ACR LEADERSHIP | INTEGRITY | QUALITY | INNOVATION MARCH 2021 | VOL. 76 | NO. 3

Bulletin

RECOVERY MODE

The next level in ultrasound breast biopsy procedures

BD EleVation™ Breast Biopsy System

This ergonomic, handheld vacuum-assisted device is engineered to elevate expectations.

- Single Insertion Multiple Sample (SIMS™) Technology
- Available in 10G, 12G and 14G
- Average 9-second sampling time

The BD EleVation™ Breast Biopsy System gives you the flexibility to handle different lesions and different locations with confidence.

Please consult product labels and inserts for any indications, contraindications, hazards, warnings, precautions and directions for use.

1.800.323.9088 bd.com

BD

Bulletin

MARCH 2021 | VOL.76 | NO. 3

CONTENTS

FEATURE

INSIDE

DEPARTMENTS

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.

ACR® AMERICAN COLLEGE OF RADIOLOGY

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

Digital edition and archives of past issues are available at ACR.ORG/BULLETIN.

Howard B. Fleishon, MD, MMM, FACR

Reimagining the ACR

This year, the College is taking a new approach to its operations, goals, and resources.

Back in October, when the winter surge of the coronavirus was upon us, I proposed a challenge to the Board and staff to "reimagine" the ACR. Reimagining an organization is hard. It necessitates thinking outside the box and frequently outside our status quo comfort zone. But the process is necessary for continuously learning organizations — especially during sentinel events, like we are realizing during COVID-19.

As part of my preparation, I focused on a recent article in *Harvard Business Review,* which provides a roadmap for the reimagination process.[1] The framework includes four components:

Impact

Nonprofits exist to have impact. So, an initial step is to clearly determine our focus. For the ACR, concentrating on impact goes beyond our environmental surveillance and strategic planning process. It relies on candid, data-driven discussions about how current individual commissions and programs will deliver impact in a new environment.

People

Reimagining our College gives us a chance to re-engage with staff and reflect upon the people we serve. Rather than assume what patients and staff want or need, we need to invite them into the process and build the organization based on broad input. If everyone has a voice in defining success and impact, we will end up with a much more diverse, inclusive, and resilient organization.

Finances

A revenue strategy is fundamental to any organization. Fortunately, with support from our membership and management from our expert finance staff, the ACR is in a solid position. Nevertheless, we keep looking at how to provide additional services and improve value. We start by evaluating the true costs of our programs — both direct and indirect expenses. By measuring costs against impact, we can align our capacities against benefits for our staff, members, and patients.

Community

We also need to focus on the larger ecosystem in which we operate. The radiology community is made up of our members, other radiology-based societies, the broader base of medicine, and most importantly, our patients. These groups (and the inter-relationships that exist among them) need constant attention. Securing existing relationships, fostering new ones, and reinforcing and establishing trust and credibility are critical to the success of the College.

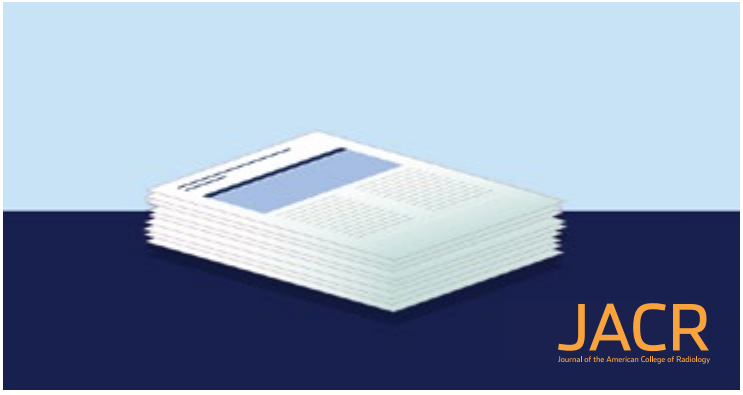
If everyone has a voice in defining success and impact, we will end up with a much more diverse, inclusive, and resilient organization.

