

## Inside surgical smoke: Keeping nurses healthy



■ Foundation News ■ Headlines from the Hill ■ From the Ethics Inbox

# Inside surgical smoke

## Nurse-led program aims to remove this threat to RNs, patients

By Susan Trossman, RN

When Brenda Ulmer, MN, RN, CNOR, worked in the operating room (OR) full time, she was aware of the seemingly fleeting smoke that was produced during certain surgical procedures, but didn't link it to how she felt at the end of the day.

It wasn't until switching to a *per diem* schedule—with many days off in between—that she noticed a striking pattern. After working a shift, she headed home with a headache, sore throat, and chest congestion. On her days off, she was symptom-free.

Ulmer pinpointed the source of her symptoms to that surgical smoke.

"I could really feel what it did to my body," said Ulmer, who helped develop an Association of periOperative Registered Nurses (AORN) education and award program focused on the hazards of surgical smoke to healthcare professionals and patients. AORN is an organizational affiliate of ANA.



In spring 2016, AORN announced the launch of its 3-year, national Go Clear Award™ program, and now is engaged in a full-court press to assist nurses, other surgical team members, and hospital administrators in implementing practical, evidence-based solutions to end this workplace threat.

"We have smoke-free restaurants, airports, and hospital grounds," said Vangie Dennis, BSN, RN, CNOR, CMLSO, director of Patient Care Practice at The Emory Clinics: Ambulatory Surgery Center in Atlanta, GA, and AORN member. "But many hospitals continue to allow staff to be exposed to surgical smoke."



**GO CLEAR AWARD™**  
Surgical Smoke-Free Recognition Program

### The hidden hazards

Smoke, or plume, is created when lasers or other surgical, energy-generating devices are used to cauterize vessels, destroy tissue, or cut bone, according to AORN. These instruments are used in millions of procedures annually.

The amount of smoke produced and its composition is concerning.

"When you use energy devices, such as lasers and electrosurgical devices, tissue is heated to temperatures of 100° C or higher," said Mary Ogg, MSN, RN, CNOR, senior perioperative practice specialist at AORN and long-time OR nurse. "The tissue vaporizes and gaseous products are produced."

"Within that smoke can be harmful chemicals, such as benzene and toluene; viruses, including HIV and human papillomavirus; bacteria; blood; and cancer cells," Ogg noted. Although the long-term health effects of being exposed to surgical smoke are still unknown, many respiratory problems and other short-term effects are evident. In addition, some 150 chemicals have been identified in surgical plume and linked to health issues ranging from acute and chronic respiratory conditions to liver and kidney damage to potentially leukemia.

Looking at some statistics, the smoke produced when using an electrosurgical device on 1 gram of tissue is the equivalent of inhaling the smoke from 6 unfiltered cigarettes in 15 minutes, according to AORN. The average daily intake of surgical smoke by the OR team is similar to inhaling the smoke from 27 to 30 unfiltered cigarettes.

Perioperative nurses Ogg and Ulmer pointed to other statistics to emphasize the importance of the Go Clear Award campaign. The Occupational Safety and Health Administration (OSHA) reported that roughly 500,000 healthcare workers are exposed to surgical smoke annually. In a survey conducted by the National Institute for Occupational Safety and Health released in 2015, nearly half of 4,500-plus respondents said they never had training on the hazards of surgical smoke, and one third said that local exhaust ventilation, which is used to control smoke, was not part of their workplace protocol.

### The plume's reach

AORN estimates that 160,000 perioperative nurses are exposed to surgical smoke. However, this hazard extends well beyond the surgical suite.

When working in inpatient ORs, Dennis recalled nurses smelling smoke wafting into pre-op and post-op areas, which meant staff there, as well as patients and family members, were at risk.

"It also occurs in labor and delivery during C-sections, in interventional radiology and dermatology clinics, for example," Ogg added.

Nicholas Golda, MD, medical director of University of Missouri Health Care's dermatology clinics, performs eight to ten surgeries a day, and until recently, worked amid smoke. Golda said he had an epiphany about the hazards of surgical smoke while working with a colleague on an occupational safety review.

"I didn't want to have an issue with my health, because I was ignorant of this hazard," said Golda, who used research from AORN and other sources to successfully convince his administration to purchase specialized equipment, such as tubing that attaches to electrocautery pencils to capture and filter smoke.

