ACR LEADERSHIP | INTEGRITY | QUALITY | INNOVATION DECEMBER 2019 | VOL. 74 | NO. 12

Bulletin

Make No Mistake

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ACR
Bulletin
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OUR MISSION: The *ACR Bulletin* supports the American College of Radiology's Core Purpose by covering topics relevant to the practice of radiology and by connecting the College with members, the wider specialty, and others. By empowering members to advance the practice, science, and professions of radiological care, the *Bulletin* aims to support high-quality patient-centered healthcare.

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QUESTIONS? COMMENTS? Contact us at bulletin@acr.org

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Geraldine B. McGinty, MD, MBA, FACR, Chair

To Err Is Human

Just culture is the most important concept in healthcare safety.

Despite our best efforts, things in healthcare do not always go as planned. Mistakes happen. Patients get injured. In fact, mistakes will continue to happen in healthcare as long as we remain human. Human error is by far the most common behavior resulting in healthcare mistakes, accounting for approximately 85% of errors. Recognizing this, our goal as committed healthcare professionals should be to drive down the number of mistakes to the lowest achievable level.[1]

A basic tenet of a just culture is that errors due to system failings should not be accountable to the individual practitioners who fall prey to them.[5] A just culture is an environment in which errors and near-miss events are evaluated in a deliberately non-punitive framework — avoiding a culture of blame and focusing instead on error prevention and fostering a culture of safety and quality improvement.[2] Fundamental to just culture is the recognition that errors inevitably occur, even by the most qualified healthcare practitioners.[4] The adoption of a just culture requires careful attention to detail and relies on continuous coaching of individuals and teams to ensure systems improvements.[2] Regardless of the clinical impact of any singular event, the focus of the framework is on avoiding future error.[4]

In a just culture, healthcare providers are not punished for human error. Punishing healthcare providers for human error destroys their confidence, erodes their trust in the healthcare system, and ensures future mistakes will not be freely disclosed — lest additional punishment ensue. In doing so, punishment impairs the surveillance function of quality and safety and blinds us to our problems. Instead of placing the blame on the healthcare provider, a just culture places the blame on the system. Just culture asks how we can build a system that limits the number and effect of our human errors. As such, we look for areas of improvement and try to alter the system to prevent the mistake in the future — implementing checklists, safeguards, and automation where appropriate.[1]

A just culture responds to at-risk behavior with education and training.[1] Education might correct an inaccurate risk assessment or provide the rationale behind an unheeded policy. After an error like this, just culture also considers extending this education to other staff. After all, if one well-intentioned employee made the errant decision under those clinical circumstances, so might another.[1]

If just culture is to be used in radiology organizations, an honest, in-depth look needs to consider the leadership, the human factors, and the factors leading to poor performance. This process is not for the faint of heart or for those seeking quick improvements.[3] It is a long-term commitment. However, as healthcare professionals, we have a duty to protect patients from avoidable harm when they are under our care.[1]

Fundamental to just culture is the recognition that errors inevitably occur, even by the most qualified healthcare practitioners.

Read more in "Make No Mistake" on page 10.

Creating a Q&S Program

All radiology departments are now expected to create organized and comprehensive quality and safety programs. Just culture and culture of safety are essential principles in establishing effective programs. Learn more about the principles and pitfalls of creating a Q&S program at bit.ly/QS_JustCulture.

ENDNOTES

1. Harvey BH, Sotardi ST. The just culture framework. *J Am Coll Radiol.* 2017;14(9):1239-1241.
2. Boysen PG. Just Culture: A Foundation for Balanced Accountability and Patient Safety. *Ochsner J.* 2013;13(3):400–406.
3. Abujudeh HH. "Just culture": is radiology ready? *J Am Coll Radiol.* 2015;12(1):4–5.
4. Burns J et al. Just culture: practical implementation for radiologist peer review. *J Am Coll Radiol.* 2019;16(3):384–388.
5. Brink JA. Is achieving "just culture" just culture, or something more? *J Am Coll Radiol.* 2017;(14):143–144.

The Promise of AI

Bibb Allen, Jr., MD, FACR, ACR DSI™ chief medical officer, and Keith J. Dreyer, DO, PhD, DSI chief science officer, are pictured at the 2019 Imaging Informatics Summit in Washington, D.C.

Radiologists, medical students, data scientists, and IT experts gathered in October in Washington, D.C., for the 2019 Imaging Informatics Summit to explore current challenges, potential pitfalls, and practical implementation of AI and machine-learning algorithms. Speakers from all backgrounds focused on the design of algorithms and how they can be tailored to a radiology group's needs. According to the speakers, choosing the right problem to solve — based on your needs — is imperative.

ACR's Data Science Institute™ (DSI) Chief Science Officer Keith J. Dreyer, DO, PhD, FACR, drove home that the democratization of AI — with radiologist stakeholders involved in start-to-finish implementation of AI models — is critical to understanding how to put algorithms to practical, daily use. Other speakers compared the speed of adoption of AI tools to PACS years ago — when some were quick to adopt and others fell behind in the transition. A core message was to take the time, now, to find out what is available from AI vendors. New tools must work seamlessly with current radiology systems, some of which are strained and dated. Attendees were cautioned on how algorithms must be trained to avoid bias, and experts made clear that including a diverse population of patients in datasets is critical. Several speakers pointed to DSI's use cases as a means of guiding the development of new AI tools toward functional applications that are easily integrated into radiology workflows — saving valuable time and bolstering radiologists' role in patient care.

To learn more about getting AI tools in place, visit acrdsi.org.

Now Available: CPI Module in Chest Radiology

Test your knowledge and improve your diagnostic imaging skills with the new Chest Radiology Module 2019 from ACR Continuous Professional Improvement™ (CPI). Study casework directly from CPI's expert chest imagers, including over 85 images using CT, CTA, HRCT, and radiography. Self-assessment questions feature the most updated guidelines including Lung-RADS® Version 1.1 classification, Fleischner Society guidelines for lung nodules, and interstitial lung disease — as well as many others.

Each CPI module includes at least 50 self-assessment questions and offers up to 8 CME/SA-CME. Choose the print publication or the online examination and receive a free e-book copy. Members save $35 per module when selecting six modules through a customized CPI Select Six Series.

Learn more at acr.org/cpi.

RadInfo 4 Kids Needs Submissions!

Radiologyinfo.org, developed jointly by the ACR and the RSNA, is the preeminent radiology information resource site for patients and families. RadInfo 4 Kids, part of the website devoted to providing information specifically tailored for kids, needs more stories and videos from kids about their medical imaging experience. The site has a variety of videos, stories, games, and activities created by kids, for kids, to help them prepare for and be more comfortable when undergoing radiologic exams.

If a child you know has had a medical imaging test performed and would like to share their experience with other kids, have them contact **radiologyinfo@rsna.org**.

Lung Screening in an Urban Setting

IMAGING3.0®

Radiologists at Montefiore Health System have led development of a life-saving lung cancer screening (LCS) program in the Bronx, N.Y. Program directors meet regularly with referring providers throughout the hospital network to raise awareness and build trust around LCS. Since the program started in 2012, radiologists have screened more than 2,200 patients and detected 55 cancers, about half of them stage I and II lung cancer.

"We have systems like mammography to detect breast cancer and colonoscopy to detect colon cancer, but lung cancer always lacked a screening pathway until we introduced low-dose CT," says Chirag D. Shah, MD, director of the pulmonary and critical care fellowship at Montefiore. "With a framework for LCS, we can really impact patient care."

Read the case study at acr.org/i3cs-setting.

> **We often debate and worry about the factors in healthcare that contribute to the erosion of the patient-physician relationship, but physicians still consistently score as one of the most trusted professions in America. That trust lends great strength to your voice in advocating for your patients and your profession.**
>
> – Michael T. Johnson, MD, at bit.ly/VOR_Johnson

Leaders Influence the Future of Imaging

Bring your leadership skills to the College to influence the future of radiology! Please visit the ACR's call for nominations page to review the updated list of open positions, now featuring the addition of the chair of the Commission on Patient- and Family-Centered Care. The chair of the Commission on Informatics will now be appointed and is no longer open for application. Candidate applications are due Dec. 12, 2019.