Recently, I asked our staff and commission chairs to share their "reimagination" ideas in preparation for our winter Board meeting. The results were inspiring, with replies that underscored the commitment of staff and volunteers to constantly bring the College forward in new and innovative ways, not only within commissions but through working together as an organization to reestablish new lines of communication and pathways to coordinate activities. Our success will depend on leveraging our existing infrastructure along with innovative methods that have evolved during the pandemic — all to support and improve our collective value proposition.

Reimagining an organization is never easy. But the process also represents an opportunity to be introspective about who we are, to better focus on our mission, and to reinvent better ways to serve our members and patients. At the College, we are fortunate to have dedicated and experienced staff and volunteers to carry this challenge forward — to reimagine, recreate, and reinvent our organization. B

ENDNOTE

1. Zimmerman S. Reimagine your nonprofit to survive the crisis. *Harvard Business Review.* June 1, 2020.



JACR® Call for Papers: Data, Distilled

The sheer quantity of available data can present a challenge for busy radiologists. This is made more difficult when published research is of variable quality or has conflicting conclusions. Research synthesis aims to increase the generalizability and applicability of existing data through a transparent and reproducible process of searching, appraising, synthesizing, and interpreting published studies related to a specific question. Important new knowledge is often discovered through this process.

The *JACR*® is accepting proposals for a new column that covers original systematic reviews and meta-analyses on topics important to the specialty. The *JACR* is seeking submissions for these highly useful and impactful articles with this ongoing series.

Successful submissions should seek to answer a previously unanswered and clinically/practice-relevant question through a systematic review and meta-analysis (if warranted) of the published literature. Submissions should address topics pertaining to:

- Clinical practice management
- Health services and policy research
- Training and education
- Leadership
- Data science

The deadline for submissions is ongoing. Please submit concept proposals to jacr@acr.org.

> **The magnification of gender disparities by the pandemic could have longer-term effects on career advancement and retention of women faculty, particularly if supportive institutional policies are not put in place.**
>
> — MONIQUE A. MOGENSEN, MD, CHRISTOPH I. LEE, MD, MS, AND RUTH C. CARLOS, MD, MS, FACR

AIRP® Updates Case Requirements

The American Institute for Radiologic Pathology (AIRP®) would like to thank all program directors, program coordinators, and residency programs for their continued support of the Institute. The cases submitted by residents into the AIRP case archive system are used to improve and supplement the AIRP's educational programs and outreach, both nationally and internationally.

Moving forward, the AIRP will require that rad-path cases be complete before residents' courses begin, including slides and online submissions. Cases are due 30 days before courses start (this requirement has not changed). However, the AIRP now implements a strict no-entry policy into the virtual course if the case is not complete. Rare exceptions may be granted for unforeseen delays up to two weeks before the course starts.

To help program directors keep track of their residents' cases, the AIRP has enabled a review tool at bit.ly/AIRPReviewerTool. This tool requires an ACR username and password to log in. If a case does not meet a program director's approval, they (at their discretion) are able to request the case be reopened and improved in any section, such as summary or imaging. Alternatively, if program directors feel a resident needs to do more work on the case, they may contact the resident who can then request the case be reopened by emailing Claire Martinez at **AIRPcasepackagehelp@acr.org**.

APRIL 9-11, 2021
SBI ACR
BREAST IMAGING SYMPOSIUM
Virtual Conference

Register for the SBI/ACR Breast Imaging Virtual Symposium

The first-ever SBI/ACR Breast Imaging Virtual Symposium will take place April 9–11, 2021, and offer more than 60 live sessions across all breast imaging modalities, access to ePoster abstracts, and industry-sponsored learning labs. Registration is currently open for what is sure to be an informative and engaging event.
To register for the Symposium, visit bit.ly/SBIACR21.

