

The official membership news publication of the Infusion Nurses Society



# Compounding: Prepare With Care

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National Academy 2018 Preview

INS Introduces New Headquarters

Qualification or Certification?





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**INSight into INS** INS introduces

new headquarters

13

**COVER STORY** A look at medication compounding and upcoming revisions to USP compounding chapters





**President's** Message How nurses can cope with incivility in the workplace

**National Academy Preview** Spend a weekend with INS in Washington, D.C.



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# In this Issue





**Education News** Learn *your* way with INS webinars.



#### **Guest Feature**

Qualification or Certification? How to detect the differences





#### **Research Matters**

Models, toolkits, and resources for evidence-based practice and nursing research



#### **Risk Management** Focus Understanding the nurse's role as a patient advocate

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#### INSIGHT INTO INS













A move several months in the making yet less than a mile from our previous location of 12 years, INS is excited to debut our new collaborative space, which lends itself to greater efficiency, teamwork, and exchange of new ideas. We have reduced our square footage by 4,000 feet in an effort to streamline costs and overall budget footprint.

Our state-of-the-art office includes sun-drenched open spaces, private offices, an 18-seat conference room, library/ meeting area, copy/mailing room, plus a staff kitchen and storage. Staff members have also been outfitted with adjustable, sit-and-stand desks that provide more mobility and comfort.

A big technology improvement includes TecSlate, a 65-inch, flat-panel monitor that offers interactive and touch screen capabilities, video conferencing, as well as computer and television functions. This device will accommodate planning meetings of all sizes and from all locations with the quick press of a few buttons. Now we don't have to ask board members to fly in, we can Skype them all at once!

The office building features a café, fitness center, and plenty of parking! We look forward to utilizing these new tools and amenities to better serve our staff, and of course YOU our members.

Please update your records with our new mailing address. Our web address, email addresses, and phone numbers remain the same.

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## Nursing in a Climate of Incivility

Felicia Schaps, MSN-Ed, RN, CRNI<sup>®</sup>, OCN<sup>®</sup>, CNSC, IgCN, INS President, 2018-2019



ivility is defined as the treatment of others fairly, with respect and human dignity, free of harassment, and threatening behavior. Civil behavior includes tolerance, listening, accepting other views, honoring differences, seeking common ground, and engaging in social discourse.<sup>1</sup>

In a survey called Civility in America: A Nationwide Survey, conducted by Weber Shandwick and Powell Tate in partnership with KRC Research, respondents reported a severe civility deficit in our nation.<sup>2</sup> Sixty-nine percent of Americans believe that incivility has reached a crisis level, blaming social media and our political leaders. Eighty-four percent reported personal experience of incivility, while driving, shopping, or online in the form of cyberbullying. Most Americans say that uncivil comments by our political leaders during the last presidential election played a role in keeping some Americans from voting and damaged our reputation and standing with other nations.<sup>2</sup>

Incivility in the nursing profession has been documented in professional literature for the past 25 years. This behavior is hard to understand as nursing is based on caring for others and interpersonal relationships. Nursing is the primary occupation at risk for horizontal or lateral violence, which is defined as hostile, aggressive or harmful behavior by a nurse or group of nurses against a coworker.<sup>3</sup> Studies estimate that as many as 85 percent of nurses are victims of incivility and up to 93 percent of nurses report witnessing incivility in the workplace. The decades-old expression "nurses eat their young" refers to experienced nurses bullying or hazing new nurses, and it continues to prevail in today's nursing environments.4

Incivility in the workplace is believed to be caused by a power imbalance. Nursing is practiced in a medically-dominant environment, in which nurses practice under a treating physician's name. The subordinate role of nurses leads to a lack of autonomy and self-esteem. Nursing has also fostered a culture requiring an individual to "earn their stripes" and the belief that "if I had to do it, (s)he can too."4 The American Nurses Association Code of Ethics requires nurses not only to maintain civil and caring relationships with patients and their families, but also with colleagues. The Joint Commission issued a mandate that institutions address uncivil behaviors in the workplace because they can create a threat to patient safety.4

Have you attended a staff meeting in which one nurse interrupted the conversation, did not consider anyone else's opinions or new ideas, and did not recognize everyone's strengths and contributions to the team? Or maybe you were at a conference where the speaker was challenged, berated, or criticized in public. Do you know a nurse who tells patients that (s)he is the only one who can

care for them correctly and speaks negatively about other staff dignity. To act civilly, we must let go of all the past injustices, nurses? Does your staff gossip, send angry emails, and fail to slights, and wrongs we believe we have suffered. Bitterness listen and respond appropriately? All of these behaviors are does not give us permission to be less than civil to those we examples of incivility that undermine coworkers' self-esteem feel have wronged us. and can have an impact on patient care.

Resist looking for someone to blame. Know what your triggers Leaders of organizations can have a powerful influence on a are and assess your own behavior. Try to walk in someone else's shoes to better understand the context of their words. Take culture of civility. A positive workplace where there is a sense of team and collaboration fosters respect, and incivility is less likely. the time to make it safe for someone to have a discussion with Strong leaders demonstrate acceptable behavior, appropriate you. Don't jump to conclusions or assume you know what attitudes, and positivity. Hazing, bullying, and other rude someone else is thinking. All of these strategies will help you behaviors are not tolerated. Civility requires authentic respect behave in a civil manner. for one another. It requires time and willingness to engage in conversation. If nurses don't treat one another with respect, incivility in our nation. Changing society as a whole, especially they cannot communicate effectively and, as a result, will not our political leaders, may be an insurmountable task for many have highly effective teams. To understand another's point of to consider. Changing attitudes in our workplace is a smaller, view, one must listen to what they have to say.

