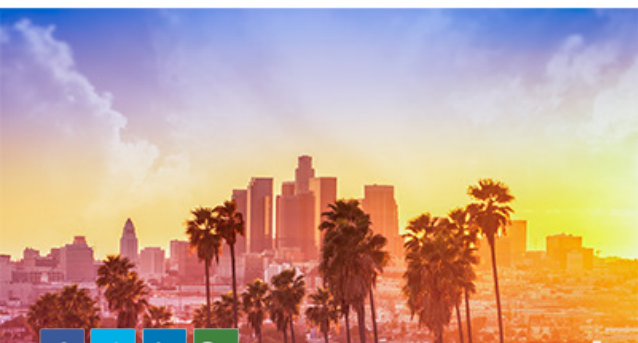




ARINVISION

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ARIN 37TH ANNUAL CONVENTION

LOS ANGELES | MARCH 18-21, 2018
#ARIN18LA

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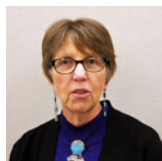
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CONFERENCE IS APPROACHING!

Cheryl Jaglowski-Ho BSN RN CRN
2017-2018 ARIN President-Elect



Greetings ARIN colleagues, exciting times in ARIN this month. We are preparing an exciting conference in March. Are you planning to attend? I hope to see you there. I know

five lucky winners of the social media contest on Facebook are! Five registrations were given to the lucky winners. I hope you have checked out the [ARIN Facebook page](#). You can be a part of the team helping to increase likes and visibility of our organization. Does this sound like fun to you? If it does, you can check in with the main office and get a message to Liz.Boulter@arinursing.org or Sarah.Whitehead@arinursing.org who will help get you started.

Our annual conference is March 18-21, 2018 in sunny Los Angeles, California. The schedule is packed full of lectures of interest to all members. You will see collaborative events from both AVIR and SIR. Joint sessions are exciting as they build teams and expand the nursing knowledge of all groups attending. They are also integral to understanding the team members roles and increasing the knowledge of the science as it relates to the people we care for. It is a welcome sight, perhaps a long time coming, that three specialties can collaborate on the care of a patient in imaging.

This year ARIN will be offering a hands-on capnography and pediatric sedation classes. This is the work of the capnography team under the guidance of Mary Sousa and Karen Green. The team has developed a hands-on approach to using capnography, and the knowledge base you need to be successful in using this. I know some institutions are not quite there yet, but as new equipment is purchased, this may be the time to invest in it.

You will also see the new ARIN APP for conference. The instructions for obtaining the app will follow as registration progresses. This is very exciting! The app will keep you up to date on what's happening at the conference. This will be an additional way to connect with friends and a whole new way of going to conference. Don't worry if you have never done this before. There will be support at the main ARIN area to help familiarize attendees with it. It may feel a bit uncomfortable, but the whole ARIN team will help you feel empowered with the APP. Stay tuned on the [ARIN web site](#) and the [Facebook page](#) for more to follow.

Finally, I would like to thank you for all you do to make patient care in imaging a safe and quality experience for the people we care for. I look forward to meeting you at conference!

Thank you to our corporate sponsors





CAN YOU FIGHT MOTHER NATURE?

Greg Laukhuf ND, RN, CRN, RN-BC, NE-BC

It's always difficult when you're working with Mother Nature, because you need to adapt to that.

– Pilou Asbaek

Hurricanes, earthquakes, floods, and wildfires; 2017 was a year that will be remembered for mother nature and her might. According to insurance industry, 2017 was the costliest year on record for claims (Online Today, 2018).

It is natural for one to go into survival mode. This is especially true when your family and job are hit by the large-scale disasters seen last year. Regardless of preparations made, with thousands of injured and displaced whom may need medical attention, thoughts must turn to the urgent needs, responses, and relief of the affected. Identifying and addressing life-threatening situations must be the immediate priority. But what happens in the aftermath, when the dust settles, and the waters begin to recede. What happens when we start putting our communities back together. In the wake of a natural disaster, it is easy to lose sight of our patients intermediate and long-term needs once the short-term needs are met.

For individuals relying on regularly scheduled radiology screenings or procedures to manage chronic conditions or monitor disease progression, the resulting disruption in care can be costly. The exhausting journey back to normal, spanning months or perhaps years to reestablish treatment, may potentially be a leap backwards. With the treatment interruption, symptoms may reemerge with increased severity.

As healthcare providers, many rely on your ability to meet their health care needs. But are you prepared to meet the demands of your regular patient population as well as the diverse needs of the greater community following a natural disaster? Will you be able to quickly and efficiently

deliver care when the need is the greatest? The key to success in these situations for your patients and team lies in taking time to breathe deeply and clear your head. You need to adjust your perspective to evaluate recovery with the goal of supporting long-term health needs and maintaining continuous care for patients for whom disruptions might be truly dangerous. When the initial impact from the disaster is finished, your focus must shift to filing insurance claims, structural repairs, and replacing drugs and equipment. Encourage your patients to work proactively with members of your office and their insurance representatives to minimize treatment interruptions. Between rescheduling appointments, replacing lost or damaged medications, patient transfers from damaged facilities and operating your department, your daily tasks may seem a bit chaotic. Despite the demand to address operational needs, you can minimize disruptions in your ability to deliver care. Challenge yourself. Whether you have been impacted by recent events or not, you can learn from the experience. Does your office have internal disaster protocols in place to support patients in the wake of an event? Do you have the infrastructure and educational materials to empower patients and minimize delays in access to care if something occurs? If you do not, now is the time to take advantage of all available resources to prepare if an event should occur. Most importantly, in times of tragedy remember that you are not alone. People and communities come together in times of crisis to persevere. Hundreds of organizations work tirelessly in the background to connect the pieces of the recovery puzzle. Future successes can be built upon preparation and response strategy that pulls external resources and assistance to continue delivering the care your patients desperately need. To learn more about disaster relief resources available through an ICA, please visit infusioncenter.org/disaster-relief.

References

Online Today, (Jan 18, 2018), Retrieved <http://www.todaygh.com/natural-disasters-globally-2017-cost-insurance-companies-135b/>

Vison is a publication of the Association for Radiologic and Imaging Nurses Association. Comments and questions may be addressed to Senior Editor; Greg Laukhuf ND, RN-BC, CRN, NE-BC at greg.laukhuf@arinursing.org.



BARE NEWS: WHAT YOU NEED TO KNOW!

Greg Laukhuf ND, RN, CRN, RN-BC, NE-BC

[Computer Program Finds New Uses for Old Drugs](#)

Case Western Reserve University. (November 16, 2017).
ECancer News.org.