"Of all the process and quality improvements we have done in our practice, the nursing staff and I agree that this has been the most impactful thing we've done to improve our daily work experience."

Currently, Golda is embarking on research exploring dermatology surgical teams' attitudes about surgical smoke and another study looking at patient satisfaction, including understanding their experiences with surgical smoke, which has been described as smelling like burning hair.

"In our culture, the patient is at the center of every decision we make," Golda said. "So we are conducting research to determine how interventions, such as intraoperative smoke evacuation, impact the patient experience in our clinics."

### Achieving a smoke-free environment

The AORN Go Clear program is a comprehensive approach to protecting patients and workers by promoting a surgical smoke-free environment and recognizing healthcare settings that succeed in achieving that goal. Components of the free, 10-step program include testing the perioperative team's knowledge, conducting a gap analysis looking at surgical smoke levels and current smoke evacuation equipment, intraprofessional education, and compliance monitoring.

The program offers many resources, including tools to conduct a gap analysis and evaluate smoke evacuation products. Facilities can earn Go Clear designations at three levels, all lasting 3 years.

So far, 85 facilities nationwide have registered to participate in the Go Clear program, and 110 have requested more information.

"Emory absolutely embraced the program,"

said Dennis, who noted that Emory beta tested Go Clear. "Having smoke-free equipment doesn't interfere with the surgical process. So we need to get to a tipping point where other facilities embrace surgical smoke-free environments."

Added Ogg, "This is an important program because it provides nurses with the research-based information they need to make the healthcare environment safer for nurses and patients."

AORN also is asking all nurses to advocate for an OSHA regulation recognizing surgical smoke as a workplace hazard.

The program manual is available on request at <http://www.aorn.org/GoClear>. Additionally, AORN developed a "Guideline for Smoke Safety," which is adaptable to all areas where operative and other invasive procedures are performed. It was published in the 2017 Guidelines for Perioperative Practice in January.

The Go Clear Award campaign is sponsored by Medtronic through the AORN Foundation.

— Susan Trossman is a writer-editor with ANA.



### Leaving against medical advice

To: **Ethics**

From: **A concerned patient**

Subject: **Trapped**

Importance: **High**

I am the new mother of a beautiful baby boy who was born in a large, city hospital in the Midwest. After delivery, I developed minor complications and my physicians wanted me to remain in the hospital for observation. However, I informed the hospital staff that I was anxious to return home with my son and was willing to come back later for blood work.

The nurse who was caring for me tried to convince me to stay, but I requested that the physician provide me with the Against Medical Advice (AMA) form so that I could be released. As I was signing the form, the nurse informed me that because I was leaving AMA, my insurance would not cover my hospital stay. I was furious and confused! How can this be?



From: **ANA Center for Ethics and Human Rights**

First, congratulations on your new bundle of joy! We're excited to hear about your new baby, but disappointed that your hospital experience was overshadowed by this event.

Leaving AMA can cause distress for the healthcare team because they want what's best for you as a patient. They want you to be safe and healthy when you're discharged, so disagreement between the patient and the team about the plan of care can be challenging for everyone.

However, using financial constraints or other inappropriate language to influence patients to stay in the hospital is not conducive to a positive outcome. This can be confusing and intimidating for patients, and they may feel like they have no other choice but to remain in the hospital.

Nurses must realize that their primary commitment is to the patient. It's vital to keep patients safe, and this must be balanced with a patient's right to self-determination. The Code of Ethics for Nurses Interpretive Statement 1.4, The Right to Self-Determination, holds that "patients have the moral and legal right to determine what will be done with and to their own person." In addition, patients have "the right to accept, refuse, or terminate treatment without deceit, undue influence, duress, coercion, or prejudice, and to be given necessary support throughout the decision-making process."

To support patients through this difficult time, nurses must assess the root cause of the desire to leave. There could be a physiologic incident occurring or the patient may be concerned about a loved one at home. In addition, nurses must be informed about current practices, while steadfastly advocating for the rights, health, and safety of their patients.

There are many myths about the role of insurance and payments for patients leaving AMA. A study in 2012 found that, contrary to belief, there's no evidence that insurance companies deny payment based on a patient leaving AMA.

The ANA Scope and Standards of Nursing Practice holds that nurses must be competent in

assisting patients with factoring risks and benefits associated with health care, through timely and patient-centered discussions. Nurses must have honest and factually based conversations about available resources and treatment options for patients.

