prior to Go Live. Not only will the end-users testing the final product build proficiency and confidence, it will also identify any potential problems with real time usage prior to Go Live. It is important to test many patient care scenarios from all disciplines, test on the actual equipment, and test in all physical patient care areas. This assists in identifying problems such as dead zones, equipment problems, and what if situations.

Plan for the meltdowns. Yes, it will happen even in the best prepared situations simply because of the enormous pressure. There are things you can do to help ease the stress such as having a refreshment area in the command center for staff, provide for meals around the clock on the units, and my favorite, have a candy bowl on each unit with a lot of chocolate! Another tip is to make sure all staff including the superusers take a break off the unit. There is an amazing difference in the energy level of staff when they spend time away from the unit, uninterrupted, especially during this demanding timeframe.

Implementing EMR is one of the biggest culture and practice changes nurses has seen for many years. In order to best accept the process transformation, nurses are best suited to lead this worthwhile endeavor. Nursing as a dynamic profession can easily adapt to constant change. And as natural leaders, nurses are poised for the challenge of leading EMR implementation. The professional nursing role incorporates the role of coordinating a multidisciplinary team to accomplish a goal, whether that goal is restoring or maintaining the health of a patient or successfully implementing a multimillion dollar EMR system that will change the face of nursing documentation as it has been known for over a century.

References
1. Angeline C. Dewey, BSN, RN, CCRN. Nursing Led EMR Implementation. DNA Reporter, August, September, October 2009
Imagine it is 3 o’clock in the morning, you are concerned about your patient’s condition. The Tele-ICU, Virtual ICU, eICU®. The Tele-ICU is another patient’s room, in a different institution. The Tele-ICU is a means of ensuring continuous proactive care and prompt intervention when on-site care is not possible. The scenario above is happening in ICUs across the country. It is called the Tele-ICU (also known as Remote ICU, Virtual ICU, eICU®). The Tele-ICU is a telemedicine model of care delivery that couples cutting-edge technology with critical care expertise to bring critical care services to patients and direct care providers: no matter the size of the ICU or its location (Celsi, Hassan, Marquardt, et al., 2001).

Intensivists save lives and reduce ICU mortality. Studies have shown that ICUs with critical care intensivist directly involved in the care of patients 24/7, experienced lower mortality and length of stay rates; potentially saving over 50,000 preventable deaths a year (Pronovost, Angus, Dorman, Robinson, Dresmiov, et al., 2002; Pronovost, Needham, Waters, Birkmeyer, Calinawan, et al., 2004; & The Leapfrog Group, 2005). Currently, there is a shortage of intensivists to meet the growing nationwide demands for now and for the future (Kelly, Angus, Chalfin, Crandall, Inghar, et al., 2004; Angus, Kelley, Schnitz, White, and Popovitch, 2000). To leverage these scarce resources, the Tele-ICU is proving to be one solution of using telemedicine technology, along with board-certified intensivists and critical care nurses to reach more critical care patients than traditional methods allow (Rosenfeld, Dorman, Breslow, Pronovost, Jenkins, et al., 2000; Breslow, Rosenfield, Doerfier, Burke, Zhang, et al., 2004).

Remotely located from the ICU, these tele-criticians work in Tele-ICU Centers that are equipped with state-of-the-art computer systems. Real time patient information is available to the Tele-ICU clinicians. Through the use of network and interface technology, the staff in the Tele-ICU has instant access to patient information systems, real-time vital signs, evidence-based clinical decision support systems that provide early warning alerts. Each ICU room is installed with high resolution video cameras with advanced audio and two-way visual technology. Video capability is only turned on as needed and no video or audio is recorded. Critical care nurses who work in the Tele-ICU have a nurse patient ratio of 1:30-50 patients and provide continuous monitoring 24 hours a day. On the other, tele-intensivists assume management of between 100 to 150 patients at night when the on-site physicians typically have gone home. The Tele-ICU is a means of ensuring continuous proactive care and prompt intervention when on-site care is not possible.