> **We must put radiation safety at the forefront of our work. And whether you're a diagnostic radiologist or an IR, radiation oncologist, medical physicist or other imaging practitioner, you can make the commitment to put your patients' safety, health, and welfare first and Image Wisely® is here to support you in doing so.**
>
> — BETH ANN SCHUELER, PHD, FACR, AND DIANA LITMANOVICH, MD

IMAGING 3.0:

The Meaning of Grit

When the COVID-19 infection rate skyrocketed in March of 2020, administrators at one New York hospital asked radiology residents to serve on the COVID-19 floors. The radiology department partnered across disciplines to support a number of COVID-19 response efforts, such as providing clinical care on newly established COVID-19 floors and in surge ICUs. Clear and regular communication between radiology program directors and radiology residents, attendings, and staff proved key, as did matching people to tasks with which they were most comfortable.

"What I learned over just the first few days of the surge was that our residents had the intangible characteristics of grit and determination," says Evan G. Stein, MD, PhD, residency program director and director of neuroradiology at Maimonides Medical Center in Brooklyn. "This virus creates a lot of fear in people and, at first, I didn't appreciate how big of an impact that would have on me and the residents. But they all rose to the occasion and contributed a tremendous amount to patient care."

Read the full Imaging 3.0® case study at acr.org/True-Grit.

Register for the SPR 2021 Pediatric US Course

The SPR 2021 Pediatric US course will take place virtually April 22–24, 2021. The course will feature three days of didactic lectures and case discussions, covering topics such as MSK US, contrast-enhanced US, and US elastography. At the conclusion of the course, participants will understand basic and advanced techniques in pediatric US — and be able to recognize and apply these techniques for advanced diagnosis and improved management.

To register for the course, visit pedrad.org.

ACR Education Center Launches Virtual Micro-Courses

The ACR Education Center is expanding its offerings to include a series of micro-courses covering a variety of specialties. Each micro-course begins with one-week online access to pre-recorded lectures and cases for a self-paced deep dive on the most challenging topics in a chosen specialty — followed by a virtual two-hour group case review and Q&A with faculty via Zoom and two additional days to review the case content.

"The in-person courses at the ACR Education Center are the world's best radiology simulator," says Mark D. Murphey, MD, FACR, one of the ACR Education Center's course directors. "By adapting to the COVID-19 pandemic and expanding its offerings to include these virtual micro-courses, the ACR Education Center continues to offer high-quality radiology training in a new way that's accessible to all and protects the health of these physicians and the patients they serve."

Registration for the virtual micro-courses is now open at acr.org/micro-courses. All virtual micro-course participants will have the opportunity to earn *AMA PRA Category 1 Credits*™ and SAM credits. Additional course specialties will continue to be offered throughout the year.

Earn the FACR Credential

Becoming a Fellow may improve your chances of a promotion or increase your hiring potential in today's evolving radiology job market.

Here are steps that you can take this year to jumpstart your pathway to the FACR:

- Reach out to your chapter's fellowship chairperson for guidance.
- Begin volunteering in leadership roles to strengthen your candidacy.
- Seek a current Fellow to serve as a potential endorser.
- Contact ACR about application content and submission deadlines.

If you are currently a Fellow, consider mentoring a member and offering guidance. Recommend a member to serve on a committee or commission. Consider writing endorsement letters for candidates, attesting to their professional accomplishments.

Your chapter and the College are prepared to support you in your pursuit of becoming a Fellow, whether you are an early career member or a currently eligible member.

Visit acr.org/FACR or email FACR@acr.org to navigate your professional journey toward achieving ACR's highest level of membership.

Gregory N. Nicola, MD, FACR

Andrew K. Moriarity, MD

ACR Alternate RUC Advisor

Guest Columnist

Staying Engaged, Remaining Active

ACR members are already working together to ensure legislative success at the end of 2021.