Researchers at the Case Comprehensive Cancer Center at Case Western Reserve University School of Medicine have developed a computer program to find new suggestions for old drugs. The computer program, called Drug Predict, matches data about FDA-approved drugs to diseases, and predicts drug efficacy. In a recent study published in *Oncogene*, the researchers successfully translated Drug Predict results into the laboratory. They showed common medications, for example aspirin, can kill patient-derived epithelial ovarian cancer cells. ... Co-senior author Analisa DiFeo, PhD will conduct [a phase 1 clinical trial] at University Hospitals Seidman Cancer Center using the new software.

[Making Mammograms More Comfortable](#)

Pysa, C. (October 18, 2017). WCPO Cincinnati.

Mammograms are vital in the fight against breast cancer, but they are not the most comfortable. Engineers are attempting to change that reality with a curved paddle. Years ago, University Hospitals Cleveland became the first site in Northeast Ohio to offer 3D mammograms, "If I compare these two images, I can scroll through the breast kind of like looking at different pages of a book, as opposed to just looking at the cover of the book," explained Dr. Donna Plecha, co-director of UH MacDonald Women's Hospital Breast Centers. The 3D technology is standard care for mammographies and has been shown to not only find more cancers in the breast, but also decrease callback rates. A 3D mammogram can be painful. "Some patients won't come to get their mammogram because they're worried about the pain during the exam," said Dr. Plecha. "Not every patient has pain. Some patients do, though. Trying to make it as comfortable of an exam as we can I think is really important for women," Dr. Plecha noted. That is where the Smart Curve paddle comes in. "The edges are much more curved," Dr. Plecha explained. "It's less rectangular allowing for a more comfortable exam."

[How Geisinger, Cleveland Clinic, and others are responding to negative patient reviews](#)

Rege, A. (November 13, 2017). Becker's Hospital Review.

While healthcare organizations agree patients and families should be able to share concerns, hospitals and health systems have begun searching for ways to ease the effect of negative reviews on online rating platforms such as Yelp or Healthgrades, STAT News reports. Experts in the online physician rating business claim negative reviews are the outcome of an open and transparent market, the report shares. Instead of combating negative reviews with litigation, many hospitals such as the Cleveland Clinic, Geisinger Health System, and Brigham and Women's Hospital, are posting patient reviews on their hospital's websites. University of Utah Hospital was among the first to begin posting unedited patient comments on its website in 2012, the report states. Providers who post physician reviews on their websites argue that third-party rating websites only feature a selection of comments; if even a few of them are negative. Patients may be reluctant to select the hospital or physician as their care provider, the report states. By posting reviews directly on their website, hospitals aim to put negative provider ratings in context, while simultaneously encouraging physicians to "do [their] job better" so that they don't receive any negative reviews, according to the article.

[Hospitals are struggling, and the future is grim](#)

Pearl, R. (November 20, 2017). MedPage Today.

Harvard Business Review shares several big-name hospitals reported significant declines or net losses to their 2016 operating margins. Partners HealthCare, New England's largest hospital network, lost \$108 million, the Cleveland Clinic witnessed a 71 percent decline in operating income while MD Anderson dropped \$266 million. How did some of the biggest brands in care delivery experience this decline? The issue isn't declining revenue. Since 2009, hospitals have accounted for half of the \$240 billion spending increase among private U.S. insurers. It's not that increased competition is driving price wars, either. On the contrary, 1,412 hospitals have merged since 1998, primarily to increase their clout with insurers and raise prices. Nor is it a consequence of

people needing less medical care. The prevalence chronic illness continues to escalate, accounting for 75 percent of U.S. health care costs, according to the CDC "The patients are older, they're sicker and it's more expensive to look after them." That, along with higher labor and drug costs, explained the Cleveland Clinic's economic headwinds, according to outgoing CEO Dr. Toby Cosgrove. And though he did not specifically reference Medicare, years of flat reimbursement levels have resulted in the program paying only 90 percent of hospital costs for the "older," "sicker" and "more expensive" patients.

[Prion seeding activity and infectivity in skin samples from patients with sporadic Creutzfeldt-Jakob disease](#)

Christina D. Orrú,, Jue Yuan*, Brian S. Appleby,, Baiya Li,, Yu Li, Dane Winner, Zerui Wang, Yi-An Zhan. (2017). Science Translational Medicine. 9, (417), eaam7785. DOI: 10.1126/scitranslmed.aam7785.

Sporadic Creutzfeldt-Jakob disease (sCJD), the most common human prion disease, can be transmitted via neurosurgical instruments or corneal/dura mater transplants contaminated by infectious prions. Some studies have associated sCJD risk with surgeries that involve the skin, but whether the skin of sCJD patients contains prion infectivity is not known. Orrú et al. now report detectable prion seeding activity and infectivity in skin from sCJD patients, although at much lower levels compared to brain tissues from sCJD patients. These data suggest that there may be a potential for iatrogenic sCJD transmission through skin.

[DNA vaccine promises permanent, universal protection against the flu](#)

Haridy, R. (December 28th, 2017). New Atlas. UW Medicine.

A universal, one-dose flu vaccine has long been a goal for medical researchers. The World Health Organization (WHO) estimates over half a million people die annually from influenza. Research from the University of Washington School of Medicine could provide for a universal flu shot to impact this statistic. The researchers are working to develop a novel DNA vaccine that targets the virus genetic components.

"Relatively speaking, DNA vaccination is the new kid on the block regarding the types of vaccines," explains Deborah Fuller, whose UW Medicine lab is leading this innovative research. DNA vaccines are at the vanguard of modern medical research. Unlike conventional vaccines, which utilize whole forms of an organism to create an immune response, a DNA vaccine inserts a genetic code into a cell guiding it to produce a pathogenic antigen that triggers an immune response.

DNA vaccines offer many significant benefits over traditional vaccines. They are cheaper and faster to make and, because they target fundamental genetic components of a virus, they get around the problem of "genetic drift." This means a single shot could protect against all influenza strains, both in the past and the future. Early studies with DNA vaccines have not proven to be effective; researchers struggled to evoke immune responses in human subjects using the technique. Recent advances in delivery methods have revived the field.

It is still early days in the world of DNA vaccine research, with no real human, commercial results to be expected for at least five or 10 years, but this certainly has the potential to be truly revolutionary.