To apply, visit acr.org/CNC2019. Email Amy Shipp at cnc@acr.org with any questions.

Showcase Your Chapter

The ACR Chapter Recognition Program, created in 2003, recognizes state chapters' successes, innovative ideas, and work. Chapters can earn awards in four categories: government relations, meetings and education, membership, and quality and safety. Chapters that have demonstrated excellence in all four categories can earn the Overall Excellence Award. The submission process has been revamped to better meet the goals of the program and to streamline the process for applicants. The 2019 awards submissions are due Jan. 15, 2020.

For questions, contact chapters@acr.org. To apply, visit acr.org/ChapterRecognitionAwards.

Pondering Peer Learning

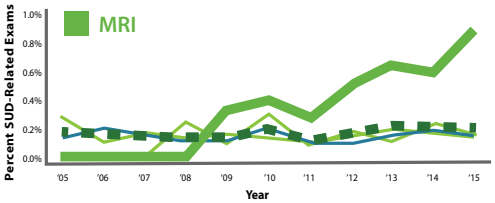
On Jan. 10, 2020, the ACR is sponsoring a free, four-hour virtual summit to define the concept and parameters of peer learning. The goal of the summit is to develop a white paper to document the current state of programs and to recommend a strategy for implementing effective peer learning practices for all radiologists in the U.S. The summit will convene invited experts and thought leaders, including Jonathan B. Kruskal, MD, PhD, FACR, David B. Larson, MD, MBA, Mythreyi B. Chatfied, PhD, Richard M. Sharpe Jr., MD, MBA, Jennifer C. Broder, MD, Richard M. Heller, MD, FACR, and Andrew K. Moriarity, MD. Topics to be addressed include:

- The practical differences that exist between small and large practices, as well as academic and private practices
- Direction from the Joint Commission and ACR Accreditation
- The differences between peer learning and peer review
- Challenges implementing peer learning systems
- How peer learning fits within regulatory needs

For more information on the summit, visit acr.org/PeerLearningSummit. To register, visit bit.ly/PeerLearning_Registration.

Are ED patients with suspected substance use disorders (SUD) more likely to receive imaging?

Researchers analyzed trends in diagnostic imaging in the **ED** from **2005** to **2015**, focusing on **patients with possible SUDs.**



The growth of SUD-related **MRI exams** in this population **significantly outpaced other imaging modalities.**

Imaging Utilization for Suspected SUD in the ED

A recent *JACR*® study assessed temporal trends and utilization patterns of diagnostic imaging performed for substance use disorder (SUD)-related indications in an academic radiology ED from 2005 through 2015. The researchers found that imaging examinations performed in the ED for SUD-related indications represent an increasing subset of overall imaging utilization in the ED. The study also found that utilization of MRI for evaluation of SUD-related indications has significantly outpaced the growth rate of non-SUD-related MRI utilization in the ED.

"In parallel with the reported increasing burden of the opioid epidemic on healthcare organizations, imaging for SUD-related indications is a small but increasing share of overall ED imaging volume," says Efrén J. Flores, MD, officer of radiology community health improvement and equity at Massachusetts General Hospital. "Given the significant morbidity and mortality associated with SUD, radiologists should work with referring physicians to ensure that adequate and relevant clinical information is available before performance of examinations that are for suspected SUD."

To read the full study, visit bit.ly/JACR_Oct2019.

Advocating for Change

Amy K. Patel, MD, medical director of the Women's Imaging Center at Liberty Hospital and assistant professor of radiology at the University of Missouri-Kansas City School of Medicine, partnered with the Missouri Radiological Society to advocate for a bill that would require insurance companies to cover 3D mammography in accordance with ACR's national screening guidelines. Now women throughout Missouri have access to 3D mammography starting at age 40, with no out-of-pocket costs.

"Advocacy is a huge value that radiologists can provide in the care of our patients, and as healthcare transitions to value, it's important that we're seen doing this work," Patel says. "We know healthcare is competitive; we know insurance providers are pushing back on reimbursements. But we can't change anything unless radiologists take initiative and get involved."

Read the case study at acr.org/i3cs-change.

Apply Now for the Hillman Fellowship

Kelly Adamitis (left), commercial sales director at Elsevier, and Hansel J. Otero, MD, the 2019 Hillman fellow, are pictured at the Elsevier head offices in New York.

The application window for the 2020 Bruce J. Hillman fellowship is now open! The fellowship provides a concentrated experience in medical editing, journalism, and publishing for an interested and qualified staff radiologist or radiologist-in-training. The fellowship supports talented physicians in pursuing an aspect of medical journalism as a part of their careers. The selected fellow will visit ACR headquarters in Reston, Va., gaining hands-on experience editing and publishing the *JACR*® with the editor-in-chief and *JACR* staff. The fellow will also travel to New York City to spend time with the *JACR*'s publisher, Elsevier. Travel will be scheduled around the fellow's availability. The fellowship also includes an ongoing project with the journal, a one-year appointment to the editorial board, and an invitation to the editorial retreat. The ACR and Elsevier will reimburse travel expenses, accommodations, and living expenses incurred during the fellowship period.

The application deadline is Jan. 30, 2020. To apply, visit **bit.ly/Hillman2020**. Please email Lyndsee Cordes at **lcordes@acr.org** with any questions.

State Legislative Challenges: Looking Ahead to 2020

ACR state government relations staff members are planning for 2020 and the challenges and opportunities of the upcoming election year. Forty-six state legislatures will meet in 2020, many without carryover of bills from previous, odd numbered year sessions. In the states without carryover, any bill that died in 2019 will have to be reintroduced next year. ACR state government affairs staff tracked close to 600 state bills related to radiology in 2019 and expect a similar number of bills in 2020. A searchable website, congress.gov/state-legislature-websites, offers a convenient way to track individual legislative proposals by state, topic, bill number and other variables.

The ACR state government affairs team is a valuable resource for effectively responding to important, state-level issues. Recent legislative areas of interest have included scope of practice, surprise/balance/out-of-network billing, price transparency, physician reimbursement, teleradiology, state licensure, and medical liability reform. With assistance from CQ Engage, the state legislation tracking service, the ACR can now assist any of the 46 states and several territories that will convene their legislatures in 2020 with geographically targeted call-to-action alerts. They can be customized to target specific committees or state legislators in specific districts. Factual accuracy and proper coordination with local efforts are of utmost importance when planning such initiatives. The ACR state government affairs team asks that they be vetted and endorsed by state radiological societies before seeking their involvement. Please contact mballesteros@acr.org to learn more about this feature. Eugenia Brandt (ebrandt@acr.org) and Tina Getachew (tgetachew@acr.org) are ACR members' expert points of contact for other questions about state legislative and regulatory affairs.

At times like this when we're experiencing rapid change in technology, we need forums like the ACR Informatics Summit to help us work together toward a common vision. Individual commitment to a group effort is what drives change.