With 5,593 pages and $2.3 trillion, the Consolidated Appropriations Act of 2021 (CAA21) is the longest and largest spending bill ever passed by Congress. It combines $900 billion for COVID-19 stimulus relief with the $1.4 trillion of 2021 annual omnibus bill spending — the later including 12 separate annual appropriations bills.[1] The bill impacts almost everyone, and for radiologists and medical professionals, the impact is profound.

Throughout 2020, the ACR led a coalition representing more than a million providers to shape the E/M legislation, resulting in a positive impact on its patients and members (learn more at acr.org/EM). The advocacy effort was critical as radiologists were faced with a potential reduction in reimbursement of more than 10% — resulting from budget-neutrality–mandated reductions in the Medicare Conversion Factor (MCF) due to increases in E/M coding changes proposed by CMS. The ACR has a strong history of legislative advocacy, but this unprecedented multilateral effort resulted in several provisions that were positive for patients — as well as radiology and the broader house of medicine. The provisions included:

- Increasing the Medicare Physician Fee Schedule (MPFS) by 3.75% for CY 2021
- Suspending the 2% payment adjustment (sequestration) through March 31, 2021
- Reinstating the 1.0 floor on the physician work Geographic Practice Cost Index through CY 2023
- Delaying implementation of the "inherent complexity" E/M add-on code (G2211) until CY 2024

Together, these changes resulted in a 2021 MCF of 34.8931 and represents a 3.32% decrease for 2021, compared to the 10.2% decrease previously published by the CMS Final Rule in December. Our patients and physicians welcome these positive adjustments by members of Congress and also extend our appreciation for the increase in graduate medical education funding that was included in CAA21.

However, you will note that the four adjustments made are not permanent and will result in a phased-in approach of the full 10.2% MCF reduction in absence of additional action by either CMS or Congress. This legislation provides temporary relief to our physicians and practices that have been negatively impacted by the pandemic, but the adjustments do not offer durable solutions. The reductions mandated by budget-neutrality due to E/M revaluation are still scheduled for implementation.

In addition, it is expected that the initial revaluation of outpatient office visit services will prompt consideration of other E/M services throughout the MPFS. If several additional services are increased in value to gain parity with the outpatient visits, or if these increases are expanded to the global surgical payments, there will be further budget-neutrality–mandated reductions in the MCF that will negatively affect those providers who do not perform those services. The potential for a substantial and enduring impact looms large across the entire MPFS.

The ACR is already examining all potential avenues to further address this issue and will be communicating with members as more information and opportunities become available. The coalition of medical providers that stood together will continue to work on behalf of patients and physicians to ensure that we maintain appropriate, accessible, and equitable access to care — not only during the pandemic but in the recovery and years to follow. The Commission on Economics strongly agrees that the increase to those who provide E/M services is appropriate; however those payment increases should not be at the expense of the much smaller group who do not — especially when such drastic reductions could have a negative impact on available services and patient access.

This year will not be like 2020. We will not be facing a direct challenge to our reimbursement in 2021. However, now we will need to maintain our strong relationships with others, in both the house of medicine and the legislature, while working to expand our influence. The temporary relief provided through direct increase in payments across the entire 2021 MPFS has introduced the potential for relative payment reductions to many more providers in 2022 — and should increase the potential size and urgency among those groups that did not participate in previous advocacy efforts leading up to the passage of CAA21.

The ACR is counting on its members to stay engaged and remain active as the issues unfold. While we cannot expect another landmark legislation at the end of this year, we can start working together now to ensure that the end of 2021 will mark a significant improvement in the MCF — compared to where we ended in 2020. B

ENDNOTE available in the digital edition at acr.org/bulletin

RECOVERY MODE

Cyber attacks have ramped up in recent years, and radiology practices must be prepared to respond decisively to potential breaches.