Within the Tele-ICU Center, the staff work as a team at individual work stations equipped with multiple computer displays and phones with speed dial capabilities. These tools allow the Tele-ICU clinicians the ability to effectively observe, assess, and communicate with family, patients, and on-site care providers. Each patient is prioritized by an acuity system that indicates the frequency of patient rounding. Patients who are most critical are rounded on, either with a video assessment and/or evaluation of clinical data, more frequently than less critical patients.

The on-site patient care team and the Tele-ICU team partner to provide critical care patients with the most best possible care. On the patient and thought processes, the critical care nurses and physicians in the Tele-ICU can help support safety initiatives, such as independent double checks of high risk critical medication infusions; surveillance of best practices, such as deep vein thrombosis and stress ulcer prophylaxis in high risk patients, as well as compliance to evidence-based protocols, such as ventilator associated pneumonia and sepsis protocols.

Tele-ICU nurses are a back-up support for on-site staff not a replacement or substitute. Tele-ICU staff can not replace the human hands-on touch, knowledge, skill that is so important in the holistic care of patients and families. However, without the normal bedside interruptions, the Tele-ICU staff has time to help on-site staff troubleshoot equipment, critically review the clinical situations, and monitor or watch over patients thus freeing up nurses’ time to take care of other things.

The impact of the Tele-ICU is the video cameras are not on all the time, nor do they have the ability to request the remote staff to refrain from physician conversations, the ICU nurse has the ability to request the remote staff to refrain from performing a video assessment. Greater acceptance of the Tele-ICU occurs when on-site staff is involved in the implementation process and when they are provided opportunity to visit and spend time with the clinicians at the Tele-ICU Center.

The Tele-ICU is an innovative approach that brings technology and clinical experts together in delivering critical care services to the critically ill patient population. Across the nation, many institutions view this as an opportunity to improve the holistic care of patients and families. However, the privacy issues are two concerns most frequently voiced by on-site nursing staff. These concerns often lead to delays in acceptance and integration of the Tele-ICU into patient care. Most important to note is the video cameras are not on all the time, nor do the nurse, and/or the family if it is okay to enter the room and to have the video cameras on. The Tele-intensivist directly involved in the care of patients and intensivists can help support safety initiatives, such as independent double checks of high risk critical medication infusions; surveillance of best practices, such as deep vein thrombosis and stress ulcer prophylaxis in high risk patients, as well as compliance to evidence-based protocols, such as ventilator associated pneumonia and sepsis protocols.

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Patient Monitoring Informatics

Critical Care Services to the Bedside


Imagine an inpatient rehabilitation facility where patients have access to a tennis court, baseball field, bowling alley, golf course, and boxing ring. The use of the Nintendo Wii video gaming system makes virtual participation in these sports possible as an adjunct to traditional occupational and physical therapy.1 Players use a wireless handheld controller to perform the motions used in the real version of each sport. These movements are translated into the context of an onscreen video game.

Nintendo introduced the Wii system in 2006 as a video game experience for people of all ages.2 Wii Sports was included with the purchase of the system. The interactive nature of the games is enjoyable, so participation in virtual sports could serve solely as recreational therapy, but innovative therapists quickly recognized the system’s potential as a rehabilitation tool. The physical body movements required to play the games during “Wiihabilitation” may improve balance, coordination, range of motion, and strength.3

According to CMS requirements, the patient in an inpatient rehabilitation facility must receive three hours of therapy per day; consisting of physical therapy, occupational therapy, and speech therapy.4 Communication between members of the rehabilitation team is necessary to recognize carryover of skills learned in therapy. The nurse may note that the patient requires less assistance with activities of daily living. For example, an increase in standing balance enables the patient to safely adjust clothing after toileting. Or, increased shoulder range of motion allows the patient to complete grooming tasks independently. Such functional gains should be documented and discussed with the therapist.