Acting civilly is not always easy, especially in the sometimes stressful environment of patient care. Nurses are often overworked and may not be treated respectfully by patients and their families or other health care professionals. Civil behavior requires courage at times, concern for others, and often patience. Civility is not just being polite; it's a requirement for us to live together and work with a team or live in a community. It includes tolerance, acceptance of others' views and ideas, respect for our differences, and treating others with

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Incivility in the workplace may be a reflection of the rise of more manageable, goal to achieve. We spend a lot of time at work, so isn't it worth the effort to make it a more civil place to be, to leave it better than we found it? As Eleanor Roosevelt said, "We have to face the fact that either all of us are going to die together or we are going to learn to live together. And, if we are to live together, we will have to talk."5

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### LEARNING Learn YOUR Way With INS Webinars CENTER

Teach me and I remember. Involve me and I learn."<sup>1</sup> The tenets expressed in this statement are as true today as they exemplified in the nursing profession. Its credo of lifelong learning has set the profession apart from so many others.

INS subscribes to this credo as well, and has made it our priority to deliver the most relevant infusion-related information in the most user-friendly formats available. Our commitment is to ensure you have the educational tools you need to enhance your practice and improve outcomes for your patients.

effective and convenient ways is through our monthly webinar programming created for the INS LEARNING CENTER.

your own learning by participating in webinars that best meet

continuing education needs are met. Led by INS' Director of Nursing Education Marlene Steinheiser, PhD, RN, CRNI°,

**Chris Hunt, INS Executive Vice President** 

"As nursing professionals, we strive to provide our patients with quality, safe care," says Marlene. "I believe the role of INS' education department is to stimulate our members' intellect through involvement with dynamic speakers who present the

to increase, and the reviews we receive confirm their value. Close to 1,200 clinicians have participated in more than 3,300 webinar sessions since the fall of 2017. The large number of attendees attest to the quality of the content and the availability

necessary to accommodate a busy professional work schedule." One aspect of INS' webinar programming that has received the most praise from participants is the diversity of educational administration in the home setting to the infusion nurse's role we have received and are excited to build on the success of each webinar.

Your thoughts and ideas are important in helping us continue to build a stronger LEA**RN**ING CENTER and a stronger INS. We encourage you to log in to the LEARNING CENTER, colleagues are raving about. If you have already participated in

#### Reference

## 2018 Most-Viewed Webinars

Stay tuned! Webinars are available on-demand, 24/7. www.learningcenter.ins1.org/webinars

#### **Frequency of Assessment of the Short Peripheral Catheter** Presented by: Lisa Gorski, MS, HHCNS, CRNI<sup>®</sup>, FAAN

Short peripheral catheters (SPCs) are the most commonly used invasive device among hospitalized patients, yet nurses often underestimate the risk and the potential for serious consequences associated with peripheral access. Critically important to reducing the risks associated with SPCs are appropriate device and site selection, impeccable insertion technique, and regular and careful assessment for signs/symptoms with prompt catheter removal if present.

#### Intravenous Immunoglobulin Therapy: Treatment Approaches, Product Selection, and Administration Considerations Presented by: Amy Clarke, RN, IqCN

More than 75% of intravenous immunoglobulin (IVIg) therapy administered in the United States is for patients with autoimmune and inflammatory diseases. However, indications for use continue to increase. This session will discuss the mechanism of action of immunoglobulins, the use of IVIg therapy in certain disease states, and dosing strategies.

#### Using a Model of Empowerment to Create a Culture of Civility in the Practice of Infusion Nursing Presented by: Linda Shanta, PhD, MSN, RN, ANEF

Incivility in health care presents a significant threat to our health care system and especially to safe patient care. A hostile environment has the potential to damage collaboration among members of the health care team. Nurses are central to the infusion team and are in a position to take the lead in changing this destructive phenomenon. This presentation will review the intersection of incivility and disempowerment.

#### The Patient Experience: An Essential Component in Improving Health Outcomes in Home Infusion Presented by: Amanda Walker, BSN, RN, CPXP

Patients have been receiving infusion therapy in their homes since the 1980s. However, the demand and volume of therapies that can be infused in the home continues to rise. Many of these infusions can be administered by the patient. This webinar will explore the importance of the patient experience in improving overall health outcomes in patients who receive home infusion by examining case studies and observations from the field.

#### The 5 Why's of Injectable Medication Shortages Presented by: Deborah A. Pasko, PharmD, MHA, BPharm

Medication shortages, especially injectable drugs, cause significant risks to patients from both safety and clinical treatment aspects. Clinicians are faced with daily drug shortages in practice settings that necessitate restrictions, rationing, and sometimes rapid changes in therapies. This webinar will explain why drug shortages occur, identify the key stakeholders in drug shortage management, describe current drug shortages, and offer predictions on how long current injectable medication shortages may last.

**Prevention and Management** of IV Infiltrations









## Qualification or Certification?

#### Laurie Ellefson, BSN, RN, CWOCN<sup>®</sup>, CFCN

There are terms that many health care professionals use interchangeably. Two are qualification and certification. Merriam-Webster defines qualification as a "quality or skill that fits a person (as for an office)..." and "a condition or standard that must be complied with (as for the attainment of a privilege)... ."1 A job description usually outlines the qualifications required to perform the job. Qualifications may be skills or abilities that make a person special or different from another and may include, but are not limited to, licensure and qualifications in many areas, such as cardiopulmonary resuscitation, advanced cardiac life support, and more. Licensure is mandatory and signifies the licensed individual has met the minimum standard to practice nursing in the state in which she or he is licensed.

The American Board of Nursing Specialties (ABNS) defines certification as "formal recognition of the specialized knowledge, skills, and experience demonstrated by the achievement of standards identified by a nursing specialty to promote optimal health outcomes."<sup>2(p1)</sup> While licensure is mandatory, most often becoming board certified is a voluntary process that requires consistent evaluation of a nurse's professional knowledge and skills. In addition to licensure, an advanced practice registered nurse is required to gain certification by a national nursing certification body as outlined in the Consensus Model for APRN Regulation introduced in 2008.<sup>3</sup>

While a nurse who is not board certified may possess basic entry-level skills, he or she may not have the specialized skills and experience to adequately provide expert care. Board certification helps ensure that a nurse is knowledgeable and well qualified to meet patients' individual needs.