[Did Hurricane Maria Cause an IV Bag Shortage Across the United States?](#)

Retrieved <https://www.snopes.com/did-maria-cause-an-iv-bag-shortage/>

On 28 December 2017, a tweet from a man in California focused attention on one of less-reported aftereffects of the damage caused by the massive Hurricane Maria, which hit Puerto Rico on 20 September 2017. Ben Boyer's post criticized the Trump administration's response to the disaster while describing a recent hospital visit:

"My wife's nurse had to stand for 30 mins & administer a drug slowly through a syringe because there are almost no IV bags in the continental U.S. anymore. See, they were all manufactured in a Puerto Rican factory which still isn't fixed."

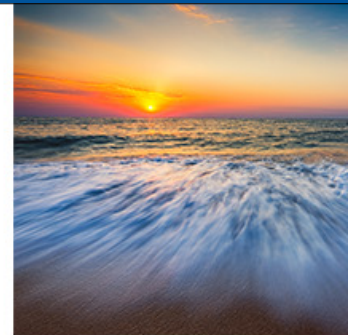
Hospitals in both Puerto Rico and the United States have reported shortages of intravenous fluids and bags since Maria tore through the island, where several medical manufacturing plants are located, in September 2017. According to a Food and Drug Administration analysis, medical manufacturing is a significant part of the island's economy:

Manufacturers affected included Baxter International, the largest IV bag supplier in the United States. The company says on its website that it ships more than a million units of IV solutions a day. The FDA has been working very closely with industry and local and federal officials to help address the shortage situation for IV saline and other products because of Hurricane Maria.

[New Shingles Vaccine Is Cost Effective](#)

January 4, 2018 The New York Times.com.

A new shingles vaccine on the market is expensive, but effective according to a study in JAMA Internal Medicine. Many nurses know that shingles is a painful and sometimes cause debilitating nerve inflammation and blistering skin rash. It is triggered by the same virus that causes chickenpox. The old vaccine, Zostavax, is about 50 percent effective. The new one, Shingrix, provides 90 percent protection. The two-shot treatment is \$140 for each dose, and it is recommended for people 50 and older. Researchers calculated that using the new vaccine would save money over the long term, based on the cost effectiveness of health care measures. "Our findings are subject to the proposed price - \$280," said the lead author, Phuc Le, an assistant professor at the Cleveland Clinic. "Any price change in the future may change the calculation." The age of the recipient and failure to get the second shot could change the cost effectiveness. But even allowing for such variables, if the new vaccine cost \$350 for two doses, it would still be more cost effective than the old one.



ARIN 37TH ANNUAL CONVENTION

LOS ANGELES | MARCH 18-21, 2018
#ARIN18LA

COMING SOON

ARIN 37th Annual Convention, Los Angeles Convention Center

March 18-21, 2018

Imaging Review Course

March 16-17, 2018

Bruce Boulter
ARIN Executive Director

It's hard to believe that almost one year has gone by since ARIN arrived in Washington, D.C. for education and visiting all of the history that is our nation's capital. Now we find ourselves again in the home stretch to visit another iconic city; Los Angeles. The planning committee has been working hard to create an outstanding program. As always, in addition to the convention, we will be presenting our updated Imaging Review Course. Now is a great time to work on your CRN and prepare for the exam in May.

As we head to one of the most amazing cities in the United States, we invite you to take advantage of the many educational offerings that ARIN has to offer. Adding to the popularity of the Capnography Simulations or "Airway Management for the Interventional Nurse" offered last year, our attendees will be able to take advantage of the class in 4 sessions this year. In addition, we have added one session of a hands-on Pediatric Sedation simulation.

For the first time in many years, all three associations (ARIN, AVIR, SIR) will be in the same building, the Los Angeles Convention Center. Never have the ARIN attendees had the opportunity to take advantage of the proximity to the exhibit hall. As in past years, we will be offering joint days with both AVIR and SIR. Teamwork will be on display in LA.

Don't forget, the average temperature in Los Angeles in March is in the 70's. Perfect weather for those evening strolls and visiting all of the sites of "La La Land". From the Getty Center, to the Griffith Observatory, to Universal Studios; you will find something to do there. If you need more ideas, call the ARIN National Office, we are all from southern California and would love to suggest some of the hidden gems (like The Pantry, 2 minutes walk from the hotel) for you to experience.

Make your plans now to join ARIN in Los Angeles for a 37th anniversary convention you'll never forget.

[CLICK HERE TO REGISTER](#)

CELEBRATE CERTIFIED NURSES DAY

Every March 19, employers, certification boards, education facilities, and healthcare providers celebrate and publicly acknowledge nurses who earn and maintain the highest credentials in their specialty. The day was inspired by Dr. Margretta 'Gretta' Madden Styles, RN, EdD, FAAN, a pioneer in nursing certification. The Association for Radiologic & Imaging Nursing (ARIN) wishes to celebrate all Certified Radiology Nurses (CRNs) on this day! The dedication to your profession through certification is an example of the comprehensive care you offer to patients. ARIN recognizes your expertise and diligent efforts not only on this day, but throughout the year as stalwarts in radiology and imaging nursing. Visit the "Certification Toolbox" found on ARIN's website today for ways you can celebrate your CRNs within your radiology and imaging department.



2018 RESOLUTION: JOIN A CHAPTER

ARIN has many new members and is growing! With growth, new members may not be aware of a chapter close to them. The above map with links can be found on the ARIN Website under the Chapters tab on the home page. Make 2018 the year you join your local chapter!



ANNUAL ARIN CONVENTION: LOS ANGELES, CALIFORNIA

ARIN's 37th annual convention is being held in historic Los Angeles. From March 18 – 21, 2018. Attendees can gain knowledge, network, build new relationships and strengthen those already developed. The educational program this year is comprehensive and includes simulation sessions on airway management and interdisciplinary joint sessions with Society of Interventional Radiology (SIR) on topics of anticoagulants and sedation, and information on how to publish or present. ARIN is leading the way in radiology nursing education. I encourage everyone to visit the ARIN website and find out more about convention and its continuing education opportunities. I look forward to seeing you all at convention to connect and learn of ways ARIN can support its members continue to lead the way in expanding the body of knowledge for radiology nurses everywhere.

WE NEED YOUR HELP!

ARIN is sending out a [Survey Monkey](#) to gather member feedback on Vision. We want to hear what you like and what we can do better. Please take time to complete the survey. We can't do it without you!

TAKE THE SURVEY



FIVE MINUTES WITH THE BOARD

Leadership is a learned action! Our new feature, Five Minutes with the Board offers insight and encouragement into a leadership position in the Association for Radiologic and Imaging Nursing from the perspective of current or former Board members. Today's interview is with Greg Laukhuf ND, RN, CRN, RN-BC, NE-BC who served on the ARIN Board from 2012-2016 as Member at large, President elect, President and Past President. He is currently the Editor of Vision.