#### Reference

Schaefer GR, Matus H, Schumann JH, et al. Financial responsibility of hospitalized patients who left against medical advice: Medical urban legend? *J Gen Intern Med.* 2012;27(7):825-30.

## Welcome to the 115th Congress

By Monisha Smith

The 2016 election cycle brought in a new U.S. President and Congress, along with a continued Republican majority in both chambers. The ANA congratulates the candidates elected who have proven to be advocates for a stronger healthcare system and improved patient care.

In this election, 83% of the candidates for Congress who ANA endorsed won their races. These are champions who listened to nurses during the campaign, and ANA is already working with them to get started on the job ahead. (Read more about ANA-endorsed candidates at <https://goo.gl/W2qwsv>.)

The 115th Congress includes many familiar faces, such as nurse champion and advocate Congressman David Joyce (R-OH), who was the lead sponsor on ANA's priority legislation, the Registered Nurse Safe Staffing Act (HR 2083/S 1132). ANA looks forward to continuing this work in the new Congress.

Along with familiar faces, the 115th Congress welcomes a new freshman class, including ANA-PAC endorsed candidates, noting a trend toward more representation of the diverse population of America.

In the Senate, Catherine Cortez Masto of Nevada becomes its first Hispanic woman and replaces Harry Reid. New York Democrat Adriano Espaillat is the first member of Congress who was born in the Dominican Republic, which he left as a boy. Democrats Raja Krishnamoorthi of suburban Chicago and Pramila Jayapal (ANA PAC-endorsed) of Seattle were born in India.

The Sunshine State is providing 10 new House members, more than one-third of its delegation. The five Democrats include Val Demings (ANA-PAC endorsed), the first black woman to run Orlando's police department, and Stephanie Murphy, a former Defense Department foreign-policy analyst who unseated 12-term Republican representative John Mica in an adjacent district. Murphy was born in Vietnam and fled that nation with her family as an infant.



**Members-elect gather for the 115th Congress freshman class photo.**

Democratic representative Tammy Duckworth's (ANA-PAC endorsed) defeat of Republican Senator Mark Kirk will help bring to 21 the number of female senators in the 115th Congress, a new record. The victory of New Hampshire Governor Maggie Hassan (ANA-PAC endorsed) over Republican Senator Kelly Ayotte won't affect the overall number of women in the Senate, though it will skew the partisan ratio of female senators even more in the Democrats' favor.



In California, state Attorney General Kamala Harris succeeds retiring Democrat Barbara Boxer, marking the 10th straight time the state has elected a Democratic woman in a Senate election. Harris also becomes California's first black and Asian senator; her parents are immigrants from India and Jamaica.

In Delaware, Democrat Lisa Blunt Rochester (ANA-PAC endorsed), a former state labor secretary, became the first woman and first black person to represent the state in Congress. Only Vermont and Mississippi have never sent a woman to Congress.

ANA looks forward to working with lawmakers to effect positive change by advancing issues important to nurses, patients, and the broader community. To learn more, stay up to date, and become involved, visit [www.RNAction.org](http://www.RNAction.org) and subscribe to [anacapitolbeat.org](http://anacapitolbeat.org).

— **Monisha Smith is the associate director for advocacy and engagement at ANA.**

# 2017 ANA Annual Conference

*Presenters focus on innovation, culture, and resilience*

**H**ealth care is transforming, and the ANA Annual Conference provides tools for registered nurses to prepare for and lead the transformation. Attendees will walk away equipped with fresh ideas, effective strategies, and practical resources such as:

- strategies to build trusting relationships with consumers while navigating the shifting culture
- tools to create and maintain a balance between personal and professional well-being
- techniques for leveraging data and technology to improve workflow and patient care
- proven strategies to prevent and mitigate workplace bullying, incivility, and violence.

Join more than 1,000 of your nurse colleagues at the 2017 ANA Annual Conference March 8-10 in Tampa, Florida — the premier conference for nurses focused on quality outcomes.

Register now at [nursingworld.org/anacconference](http://nursingworld.org/anacconference).