– Wende N. Gibbs, MD

CALENDAR

December

- 9–11 Neuroradiology, ACR Education Center, *Reston, Va.*
- 13–15 Coronary CT Angiography, ACR Education Center, *Reston, Va.*

January

- 9–10 CT Colonography, ACR Education Center, *Reston, Va.*
- 13–15 Abdominal Imaging, ACR Education Center, *Reston, Va.*
- 17–19 Body and Pelvic MR, ACR Education Center, *Reston, Va.*
- 17–19 ACR/RBMA Practice Leaders' Forum, Hilton La Jolla Torrey Pines, *California*
- 23 MR Imaging of Breast Implants, Cosmos Club, *Washington, D.C.*
- 23–25 Breast Imaging Boot Camp With Tomosynthesis, ACR Education Center, *Reston, Va.*
- 27–28 Breast MR With Guided Biopsy, ACR Education Center, *Reston, Va.*
- 30–Feb 1 NIOSH B Reader Training and Examination, ACR Education Center, *Reston, Va.*

February

- 3–5 ACR-Dartmouth PET/CT, ACR Education Center, *Reston, Va.*
- 7–9 Musculoskeletal MR of Commonly Imaged Joints, ACR Education Center, *Reston, Va.*
- 10–12 High-Resolution CT of the Chest, ACR Education Center, *Reston, Va.*
- 10–March 6 AIRP® Correlation Course, AFI Silver Theatre and Cultural Center, *Silver Spring, Md.*
- 21–22 Prostate MR, ACR Education Center, *Reston, Va.*
- 24–26 Coronary CT Angiography, ACR Education Center, *Reston, Va.*
- 27–28 Transcatheter Aortic Valve Replacement, ACR Education Center, *Reston, Va.*
- 27 Optimizing CT Imaging for Gastric Tumors, Cosmos Club, *Washington, D.C.*

ACR Education Center Selected to Train Next Generation of B Readers

The National Institute for Occupational Safety and Health (NIOSH) has selected the ACR Education Center to provide training and examination to increase the number of B readers available in the U.S. B readers are a special group of physicians recognized by NIOSH as qualified to classify chest radiographs to identify pneumoconiosis. NIOSH is required to carry out a national program of health surveillance for coal miners, including periodic chest radiography to identify the early changes of this progressive and irreversible interstitial lung disease. As part of this surveillance, B readers classify chest radiographs for the presence and severity of appearances of pneumoconiosis according to the Guidelines for the Use of the International Labor Office (ILO) International Classification of Radiographs of Pneumoconioses — a highly specialized system that is unfamiliar to most physicians.

"The ACR Education Center has been providing best-in-class, hands-on radiology education for more than a decade," said William T. Thorwarth Jr., MD, FACR, ACR CEO. "We are honored to work with NIOSH to remedy attrition among B readers, enable a new generation of B readers and increase accessibility to these vital medical professionals."

The ACR Education Center has committed to providing at least two courses, including training and examination, to qualify at least 80 physicians to become certified B readers by August 2020. The first course will take place Jan. 30 and 31, 2020, followed by a full-day exam on Feb. 1. Registration is now open at acr.org/B-Reader.

Watch on Demand: Judicious Use of Multiphase Abdominal CT Protocols

On Sept. 26, Pamela T. Johnson, MD, FACR, vice chair of quality and safety in the department of radiology at Johns Hopkins Medicine, discussed harmonizing abdominal CT protocol utilization without compromising quality of care during an Image Wisely® Facebook Live event. Image Wisely, a joint initiative of ACR, RSNA, the American Society of Radiological Technologists, and the American Association of Physicists in Medicine, encourages practitioners to optimize the amount of radiation used in medically necessary imaging studies and to eliminate unnecessary procedures.

To watch the video on demand, visit bit.ly/ImageWisely_PamelaJohnson.

IMAGE® WISELY

Apply for the FACR

The application cycle for ACR Fellowship will begin in January. The minimum eligibility to apply is 10 years of post-training ACR membership; however, the years are not required to be consecutive. Please review other fellowship requirements and determine your chapter submission deadline at acr.org/facr. Send your eligibility inquiries to FACRadmin@acr.org.

> **It isn't enough to eliminate unnecessary care. It has to be replaced with necessary care. And that is the hidden harm: unnecessary care often crowds out necessary care, particularly when the necessary care is less remunerative.**
>
> **— Atul Gawande, MD, MPH, CEO of Haven, at bit.ly/TheNewYorker_Overkill**

By Ezequiel Silva III, MD, FACR, Chair

A Convergence

FFS and value-driven care are continuing to evolve — creating challenges and opportunities for physicians and institutions.

Fee-for-service (FFS) has been the primary determinant of physician payment for decades. FFS is relatively simple. The doctor does something; the doctor is paid for it. This yields several advantages. The system directly pays the physician who performs the service, the payment is based on the required resources to perform it, and the payment amount is transparent and predictable. Despite these advantages, FFS has been criticized due to the following two main shortcomings: FFS incentivizes overutilization, and payment is not tied to quality. Over the past 12 years, these shortcomings have resulted in a policy pursuing value, built around lowering cost (reducing utilization), and increasing quality.

These policies to increase value have largely evolved in parallel to FFS. In general, value initiatives still require FFS billing and payments with adjustments subsequently made to those payments. For instance, the Physician Quality Reporting System and, more recently, the Merit-Based Incentive System, adjust FFS payments depending on overall performance on quality and cost measures. Advanced alternative payment models, such as shared savings models, involve FFS billing with shared savings payments (or penalties) occurring later. Like FFS, value-based initiatives have shortcomings. Reporting can be burdensome, the measures difficult to implement, and the impact on quality unclear. Nonetheless, there are many examples where quality incentives work.

Where do things stand, now, 12-plus years into value-based initiatives and physician payment? Both FFS and value-based efforts continue to evolve, but the parallel separation of the two is less obvious. To evaluate this evolution, let's look at one of the earliest services/procedures affected: orthopedic joint replacement. Joint replacement was one of the first services to be subjected to bundled payments tied to value. In fact, joint replacement efforts even predate the Affordable Care Act (which created the CMS Innovation Center) and also predate MACRA. Joint replacement bundles in the late 2000s were part of the ACE Demonstration Project, a byproduct of the Medicare Prescription Drug Improvement and Modernization Act of 2003. Since that time, the program has undergone several revisions, now a Bundled Payment Care Initiative. The outcomes from the program, which essentially combines physician (Part B) and hospital (Part A) into one payment, have been favorable. Costs have decreased and quality has increased. One data point is particularly relevant for FFS: the length of stay (LOS) under the program has decreased. Since FFS is based on the total resources required (such as physician work), when LOS goes down, payment goes down accordingly. This is undoubtedly good for the patient, but the immediate consequence is that physician payment also goes down. In other words, due to better peri-operative patient selection and preparation, there are fewer post-op visits. But what happens to the extra work done before the procedure? Has work shifted from the post-op to the pre-op period? And if so, how may FFS payments accommodate this? Do we shift RVUs from the post- to the pre-service period? Is this "new" payment from the subsequent quality bonus (or shared savings)? Does that payment go to the facility and only secondarily to the physician? Are there different considerations for employed versus independent physicians?

> FFS and value-driven care will continue to evolve, partly separate but partly connected.

Within radiology, we have similar questions. As we work to increase appropriate utilization, we do less imaging overall. This results in better care, lower costs, decreased radiation exposure, and improved outcomes. These pre-study activities often require more extensive patient consultation/preparation, greater team-based care, registry participation, structured reporting, and interfaces with digital decision support systems. Do those activities result in more work? If so, how do we capture that?

In addition, we cannot overlook other payment systems. The Hospital Outpatient Prospective Payment System and the Inpatient Prospective Payment System each have their own FFS structure and quality initiatives, generally affecting the hospitals with whom physicians commonly partner. Why is there overlap and commonality here? And let's not forget private payors, state Medicaid programs, and military medicine — including the VA — all of which are evolving in a similar manner. It doesn't take long to feel overwhelmed. FFS and value-driven care will continue to evolve, partly separate but partly connected. This creates challenges and opportunities for physicians and institutions, with patient benefit being the desired outcome. B

Make No Mistake

Less fear and more conversation could mean better medical error rates.

Error Prevention Tools

Fostering a culture of safety within an organization is the first priority in any quality and safety effort. Here are some resources on diagnostic quality and patient-centered care:

- The **ACR Practice Parameters and Technical Standards** promote the safe and effective use of diagnostic and therapeutic radiology by describing specific training, skills, and techniques. Learn more at acr.org/PP-TS.
- **RADPEER®** allows for peer review during routine image interpretation — with scores submitted through a secure website based on new interpretations of prior images. Learn more at acr.org/RADPEER.

Understanding that to err is human does not give radiologists a pass on medical errors. It can, however, shift a mindset of failure to a renewed focus on creating an environment in which physicians support and learn from one another — where individuals contribute to the collective standards of their healthcare team, while raising the bar for patients who rely on their commitment and expertise.