Certification may require additional education, and many certifications require demonstration of work experience specific to the specialty sought. Most important, certification involves successfully passing an examination that proves the candidate's competence to function in the specialty area. Certification also requires a method to prove ongoing competence, such as completing a portfolio showing professional growth.

There are job titles or qualifications that many mistakenly

believe are certifications. A certified nursing assistant is an example of a job title that could be confused with a certification. Each state's board of nursing maintains a Nurse Aide Registry. To be listed on the registry, an individual must hold a certificate of completion from a state-approved education program and have successfully passed a competency evaluation. Cardiopulmonary resuscitation (CPR) is a qualification that may be mistaken for certification. After completing a CPR course, however, the candidate receives a card that simply states: "The above individual has successfully completed the cognitive and skills evaluation in accordance with the curriculum of the American Heart Association Basic Life Support Provider Program."4

#### Why Would a Nurse Seek Specialty Certification?

Nursing certification is a voluntary process, with the exception of advanced practice registered nurses, that fosters a culture of life-long learning. The process of certification demonstrates a commitment to the nursing profession and, more important, provides formal recognition of knowledge beyond a degree. Many certifications require either formal education or continuing education to reflect the advanced knowledge acquired to pass the certification examination and achieve the specialty certification. Additional reasons to pursue specialty certification include:

- Enhanced autonomy
- A heightened sense of professionalism and pride
- Increased confidence in patient care
- Career advancement
- Recognition of expertise by peers
- Increased earning power

Not only do nurses benefit from specialty certification, employers also experience benefits. One benefit might include help achieving American Nurses Credentialing Center Magnet Recognition. Specialty certification provides an avenue for ongoing validation of specialty experience, knowledge, and

skills. Because of specialty knowledge, certified nurses help ensure increased productivity, efficiency, and high-quality care.

The certified registered nurse infusion (CRNI®) credential is earned by nurses who pass a comprehensive exam offered by the Infusion Nurses Certification Corporation (INCC). The exam includes content from the 8 core areas of infusion nursing. A nurse seeking this specialty certification must have a current, unrestricted license as a registered nurse and a minimum of 1,600 hours of experience in infusion therapy. Gaining certification as a CRNI° is an objective measure of nursing excellence, competence, and experience.<sup>5</sup> The CRNI® credential must be renewed every 3 years, which can be accomplished either through examination or continuing education.

Infusion nurses work in a variety of care areas, such as acute How to Identify a Quality Certification Program care in direct patient care or as a resource nurse. They also When seeking specialty certification, it's important to work in infusion centers, oncology centers, long-term care confirm that the certification board has completed important facilities, skilled nursing homes, and home health care. background work to help ensure a high-quality certification. Infusion nurses are responsible for initiating and maintaining Typically, a job analysis has been completed to develop a intravenous catheters and administration sets, administering detailed content outline. The outline serves as the blueprint for medication and fluid therapy, and educating families on the certification examination. The certification examination catheter maintenance and treatment.<sup>6</sup> The median salary includes content written by experts, is comprehensive and earned by infusion nurses is \$83,171.6 This varies depending evidence-based, and it reflects current practice. A thirdon the state and organization in which a nurse is employed.<sup>6</sup> party ensures the examination is statistically sound. With an Findings from the National Database of Nursing Quality examination that meets all guidelines, nurses and employers Indicators show that in hospital units where specialty can be confident the certification is legally defensible. The certification rates are higher, the rate of preventing patient Accreditation Board for Specialty Nursing Certification falls improves.7 Additional data reflect that higher rates of (ABSNC) is the only accrediting body specifically for nursing specialty certification are significantly associated with lower certification. The accreditation demonstrates compliance with rates of central line-associated bloodstream infections.8 Boyle 18 of the highest quality standards in the nursing profession.<sup>10</sup> et al<sup>8</sup> describe how hospitals that employ certified wound, ABNS member organizations represent almost 750,000 ostomy, continence nurses (CWOCN®s); certified wound certified registered nurses in a variety of settings worldwide.

ostomy nurses (CWON<sup>®</sup>s); and certified wound care nurses The National Commission for Certifying Agencies (NCCA) (CWCN°s) had lower rates of hospital-acquired pressure also provides impartial, third-party validation that a program injuries (HAPIs). The same hospitals also had better pressurehas met recognized national and international credentialinginjury risk assessment and prevention practices. Among industry standards for development, implementation, hospitals employing CWOCN®s, CWON®s, and CWCN®s, and maintenance of certification programs. Certification the occurrence of stage-3 and stage-4 HAPIs was nearly half

the rate of hospitals that did not employ specialty nurses.<sup>9</sup> More than 8,100 dedicated nurses have chosen certification in wound, ostomy, continence, and foot care nursing through the Wound, Ostomy, and Continence Nursing Certification Board (WOCNCB). The WOCNCB certifies nurses with a bachelor's degree or advanced practice degrees.

September/October 2018 | 11

organizations that submit their programs for accreditation are evaluated based on the "process and products and not the content,"11 so the standards are applicable to all professions and industries. Program content validity is demonstrated with a comprehensive job analysis conducted and analyzed by experts, with data gathered from stakeholders in the occupation or industry.<sup>11</sup>

Specialty nursing advances nursing practice, which improves patient safety. It also signifies that nursing has changed, moving from a global approach to focus on defined areas in nursing practice that require specialized knowledge and skills. At present, almost 3,000 nurses have attained the CRNI° credential. The CRNI° program is accredited by both ABSNC and NCCA and is the only nationally recognized and accredited certification in infusion nursing. As INCC's vision statement affirms, "Certification by INCC is the standard of excellence that nurses will seek in order to provide optimal infusion care that the public expects, demands, and deserves."5

#### About the Author

Laurie Ellefson, BSN, RN, CWOCN<sup>®</sup>, CFCN<sup>®</sup>, is a faculty member at the Western Technical College Nursing Assistant Program in La Crosse, Wisconsin. She received a BSN from Viterbo University in La Crosse. Laurie has 30 years of nursing experience and has been active in specialty nursing certification for 12 years. She has been a volunteer for the Wound, Ostomy, and Continence Nursing Certification Board since 2006, and a volunteer for the American Board of Nursing Specialties. She advocates for safe, patient-centered care. Laurie presented the "Qualification or Certification" educational session at INS 2017 in Minneapolis. She can be reached at ellefsonl@westerntc.edu.