## Program highlights:

Thursday, March 9

8:00 a.m.–9:30 a.m. Welcome Session and Opening Keynote

### Healthcare Innovation: Shifting Decision-Making to Consumers

Patients are now savvy consumers, which signals a major transformation in health care. With so many choices, how are patients making decisions for optimal health? How does this impact nursing? Join this conversation to better understand the health-care transformation and how to translate quality into practice! Learn more about:

- care model innovation and disruption (for example, Minute Clinics)
- regulatory requirements and government mandates
- shifting care from acute to post-acute long-term-care settings.

**Presenters:** Pam Cipriano, PhD, RN, NEA-BC, FAAN, president, American Nurses Association  
 Harry Greenspun, MD, chief medical officer and managing director, Korn Ferry Health Solutions



Pamela Cipriano



Harry Greenspun

4:15 p.m.–5:15 p.m. General Session

### Shifting the Culture

Health care is now focused on the needs of the consumer,

not the provider. Given this significant cultural shift, nurses need to fully engage and guide consumers in making the best health care decisions. Some key questions about this new culture include:

- How is this cultural shift accomplished within our organizations?
- As healthcare providers, how are we providing empathetic and quality care?
- Do we understand what our customers want or what is best for them?

Explore the answers in this session.

**Presenter:** Ed Tori, DO, FACP, CH, associate director, MedStar Institute for Innovation (MI2) and director, MedStar Center for Health Influence & Engagement



Ed Tori

Friday, March 10

8:00 a.m.–9:00 a.m. General Session

### Care Across the Continuum: New Nursing Roles

As health care moves into new realms, nurses are moving into new roles and embracing new responsibilities in many areas, including acute-care settings, nurse-run clinics, home healthcare, and long-term care. How do we match these new roles with consumer expectations and industry needs, and provide the best possible care across the continuum? Learn how to navigate these new practice settings.

**Presenter:** Carol Boston-Fleischhauer, JD, MS, BSN, chief nursing officer, The Advisory Board Company



Carol Boston-Fleischhauer

Noon–1:00 p.m. Closing Session

### Building Resilience: Bounce Back and Thrive

How well do you cope with stress and change? Nurses today are immersed in a challenging and fluid environment, with increased workloads, new roles and responsibilities, and tremendous pressure to adapt to new realms in health care. Resilience is key to being successful in the face of change, but how do you become resilient? Please join us for our keynote session and learn powerful habits to boost your resilience and effectively manage change.

**Presenter:** Jeff Vankooten, motivational speaker



Jeff Vankooten

## Dedicated to helping people through nursing research

**W**e do things because we want them to matter—to make a difference. That’s why the American Nurses Foundation began the Nursing Research Grant (NRG) Program more than 60 years ago—to support nurses who are making a difference in defining quality care.

To mark the program’s 60th anniversary in 2016, a committee of nine scholars, led by Martha N. Hill, PhD, RN, FAAN, Dean Emerita Professor of Nursing, Medicine and Public Health, Johns Hopkins University, prepared a comprehensive review of the NRG program.

The key question: Was the program making a difference?

The answer: Yes, and it should be expanded to offer more and larger grants to nurses.

“Nurses and their patients must be able to rely on care that is proven, reliable, safe, and evidence-based,” said Hill, a Maryland Nurses Association member. “This requires research. And nursing research is important because nurses look comprehensively at the broad social determinants of health in addition to physiological, psychological, and emotional factors. Every nurse and every patient should demand that nursing expertise guide today’s and tomorrow’s research.”

Working closely with Foundation staff, the National Nursing Research Grant Program Review Committee evaluated the program from mission to operations to impact. The process included surveys of past grant recipients; a SWOT (strengths, weaknesses, opportunities, and threats) analysis; environmental scanning; participant satisfaction scores; mapping of research trends; and funding gaps.

Based on their findings, the committee strongly affirmed the program’s mission to fund nurse-led research of the highest quality that is focused on improving health and healthcare delivery. Additionally, they called for a broader definition of clinical research that focuses on the “discovery of new knowledge,”



and they identified the need for more gifts and contributions.

Last year, 126 nurses and friends of nurses, including many from Stryker Medical, funder of The Margretta Madden Styles Credentialing Research Endowed Grant, made contributions to the NRG program. They did so for a number of reasons. One nurse, Maura Ryan, PhD, RN, GNP, a former grant recipient, said that her grant allowed her to help others while she administered the Gerontological Nurse Practitioner Program at the University of Pennsylvania. Other former recipients reported that the grants helped them teach students new methods of care delivery and assisted them in becoming successful faculty members.