"No physician wants to make a mistake. And while you can't eliminate all errors, no individual error is unavoidable," says Paul L. Epner, MBA, MEd, CEO and co-founder of the Society to Improve Diagnosis in Medicine (SIDM). Success in reducing diagnostic errors in radiology, he says, does not lie in presuming that a certain level of errors is intrinsic to the system.

The National Academy of Medicine (formerly the Institute of Medicine) defines diagnostic error as a failure to establish an accurate and timely explanation of a patient's health problem(s), or to communicate that explanation to the patient. While the error rate for radiologists is lower than that of other specialties — internal medicine, pediatrics, and emergency medical care, as examples — the fact that millions of imaging exams are performed each day in the U.S. puts radiologists in an unenviable position.[1]

There are, of course, other failings that do not fall within diagnostic interpretive errors — such as the ordering of inappropriate studies, PACS failures, a lack of accurate clinician contact information, incomplete medical records, or hazards inherent to IR. These all lead to wasted resources, delays in patient care, and potential negative outcomes.[2] There is no arguing, however, "mistakes relating to diagnosis are the most common, most catastrophic, and most costly of all medical errors," Epner says.

In radiology, Epner stresses, interpretation skills are not solely responsible for diagnostic errors. "There are cultural issues associated with the institution as well as demands on time and what gets prioritized," says Epner. "You have to overlay radiologists' heavy volume, limited time, lack of proximity to colleagues, and a lack of supporting tools for collaboration."

Just Culture

Radiology managers must acknowledge the factors that contribute to diagnostic errors to foster a culture that encourages timely and accurate reporting, peer learning, and follow-up measures to prevent future occurrences. The term "just culture" embodies an environment in which errors are evaluated in a non-punitive framework — one that focuses on error prevention and quality improvement rather than finger-pointing and individual accountability (see more on page 4).

Just culture recognizes that adverse events, systems failures, flawed workflow processes, and increased volume all contribute to human error. "Leaders must work to change conditions that promote errors by decreasing distractions, streamlining workflow processes, optimizing PACS/EMR integration and ergonomics, and advocating for streamlined critical results solutions," suggests Stephen A. Waite, MD, associate professor of radiology with SUNY and NYC Health & Hospitals in Brooklyn.

While there are tools available to assist in analyzing errors and how they occur, these become useless if errors are never revealed. Staff are often reluctant to report their own mistakes or those of coworkers. Some may doubt it will ultimately help anything or anyone. Hesitation may stem from a fear of disciplinary action, intimidation by an entrenched hierarchy, a negative impact on performance reviews, or the possibility of litigation.[3]

"To deny and defend mistakes is never the right way to approach medical errors."

– Susan E. Sheridan, MIM, MBA, DHL

"A punitive culture — the traditional medical culture where we blame individuals for human mistakes — clearly leads to covering up mistakes," Waite says. "When they can't be covered up, a punitive system advocates for punishing individuals for system inefficiencies and understandable mistakes."

Mistakes can be categorized in three ways: human error, at-risk behavior, and reckless behavior.[4] In a just culture framework, Waite says, punishment is recommended only for reckless behavior and a conscious disregard for a substantial and unjustifiable risk.[5] "I think such an occurrence is exceedingly rare," says Waite. "Every medical professional I know is doing the best job they can in what are often very stressful situations."

Peer Learning

Contrary to a punitive environment that can erode radiologists' confidence and potentially make them question their own interpretive skills, peer learning creates opportunities to improve individual performance, the organization, and the entire culture of safety.

"Peer learning moves away from the judgment of standard peer review," says Jennifer C. Broder, MD, vice chair of radiology quality and safety at Lahey Hospital and Medical Center in Burlington, Mass. In standard peer review, a radiologist might review a certain number of cases each month, scoring them on a 1 to 3 ranking system, Broder notes. One is seen as the best score, and 3 the worst, as the language used to describe the '3' implies the mistake should not have been made by your colleagues.

"Think about how scoring could make you feel about yourself, or your colleagues, or about making mistakes in general," Broder says. "Scoring systems make people feel judged. We're already our own worst critics, and scoring can cause worry over implications for your performance evaluations."

In a peer learning system, the goal is more about identifying learning opportunities rather than grading performance. "It allows people to submit cases with any sort of error when they find them, without judgment," Broder says. "That feedback goes

back to the initial radiologist and also to a section head who can decide if there is value in sharing the case with the larger group."

According to Broder, peer learning cases may be presented in an educational setting, with a moderator leading discussion. The goal is to help others avoid similar mistakes in similar situations, not to score someone's efforts or keep count of the number of mistakes. While there may be disagreement during the discussion, the conversation focuses on moving toward improvement. Further, most peer learning programs include opportunities to identify "great calls." "One person's great call might have been my miss. These are opportunities to learn from the masters and elevate everyone's practice," Broder says.

Collegial Experience

When thinking about reducing interpretive errors, think about prevention, Broder says. "Look at your reading environment and how and where someone is working," she says. Consider fatigue and long hours as drivers of mistakes. Find out how often interruptions are happening, she says. Personal interaction with clinical coworkers can be invaluable, but the more interruptions, the more likely someone is to make a mistake. Phone calls from people asking questions about other exams can be distracting, and having dedicated staff to filter and triage calls is one solution.

A high volume of reads is always challenging — in terms of accuracy and for accomplishing non-interpretive tasks. "While opinions vary on whether or not faster readers make more mistakes, you still need to look at the experience level of someone who has a heavy workload — especially for certain diagnoses," Broder notes.

"Gaining experience is absolutely the most important thing in building expertise," Broder says. And one-on-one interactions are critical, she adds. This could mean learning from another clinical specialist about how they treated a finding, following up on your own notes about a patient, or contacting another radiologist who has more experience in a particular area. For younger radiologists especially, reviewing cases with more seasoned colleagues can be invaluable, she says.

It is incumbent on radiology managers to evaluate if staff have adequate time to follow up on clinical outcomes, opportunities to work alongside other members of the healthcare team, and sufficient administrative support to help them achieve closed-loop communication of results. "Radiologists are sometimes held liable for falling short of communication that someone else thought was important enough to warrant additional communication beyond the report," Broder says. "Someone may ask, 'You didn't think this was important enough to pick up the phone and talk to the other clinician about it?'" The consequences in those types of situations can be significant for all parties involved, she says.

"Every medical professional I know is doing the best job they can in what are often very stressful situations."

– Stephen A. Waite, MD

Patient Message

Few patients expect absolute perfection from their physicians, but honesty and truthfulness in reporting will advance relationships between physicians and patients for quality patient care.[6] Patients and their families impacted by medical errors can experience overwhelming frustration, anger, and loss of trust in their healthcare providers.

"To deny and defend mistakes is never the right way to approach medical errors," says Susan E. Sheridan, MIM, MBA, DHL, director of patient engagement for SIDM. Sheridan's son still lives with the effects of permanent brain damage as the result of MRI findings deemed insignificant in the radiology report. Those findings were never communicated to Sheridan or her husband, though they had serious concerns about their son's health. Her husband died some years later following surgery to remove a tumor. The pathology report was filed without the surgeon seeing it — and once again, the family wasn't told, this time about the malignant pathology.

In the cases of both her son and husband, Sheridan says not knowing what was happening with test results — because they were not easily accessible and were not revealed quickly enough — led to irreparable damage. "Based on my experience, I would want to know right away if something was suspected. I would rather the medical team come to me and say, 'We saw some things on MRI that concern us.' It's when you find out later that they knew

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The Society to Improve Diagnosis in Medicine (SIDM) catalyzes and leads change to improve diagnosis and eliminate harm from diagnostic error, in partnership with patients, their families, and the healthcare community. SIDM is accepting applications for grants of up to $50,000 for organizations with ideas for improving diagnostic quality and reducing harm from diagnostic error. Learn more and apply at improvediagnosis.org.

Elevating Practice

For radiologists to be present, fairly valued, and more patient-facing, we must embrace the new technology that is shaping a changing imaging landscape.

In a world of ever-increasing imaging volumes, patient-centered care, and complex care delivery systems, AI has the potential to transform the way we practice.