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Find out more about CRNI<sup>®</sup> Certification at www.INS1.org/CRNI®Certification

#### COVER STORY





Shawn Becker, MS, BSN, Senior Director, USP Healthcare Quality & Safety Loredana I. Jinga, MPH, BSN, Director, USP Healthcare Quality & Safety

## Compounding: Prepare With Care

illions of medications are compounded each year in the US to meet the unique needs of patients. Compounding provides access to medication for patients who may not be able to use commercially available formulations as a result of dosing requirements, allergies, or rare diseases. Compounded medications can be sterile or nonsterile.

Understanding the risks inherent in sterile and nonsterile compounding and incorporating established standards into daily practice are essential for patient safety. Compounded drugs made without the guidance of standards may be subpotent, superpotent, or contaminated, exposing patients to significant risk of adverse events or even death.

United States Pharmacopeia (USP) is a not-for-profit, science-driven organization that has an established process for convening independent experts in the development and maintenance of health care quality standards. The process is public health focused, leveraging current science and technology, and draws on the expertise of scientists and health care practitioners, while providing opportunities for public input from stakeholders throughout the standards' progress.

To help reduce risks, such as contamination, infection, or incorrect dosing in all health care settings, USP develops standards for preparing compounded drugs by developing General Chapters such as <795>, <797>, and <800>. USP General Chapters <795> and <797> describe a number of requirements, including responsibilities of compounding personnel, training, facilities, environmental monitoring, and storage and testing of finished preparations. Compounded sterile preparations are potentially most hazardous to patients because they are more likely to be administered into sterile body spaces, such as the central nervous or vascular system, eyes, or joints. These spaces typically are microbe free, and the introduction of contaminants can lead to infection, serious injury, or even death. In addition, incorrect ingredients or incorrect quantities of ingredients can result in medicine that is not therapeutically effective or is toxic to the patient.

General Chapter <800> is also meaningful to compounding practice. The National Institute for Occupational Safety and Health considers a drug to be hazardous if it exhibits

## **USP** Compounding Chapters at a Glance

#### USP <795> Pharmaceutical Compounding—Nonsterile Preparations

Provides standards for compounding quality nonsterile medicine. The chapter describes requirements for the compounding process, facilities, equipment, components, documentation, quality controls, and training. General Chapter <795> also provides general guidelines for assigning beyond-use dates to nonsterile preparations.

#### USP <797> Pharmaceutical **Compounding**—Sterile Preparations

Provides standards for compounding quality sterile medicine. The objective of this chapter is to describe conditions and practices to prevent harm to patients, including death, that could result from microbial contamination, excessive bacterial endotoxins, variability in the intended strength of correct ingredients, unintended chemical and physical contaminants, or ingredients of inappropriate quality.

#### USP <800> Hazardous Drugs—Handling in Healthcare Settings

The goal of these standards is to help protect health care workers from the risks associated with handling hazardous drugs. USP General Chapter <800> contains sections related to types of exposure; personnel and facility responsibilities for handling hazardous drugs; appropriate use of personal protective equipment; and deactivation/decontamination, cleaning, and disinfection.

1 or more of the following characteristics in humans or animals: carcinogenicity, teratogenicity or developmental toxicity, reproductive toxicity, organ toxicity at low doses, genotoxicity, or structure and toxicity profiles of new drugs that mimic existing hazardous drugs. More than 12 billion doses of hazardous drugs are handled by US health care workers each year; yet less than 10% of these drugs are

labeled as hazardous. The goal of General Chapter <800> is to Public comment is integral to the standard-setting process. help protect health care workers from the risks associated with During standard development, public comment is designed handling hazardous drugs; this includes safe handling of drugs to obtain input from stakeholders, such as patients, health while compounding, preparing, or handling medications. care practitioners, policymakers, regulators, academicians, and industry representatives, to help ensure that broad perspectives Staying up to date is an important aspect of public health sessions.

are included in the standard. Stay involved! Stakeholder input advancement. For this reason, USP is in the process of revising is an important part of the revision process. USP encourages the compounding chapters to better align the standards with stakeholders to submit public comments during the public changes and advances in science and clinical practice to help comment period and to participate in the open microphone ensure quality compounded preparations. The revision of <797> began in 2010 and the revisions to <795> began in 2015. Among other content changes in the proposed revisions Learn more at www.usp.org/compounding/updates-onare the hazardous drug handling sections in <795> and <797>, standards and sign up for health care quality and safety updates which will be revised to reference General Chapter <800>. (www.usp.org/hqs-signup-form) to receive the most current General Chapter <800> was completed and published in information on chapter revisions. February 2016, and is not currently under revision. The 3 chapters-<795>, <797>, and <800>-are anticipated to be official and aligned with one another in December 2019.

A timeline associated with the proposed revisions to <795> and <797> is provided in the Figure below.







# **NATIONAL SACADEMY**

WASHINGTON, D.C. | NOVEMBER 2-4, 2018

## Get Ready for National Academy 2018!

There's no better location to spend a long weekend than our nation's capital! Join us in Washington, D.C., November 2-4.