HOW DO YOU VIEW YOUR ROLE AS A RADIOLOGY NURSE AND WHERE DO YOU SEE THE NURSING PROFESSION HEADING IN THE FUTURE?

My role as a Radiology nurse is to impact patients and staff through evidence based practice and the latest in technological developments. It is a team role in which the radiological nurse is the glue that holds the team together for optimal patient care and experience. I see ARIN as a leader in providing easily accessible educational resources to all imaging professionals.

Radiology nursing is entering an interesting time. With the impact of declining reimbursements, the push to do more with less and a retiring Baby Boomer population, we have more challenges than ever before in its history. Nursing leaders will become a sought-after commodity as current leader retire. ARIN can help members through these impacts.

WHERE DO YOU SEE RADIOLOGY NURSING PROGRESSING IN THE FUTURE?

I believe imaging nurses will continue as an essential element in educating other nurses, patients, and technologists. In the near future as, Artificial intelligence gains a greater role in Radiology, radiology nurses will be involved in the interface between AI and patient care. We will continue our enhancement of the communication and educational needs between a technologically evolving discipline and patient care with the focus on the patient.

HOW DO YOU THINK INDIVIDUAL ARIN MEMBERS MAKE A POSITIVE IMPACT ON PRACTICE?

Arin members can impact practice in many ways. Arin brings the latest advances and information to its members by conferences, certification, webinars and publications (e.g. Vision and Journal of Radiology Nursing) When members share this information with colleagues or incorporate it into everyday processes, they are impacting practice. Many of our members are involved in committees in their work areas. Sharing this information and involvement in practice decisions aids in raising the practice level in the imaging environment.

HOW DID YOU BECOME INVOLVED IN ARIN?

I became involved waiting for a patient to arrive during a late night on call. The patient ambulance was held up so as I waited in my prepared procedure room, I picked up a copy laying around of Journal of Radiology Nursing. I was very impressed with the relevance of the articles that I read. The next week I joined my local ARIN chapter, moving from active member, Board member-at-large and eventually chapter president.

DESCRIBE YOUR LEADERSHIP JOURNEY TO THE ARIN BOARD.

I became involved in the ARIN board after serving on the ARIN Chapter committee as Ohio Radiological Nurses Association (ORNA) President. With mentoring from one of the founders of ORNA, I ran for the ARIN Board. In this way I could impact decisions to help local chapters. Along the journey, I have had the opportunity to lead the organization from the highest role and speak at several conventions. I have edited books, written for Vision, JRN, SIR and The Core. Arin has allowed me the opportunity to present in front of ANA. ARIN has allowed me to impact practice by providing imaging information to nurses not familiar with our environment by reaching out to inpatient settings, outpatient clinics and other nursing specialties to provide information on the patient experience in radiology. I do believe that I am a better leader due to my experiences with ARIN and the people I have met.

"THAT NURSE WAS JUST DOING HER JOB"

Maureen Chila, RN, MPA, JD, CPHRM, CRN

When a recent incident in Utah involving an RN, who was properly carrying out our professional practice ethic and following her hospital's policy in the course of caring for a patient, was arrested, it was not only a shock to the people involved, but an event that impacted all who have heard of it and violated the very core of our professional practice ethic.

In summary, an ICU patient was a police officer from another state who was not suspected of causing an accident. The Utah police advised the RN that they needed a blood sample to prove his innocence and that they had implied consent. Prior to entering the ICU, the Police Lieutenant advised the Police Phlebotomist to arrest the RN if she refused to allow a blood draw.

When the police arrived, the RN contacted a hospital Administrator and after discussion they refused to allow the police phlebotomist to draw blood according to a hospital policy that required a warrant because the patient was unconscious and could not give consent. The officer then became aggressive, dragging the RN out of the facility, placing her in handcuffs and confining her in the police vehicle. The event concluded with a legal settlement for the Nurse and the termination of employment for both Police Officers.


Advocacy is an integral concept in professional Nursing practice. What is so striking about this case is that it clearly demonstrated the unanticipated risk to personal safety that can occur in the course of advocating for patients. Advocacy describes the nurse/ client relationship and is a philosophy of nursing practice which supports individuals to promote their own well-being, as understood by that individual and is an ethic of practice. The ANA definition of Nursing includes "...advocacy in the care of individuals, families, communities and populations." Recent online comments about this case included the "1st job of an RN is to protect and advocate for patients" and

that this event "sent a chilling message about safety of nurses and patient rights." While there was clearly no excuse for assaulting the RN, we will all have to stop and consider how we will continue to be able to be advocates and maintain our own safety and the safety of our colleagues while we are following our Organizational policies so that incidents such as this can be prevented going forward.

The Bureau of Labor Statistics reported that rates of workplace violence increased by 11% between 2005 and 2014 in private industry hospitals, and that 48 % of all non-fatal injuries from occupational assaults and violent acts occurred in health care and social service settings. Many facilities now require employees to complete workplace violence training programs. To date, 34 states have enacted Violence Against Nurses Statutes, which makes any occurrence a felony. National Nurses United was recently granted a petition from OSHA for a national standard for workplace violence, which is currently under review by the Department of Labor. An advanced study of the problem can also be found in the National Advisory Council on Nurse Education and Practice Report to the Secretary of Health and Human Services and the Congress (April 2005).

Alex Wubbels should be commended for her professionalism in handling this instance and for her commitment of part of her legal settlement to assist others in pursuing body camera evidence. The unexpected acts that arose in what was to us, a typical course of routine duties, will hopefully increase our awareness and encourage our participation in shaping our future work environments and policies.

A Life-Changing Career




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- Vascular and Neuro Interventional • Hybrid Procedural Suite

To hear from one of our Radiology Nurses visit mayocareers.com/RadRNVideo.

To learn more about available positions, please visit mayocareers.com/ARIN.



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TOP 10 LIST OF 2018 DEVICE RISK AREAS

Greg Iaukhuf ND, RN-BC, CRN, NE-BC
Vision Editor

The ECRI Institute (Emergency Care Research Institute) has unveiled its annual Top 10 Health Technology Hazards for 2018, highlighting what the Institute feels are the greatest sources of danger involving medical devices and health technologies for 2018.