The next generation of radiologists is ready to embrace this change and lead the charge. Perhaps the strongest evidence of this is the enthusiastic participation of residents and fellows across the country in the ACR RFS Journal Clubs (see sidebar). These forums allow physicians, data scientists, vendors, and industry leaders to come together to discuss advancements in AI applications for patient care. In fact, Hugh Harvey, MD, a U.K. radiologist and world-renowned expert in AI, attested to the fact that radiology trainees in America are leading in AI compared to other parts of the world. That is a testament to the contributions made by the new physician workforce within our profession — a group dedicated to solidifying our presence as AI leaders throughout the world.

AI is a welcome development, because the current practice models of delivering care will be severely strained under the pressure of rapidly rising imaging volumes and the potential paucity of radiologists. The radiology community must also address increasing demand for precision medicine. AI can augment what we do by automating onerous, time-consuming tasks while potentially improving our accuracy in the face of fatigue. This could free up time for other in-demand duties as we simultaneously advance the era of Imaging 3.0®.

As part of this value-based system, multidisciplinary activities and communication play a crucial role in the lives of radiologists — whether it's participating in a tumor board or communicating critical results to an emergency room, to a primary care physician, or even to a patient when delivering breast biopsy results. As a breast radiologist, for example, it's imperative that I work closely with the oncologist, the surgeon, the pathologist, the nurse navigator, and the social worker to ensure our patients receive the best treatment and support we can offer.

This multidisciplinary approach is more relevant than ever in the push toward personalized medicine. As part of the care team, radiologists provide comprehensive diagnostic insights that can be instrumental in tailoring the care of every patient. Radiologists must come out of the dark rooms and continue to expand our interactions with the rest of the care team. This is already an everyday occurrence in breast imaging and IR, where radiologists speak with patients on a daily basis.

In breast imaging, AI tools have the potential to drastically improve our diagnostic accuracy and support our decision-making — to improve practice efficiency and the delivery of precision care. In my practice, our team collaborated with a vendor to implement an AI breast US tool that can offer an instant and accurate second opinion to aid in clinical decision-making. It is a machine learning algorithm that has been trained on more than 400,000 US images, as well as the corresponding pathology reports, to aid in the differentiation of benign versus malignant lesions in real-time care. We hope to collaborate with other practices and institutions using the same tool and continue to evaluate the accuracy of this potentially ground-breaking breast imaging system.

However, as a profession, we must assert that we cannot and will not be replaced. We must make ourselves available to referring physicians to discuss diagnoses and treatment of patients. In breast imaging, discussing a result with the patient is central to what we do, particularly with diagnostic examinations. This puts patients' minds at ease, especially if they have had a previous cancer diagnosis. Although applications of AI in medical imaging have the potential to create monumental changes in radiology, it is this human touch that cannot be replaced. Thus, radiologists will always add value, where technology alone cannot.

We have an avenue of innovation through AI applications to help us be better at our tasks, from supporting diagnostic accuracy to carving out more time for patients. We must continue to stress that this paradigm shift will not be achieved if we, as radiologists, are not present and more patient-facing, providing personalized expertise that technology cannot. This is how our contribution will continue to be valued within patient care and our professional role will always remain relevant. B

Amy K. Patel, MD, is medical director at Liberty Hospital Women's Imaging Center and associate professor of radiology at the University of Missouri-Kansas City School of Medicine.

Participate in the RFS AI Journal Club

Did you know that the ACR RFS has been delving into the current state of data science in radiology through its AI journal club? The club has its own YouTube channel that includes all previous AI Journal Club recordings. Learn more and subscribe to the mailing list at acr.org/RFS_JC.

Championing CDS

Using ACR's new CDS R-SCAN Registry interactive report, Jamaica Hospital significantly improves high-value CT imaging in the ED.

Health systems nationwide are working to implement clinical decision support (CDS) in response to the 2020 deadline for the PAMA, which requires referring providers to begin implementing and training to use CDS when ordering advanced diagnostic imaging exams for Medicare patients. At Jamaica Hospital in Queens, N.Y., Sabiha Raoof, MD, FACR, ensured that her hospital stayed ahead of the curve when she started advocating for hospital-wide CDS implementation four years ago.

Beginning in 2015, the 408-bed safety net hospital, which provides care regardless of patients' insurance status or ability to pay, incrementally started instituting CDS throughout most of the facility. By the spring of 2019, Jamaica had just one more group to reach: the ED. To help the ED acclimate to consulting CDS for imaging orders, Raoof proposed using the ACR's new CDS R-SCAN™ Registry to conduct an R-SCAN quality improvement project. R-SCAN quality improvement projects focus on the most frequently ordered exams and include a pre-interventional analysis, educational intervention, and post-interventional analysis.

Participants have access to free educational resources that address evidence-based exam ordering, including PowerPoint presentations, white papers, and podcasts. Clinicians whose facilities have the CareSelect® Imaging CDS platform integrated into their EHRs can also use the new CDS R-SCAN Registry interactive report for deeper insights about imaging exam ordering patterns. As an early adopter of CDS, use of the registry report to conduct an R-SCAN quality improvement project was a natural progression for Jamaica — the first in the U.S. to take advantage of this new tool.

In reviewing the R-SCAN topics, Raoof, radiology chair, chief medical officer, and patient safety officer at Jamaica, was drawn to one topic in particular: CT for adults with minor head trauma. Neuroradiologists and ED managing physicians had suspected that the hospital's ED doctors' ordering patterns varied for these cases. Raoof saw an opportunity to partner with lead ED physicians to improve ordering around the topic.

The Stewards of High-Value Imaging special collection features a selection of case studies from the Imaging 3.0® library that highlight how radiologists are working with referring physicians and other care partners to improve image ordering through R-SCAN™. Access the collection at acr.org/I3-Value.

Implementing CDS

Raoof began advocating for CDS implementation at Jamaica in 2015. She frequently gave presentations about CDS at department- and hospital-wide meetings using data to illustrate how having the right information at the point of order improves patient care and reduces costs.

Jamaica implemented CDS for inpatient care before expanding it across the hospital's ambulatory care network. Working with the CareSelect vendor, the hospital was able to seamlessly integrate the CDS tool into its EHR, allowing smooth implementation into the clinicians' workflow. Jamaica's radiologists offered a consult service to answer ordering physicians' questions about the CDS tool.

By the end of 2015, referring physicians throughout much of the hospital were using CDS, which provides guidance at the point of order about the utility of various imaging exams and their associated radiation exposure and estimated cost considerations. "This information helps referring physicians make the best possible decision about what to order," Raoof says.

"It's hard to say we were 'overordering,' but I knew that we could be more consistent in our ordering practice."

— Shi Wen Lee, DO

Identifying an Opportunity

While Jamaica has widely used CDS since 2015, the ED physicians were not using the tool. ED physicians typically use clinical pathways taught in residency when deciding whether or not to order CTs in adult minor head trauma cases, resulting in exam ordering variability, explains Shi Wen Lee, DO, lead ED physician on the R-SCAN project. "It's hard to say we were 'overordering,' but I knew that we could be more consistent in our ordering practice," Lee says.

Anecdotally, both Jamaica's ED physicians and radiologists were aware of the inconsistency problem, but they had never officially quantified it or attempted to address it. That's where the R-SCAN project came in, says Raoof, who called Lee about partnering on the project. "We knew this was an opportunity to eliminate any unnecessary exams and provide only high-value imaging for the patient," she says.

Conducting Analysis

For the pre-interventional phase of the R-SCAN project, Raoof used the CDS R-SCAN Registry report to conduct a retrospective analysis of 673 CT exams ordered in the ED for adult minor head trauma from Dec. 1, 2018, to Feb. 28, 2019. A team of radiologists, neuroradiologists, ED physicians, and ACR's R-SCAN project director met to review the CDS data and analysis, which showed that Jamaica's ED physicians were inconsistently referring patients for CT scans, and that 67% of the exams were of low value.