The NRG program is important for nurses and patients. “Scientific discoveries are essential to providing better care and lessening suffering,” said Kate Judge, executive director of the American Nurses Foundation. “Nursing discoveries are, I think, among most important because of two things. First, they use a comprehensive approach to health problems and second, patients trust nurses and tell them the truth. That is a powerful combination. We need new ideas and fresh perspectives — and that is the heart of the American Nurses Foundation’s program.”

The 2017 Foundation grant cycle opens for applications on February 1, 2017. For the full recommendations, visit [www.givetonursing.org](http://www.givetonursing.org).

### The Foundation expresses its appreciation for the National Nursing Research Grant Program Review Committee:

**Martha N. Hill, PhD, RN, FAAN**  
Dean Emerita Professor of Nursing, Medicine and Public Health, Johns Hopkins University

**Michael Bleich, PhD, RN, FAAN**  
President and Chief Executive Officer, NursDynamics

**Holli A. DeVon, PhD, RN, FAHA, FAAN**  
Associate Professor, University of Illinois at Chicago

**Ann Marie McCarthy, PhD, RN, PNP, FAAN**  
Professor & Associate Dean for Research College of Nursing, University of Iowa

**Lusine Poghosyan, PhD, MPH, RN, FAAN**  
Assistant Professor of Nursing & Doctoral Student, Columbia University

**Sharon Smith, ONS**  
University of Maryland DNP Student

**Patricia W. Underwood, PhD, RN, FAAN**  
Retired Associate Professor, Case Western Reserve University

**Marianne E. Weiss, DNSC, RN**  
Associate Professor, Marquette University

**Geri L. Wood, PhD, RN, FAAN**  
Coordinator, PhD Nursing Program Professor, University of Texas Health Science Center



Through the generosity of supporters during the past 60 years, the American Nurses Foundation has awarded close to \$5 million to more than 1,000 beginning and experienced nurse researchers to conduct studies that contribute toward the advancement of nursing science and the enhancement of patient care.

## Enter ANA's "What's Your Resolution?" contest

It's the "Year of the Healthy Nurse," and to kick things off ANA invites you to join and share the social media contest "What's Your Resolution?" from January 9 to February 28.

Here's how to enter:

- Create a New Year's resolution that falls within one of the following categories: physical activity, nutrition, quality of life, rest, and safety.
- Submit a short, creative video explaining your life-changing resolution for a chance to win prizes.
- If you're camera shy, no worries. Just write a quick note about why your resolution is important to your journey.

Get started and share this opportunity with your nurse colleagues, encouraging them to participate too!



## 2017: YEAR OF THE HEALTHY NURSE

*Balance your life for a healthier you.*

In recognition of the impact that increased nurse health, safety, and wellness has on patient outcomes, quality of care, and overall nurse satisfaction and quality of life, ANA has designated 2017 as the "Year of the Healthy Nurse" with the tagline of "Balance your life for a healthier you." Each month highlights various health, safety, and wellness topics important not only to nurses, but to their coworkers, families, patients, and the communities in which they live, work, and play.

Year of the Healthy Nurse resources include

- sharable social media graphics, logo, tweets, and Facebook posts
- dedicated "Year of the Healthy Nurse" nursingworld.org webpages filled with resources and events and updated monthly
- toolkit for 2017 National Nurses Week (May 6-12)
- thematic articles throughout the year in *American Nurse Today*
- multiple Navigate Nursing webinars related to the Year of the Healthy Nurse.

Find out more about the Year of the Healthy Nurse at [www.nursingworld.org/yearofhealthynurse](http://www.nursingworld.org/yearofhealthynurse).

## Tri-Council for Nursing releases statement on community team-based care

In January, the Tri-Council for Nursing released a statement on the essential role of the RN in community team-based care. The document describes the relationship of RNs and community health workers who assist teams in achieving individual and population health outcomes. The Tri-Council for Nursing consists of the American Association of Colleges of Nursing, ANA, American Organization of Nurse Executives, and National League for Nursing.

The evolution of community team-based care acknowledges new and modified roles for clinicians and other caregivers, their relationships, and customized interactions with patients and families. The Tri-Council position informs consumers, providers, and policymakers



about the changing nature of care in the community and the importance of high-impact teams, highlighting the roles of RNs and community health workers.

To read the statement, visit <https://goo.gl/StCgS5>.