To comprise the list, ECRI Institute engineers, scientists, clinicians, and patient safety analysts designate topics for consideration and scrutinize health-technology-related reports the Institute has received through its Problem Reporting Network. They also weigh factors like severity, likelihood that the hazard could cause serious injury or death, frequency, overall likelihood and the likelihood of the spread to affect a great number of people.

1. CYBERSECURITY THREATS IN HEALTHCARE DELIVERY AND PATIENT ENDANGERMENT

Ransomware and other cyber-attacks constitute a patient safety crisis that places patients' lives at risk by stalling or halting operations and care delivery. Disruptions can include compromising patient care with canceled procedures, workflow changes, closure of care units or information data breaches and electronic chart lockdown.

2. ENDOSCOPE REPROCESSING

High level disinfection (HLD), consistently and effectively cleaning, disinfecting, and sterilizing endoscopes remains a challenge. Failure to properly clean can lead to deadly infections in patients. ECRI Institute recommends healthcare facilities have quality assurance processes for cleaning such as magnification-aided visual inspections and the use of biochemical testing as well as methods of drying endoscope channels after reprocessing.

3. BED AND STRETCHER MATTRESS CONTAMINATION

Contamination can occur even after cleaning, creating the risk of exposure to body fluids or microbiological contaminants. Examples of reported incidents included patients on an apparently clean bed or stretcher when blood from a previous patient oozed out of the mattress onto the patient. Regular inspections of mattresses and covers for integrity are suggested to identify damage or contamination risk.

4. SECONDARY ALARM NOTIFICATION SYSTEMS

These are software solutions that send alerts from a medical device or IT system to a clinician's smartphone or other communication devices. They are supposed to be a method of timely notification. Delayed or failed delivery of a critical alarm or alert can lead to missed alarm conditions, delayed care, and avoidable patient harm.

5. MEDICAL DEVICE CLEANING METHODS

Exposing medical devices and equipment to the incorrect cleaning agents or cleaning methods can lead to corrosion of a device's nonmetallic parts and weaken, or break it. This can trigger performance

and safety issues, such as equipment failure, power supply interruptions, and incorrect alarms. Hospitals should stock and use multiple cleaning products and educate staff on using the correct cleaning product.

6. ELECTROSURGICAL ELECTRODE PENCIL HANDLING

Failure to place the device in an approved holder in between activations can lead to burns or fires if the device is inadvertently activated. It's something ECRI Institute has received reports of, investigated and published guidance on for years due to resulting burns, arcing, and fires due to inadvertent activation of ESU pencils. Consistent use of safety holsters for active-electrode pencils can prevent accidents.

7. DIGITAL IMAGING TOOLS TO CONTROL RADIATION

ECRI found these tools are often not used to their full advantage, allowing the possibility of high doses of ionizing radiation. Repeated exposures can increase a patient's long-term risk of getting and severely high doses can cause radiation burns. To reduce long-term risks, users need to be proficient in the use of tools to prevent unnecessary exposure.

8. BAR-CODED MEDICATION SYSTEM WORKAROUNDS

Administering medications before using the bar-code scanner, scanning patient barcodes from a list of stickers on a clipboard instead of from the patient wristband, and preparing medications for more than one patient at a time cause a variety of problems. These behaviors can be fueled by such things as system configuration that does not support safe clinician workflow, lack of understanding or a system that is not user-friendly, reliable or well maintained.

9. NETWORKED MEDICAL DEVICES AND INFORMATION SYSTEMS

Errors in networking can delay treatment or cause a dangerous misdiagnosis. Some reported incidents included lab results being delivered from a laboratory information system to the electronic health record with reference ranges but no lab values. Regular system monitoring is needed along with a plan to assess, approve and implement changes.

10. ENTERAL FEEDING TUBING ERRONEOUSLY CONNECTED TO PATIENT LINES

ECRI shared that enteral nutrition was delivered into a patient's lungs when feeding tubing was improperly connected to a ventilator suction catheter in one incident reviewed. As shared in previous Vision issues, a new standards-based connector design for enteral feeding systems known by its trademarked name ENFit could help prevent these errors. The connectors fit only with each other, not with other connector types. A transition to enteral devices with ENFit connectors is recommended by ECRI and other organizations to avoid these issues.

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Retrieved https://www.ecri.org/Resources/Whitepapers_and_reports/Haz_18.pdf

CDC RAISES AN ALARM: UNSAFE INJECTION PRACTICES CONTINUE

Greg Laukhuf ND, RN, CRN, RN-BC, NE-BC

Safety is more important than convenience
– Don Hambidge

Many of us entered nursing to impact patients. Administering medications in a safe and timely manner was one avenue to accomplish this. Radiology nurses know from nursing school that to safely prepare and administer an injectable medication, practitioners must follow aseptic technique, one use of single-dose or single-use vials, use one needle/syringe for each injection, and never enter a medication container with a used needle or syringe. This was drilled into each of us during our early clinicals on the floor with our clinical instructors.

However, the results of a recently published survey from the Institute for Safe Medication Practices (ISMP) on injection practices had some surprising results (ISMP, 2017). It revealed dangerous knowledge gaps, attitudes, and practices by health professionals. This is a surprising finding considering media scrutiny on medication practice and the launch of the National One & Only Campaign in 2009 by the Safe Injection Practices Coalition (ISMP, 2010).

The One and Only Campaign www.oneandonlycampaign.org/ goal is to raise awareness among patients and practitioners about safe injection practices. While most health professionals surveyed were aware of the outbreaks, awareness of this campaign was low (22.7% for physicians, 20.0% for nurses). In addition, study results revealed continued confusion regarding the acceptability of injection practices that are dangerous. Highlights from the published survey (Kossover-Smith, Coutts, Hatfield, et al: 2017) are below.

HIGHLIGHTS OF SURVEY RESULTS

The survey was completed by 370 physicians and 320 nurses. While most physician and nurse responses were in accord with CDC recommended injection practices, there is a minority of experts who continue to violate basic infection control practices with the reuse of syringes, needles, single-dose vials, diluent containers, and other unsafe practices. Below are the survey results.

SYRINGE REUSE

The survey responses indicate that 12.4% of physicians and 3.4% of nurses reuse a syringe for more than one patient. This is despite the findings that 91.6% of physicians and 99.4% of nurses state that this is a dangerous practice. While practice locations were not a part of this study, it is important to note that little difference was seen in attitudes or practices in acute care, long-term care, or outpatient facilities in relation to this issue.