The team identified the indications for which physicians inconsistently ordered imaging, as well as the clinicians who routinely ordered the highest number of exams. They discussed the need to improve consistency, and also noted how leveraging CDS data for this goal would complement other radiation safety measures in place at the hospital, including participation in the Dose Index Registry, use of DoseWatch™ software, and physicist review of doses and protocols, to improve care. "We used these meetings to say, 'This is where we are with our high-value imaging numbers, and this is where we'd like to be,'" explains Raoof, the first R-SCAN participant to use CDS throughout the project.

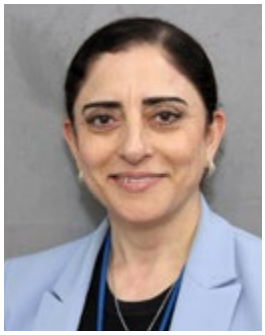
To reach its high-value imaging goals, the group decided to implement the Canadian CT Head Rule (CCHR) to help ED physicians determine whether patients with minor head trauma require imaging. If a patient meets the imaging requirements under CCHR, the ED physician then uses the CDS tool that automatically pops up in the EHR to determine whether a CT is high-value based on the patient's clinical indications. With the rule and CDS as the basis of their intervention, Raoof and Lee, along with ED physician Morgan Chen, MD, devised a plan to educate Jamaica's ED physicians about the issues surrounding inconsistent ordering and how to correct those issues to achieve high-value CT ordering for adult minor head trauma cases.

Educating Physicians

Lee and Chen presented the CDS analysis that revealed ordering inconsistencies and shared the CCHR and CDS solution in department-wide meetings in early 2019. Unfortunately, this intervention alone did not yield significant improvements in ordering consistency. "In a group setting, no one thinks you're speaking directly to them," Lee says.

Realizing that a more personalized educational approach could generate a more significant impact, the R-SCAN team analyzed the ordering habits of specific physicians using their national provider identifier (NPI) numbers within the CDS report. "We set up private meetings with individual ED physicians and shared the data specific to them, noting changes that each physician could make in future cases to improve high-value imaging. This had a huge impact on them," Lee reports, noting that in many cases, rushed physicians were simply choosing incorrect indications from the list.

Working collaboratively with individual ED physicians to improve high-value imaging, as opposed to instituting broad mandates, was critical, Lee says. "By showing them the appropriateness scores of their imaging orders and the CCHR guidelines, we weren't saying, 'You can't order this CT.' We were saying, 'It's okay not to order it,'" he explains.



"We knew this was an opportunity to eliminate any unnecessary exams and provide only high-value imaging for the patient."

— Sabiha Raoof, MD, FACR

Reaping Results

Following the personalized educational component of the R-SCAN project, Raoof analyzed minor head trauma CT ordering in the ED via CDS from April 1 through June 30 of 2019. Physicians ordered 568 CT exams, down from 673 during the three-month pre-interventional review. In addition to reducing overall ordering, the team improved the ordering of high-value exams from 202 (30%) at baseline to 386 (68%) post-education. The number of low-value exams plummeted from 488 (67%) at baseline to 157 (28%). In all, Jamaica realized a 33% improvement in high-value CT ordering for adult patients in the ED with minor head injury and a 12% reduction in ordering volume.

Based on the success of the R-SCAN project, Jamaica's ED will build on the lessons it learned by continuing to follow the CCHR for adult head trauma and consistently using CDS for image ordering, Lee says. "The entire healthcare system is changing into a value-based model, in which we need to provide the highest quality care to our patients and in a cost-effective manner," Raoof says. "Any unnecessary testing or lab work drives up the costs, so we need to take charge and prevent that from happening." B

By Kerri Reeves, freelance writer, ACR Press

Hansel J. Otero, MD, cares for a newborn in the inpatient unit of the Hospital Bernard Mevs in Port-au-Prince, Haiti. Otero was in Haiti as part of a team from RAD-AID International, which works to bring radiology and imaging technology to resource-limited regions and communities of the world.

A Vaccine for Burnout

A pediatric radiologist shares how his work has kept him focused on his mission to help children — and helped him maintain his professional fulfillment.

The primary motivation for radiologists' involvement in the global health community is to address the disparities in access to imaging services; however, being part of that community can also play a role in reducing burnout and increasing professional fulfillment.[1] This has been the experience of Hansel J. Otero, MD, director of international pediatric radiology education and outreach at Children's Hospital of Philadelphia.

Otero, who was recently named the 2019 Bruce J. Hillman Fellow in Scholarly Publishing, has participated in educational missions to Haiti, Ghana, and Ethiopia, and he was recently appointed as director of outreach for the World Federation of Pediatric Imaging. The *Bulletin* spoke with Otero to discuss how he has found meaning in his work as a pediatric radiologist.

How has your international work helped you stay focused on your mission to help kids?

One of the advantages of working in low-resource settings — and this is true within or outside the U.S. — is that the systems are simpler, less complicated. When you see how one study affects a family and you stay there for the outcome or when you teach someone how to do a procedure and see how the implementation helps patients — it's a lot easier to see that impact in smaller departments or rural clinics. Last year in Addis Ababa, Ethiopia, one of the residents took an interest in brain US. I was fortunate to be able to teach him how to get better images and how to interpret certain findings, resulting in the adoption of the test as screening for preemies. It's gratifying to see our effort resulting in a new service and in improved communication between the neonatal intensive care unit and the families who now have more information about long-term prognosis. Sometimes, when working in big hospitals, it's hard to see those types of results, as you often only hear feedback when you don't get something right.

How do you avoid burnout as a pediatric radiologist?

People typically think that working with children is hard or that the work might be particularly onerous — but I think it's the opposite. I believe the nature of my work serves as a vaccine against burnout. One of the important solutions to burnout is to do work that is meaningful and to feel like you are part of an enterprise that is making a difference. For me, working at a children's hospital and feeling part of a team, having interaction with patients, and knowing I'm improving the lives of those patients and their families — to me that is the best way to not get burned out.

Being a pediatric radiologist, I spend a little less time in the traditional dark room and more time interacting with referring physicians, patients, and families. For

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Become the Next Hillman Fellow

The application window for the 2020 Bruce J. Hillman Fellowship in Scholarly Publishing is now open. The fellowship provides a concentrated experience in medical editing, journalism, and publishing for an interested and qualified staff radiologist or radiologist-in-training. The fellowship includes an ongoing project with the journal, a one-year appointment to the editorial board, and an invitation to the editorial retreat. The application deadline is Jan. 30, 2020. To apply, visit bit.ly/Hillman2020.

Leading Innovation Into Practice

Now in its fifth decade, the Society of Computed Body Tomography & Magnetic Resonance preserves its relevance by becoming the Society for Advanced Body Imaging.

In 1978, the 14 founders of the Society of Computed Body Tomography met for their initial scientific meeting. All hailed from institutions that were the earliest to invest in second- and third-generation CT scanners, with scanning times fast enough to permit whole body imaging. These were radiology departments still among today's most renowned: Mayo Clinic, Mallinckrodt Institute of Radiology, Georgetown University, Massachusetts General Hospital, University of California San Francisco, Stanford University, Weill Cornell Medicine, Cleveland Clinic, etc. In only a few years, the society's annual meeting would attract thousands seeking to learn directly from the first radiologists to use CT for body imaging.

Today, it is difficult to imagine what imaging would be like without CT. Indeed, CT is now taken for granted. Along the way, radiologists new to the profession became unaware of the ways in which the Society of Computed Body Tomography & Magnetic Resonance (which added MR to its name in 1991) was advancing to stay abreast of the developments in body imaging.

New Possibilities

"We had sensed for a while that we had outgrown our name," says Susan M. Ascher, MD, FSABI, the society's immediate past president and co-chair of abdominal imaging at Medstar Georgetown University Hospital. "While innovations in CT and MR are still being made, the modalities themselves are no longer cutting-edge technologies. Further, many of our society's members are leaders in newer technologies, such as machine learning and PET/MR, among others." To modernize its name and make it congruent with what the group represents, at its October 2019 annual meeting the society officially announced it was now the Society for Advanced Body Imaging (SABI).