The meeting begins on Friday with our one-day program, Culture of Collaboration in Infusion Practice, which is supported by an educational grant from BD. Concurrent general sessions will be held throughout the weekend. Between sessions, attendees will be able to visit the exhibition hall, where they'll have hands-on access to the most advanced technologies in the field.

New this year, the Clinical Community Exchange will provide attendees with the opportunity to attend 2 sessions, each of which will feature a 10-minute presentation followed by an interactive discussion. Topics will focus on strategies attendees can incorporate in their daily practice of infusion therapy. After hours, there'll be plenty of time to unwind and network with infusion nurses from around the country.

Unable to make the trip to D.C.? Virtual Infusion Education has made learning easier and more convenient than ever. INS will stream Friday's oneday program directly to your home or office live. The virtual conference will address the potential consequences resulting from a lack of teamwork, real-life challenges, and communication barriers as patients transition through the care continuum.

> Don't miss out on this valuable education! Register now at www.ereg.me/Academy2018







## Does Age Matter? Generational Differences Among Coworkers Saturday, November 3, 2018, 9-10am EST

This session marks the first time INS has encountered 4 generations of nurses who work side by side. Attendees will hear from the panel of nurses, who will share their perspectives on their first nursing position, communication between nurses of different generations, and their thoughts about the defining characteristics ascribed to each nurse's generation. We will be honored to hear from Florence Rigney, RN, the oldest working registered nurse in the United States.

Florence, known as See See, graduated from the Tacoma General Hospital School of Nursing in 1946. Although she began her career in pediatrics when penicillin was first being used, she has worked in the operating room for most of the past 72 years. She says she tried to retire at 67, but her "retirement" lasted only 6 months. Today, at 92 years young, See See continues to work in Tacoma General's operating room 2 days a week, because, she says, she enjoys working, having patient contact, and providing comfort to patients. As evidenced by this recent profile on NBC News (www.nbcnews.com/nightly-news/video/inspiring-america-meet-america-s-oldest-working-nurse-904240195800), See See has been known to run circles around nurses half her age!

So come, see, and hear See See broadcast live from Tacoma General Hospital in Tacoma, Washington, on Saturday, November 3, 2018, at 9 am, as she compares what it was like to be a nurse 72 years ago to the profession today.





Florence "SeeSee" Rigney, RN

## Models, Toolkits, and Resources for Evidence-based Practice and Nursing Research

Amy Kyes, MSN, RN, CRNI<sup>®</sup>, APRN, AGCNS-BC, INS Research Committee

In support of the landmark publication *The Future of Nursing: Leading Change, Advancing Health*,<sup>1</sup> INS demonstrates an ongoing commitment to advancing the science of infusion nursing and patient outcomes through evidence-based practice (EBP) and research. Since 2016, the INS Research Committee's membership publication columns have supported INS members in building a body of knowledge to emphasize EBP in infusion nursing research.

Several models, guides, and toolkits are also available to help infusion nurse clinicians prepare for EBP, research, and research-related activities. EBP models provide a framework for the process of translating the best evidence, while incorporating the infusion nurse clinician's expertise and the patient's values in the pursuit of the best clinical decision for care.<sup>2</sup>

Much like the steps of the nursing process, each of the models include 5 basic steps that support translation of evidence into practice<sup>2</sup>:

- Ask a well-built question. A clinical issue is identified (ie, a problem or an opportunity for improvement), and a question is developed that is used to search the literature.
- **2. Acquire the best evidence.** A thorough literature review is conducted to obtain relevant information.
- **3. Appraise the evidence.** The literature is appraised critically for validity, strength of evidence, and applicability to the clinical problem or opportunity for improvement.
- **4. Apply the evidence.** The evidence is applied to clinical practice by designing interventions and systems based on best available evidence, patient preferences, and professional expertise.
- **5.** Assess or measure the outcome(s) and disseminate the findings. The clinical effectiveness of the EBP change is evaluated and results are shared.

Contemporary models are designed primarily for organizational use and may be summarized in this way<sup>3</sup>:

- ACE Star Model of Knowledge Transformation focuses on finding nursing evidence, including qualitative evidence, for bedside nursing practice.<sup>4</sup>
- Advancing Research and Clinical Practice Through Close Collaboration Model guides clinicians to adopt EBP through behavioral change. An EBP readiness scale is used to assess an organization's culture to support EBP changes.<sup>5</sup>
- Iowa Model Revised: Evidence-based Practice to Promote Excellence in Health Care incorporates a flowchart to guide decision-making and problemsolving to translate evidence into practice. Piloting the practice change and an interdisciplinary team approach is recommended.<sup>6</sup>
- Johns Hopkins Nursing Evidence-based Practice Model guides translation of best evidence and includes tools for the literature appraisal process.<sup>7</sup>
- Promoting Action on Research Implementation in Health Services framework is designed to evaluate progress in implementing practice change and the likelihood of success.<sup>8</sup>
- Stetler Model of Research Utilization focuses on critical thinking and the use of evidence by individual clinicians or groups of clinicians.<sup>9</sup>

The American Nurses Association (ANA) has developed a research toolkit to help its members provide evidence-based care that promotes quality health outcomes for individuals, families, communities, and health care systems. The toolkit provides access to numerous resources to support nurses who are interested in research or research-related activities.<sup>10</sup> Visit ANA's website for an overview of the toolkit.