There are safety issues to consider with use of the Wii system. Nintendo5 recommends that players stand three to ten feet away from the video screen. The playing area should be clear of other persons or objects. Holding the controller securely and using a wrist strap reduce the risk of throwing or dropping the remote. These precautions are especially important when bowling or pitching because of the temptation to actually throw the controller.

To reduce the risk of infection, players should perform hand hygiene before and after using the remote controller. A hand gel is convenient if players are turning takes as part of group therapy. Nintendo4 recommends using a cloth slightly dampened with water to clean the remote controller, but health care facilities have found the use of disinfectant wipes to be safe and effective. According to the operations manual,6 persons with a seizure disorder or an implanted medical device should consult a physician before using the Wii. Players with a tendency for motion sickness may develop dizziness and nausea. Overuse may lead to tendinitis or carpal tunnel syndrome, but these injuries are less likely to occur with use of the system as an adjunct rehabilitation tool. Overexertion and poor body mechanics should be avoided to prevent muscle soreness.

Games may be played at wheelchair level, but if the treatment goals include increased standing balance, then fall prevention measures are imperative. A staff member may use a gait belt, walker, or parallel bars to provide support while the patient stands. Seated precautions, total hip precautions, or weight-bearing restrictions may limit or prevent the patient’s participation in “Wiihabilitation”. RehabCare7 also suggests that the patient’s ability to follow three-step commands should be a prerequisite for participation in Wii games. Input from the entire rehabilitation team must be considered when determining if Wii is an appropriate and safe treatment intervention for a patient.

The trend to use Wii Sports as a therapy tool is increasing as information about the system is spread via internet blogs, news coverage, and professional conferences. The release of additional programs, such as Wii Fit, further promotes use of the system in the rehabilitation setting. Research on using the Wii system in rehabilitation has been limited to case studies, but the Robert Wood Johnson Foundation recently provided funding for a research study to determine the effect of the Wii system on recovery of motor skills for stroke survivors.8 Although Nintendo does not market the Wii system for rehabilitation, the company is pleased with the apparent benefits in this setting. So are the patients, and for many of them, playing Wii with their grandchildren has become a new discharge goal.

References
Lisa Wallace has been a registered nurse for twenty-two years. She is certified as a registered nurse by the American Association of Critical Care Nurses. She has worked primarily in adult critical care. Her work experience includes time spent at Philadelphia, Pennsylvania, in Washington, D.C., and Wilmington, Delaware. She is currently a Staff Development Specialist for Christiana Care Health System and collaborates with nursing educators throughout the organization to provide quality educational experiences for nurses, both in the classroom and on the nursing unit. Lisa earned her BSN from Villanova University and her MSN from the University of Delaware. She can be reached by e-mail at lwallace@christianacare.org

Since the late nineties, the work of environmental scientists has helped the public become more aware of pharmaceutical waste products lurking in our water supply (Bound & Voulvoulis, 2005; Daughton, 2003; Dorne et al., 2007; Kolpin et al., 2002; Sherer, 2006; Stackelberg et al., 2004). Their presence has been attributed, at least in part, to influences on humans and for safer medication discard methods (Daughton, 2003; Dorne et al., 2007; Kidd et al., 2007; Kolpin et al., 2001; Stackelberg et al., 2004). There are universal practices of which nurses are then incinerated under the watchful eye of law enforcement.

While little is known about the extent these trace environmental pollutants may have on human health, the damage observed in aquatic life substantiates the call for further investigation of possible medical and economic costs. Lisa Wallace earned her BSN from Villanova University and her MSN from the University of Delaware. She can be reached by e-mail at lwallace@christianacare.org.