To be clear, CT and MR remain a large part of SABI's purview (Ascher refers to them as "the bedrock of body imaging"). However, now SABI has more reason to converse about other modalities and technologies. Its members want the society to delve further into US, and its fellows are keen to lead the field in applying AI to their imaging practice. SABI aims for a broader focus — involving all modalities, all body systems — to lead innovation as ideas are cross-pollinated across its membership.

SABI Society for Advanced Body Imaging™

A Rebuilt Identity

Prior to choosing a new name, the society engaged a strategic planning firm to help clarify what set it apart from other professional radiology associations. Together, the board and the firm queried the society's members to find out what made the group valuable. Receiving feedback from 53% of its membership, the society discovered both fellows and members overwhelmingly value two opportunities the group affords: exchanging information with peers about the latest technologic advances, and continuing their professional development.

Armed with these insights, the board of directors devised a desired future statement. They determined that the society should be the authority on the "innovation and translation of cutting-edge technology into the practice of body imaging." This concept represents what the society has always done and provides the kernel of the tagline SABI adopted: leading innovation into practice.

The Future of Body Imaging

SABI has also made the development of the up-and-coming generation of radiologists a priority — doing so in the welcoming, inclusive environment desired particularly by the group's more junior members. The society improved in these areas even before adopting its new name. As one female radiologist in her 30s wrote after the 2018 meeting, "This year's conference was fantastic! It is completely different from prior years with its level of energy and diversity — not just faculty, but topics covered." Noting that previous events had seemed to her "like an exclusive established professor's meeting," she was encouraged to see people like herself there. The young faculty presented material in a dynamic fashion, she continued, citing the productive dialogue between junior and senior members during the meeting's case panels and debates.

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JACR
Journal of the American College of Radiology

Year in Review

2019 ushered in new leadership for the scholarly publication — and poised it for success in the digital age.

The blue journal has been busy this year! With Ruth C. Carlos, MD, MS, FACR, formally assuming the role of editor-in-chief in January, the *JACR* continues to push beyond the pages of the print edition. Here are some of the things *JACR* has been up to in 2019. Stay tuned for more in 2020!

More Ways to Get SA-CME

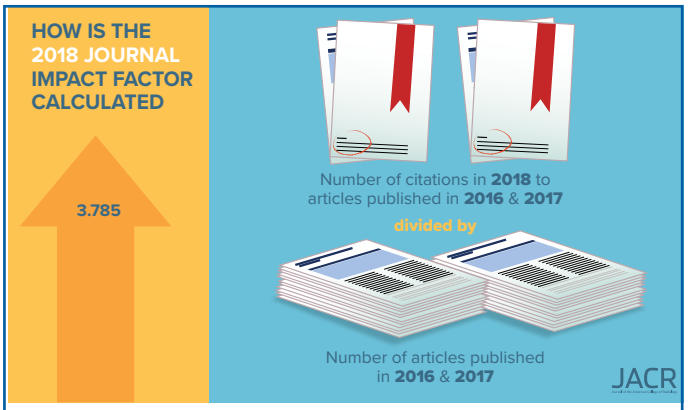
You've been getting SA-CME credits from reading *JACR* articles for a while now (right?). Now the *JACR* is offering SA-CME for our peer reviewers too. To get started, head to jacr.org/reviewers.

Focus on Private Practice

This year, the journal launched a private practice initiative, beginning with two focus groups held at ACR 2019. The *JACR* then launched a private practice special collection (find it at jacr.org/private-practice). And watch for the Private Practice Perspective column beginning in 2020.

In Case You Missed It

The top-read article this year was "Ethics of AI in Radiology: Summary of the Joint European and North American Multisociety Statement." Jointly published in four radiology journals, this paper garnered interest from radiology and beyond, including a write-up in *POLITICO.*



Impact Factor

This year, the *JACR* achieved an impact factor of 3.785, its 7th consecutive increase year-over-year. The *JACR* ranks 25th among the 128 journals in the Radiology, Nuclear Medicine, and Medical Imaging category, an increase from its previous rank of 28 and outpacing several peer publications.

Bruce J. Hillman, MD, FACR, with current *JACR* editor-in-chief Ruth C. Carlos, MD, MS, FACR.

Happy Birthday to the *JACR*!

Fifteen years after Bruce J. Hillman, MD, FACR, founding editor-in-chief, launched the journal, the landscape of radiology has changed drastically. The *JACR* continues to support radiologists in adapting to a shifting practice environment while keeping quality, patient-centered care front and center. No one knows what healthcare will look like in another 15 years, but *JACR* will remain a place for innovative scholarship that pushes radiology forward and positions readers for success.

What's a Focus Issue?

It's a regular issue of the journal that includes a special section on a single topic. The *JACR* rolled out its first one in October, homing in on survey methods. In 2020, look for focus issues on resilience, well-being, and the corporate transformation of medicine.

Join the *JACR* for its monthly tweet chat, held on the fourth Thursday of each month. Visit jacr.org for information about the next chat, instructions on participating, and transcripts from previous chats. To participate, simply log in to Twitter at the time of the chat and search for the hashtag #JACR. To join in, tweet a question or comment and be sure to include the hashtag so that others on the chat will see it.

The Art of Never Giving Up

A patient advocate recounts his journey undergoing testing and treatment for lung cancer — and how it changed his outlook on life.

My story began in December of 2013 when I was diagnosed with colorectal cancer. I had no symptoms but the cancer was discovered during my first post-50 colonoscopy. I was diagnosed at stage I and in January of 2014 had 20 inches of my colon and 1 inch of my rectum, along with lymph nodes, removed. After testing, it was determined that all the cancer was removed and there was no need for any further treatment. Over the next few years, my blood tests every three months were normal. Then, in January of 2017, my carcinoembryonic antigen test came back elevated for the first time.

My colorectal specialist referred me to a pulmonologist for further testing. A CT and MRI showed that there was "something" in my left lung. I had a bronchoscopy with transbronchial biopsy, as well as a CT-guided biopsy and PET scan. Each result came back as "not cancerous." After six months of various testing and procedures, the decision was made that "something" must be a partially collapsed lung and that we would wait six months and see where we were at that point.

On Christmas Day of 2017, I began to feel ill but chalked it up to a cold or the flu. A couple of days later, I went to the doctor and they told me I had pneumonia. They did a chest X-ray and when the radiologist gave me the CD, she had a sullen look on her face. I knew what she saw and told her the pulmonologist had told me it was a collapsed lung. Her reply was quick — it was not a collapsed lung and I needed to see a specialist immediately.

A senior thoracic surgeon took my case and, after reviewing my previous tests, he determined I needed to have surgery — a lower left lobe wedge — to determine what was growing in my lung. He was only able to remove a little of the lobe as the cancer had spread outside the lung but at this point had not metastasized to any other organs. After consultation with family members and friends, I chose an oncologist who had a lot of experience in dealing with what I had — stage III lung cancer.

After my first meeting with the oncologist, I underwent a new CT, MRI of the brain, and PET scan. Armed with these new results, we established a plan of attack. I would begin 36 radiation treatments and two 8-day chemotherapy sessions of cisplatin and etoposide. During these treatments, I was surrounded by family and friends who helped with daily tasks, as well as with physical, emotional, and spiritual support. At the conclusion of my radiation and chemotherapy treatments, I began a new immunotherapy, IMFINZI®, in an effort to teach my body's own immune system to fight any leftover or newly developed cancer cells. The only side effect I have experienced is a day or two of tiredness after the treatment. I completed the cycle in August. The treatments did exactly what they were prescribed to do — my mass "significantly decreased with no new cancer cells."

When I was diagnosed with stage III non-small-cell lung cancer, I relied on my faith to help me in every aspect of my journey — including telling my parents and adult children that their son and father had cancer, again. I leaned on many patients, caregivers, family members and friends. I faced every day with a fight for life — a life full of adventure and memories. Most importantly, I learned what it means to never, ever give up.

Ron Simmons is pictured with his wife Rhonda. Simmons, a patient advocate, underwent treatment for stage III non-small-cell lung cancer.