In addition to the EBP models and ANA's toolkit, sever valuable online resources exist to guide EBP and nursi research. They include:

- McMaster University Health Sciences Library at www.hslmcmaster.libguides.com/friendly.php?s=nursin
- Duke University Medical Center Library and Archiv at www.guides.mclibrary.duke.edu/ebm
- The University of Adelaide. The Joanna Briggs Institute at www.joannabriggs.org
- US National Library of Medicine. PubMed for nurse at www.nlm.nih.gov/bsd/disted/nurses/cover

EBP models, guides, and toolkits have been develop to help infusion nurses translate evidence in clinical practice. The use of these resources leads an organized approach to EBP and supports infusi nurses in the implementation of practice change

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## Understanding the Nurse's Role as a Patient Advocate

Since the days of Florence Nightingale, patient advocacy has been an important nursing responsibility. Nightingale laid the foundation for patient advocacy by consistently insisting on quality of care, including a safe and clean environment and basic human rights for all.<sup>1-3</sup>

The American Nurses Association's (ANA's) Code of Ethics for Nurses clearly identifies a professional nursing responsibility to protect the rights of patients.<sup>4</sup> State nurse practice acts may also mandate that nurses act as patient advocates. Nurses must understand and comply with these professional guidelines.<sup>4,5</sup> Blurred professional boundaries can be problematic in longterm, nurse-patient relationships. Patient advocates must work to keep the relationship therapeutic and patient-centered.<sup>6</sup>

Despite a long history, the role of nurses as patient advocates is poorly understood.<sup>2,7</sup> More information on the role of nurses can be found at https://healthadvocatecode.org.<sup>8</sup>

#### The advocacy role defined

*Advocates* defend patients' rights and interests and help ensure the safety of those who can't advocate for themselves. This includes patients who are children, unconscious, mentally ill, illiterate, uninformed, or intimidated and fearful of health care professionals.<sup>1,7</sup>

- Advocates ensure that patients' autonomy and selfdetermination are respected. Serving as the link between patients and the health care system, they also contribute to the patient/family decision-making process, and they speak up when problems go unnoticed or when a patient or family can't or won't address them.<sup>2,5,7,9</sup>
- Advocates become facilitators when patients and family members need to discuss uncomfortable information or explore its implications. Communication should be assertive but not aggressive.<sup>4,10</sup> The advocacy process can be complicated and require in-depth assessment and negotiation to develop a care plan in the patient's best interests.<sup>7,9,11</sup>

### The advocacy process has 4 stages

 An assessment of needs is first. It focuses on the patient, situation, setting, risks, and available health care resources.<sup>7</sup> Establishing therapeutic relationships with patients is essential to understand their interests and personal values, which include what makes them unique and what they want and need from their health care providers. This requires nurses to assess the patient's level of awareness, cognitive function, and understanding of his or her patient rights.<sup>7,8</sup> Many questions can be included in the needs assessment. Are patients aware of their diagnoses, prognoses, and treatment options? Do they want a second opinion, or do they wish to refuse treatment? Do they want certain significant others involved in the decision-making process? What are their cultural and spiritual needs? Have their rights and choices regarding care been respected?<sup>7</sup>

2. The second step is identifying the patients' specific goals. Most goals of patient advocacy are aimed at fostering partnerships between patients, families, and health care professionals, while empowering patients in the decisionmaking process.<sup>7</sup> Nurses may need to translate hospital policies and clinical information into layman's language, as well.<sup>12</sup> Nurses can provide information on the various options recommended by the health care team and help patients practice assertiveness in expressing their wishes.<sup>7</sup>

Advocates follow the patient's directives, not their own or the family's. Each patient is an individual with distinct needs; no single approach fits all.<sup>8,12</sup> When patients are ambivalent or reluctant to explore options, motivational interviewing may help. Nurses using this technique don't impose their own opinions on the patient; rather, they elicit and explore the person's beliefs.<sup>13</sup> When the nurse accepts a patient's informed choices, the patient gains a sense of control and improved self-image.<sup>7</sup>

- 3. The third step is implementing an advocacy plan. Nurse advocates facilitate communication with all members of the health care team regarding the patient's preferences. They incorporate patient-identified goals into the plan of care and provide objective guidance. They support patients by negotiating and compromising when conflicts of interest arise, maintaining safety and care coordination throughout the entire course of the illness.<sup>7,12</sup>
- 4. In the fourth step, nurse advocates evaluate the outcomes of their advocacy behaviors. The ANA's *Scope and Standards of Practice* suggests evaluations be criterion-based, systematic, ongoing, and focused on the attainment of expected outcomes. These evaluations should include the patient, the family, his or her caregivers, and other members of the health care team.<sup>4,14</sup>

#### Advocacy in organizational settings

A health care organization's commitment to promote nursepatient advocacy is of the utmost importance. Health care administrators must maintain an effective and efficient chain of command. Clinical nurses need to know where to report concerns and how to access the chain of command. They must be assured that they have the support of their supervisors and others in leadership roles.<sup>5,7</sup>

Organizations can promote patient advocacy from within. Experienced nurses can mentor those less comfortable with the role. Working with physicians as colleagues, instead of an authoritarian presence, is another important strategy. All nurses are responsible to keep patients safe and to participate in organizational advocacy improvement efforts.

#### Supporting patient autonomy

At its best, advocacy is proactive behavior that improves or corrects a situation, rather than a report of something that's gone wrong.<sup>5</sup>Assuring that patients maintain their autonomy in directing their health care is a challenging nursing role that takes moral courage, as well as clinical skill and knowledge.<sup>12</sup>



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Adapted from "Understanding the Nurse's Role as a Patient Advocate" by Lois Gerber, MPH, BSN, RN, which was published originally in the April 2018 issue of Nursing © 2018 Wolters Kluwer Health, Inc. doi: 10.1097/01.NURSE.0000531007.02224.65.

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## Survey Results: Smart Pump Data Analytics Pump metrics that should be monitored to improve safety

Between November 2017 and March 2018, ISMP conducted 3 surveys to learn about current practices with smart infusion pumps that have dose error-reduction software (DERS). Smart pumps can vastly improve medication safety by providing customizable libraries with dose limits and administration rates specific to medications and care areas. When the library is engaged, alerts can be generated when infusions are programmed outside these preset limits. The results of the first 2 surveys were published in the July/August issue of INSider. In this newsletter, ISMP reports on the results of the third survey, which focused on how pump data is being used to improve compliance and safety. Following the survey results, ISMP offers a short discussion on pump analytics, a description of basic and advanced smart pump metrics to consider for review, and external resources available to assist you with smart pump analytics.