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Lisa Wallace, MSN, RN, CCRN

DNA Addresses Pharmaceutical Waste in the Water Supply

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The challenge then becomes one of making medical waste incineration available to the general populace. In Canada, Australia, and several European Union nations, return programs, established in community pharmacies, are successful, collecting in excess of 600 tons of unused pharmaceuticals per year (Musson et al., 2007). Medications are return programs are collected in pharmacies, and bin contents are incinerated in an environmentally responsible manner on an ongoing basis. Efforts to replicate these continuous take back programs in the United States have been thwarted largely by regulatory statutes. Virtually all states have laws that prevent pharmacists and pharmacies from accepting returned medications from the public (Seehusen & Edwards, 2006). Complicating the situation even further a federal statute dictates that controlled substances cannot be legally transferred to anyone other than the person for whom they were prescribed, with the exception of law enforcement officials who are taking them during their normal course of duties (USDOJ, 2008). Consequently, many states have developed and implemented their own unique programs. In Colorado, locked collection bins in pharmacies, local law enforcement offices, or hazardous waste facilities; some operating by mail; some for one day only take back events; none approved or regulated by federal guidelines (Sherer, 2008).

Because of its commitment to protecting the environment and to maintaining the health of Delawareans, the Delaware Nurses Association (DNA) has resolved, to overcome these legal roadblocks. With the help of the Delaware State Board of Pharmacy and Christiana Care Health System’s Environmental Stewardship Committee, the Nurses Healing Our Planet subcommittee of the DNA has developed and hosted five one-day medication take back events. Nurses and police officers avail themselves to the public for the purpose of collecting unused or expired medications. Pharmacists from the state board of pharmacy and Christiana Care volunteer strictly for the purpose of separating non-controlled from controlled substances, which are then incinerated under the watchful eye of law enforcement.

The most recent of these events was held at Christiana Hospital’s Ammon Education Center on April 23, 2009. Collaboration between the DNA and the Delaware State Board of Pharmacy and Christiana Care Health System resulted in an enormously successful collection. Volunteer nurses from the DNA and from CCHS received medication from 146 parties who returned 3,540 items contributing to the safe disposal of 346.32 pounds of medication. Participants returned a panoply of over-the-counter medications, prescription drugs, contraceptives, vitamins, herbal supplements, inhalers, diabetic syringes and lancets, and even veterinary medications. Many of the most popularly prescribed pharmaceutical classes were received, including: antihypertensives, anti-infl ammatories, lipid-lowering agents, antidepressants, anti-inflammatory, anticoagulants, antibiotics, antihypertensives, and bronchodilators. Perhaps the most notable items returned were a thirty-five year old bottle of Paramethyl chloride.

Participants were greeted by a CCHS staff member and directed, by a police officer, to an intake table. Participants returned their medications to a nurse, who then entered the items into a computer and completed a brief survey. Medications were then screened by pharmacists who separated controlled from non-controlled substances, collected in pharmacies, and bin contents are incinerated in an environmentally responsible manner on an ongoing basis. Efforts to replicate these continuous take back programs in the United States have been thwarted largely by regulatory statutes. Virtually all states have laws that prevent pharmacists and pharmacies from accepting returned medications from the public. Many participants do bring in medications that they are no longer using and that will go toward the development of the Delaware Nurses Foundation and nursing scholarships. To download the application, visit us at www.dna.org/dna/dnaresources.nurses. Numbers will be assigned in the order applications are received. DNA members will have the opportunity to apply for this plate before being opened to the general nursing community. There will be an increase in price for non-members (to be set by the DNA Executive Committee). Not a member? Visit the DNA website to join or complete the membership application in this edition of the DNA Reporter.

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- Bound, J. & Voulvoulis, N. (2005). Pharmaceutical waste disposal alternative (Bound & Voulvoulis, 2005; Daughton, 2003; Dorne et al., 2007; Kolpin et al., 2002; Sherer, 2006; Stackelberg et al., 2004). Their presence has been attributed, at least in part, to influences on humans and for safer medication discard methods (Daughton, 2003; Dorne et al., 2007; Kidd et al., 2007; Kolpin et al., 2001; Stackelberg et al., 2004). There are universal practices of which nurses are then incinerated under the watchful eye of law enforcement.