REENTERING A VIAL WITH A USED SYRINGE/NEEDLE

While 12.7% of physicians and 6.7% of nurses erroneously believed that reusing a syringe to access a medication vial is an acceptable practice, even more reported its occurrence in the workplace. Professionals feeling that this was a safe practice was highest with oncologists (25.5%) and radiologists (20.0%). This workplace practice was reported by more than half of all anesthesia-pain management physicians (63.4%), radiologists (57.5%), and oncologists (53.7%). Nurses in long-term care facilities (27.3%) and outpatient facilities (21.8%) reported this practice as occurring more often than nurses in acute care facilities (16.1%).



USING SINGLE-DOSE VIALS FOR MULTIPLE PATIENTS

The misunderstanding that using a single-dose vial for multiple patients is an acceptable practice was high with physicians (34.0%) and nurses (16.9%). Little or no differences were seen between nurse groups in acute care, long-term care, or outpatient facilities. It is interesting to note that more nurses in outpatient facilities believed the practice was acceptable.

An important component of the survey was examining the practice of using source bags or bottles as diluents for multiple patients. This practice was reported by 28.9% of physicians and 13.1% of nurses. This dangerous usage was reported by nurses more often in long-term care and outpatient facilities than acute care hospitals.

THE RESULT

The 2017 results of this study reveal that a minority of healthcare practitioners are ignoring best practices associated with safe injections. This is placing patients at risk of serious infection. Given that a higher number of oncologists, anesthesia-pain management physicians, and radiologists reported these lapses occurring in their work areas and reported issues related to these practices, these practitioners should be included in surveillance and educational activities. All medical professionals should understand that any form of syringe and/or needle reuse is dangerous and should be prohibited. Syringes cannot be reused even if the needle is changed. Healthcare practitioners should be attentive to current CDC guidelines that recommend that syringes and needles be used only once. Single-dose or single-use vials should only be used for one dose for one patient, and then discarded. If multiple-dose vials are used, they should be limited to single-patient use with sterile needle and syringe. Education on safe injection practices should be required during orientation and yearly staff competencies. In the broad scheme of things, this is low hanging fruit that radiology nurses can impact.

References

Kossover-Smith RA, Coutts K, Hatfield KM, et al. (2017). One needle, one syringe, only 1) one time? A survey of physician and nurse knowledge, attitudes, and practices around injection safety. *Am J Infect Control*. 45(9):1018-23.

ISMP. Perilous infection control practices with needles, syringes, and vials suggest stepped-up monitoring is needed. ISMP Medication Safety Alert! 2010; 15(24):1-3. Retrieved www.ismp.org/Newsletters/acute_care/articles/20101202.asp

ISMP Medication Safety Alert! Alarming survey results from CDC: Unsafe injection practices continue 2017; 15(24):1-3. Retrieved www.ismp.org/Newsletters/acute_care/articles/20101202.asp

THE VALUE AND BENEFITS OF CONTINUING EDUCATION: THE ARIN ADVANTAGE.

De'Ann McNamara, MS, ACNP-BC, CRN
Director of Education

Education is the most powerful weapon which you can use to change the world.

– Nelson Mandela

The Association for Radiologic and Imaging Nursing (ARIN) offers Continuing Education (CE) credits which are relevant to current practice and are showcased annually during ARIN Convention. Nurses who attend annual convention obtain CEs which feature the following characteristics that ARIN has become internationally famous for over the organization's 37-year history.

QUALITY CURRICULA:

Thoughtfully constructed program development by the ARIN Convention Planning Committee which is composed of clinical nursing experts and thought leaders in radiology nursing.

EXPERIENCE:

Presentation abstracts are chosen from national and international, multidisciplinary experts with a wide range of experience.

RELEVANT EDUCATIONAL CONTENT:

Topics speak to clinical and leadership practice and are based learning needs of those who are responsible for the care of patients in the imaging environment.

MULTIDISCIPLINARY EDUCATION AND ORGANIZATIONAL ARTICULATION:

ARIN collaborates with the Society of Interventional Radiology (SIR) and the Association of Vascular and Interventional Radiographers (AVIR) to create educational offering with our physician and technologist colleagues to provide opportunities for learning, perspective sharing, and defining best practice.

ARIN forms partnerships to expand and enhance education for nurses with organizations such as: The ARIN Local Chapters, Academy of Medical Surgical Nurses, Infusion Nurses Society, Journal of Radiology Nursing, Rad Aid: International Radiology and Global Health, Student Nurses Association, Radiology Nursing Certification Board, The Interventional Initiative



PROFESSIONAL SKILL AND RESOURCE DEVELOPMENT:

ARIN offers continuing leadership enhancing education on topics such as: professional article publishing, podium and poster presentations.

CREDIBILITY THROUGH CERTIFICATION:

The ARIN Imaging Review Course, which is offered at Annual Convention, is designed as a resource for nurses as they prepare for to sit for the Certified Radiology Nurse exam. The two-day course awards 15 CEs which are radiology nursing specific. Certified Radiology Nurses are entitled to use the professional initials, "CRN", with their signature.

INVESTMENT IN PROFESSIONALISM:

Quality continuing education for a professional practice is a sound investment decision for radiology nurses who: deliver patient care, provide patient and family education; serve as preceptors and mentors; communicate with other disciplines in the peri-procedural phases of patient care.

The Association for Radiology and Imaging Nurses is here to support your practice. Join us at Convention 2018 in LA as we explore best practices in patient care and professional education. Details to sign up can be found at <https://www.arinursing.org/index.cfm>.

ARIN EXTENDS A WARM WELCOME TO OUR **NEW MEMBERS!**

First Name	Last Name	City	State
Emily	Lester	West chester	OH
Stephanie	Alessandrone	Fairless Hills	PA
Christofferson	Genelza	El Dorado Hills	CA
Kayla	Bain	Waubun	MN
Linda	Thomason	Sterling	VA
Dan	Schreiber	Lees Summit	MO
Seth	Clayton	Meridian	ID
Kiyomi	Tebben	Salt Lake City	UT
Marita	Gethers	Burbank	CA
Toni	Bratt	Ottawa Lake	MI
Muriel	Makamure	Brea	CA
Linda	Larson	Richfield	WI
Lisa	Homa	Schnecksville	PA
D'anne	Guidry	Houston	TX
Roger	Maynard	Yarmouth	ME
Michelle	Gransden	Tabernacle	NJ
Erica	Deng	Brooklyn	NY
Marguerite	Francescani	Killington	VT
Kelly	Carter	Pittsford	VT
Charlene	Hill	Proctor	VT
Fritz	Asuncion	Castleton	VT
Deborah	Harte	West Rutland	VT
Jeffrey	Knisely	Andover	VT
Laura	Backus	League City	TX
Jessica	Christian	Drexel	NC
Victor	Dela Cruz	Houston	TX
Kristine	Charbonneau	Mesa	AZ