Ron Simmons is a two-time cancer survivor, patient advocate, and member of the ACR's Lung Cancer 2.0 Steering Committee. Follow his story on Twitter @PoppySimmons61.

▲ Jacqueline A. Bello, MD, FACR, chair of the Commission on Quality & Safety, is pictured at the ACR Annual Conference on Quality and Safety.

In Equal Partnership

The ACR Annual Conference on Quality and Safety showcased the expanding role of radiologists in advancing PFCC, enhancing outreach efforts, and promoting equitable care for their patients.

"Patients are social animals, so personal/emotional connections with their healthcare providers are critical." That was patient advocate David Andrews' charge to attendees at the ACR Annual Conference on Quality and Safety, held in Denver in October. The 2019 meeting, which included sessions on topics such as just culture, clinical decision support, and empowering technologists, had a strong focus on the patient experience.

According to Andrews, who serves on the ACR Commission on Patient- and Family-Centered Care, patients know more about themselves than their physicians ever will. "Some of what patients know may be important in their diagnosis/treatment," said Andrews. "That's why radiologists need to be in direct conversation with patients as consultants. There is no one answer to what patients want. Each patient is different."

Direct Contact

Arun Krishnaraj, MD, MPH, vice chair for quality and safety at the University of Virginia Health System, agreed with Andrews. According to Krishnaraj, when radiologists engage in direct conversation with patients, they add immense value to the patients, referrers, and even themselves. But what does it look like for radiologists to connect with their patients? And how can they break down some of the existing barriers to make it happen?

According to Krishnaraj, radiologists can consider teleconferencing, videoconferencing, or participating in bedside rounding as a way to engage with patients. "Determine what small shift you want to make in your routine and then do it," advised Krishnaraj.

Equitable Care

In addition to being in equal partnership with patients, the need for radiologists to address social determinants of health (defined as conditions in which people grow, live, and work) also took center stage at the meeting. According to Efrén J. Flores, MD, officer of radiology community health improvement and equity at Massachusetts General Hospital (MGH), radiologists and radiology practices need to take an active role in reducing the disparities that result from a combination of social determinants of health and health system factors. "Compassionate care is the first step towards health equity," said Flores.

Flores noted that one way in which radiologists can take that first step is by replacing the term "no-shows" with a more compassionate term, such as "missed care opportunities." "We use language blaming patients when they're 'no-shows' or 'non-compliant,' when the reality is that they are facing extraordinary barriers to accessing care — and it is our job to do better," said Flores. "We need more compassionate language and action that reflects our responsibility. By saying 'missed care opportunity,' we're accounting for the healthcare system's responsibility in patient engagement."

According to Flores, inter-specialty collaborations and novel health delivery models are critical to overcoming the barriers to health equity and providing high-quality care. He advised radiology practices and departments to embark on equity initiatives by promoting culturally competent, high-quality care, fostering collaborative care to enhance quality, partnering with patients in their care, and reaching out and providing additional assistance to community health centers and clinics. One way in which Flores' department at MGH accomplished this was by meeting patients with serious mental illnesses in a clinical setting they were familiar with to introduce lung cancer screening (LCS). As part of the program, MGH implemented a system change to facilitate immediate screening or scheduling for those who expressed an interest in the service.

"Our goal was to increase LCS in vulnerable patients seen by the Boston Health Care for the Homeless Program at MGH and by the MGH Chelsea Community HealthCare Center," said Flores. "Our example is just one way in which radiologists can take an active role towards health equity," said Flores. "When we all do this, we ensure that no patient gets left behind." B

By Nicole B. Racadag, MSJ, managing editor, *ACR Bulletin*

Make No Mistake

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something and it wasn't disclosed, that breaks the trust," she says.

It is a fallacy, Sheridan believes, that patients and their families do not want to know about a possible mistake. "It's all about getting the patient the best outcome possible — not to just check boxes — and to resolve errors in a human and empathic way," she says.

By approaching the goal of fewer errors as a way to gain the trust of your patients and build stronger relationships with clinical colleagues, radiologists can affect change beyond interpreting images. "People realize that doctors aren't perfect," Epner says. "But healthcare leaders should realize that genuine problem-solving means creating an environment in which physicians can talk openly about reducing the likelihood of something bad happening again." B

By Chad Hudnall, senior writer, ACR Press

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A Vaccine for Burnout

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example, our team does a fair amount of screening for newborns who come in because their heads are big for their age or their pediatricians heard a click on their hips. To me, the satisfaction of entering a room and reassuring parents that their newborn is fine — that is one of the best parts of my job.

Why is it important for radiologists to practice patient-and family-centered care?

When we all pay more attention to what the family or the patient is going through and we all agree that we're there to improve the patient experience, then everything functions a lot better. Sometimes we ask colleagues to go above their usual duties for a patient. They may already be tired or behind, so their first response is, "No, I don't want to do it." However, if you remind them that we have an opportunity to improve a patient's experience or to bring some relief or information to the family, then they change their minds. This makes the work environment at pediatric hospitals, in general, nicer — because even when we get overwhelmed, we remember that we're all here for the kids. B

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Leading Innovation Into Practice

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As the size of its annual meetings became more intimate, the society recognized it provided unique forums where younger radiologists could interact readily with fellows and emeriti fellows, a group that represents many of the society's still-involved founders. To continue this dynamic apart from the annual meeting, earlier this year the society inaugurated a mentorship program that meets via webinar.

"I'm thrilled by the recent developments that have taken place," says Scott B. Reeder, MD, PhD, FSABI, the society's president and chief of MRI at the University of Wisconsin-Madison. According to Reeder, "This change will invigorate the society and bring it closer to the excitement and innovation it first embodied 40 years ago, when we were harnessing nascent technology for body imaging applications. While it is bittersweet to say goodbye to 'computed body tomography' in our name, 'Society for Advanced Body Imaging' captures who we are and what the society embodies." B

By Holly Hosler, freelance writer, Society for Advanced Body Imaging

JOB LISTINGS

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Kansas – The department of radiology at the University of Kansas Health System is seeking an ABR-certified or eligible neuroradiologist to join its talented and dedicated faculty. In addition, the department of radiology at the University of Kansas Medical Center is seeking a full-time, fellowship-trained radiologist to join its cardiothoracic imaging section. Applicants must be ABR-certified or eligible.

Contact: Email Angie McCarty at amccarty@kumc.edu for more information.

New York – White Plains Hospital, a leading award-winning hospital located 25 miles from Manhattan, is looking for full-time hospital-employed body imaging radiologists. The positions involve 8-hour shifts, Monday through Sunday, varied on monthly basis, with a 6:00 p.m.–midnight shift at home. The positions offer competitive compensation, vacation, and CME, along with a health plan, paid malpractice insurance, and 403(b).

Contact: Email salfonso@wphospital.org for more information.

Wisconsin – Advocate Aurora Health has an IR opportunity available in Hartford, Wisc. The position requires the completion of a radiology residency program, a fellowship in IR, and board certification/eligibility. The candidate must have skills in all areas of diagnostic and IR. Advocate Aurora Health offers comprehensive IR services at its clinic and hospital, include a broad range of IR procedures.

Contact: For more information, contact Alison Burki at alison.burki@aurora.org.

Why is it important to communicate with patients to improve quality and safety efforts?

"When radiology practices understand what is important to their patients, they are able to provide a higher level of care. The only way to learn what is important to a patient is to ask them."

— Alexander J. Towbin, MD, associate chief of radiology, clinical operations, and radiology informatics at Cincinnati Children's Hospital Medical Center

"Direct communication empowers patients with accurate information regarding their own imaging examinations and clarifies the important roles of radiologists for both the patient and the referring provider. It can increase patient engagement and trust in the entire healthcare system by helping them fully understand the imaging which led to their diagnosis and treatment regimen."

— Xin (Cynthia) Wu, MD, assistant professor of radiology and imaging sciences at Emory University

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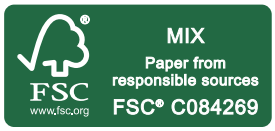

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