While little is known about the extent these trace environmental pollutants may have on human health, the damage observed in aquatic life substantiates the call for further investigation of possible medical and economic costs. Lisa Wallace earned her BSN from Villanova University and her MSN from the University of Delaware. She can be reached by e-mail at lwallace@christianacare.org.

The Delaware Nurses Association is proud to offer the first ever Delaware license plate to celebrate nursing. In order for the DNA to obtain these license plates, they will need to have 200 applications. The cost of the license plate is $10 plus a $2.50 mailing and processing fee. The proceeds of the Delaware Nurses Foundation and nursing scholarships. The numbers 1-20 reserved for the Delaware Nurses Association will go toward the development of the Delaware Nurses Foundation and nursing scholarships. To download the application, visit us at www.dna.org/dna/dnaresources.nurses. Numbers will be assigned in the order applications are received. DNA members will have the opportunity to apply for this plate before being opened to the general nursing community. There will be an increase in price for non-members (to be set by the DNA Executive Committee). Not a member? Visit the DNA website to join or complete the membership application in this edition of the DNA Reporter.

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TYPES OF COMMUNICATION TOOLS:

Blog (construction for weblog) is a type of website that is usually maintained by an individual. It has regular entries such as commentaries, event descriptions, and/or graphics.

Forums allow users to create key words or terms (tags) to categorize content. Other names are collaborative tagging, social classification, social metadata, and folksonomy.

Listserv is an automatic email broadcast to all subscribers who are on the broadcast list.

Rich Site Summary (RSS) delivers regular updates of changing web content. News-related sites and other publishers syndicate their information into an RSS Feed. You need a Feed Reader or News Aggregator software in order to grab the RSS feeds from multiple websites and display them for you to read and use.

Social networking is a method to build online communities of like-minded people who share and exchange common interests/activities. Users can interact via e-mail and instant messaging. Examples are: Twitter, Facebook, and Myspace.

Web 2.0 characterizes a second generation of web development and design. It uses the worldwide web to facilitate communication, collaboration, and information sharing. Examples include: web-based communities, hosted services, and applications such as social networking sites, wikis, blogs, video-sharing sites, and folksonomies.

Webcast or Netcast broadcasts live or delayed audio/video messages to multiple users. Instructors use webcasts to deliver various lectures. Organizations may deliver press conferences.

Webinar is a web-based seminar (presentation, lecture, workshop) that is transmitted via the worldwide web. Webinars are interactive between the source and the user.

Wiki is a website that contains collective works of multiple authors. Each author can collaboratively edit existing content.

YouTube is a website on which users can upload, share, and view videos. Instead of new companies, users can upload videos that usually are self-generated movie clips, music, and/or other organizational materials.

EXAMPLES OF TECHNOLOGY COMMUNICATION:


Webinar: Healthcare Informatics’ 5/21/09 webinar: “How to Extend the Hospital Health Tunnel Syndrome (repetitive overuse during our wired age)” @ http://www.nasa.gov/centers/johnson/news/att-sent.html#att-59

Multiple technology features: Nursing Center.com offers news updates, clinical resources, continuing education, virtual ‘open house’ tours of hospitals, and employment opportunities. The site contains Webinars, audio seminars, professional reading resources, online surveys, and links to multiple journals.

Multiple technology resources: American Nurses Association Smartbrief periodically updates news articles related to nursing. @ http://www.amnsmartbrief.org

Multiple technology resources: The Institute of Medicine (IOM) announces new releases, upcoming events, and other new offerings available from (www.iom.edu) IOM provides independent, objective, evidence-based advice to policymakers, health professionals, the private sector, and the public.