First Name	Last Name	City	State
Samuel	Crum	Summerville	SC
Adriana	Martin	Holbrook	NY
Amanda	King	Omaha	NE
Robin Louise Morgan	Morgan	Valencia	CA
Talia	Wheeler	Larkspur	CA
Alexandra	Solomon	Brooklyn	NY
Richard	Sherrill	Pensacola	FL
Heidi	Wasden	Twin Falls	ID
Jody	Ranus-Heaslet	Litchfield Park	AZ
Julius	Villa	Fresh Meadows	NY
Cory	Berthiaume	Woodland	CA
Linda	Sigwards	Stillman Valley	IL
Jodi	Friedberg	COMMACK	NY
Dâ€™Ann	Park	Riverside	CA
Rhodora Mae	Roda	Billings	MT
Andria	Henry	Leechburg	PA
Jeanie	Lenagar	Munford	TN
Satoko	Sirmans	Longview	TX
Kgotnuree	Kim	Bakersfield	CA
Alicia	Martinez	Littleton	CO
Kaitlin	Cullen	Norwalk	CT
Veronica	Mowry	Stormville	NY
David	Schwartz	Fenton	MO
Jeanette	Risley	Elmwood Park	IL
Reyna	Ramirez	Chandler	AZ
Lorelei	Hemler	Roseville	CA

ARIN'S ROLE IN PUBLIC POLICY- OUR WORK WITH THE NURSE COMMUNITY COALITION

Pauline A. Lentowski MSN, RN, ACNS-BC, CRN
ARIN Public Policy Committee Chair

The one who adapts his policy to the times prospers, and likewise that the one whose policy clashes with the demands of the times does not.

– Niccolo Machiavelli

ARIN is a proud member of the Nurse Community (NC). The NC is a coalition of over 60 professional nursing associations with the shared goal to build a consensus and advocate on a wide spectrum of healthcare nursing issues which include practice, education, research and regulations. The NC is committed to improving the health and healthcare of our nation by collaborating to support education and practices of registered nurses (RN) and advanced practice nurses (APRN).

This dynamic group, led by Suzanne Miyamoto, meets monthly in Washington and invites all member associations and interested parties to partake in the discussion. Hot topics for the 2017 agenda included the opioid crisis, APRNs practicing to their full extent, and increasing access to health care for our veterans, rural communities and the underserved.

The NC works closely with the American Nurses Association (ANA) urging congress to increase funding for Title VIII Reauthorization Act which addresses the continuing nursing shortage. A Title VIII



work development program has been developed to sustain a robust nursing workforce, qualified to meet our nations increasing healthcare needs.

Suzanne and her group met with House and Senate leaders to discuss these issues. They then returned their findings to the group where they are discussed. Letters and documents are formed to send out to the various leaders with our views. All association members are provided opportunities to agree or disagree and sign on if they advocate this issue. NC provides all associations with contact information for their members to review the issues and send in their vote.

New this year to the NC, is the development of the Steering Committee. With the increase in opportunities and concerns, this sub committee was formed to address specific issues based on advocacy and the need for fast action. As a member and chair for the ARIN Public Policy Team, I have been able to listen in and supply information to the committee and our ARIN board.

Work with the NC is another example of ARIN's work on members behalf. If member's are interested in knowing more about the Public Policy Committee or joining this dynamic group, emails can be sent to Liz.boulter@arinursing.org.



MEMBERS IN THE NEWS

ARIN members have been busy. November 4th, 2017, The Ohio Radiological Nurses Association (ORNA) co-sponsored the joint Radiology Education Day at University Hospitals Cleveland. ORNA member, Greg Laukhuf RN, ND, CRN, NE-BC, RN-BC, presented the topic "Smashing Infection" at the 15th Annual University Hospitals Cleveland Medical Center Department of Radiology Continuing Education Program in Cleveland, Ohio. He was also able to co-present "Smashing Infection" at the 15th Annual University Hospitals Cleveland Medical Center Department of Radiology Ultrasound Education Program, Cleveland, Ohio, November 11, 2017 with ultrasonographer Jacqueline Zannotti RDMS.

Greg also had the opportunity to present a presentation on MRI Safety at the University Hospitals Cleveland Medical Center Ambulatory Summit in Cleveland, Ohio November 29, 2017.

Submit the great things your members or chapters are doing. we want to hear from you. Submit your news items to Liz.boulter@arinursing.org.

RADIOLOGIC NURSING CERTIFICATION BOARD (RNCB) NEWS



CRN 2018 EXAM DATES

The Certified Radiology Nurse (CRN) Exam will be administered the following dates in 2018:

March 21, 2018* Application Due January 20, 2018
Application with late fee Due February 3, 2018
*Los Angeles, CA Only

May 19, 2018 Application Due March 23, 2018
Application with late fee: April 6, 2018

October 13, 2018 Application Due August 24, 2018
Application with late fee: September 7, 2018

Download the [CRN Exam Application](#)
and [CRN Guidelines/Handbook](#)

Questions about the CRN Exam or your recertification date?
Contact the RNCB National Office at 855-871-6681.

CONGRATULATIONS TO THE NEWLY CERTIFICATIFIED AND RECERTIFICATIFIED CRNS!

The Radiologic Nursing Certification Board, Inc. (RNCB®) would like to congratulate the following nurses who passed the Radiology Nurse Certification exam on August 12, 2017 and October 14, 2017. These nurses have met the requirements to obtain the Certified Radiology Nurse (CRN) credential.

A total of 5 nurses took the Certified Radiology Nurses (CRN®) Exam on August 12, 2017, in Manchester, NH, with a total of 4 passing. This is a pass rate of 80%.

Patricia McCarthy	Tewksbury, MA
Laura Rennie	Manchester, NH
Patricia Stella	Derry, NH
Sandra Stohl	Litchfield, NH

A total of 75 nurses took the Certified Radiology Nurses (CRN®) Exam on October 14, 2017, with a total of 60 passing. This is a pass rate of 80%.