#### Survey Results

Respondent profile. ISMP thanks the 126 pharmacists (69%), nurses (19%), and others (12%) who completed the survey. Most (95%) respondents work in hospitals of varying bed size, with only 9% from hospitals with fewer than 100 beds, 52% from hospitals with 100 to 499 beds, and 36% from hospitals with 500 beds or more. Four out of every 5 respondents (81%) reported that they have direct participation in the review of available data from their organizations' smart infusion pumps.

Frequency of data review. One in 10 respondents indicated that smart pump data is never analyzed in their organization. For most (60%) of these respondents, no data is available for review; for the others (40%), the data is available but never analyzed. For respondents who analyze pump data (n = 110), 52% review data quarterly and 26% review data monthly. Few respondents fall outside of the previously stated review periods, with only 6% reviewing data more often than monthly, and only 16% reviewing data less often than quarterly.

Resources and time. Almost all respondents (96%) reported that they believe reviewing pump data is essential to quality improvement. However, only about half of all respondents reported that their organization provides dedicated staff (56%) and dedicated time (48%) for reviewing pump data. More than half (59%) of the respondents reported spending less than 2 hours on pump data review each month. Another 34% of the respondents spend between 2 to 8 hours each month. Only 7% reported spending 9 hours or more on data review each month. Almost half (47%) of all respondents reported participating in a pump data analytics collaborative community or obtaining help from a pump vendor or external company to analyze their pump data.

Focus of analysis. Most organizations (95%) that analyze pump data focus on compliance with engaging the library and DERS. Approximately two-thirds of respondents assess alert frequency (64%) and reported that this is part of a larger alert fatigue reduction initiative (67%) in their organization. Only about half of the respondents analyze the action taken in response to an alert (51%) or use the data to investigate errors and adverse outcomes (48%) or to identify good catches (48%). Additional areas of focus reported in the Other category (12%) included interoperability compliance, improving clinical practices, and electronic health record and library agreement.

Expertise and tools. Only 22% of respondents are fully confident that their organization has the necessary time, expertise, and tools to fully extract meaningful conclusions from smart pump data. Another 52% feel they are somewhat capable of data analysis. However, more than a quarter (26%) of respondents do not believe they have the requisite skills, tools, or time for meaningful data analysis.

Respondents who review pump data were most confident in their abilities to identify the top 10 medications by alert frequency (77% fully confident) and the number and type of overridden alerts (74% fully confident). They were less confident in their abilities to identify alerts due to programming infusions below minimum concentration limits (59% fully confident) and medications that have a low frequency of use but a high rate of alerts (39% fully confident). Approximately three-quarters of respondents (74%) are unable to identify

Smart pumps can capture extensive details about how they are risky practices associated with smart pump usage, such as unnecessary nurse dilution of products, which results in a being used and the alerts generated by this technology. For example, most smart pumps can capture the following data nonstandard concentration. about each alert:1 Postanalysis actions. Respondents (83%) who analyze pump

data reported that most of what is being learned is being used to update or change the drug library. Only 16% of respondents reported that data analytics has led to educational programs, and only 13% had made updates or changes in policies, procedures, and practices.

Challenges. ISMP has received close to 100 comments about the biggest challenges faced with analyzing smart pump data. Most of the challenges were associated with the usefulness of the pump data and the resources and expertise needed to extract and analyze meaningful information. For example, dozens of comments were either about not having enough pump data available for analysis or having too much data available for analysis. Many respondents also noted that the pump data available to them was not linked to individual patients, practitioners, units, or even hospitals if pump data reports were systemwide. Respondents also reported that data on basic infusions was unavailable, or that the analysis of pump data was not being shared with frontline staff. Challenges related to resources often described a lack of time, skill, and interest in pump data analytics, and undefined roles. Many respondents also noted that high compliance rates with of the DERS.

Understanding, analyzing, and acting on this data is the engaging the library were misleading because many drugs were primary way to maximize the remarkable safety benefits of not built in the library and were being administered outside this technology. The survey respondents agree. Practically all believe that reviewing pump data is essential to improvement. However, many do not feel they have the dedicated staff, time, expertise, or tools to do this well. Those who review pump Discussion data frequently focus on library compliance and have acted on Most US hospitals have invested in smart pumps with DERS. the data by adjusting the drug library and reducing nuisance This technology has been on the market for more than 15 years; alerts. While these attributes of pump use are important to however, its safety benefits are not fully realized. Complacency safety, there is a wealth of untapped yet meaningful pump data and a low perception of risk associated with omitting certain that can be used to further improve medication safety. drugs and fluids (solutions) from the library, failing to engage the library for available drugs and fluids, and overriding the DERS alerts, has permeated some health care facilities.

• Facility • Hard or soft limit • Patient care unit or care profile • Above or below a preset limit • Drug or fluid • Drug limits Device identifier • Action taken in response to an alert • Infusion type • Library used • Programmed value • Time stamp • Times limit (degree to which the programmed value is over/under the library limit) • Other infusion- and limit-specific data (eg, diluent volume, volume to be infused, drug amount, infusion

rate, infusion duration, concentration)

#### Recommendations

To help organizations analyze, understand, and act on their smart pump data, ISMP has provided a list of basic pump metrics that should be monitored at least quarterly by all organizations that use smart infusion pumps (Table 1). For organizations that are already conducting such analyses, ISMP have also provided a list of advanced pump metrics to further improve medication safety (Table 2). ISMP has also included some basic information on where you can find external help with smart pump data analytics. Tables 1 and 2 can be viewed at http://www.ismp.org/resources/survey-results-smart-pumpdata-analytics-pump-metrics-should-be-monitored-improvesafety.