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MEDICATION SAFETY & TECHNOLOGY:

Hospital electronic “top 10 list of health technologies”—Executive have to consider organizational strategic plans, budgets, patient and hospital clinical practices and decision needs, & other factors toward decision in “top 10” technologies such as electronic medical records, alarm integration technology, radio-frequency identification, etc. @ http://www.healthcareitnews.com/news/research-firm-lists-top-technologies-impacting-hospital-e- commerce-792615/2

Nurse involvement in hospital technology systems—Nurse leaders recommend more input and consideration of nursing roles and activities to develop electronic health records (EHRs) @ http://www.rwjf.org/humancapital/digest.jsp?id=1992

Telemedicine and childhood diabetes care—School-based interventions with videoconferencing improved communication and disease management @ http://www.healthcareitnews.com/news/index.cfm/Taction=HCR_NewsPracticeStaffLatesNewsArticle&knk=New&pass=409484&stf=H04&King=04&comm=04&ad=04

Wireless healthcare technology—The West Virginia Department of Health and Human Resources uses wireless technologies to advance healthcare in areas such as clinical research and biomedical devices @ http://www.healthcareitnews.com/news/west-virginia-health-institute-receives-45m-boost

* * *

Dot Baker, RN, MS(N), CNS-BC, EdD
Professor, Nursing, Wilmington University

Dot Baker

Technology and nursing are intricate partners in every practice setting. This column is intended to provide communication tools, examples of technology communication, practice settings, multiple resources, Joint Commission, companies, new products & services, collaborative tagging, practice based, position paper, publications & articles, and research studies. The information illustrates some basic technology principles and usage experiences that nurses in clinical practice and education can easily apply.

Practice settings:

- A variety of nursing organizations and specialty practices feature and incorporate technology in their websites, resources, continuing education, and news updates. Examples are: cardiac, critical care, oncology, perinatal, nursing education, school nursing, public health, home health, occupational, longterm care, rehab, administration, education & training, etc.


Multiple resources:

- Alert system for public health—General Electric (GE) Healthcare partnered with the Centers for Disease Control & Prevention and Johns Hopkins University to develop a rapid response public health alert system about issues such as influenza, tainted foods, etc @ http://www.businessweek.com/inconten/technology/techarticle/0905/7794.htm

- Alert system for Food & Drug Administration (FDA)—FDAs new MEDWatch Plus Portal delivers a central entry point and reporting form for consumers, companies, others to submit concerns @ http://www.healthdatamanagement.com/news/FDA-Blog-28048-1.html

Clinical education & Practice—Medical schools prompt students to use smartphones as learning and communication tools as they prepare to enter practice environments that are immersed in information and technology @ http://www.rwjf.org/humancapital/digest.jsp?id=1061

“Communication lapses and patient safety”—nurse focus group discusses hospital communication “lapses that affect patient safety and ‘ideal technology’ to address those lapses” @ http://www.medpagetoday.com/Blogs/13644

Family-initiated rapid response—Institute for Health Care Improvement has a how-to guide, references, tools, brochures for pediatric teams @ http://www.who.int

Grants for technology research—National Institutes of Health grant several groups research about information technology initiatives @ http://www.healthdatamanagement.com/news/28230-1.html

Health information technology (HIT) & hospitals—Survey of 3000 hospitals showed that more than two percent use comprehensive electronic health records within overall technology Health Information Technology (HIT) initiatives @ http://www.rwjf.org/qualitivequalityproduct.asp?id=409484

Health information technology (HIT) and healthcare reform—HIT can contribute to cost containment to fund healthcare reform @ http://www.healthcareitnews.com/news/baucus-touts-hit-system-eases-worries/04/2009

Health information technology & electronic medical records (EMR)–Kaiser Permanent offers flash drives with medicals people’s health information. Some people identify advantages and disadvantages @ http://www.sacbee.com/business/story/1879519.html

Health literacy—Institute of Medicine (IOM) held a roundtable to discuss challenges with low health literacy for some consumers and communities during emerging interactive health information technologies @ http://www.iom.edu/Commencement/10thCommencement/10thCommencementSource%20%20Medicine%20and%20Health/2009/06/25/20090625/04596200-04596200-article-judgment.html

Medication safety & technology—hospital uses robot, bar-coding, and electronic medical record to address medication safety to reduce estimated annual 400,000 preventable drug-related injuries @ http://www ohio.com/business/43254759.html