Callie Almaguer	Fairview Park, OH
Nazmin Ameer	Miramar, FL
Cody Avey	Riverbank, CA
Jessil Bayog	Chapel Hill, NC
Allison Benjamin	Colchester, VT
Michael Bennett	Liverpool, NY
Lisa Bono	Derry, NH
Sharon Bryant	Aurora, CO
Danielle Buck	Brunswick, OH
Kathleen Cantos	Pasadena, CA
Andra Carley	Petersborough, ON
Carla Carrillo	Lawndale, CA
Amanda Cieri	Camillus, NY

Douglas Clements
Jennifer Corvino
Pierc Dayuta
Amy Drouin
Richard Ehrhardt
Tracy Flitcraft
Pamela Furlong
Bettina Fyffe
Raina Ghai Mehta
Karen Gourlay
Joanne Greer
Stephen Halk
Anna Harshman
Beth Heimburger
Phuong Hoang
Lorianne Hohenstern
Amanda Holmes
Mi Sun Im
Jessica Jacques
Catherine Jones
Anish Lukose
Romelyn Magno
Peter Marshall
Cynthia Medavarapu
Vickie Meza
Tami Mills
Jose Monarrez
Monica Moore
Teresa Moore
Jeffrey Murray
Stephanie Nathan
Emily O'Connell
Rebecca Peters
Stephanie Razor
Phyllis Reynolds
Lucylyn Rivada
Glenn Serafica
Kimberly Smith
Carrie Stempowski
MollyStevens
Xinyuan Sun
Helen Tagliaferro
Lorrene Walker
Christine Williamson
Robert Williamson, Jr.
MelissaWoods
Nestly Yap

Durham, NC
Parkland, FL
San Jose, CA
Portland, OR
New York, NY
Woolwich Twp., NJ
Kings Park, NY
Rancho Santa Marga, CA
Forest Hills, NY
Lido Beach, NY
Ridgewood, NJ
Union Beach, NJ
Fairview Park, OH
New York, NY
Daly City, CA
Seminole, FL
Baldwinsville, NY
Ras Al Kahaimah, UA
Margate, FL
Ft. Lauderdale, FL
Missouri City, TX
Jersey City, NJ
Scottsdale, AZ
Laurel, MD
Anna, TX
Lakewood, CO
Salinas, CA
Menlo Park, CA
Kirkville, NY
Concord, OH
Hernando, FL
Clearwater, FL
Cheyenne, WY
Manchester, NH
Wilmington, DE
Orange, CA
Bergenfield, NJ
Hudson Falls, NY
Amherst, OH
Wickliffe, OH
Spring, TX
Medina, OH
Coral Springs, FL
Hollywood, FL
Zanesville, OH
Bel Air, MD
San Jose, CA

RECERTIFICATION

The Radiologic Nursing Certification Board, Inc. (RNCB®) works hard to maintain the standard of excellence among nurses who have made the commitment to set themselves apart as Certified Radiology Nurses by maintaining certification. A total of 163 nurses with the CRN® credential were due for recertification in August and October 2017. There were 83 nurses who renewed their certification and 80 that did not submit for recertification via continuing education credit. The recertification rate for this period was 50.61 %.

The RNCB would like to congratulate the following 83 nurses who met the stringent standards to maintain their certification in August and October 2017.

AUGUST 2017

Jenny Van Swearingen	Missoula, MT
Kimberly Scotton	Climax, NC
Rose Addeo	Ridgefield, NJ
Rita McDonough	Trenton, NJ
Janet Barry	West Islip, NY
Laura Krieb Atwell	Alibion, NY
Betty Jones	Tulsa, OK
Patricia Gannon	Philadelphia, PA
Linda McDonald	Mars, PA
Richard Blevins	Piney Flats, TN
Emma Renae Temples	New Boston, TX
Glenda Zinsitz	Bandera, TX
Mia Harris	San Juan Capistrano, CA
Thomas Jennerwein	Noank, CT
Donna Broun	Pascagoula, MS
Rebecca Kepner	Wilmington, NC
Donna Mener	Branchburg, NJ
Kathleen Daley	Buffalo, NY
Christine McGee	Tonawanda, NY
Cynthia Taylor	Landenberg, PA
Gloria Callan	Lanhorne, PA
Donna Nicholson	Hamilton Parish, BERMUDA
Margaret Hover	Bend, OR

OCTOBER 2017

Jamie Simon	Whitestone, NY
Kimberly Jenkins	Munster, IN
June Bauer	High Falls, NY
Wendy Smith	Southold, NY
AnnRachel Clark	Auburn, CA
Gina Napoli	Costa Mesa, CA
Donna Dell'Agli	Barkhamsted, CT
Shaun Hamberlin	Dolton, IL
Paula Longshore	Louisville, KY
Sonja Russell	Springfield, MO
Susan Buteas	Fanwood, NJ
Yanwei Guo	Valley Stream, NY

Elvira Torelli	Saugerties, NY
Betty McEver	Ithaca, NY
Donna Holder	Pickens, SC
Hlaing Thu	Irving, TX
Kathy Ennis	Midlothian, VA
Karen Helminger	Seattle, WA
Gaile Hanson	Slinger, WI
Margaret Tarr	Yuma, AZ
Esther Chen	Campbell, CA
Diane Kirkbride	Colorado Springs, CO
Kristen O'Hanahan	Littleton, CO
Stephan Bourassa	Zephyr Hills, FL
David Gurney	Rougemont, NC
Tamela Lenhart	Pawnee, IL
Ann Murphy	Oak Lawn, IL
Gemma Noronha	Morton Grove, IL
Maribeth O'Connell	Chicago, IL
Brenda Schmitz	Clarendon Hills, IL
Anne Williamson	Evergreen Park, IL
Christine Latack	Stevensville, MI
Brenda Rosenberg	Kasson, MN
Kristin Wright	Jenison, MI
Maude Wouters	Pleasant Hill, MO
Anthony Ayscue	Winterville, NC
Julie Fassnacht	Denton, NC
Josy Clement	Bergenfield, NJ
Nadja Madon	Hackensack, NJ
Ann Hague	Charlottesville, VA
Fe Ferrer	Bronxville, NY
Lucina Francis	Yonkers, NY
Rosalie Handelman	Bedford Corners, NY
Patricia Mantione	Hicksville, NY
Emily Anderson	Rochester, NY
Sharon Hinson	Trumansburg, NY
Caroline Nolt	New Hyde Park, NY
Deborah Quiles	Cortlandt Manor, NY
Katherine Sheppard	Pittsford, NY
Lori Watt	Rockaway, NY
Colleen Nicholson	Oakville, ON
Julie Bachman	Portland, OR
Skyler Key	Ransom Canyon, TX
Kathleen Bugarin	Springfield, TX
Carol Lynn Lamarche	Hartford, WI
Dawn West	Janesville, WI
Heather Hostetler	Bunker Hill, WV

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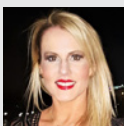
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