External assistance with data analytics. Organizations can seek assistance with smart pump data analytics from external resources. First, different smart pump manufacturers offer data reports and analytic tools that vary in quality, quantity, and price. The organization is expected to conduct the analysis using the data reports provided by the manufacturer along with any available analytic tool. However, all data and tools provided by pump manufacturers are restricted to a single organization, without an opportunity for data sharing and collaborative learning. Contact your pump vendor for more information.

Another option for help with smart pump analytics is through membership in the Regenstrief National Center for Medical Device Informatics (REMEDI) Infusion Pump Collaborative (www.ismp.org/sc?id=3060). REMEDI is a vendor-neutral community of practice focused on smart pump technology and infusion therapy safety. REMEDI has compiled a database of more than 36 million alerts and compliance data representing almost 145 million infusions. Members have access to their own data and other hospitals' data, including drug library details, alert data, and compliance data. REMEDI membership is currently provided at no cost to those willing to share their smart pump data and knowledge.

A final option known to ISMP is Bainbridge Health (www. bainbridgehealth.com). Bainbridge Health provides software and clinical support services that can help hospitals achieve their medication safety goals while reducing the burden on employees to conduct pump data analysis. Their automated data analytics is combined with a team of clinicians who provide hospitals with detailed clinical interpretations, recommendations, and supportive benchmarking data to help them maximize their smart pump technology. This more hands-on approach to assistance with data analytics is provided for a fee.

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#### Advocacy Now

#### NICA Submits Comments on American Patients First Blueprint to Lower Drug Prices Amy Rios, Marketing and Communications Coordinator, National Infusion Center Association

n July 16, the National Infusion Center Association (NICA) Areas addressed throughout the letter to HHS also included: joined hundreds of organizations, coalitions, advocates, and management of drug spending for patients with chronic autoimmune other health care professionals submitting formal comments to the diseases, site neutrality for provider-administered drugs, increased US Department of Health and Human Services (HHS) in response pharmacy-benefit manager transparency, extended manufacturer costshare assistance programs, and reformation of the 340B drug discount to the agency's request for information on the American Patients First blueprint. program.

"NICA applauds actions the administration has taken to address the Most notably, NICA expressed great concern about shifting biologics rising cost of drugs and patient out-of-pocket costs. We support the and specialty intravenous (IV) or injectable medications, currently concept of several provisions outlined in the American Patients First covered under Part B, to coverage under Part D, because of likely blueprint and urge the administration to ensure that subsequent reform increases in costs, as well as decreased access to care, for patients. NICA measures will not inadvertently disrupt access to care," wrote Brian implored the agency to reconsider such an impactful reform provision. Nyquist, MPH, NICA executive director.

Regarding the proposed transition, Nyquist wrote, "Shifting coverage The 44-page blueprint, which was introduced in May of this year, of drugs from the medical benefit to the pharmacy benefit will increase articulates the Trump administration's plan to address rising prescription the cost burden for patients and Medicare. Previous analyses by HHS drug prices. The blueprint identified 4 main strategies to counteract the regarding the impact of transitioning drugs covered under Part B to Part high cost of prescription drugs: (1) increased competition, (2) better D suggested that such a shift, as outlined in a 2005 report to Congress, 'would likely increase overall Medicare program spending by increasing negotiations, (3) incentives for lower list prices, and (4) lower out-ofspending on Part D by more than the offsetting decrease in spending pocket costs. on Part B.' "1(p13)

While the 4 strategies outlined in the blueprint are relevant in today's health care economy, NICA, like many other organizations, is hesitant Such a shift would negatively reshape the infusion delivery landscape, to accept that all strategies are possible to attain simultaneously. undermine the sustainability of this critical medication delivery channel, increase patient out-of-pocket costs, increase Medicare spending, and Nyquist wrote, "There is great concern that simultaneously implementing subsequently result in poorer health outcomes for some of our nation's multiple, significant, and sweeping reform measures-with an impact sickest and most vulnerable patients who rely on Medicare.

across a wide breadth of our nation's health care system-will produce burden for patients and payers, including Medicare."

significant unintended consequences, including an increased cost On behalf of infusion providers and their patients, NICA praised the efforts of HHS to control the rising cost of drugs and out-of-pocket spending for patients and further implored the agency to reconsider NICA outlined the following principles that would support responsible shifting coverage of provider-administered IV or injectable products reform: from Part B to Part D.

- · Address market forces and dynamics that influence increased drug-list prices and high out-of-pocket costs
- Minimize the annual per capita economic burden of complex, chronic diseases (eg, autoimmune diseases, such as rheumatoid arthritis, multiple sclerosis, Crohn's disease, ulcerative colitis, and lupus), and cancer
  - o Increase the number of covered therapeutic options
  - o Support patients' ability to achieve disease remission as quickly as possible and for as long as possible
- Improve access to care and reduce costs by supporting the expansion of lower-cost, nonhospital care settings, such as provider practice-based infusion suites and independent infusion centers

NICA concluded its comments to HHS by extending its expertise on the in-office infusion delivery channel as a resource for the agency, as it continues to develop actionable reform.

Read NICA's full letter to HHS at http://bit.ly/2nhVOOj.

National Infusion Center Association (NICA) is a nonprofit organization formed to improve patient access to office-administered intravenous and injectable medications and therapies. For nore information about NICA, visit infusioncenter.org.



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WITH A POWERFUL PARTNER IN THE NEW BD. Industry leaders BD and BARD have joined forces to deliver a proven approach to reducing the frequency and impact of IV-related complications. From failed placements to CLABSI, IV-related complications are dangerous and costly. But they're also preventable. BD Vascular Access Management is an integrated approach to total vascular access care that's been proven to help hospitals reduce complications and improve outcomes. Now that we've come together as one team, our complementary strengths and the depth of our collective experience and expertise will powerfully enhance our ability to help our customers deliver the very best possible vascular access care. Discover the difference two companies becoming one can make. Discover the new BD.

Learn more about Vascular Access Management at bd.com/VAM-BD-Difference





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