Medication safety & technology—automate medication order, administration, and record keeping @ http://www.healthdatamanagement.com/news/medication-28159-1.html

Nurse communication system—Cisco, a network product supplier, announced a Cisco Nurse Connect which gives nurses two-way communication with and others to submit concerns @ http://www.eweek.com/c/a/Health-Care-IT/Cisco-Aims-to-Improve-Nurse-Communication-792615/2

Multiple technology solutions—Nurses use emerging technologies such as wireless communications, real-time workflow systems, electronic tracking devices, etc. @ http://advanceweb.com/edit/editorial/content/editorscorner.aspx/cc=20090416CT-2

Nurse involvement in hospital technology systems—Nurse leaders recommend more input and consideration of nursing roles and activities to develop electronic health records (EHRs) @ http://www.rwjf.org/humancapital/digest.jsp?id=1992

Patient monitoring system—Care remote patient monitoring system uses six computer screens and multiple monitors to observe patients for potential conditions such as irregular heart beats and unsafe ambulation situations. The nurse observers then contact the patient care unit for prevention and intervention @ http://www.theadvocate.com/news/articles/2009/04/08/20090409c-banner0411.html

Patient monitoring and update system—Hospital uses monitoring system to track surgical patients’ surgical devices, waiting family, and assigned critical care staff communication @ http://www.wvvatvc1.com/hospital_monitoring_system_cases_worries/04/2008


“Trends in healthcare technologies”—Vendome Group, LLC offers a series of publications about technology investment, patient safety, patient services, infection control, disaster preparedness, etc. @ http://www.vendomegrp.com/index.aspx?Pag=12

Wireless healthcare technology—The West Virginia Department of Health and Human Resources uses wireless technologies to advance healthcare in areas such as clinical research and biomedical devices @ http://www.healthcareitnews.com/news/west-west-virginia-health-institute-receives-45m-boost

Data Bits continued on page 18
Data Bits continued from page 17

JOINT COMMISSION:
Electronic accreditation and certification manuals (E-dition) @ http://www.jointcommission.org/
Standards/Manuals/
National patient safety goals @ http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/
RSS Feed for “What’s New on the Joint Commission Website” @ http://www.jointcommission.org/Library/WhatsNew/

"Falls Prevention Webinar Series" @ http://www.jointcommission.org/Audio-Conferences/Falls-Prevention-ProfessionalSeries/17137
Wiki Healthcare—interactive forum for healthcare professionals to discuss and collaborate @ http://wikihealthcare.jointcommission.org/twiki/bin/view/Home/WebHome

COMPANIES:
Fitne (offers multimedia educational programs via a Virtual Learning Resource Center) @ http://www.fitne.net/
PEPID (offers electronic resources via online, handheld, and wireless technology; offers point-of-care access to integrated data; offers specialty programs for multiple healthcare and emergency providers) @ http://www.pepid.com/company/profile.asp

McKesson (offers multiple links to products, news, and webinars such as “Efficient Management of Medical Equipment and Cart(s)”) @ http://www.mckesson.com/en_us/McKesson.com/
Wellness Councils of America (WELCOA) offers a publication with tips about using technology tools to evaluate wellness programs @ http://www.welcosa.org

NEW PRODUCTS & DEVICES:
Devices and Technology such as podcasts and electronic medical records (EMRs) @ http://www.nursezone.com/Nursing-News-Events/devices-and-technology.aspx

BOOKS:

National League for Nursing offers “The Living Book of Web-based Teaching and Learning.” The chapters are online courses that use an interactive book metaphor to organize the content. They are The Net Generation: Implications for Nursing Education and Practice & Best Practices in Online Learning @ http://www.nln.org/nln/index.htm


EBP:
Cochrane Collaboration search for “nursing and technology” reveals 74 sources such as nursing record systems, infection control, information technology, nursing-led intermediate care, etc. @ http://www.cochrane.org/

Oncology Nursing Society “Toolkit on Evidence-based Practice” offers webcasts and virtual sessions @ http://www.electronicvision.com/nln/index.htm

POSITION PAPERS:
AACN (2005) AACN White Paper: Distance Education in Nursing Education @ http://www.aacn.nche.edu/Publications/positions/whitepaper.htm

PUBLICATIONS & ARTICLES:
[Prepared for the California Healthcare Foundation]


RESEARCH REPORTS:

# Membership Benefits

## Full DNA/ANA Membership
- $229 per year/$19.59 monthly, electronically
- **Employed-full time/part time**
- Save up to 45% on conference registration
- Save on ANCC certification fees
- Save 10% on professional liability insurance with Marsh*
- Free and discounted online continuing education
- Save 10% on personal accounting fees
- Discounts to insurance programs such as life, disability, job loss
- Email alerts
- Online networking-DNA Facebook page and ANA Nurse Space
- Publishing opportunities and discounts
- National and State leadership opportunities
- Much more!
*Must hold certification from ANCC; one-time savings.

## Delaware State-Only Membership
- $149 per year
- **Employed-full time/part time**
- Save up to 45% on conference registration
- Free and discounted online continuing education
- Save 10% on personal accounting fees
- Discounts to personal insurance such as life, disability, job loss
- Email alerts
- Online networking-DNA Facebook page
- Publishing opportunities and discounts
- State leadership opportunities
- Much more!

## American Nurses Association Only Membership
- $179 per year
- ANA Smart Brief
- ANA Nurse Space
- Federal lobbying
- Discount to national conferences
- Save on ANCC certification
- Free and discounted publications
- Much more!

Coming soon!
Delaware license plates for registered nurses.
Only available to full and state-only members.

DNA has partnered with the following organizations for member discounts and programs:

**CEUlectures.org**
Accounted online learning for healthcare professionals

**InsureEZ.net**

**Hewlett and Company, Inc.**
Tax Preparation, Bookkeeping & Payroll

**Get Liability Insurance**
**Get a DNA Credit Card through Bank of America**
**Higher Standards**

**Continuing Online Education**
**Certification Recertification**

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## Delaware Nurses Association/American Nurses Association Membership Application

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Permission to print name in the Reporter as a new member?  
☐ Yes  ☐ No

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<th>Highest level of education</th>
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<td>Return form to: Delaware Nurses Association Orchard Commons Complex 5586 Kirkwood Highway Wilmington, DE 19808</td>
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## Membership Category (check one box)

- **Full DNA/ANA Membership Dues**
  - $229 per year/$19.59 monthly, electronically
  - **Employed-full time/part time**

- **DNA State-Only Membership Dues**
  - $149 per year
  - **Employed-full time/part time**

- **ANA National-Only Membership Dues**
  - $179 per year

- **Reduced Membership Dues**
  - $144.50 per year/$10.04 monthly, electronically
  - Full-time Student
  - New graduate from basic nursing education program, within 6 months after graduation (first membership year only)
  - 62 years old or over and not earning more than Social Security allows
  - Not employed

- **Special Membership Dues**
  - $57.25 per year/$5.27 monthly, electronically
  - 62 years of age and not employed

- **Dual Membership Due**
  - $95.00 per year
  - RN holding membership in ANA through another state: proof of membership required

## Methods of Payment

- Full Annual Payment: Cash, Bank Card or Check made payable to the American Nurses Association
- Electronic Withdrawal: Monthly electronic withdrawal from checking account (Authorization form on ANA application—includes 86 service charge)

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## Authorization

This is to authorize ANA to withdraw 1/12 of my annual dues from my checking account each month or on or after the 15th day of each month, which is designated and maintained as shown by the enclosed check for the first month’s payment. ANA is authorized to change the amount by giving the undersigned thirty (30) days written notice. The undersigned may cancel this authorization upon receipt by ANA of written notification of termination twenty (20) days prior to deduction date as designated above.

Signature for EDPP authorization

Apply online at www.denurses.org