The University of Vermont (UVM) Medical Center in Burlington was rocked last fall by a cyber attack that took down its entire network. The attack prompted federal agencies — including the U.S. Department of Health and Human Services and the FBI — to immediately issue a warning that cybercriminals were targeting healthcare providers with ransomware.[1] The lingering effects felt by UVM staff and patients are a stark reminder that radiology groups need to shore up their systems' security and prepare for the worst.

"This cyber incident was particularly malicious," says Kristen DeStigter, MD, FACR, chair of the department of radiology at UVM. "There is no way to completely protect against these attacks, but we have learned firsthand that we can make systems less vulnerable."

"I think sometimes radiologists forget that everything we do is digital," says Christoph Wald, MD, MBA, PhD, FACR, chair of the department of radiology at Lahey Hospital and Medical Center and chair of the ACR Commission on Informatics. "That means when a cyber attack happens, and your IT people pull the network cord to quarantine malware, radiology may lose every last bit of functionality it normally relies on. That might be hard to imagine, but it could happen to your practice."

ROOT CAUSE

Cyber attacks on a hospital or healthcare group's information management and operations systems can bring an entire network to an abrupt halt. Some attacks are more crippling than others, but almost all attacks are rooted in profit — either through ransomware or theft of patient information to sell on illegal online marketplaces. When approaching cybersecurity, there must be a balance between seamless access for healthcare professionals and protection against a data breach or system failure.

During the attack on UVM, the malicious actors leveraged malware through an employee's off-network hospital laptop. "When the employee connected to our virtual private network — after two weeks of the virus sitting in the phishing email — the ransomware deployed causing widespread system outage," DeStigter says. "After initiating the encryption, the malicious actors used the privileged credential to push a second virus onto internal systems to establish persistence."

The UVM Health Network has since pivoted to a segmented approach to minimize its equipment and support system exposure. Segmenting a network creates layers between data servers — with the goal of separating your most sensitive data from everything shared outside of your internal network.

Without some kind of data separation, a virus can quickly spread. "The malicious actors gained access to our server, then encrypted all virtual hard disks, and finally obtained administrative credentials," DeStigter says. "Our system was completely down. We had to reimage, rebuild, or replace all impacted systems. This cybercrime was called one of the most significant on any healthcare system in 2020."[2]

GROWING PROBLEM

Radiology by virtue of its digital nature has a multitude of potential security vulnerabilities that pose significant cyber risk — but the specialty is not alone in adequately securing new or existing technologies, according to Daniel Reardon, MPA, CHPC, chief compliance officer for the ACR. The healthcare sector in general is woefully behind in proactively addressing the current threat landscape, he says.

When it comes to technology products, there is often a disconnect between vendors/manufacturers and IT departments. Products may not be designed with adequate security features or they may not be configured properly once procured. "Regardless of the scenario, there is a lot of finger pointing, which ultimately leaves patients at risk," Reardon says.

This kind of impasse is especially dangerous as the number of ransomware attacks continues to rise. "Since late last year, several large healthcare systems have been taken down," says Reardon. "When that happens, it can take months to get things back online."

How you approach cybersecurity will likely vary depending on your practice type and size. Most experts recommend that larger groups have internal expertise — a group dedicated to managing security. Smaller practices often outsource all security operations. In any practice setting, Reardon says, you need to have some sort of incident response protocol in place. It could be a response team or an individual responsible for acting with purpose the moment a malicious actor strikes.

GROUP LESSON

"We learned firsthand that assembling a disaster management team within your department — charged with talking everyone through a checklist if (and when) something bad happens — is critical to maintain the safety of staff and patients," DeStigter says. "A control center helps stabilize, optimize, and focus on next steps." Giving and receiving support from the radiology community as a whole should also be part of the response, she says.

"When you see the severity of an attack unfold, you feel pretty isolated," DeStigter says. "We are the only referral hospital in a large geographical area. With all systems down, we had to keep taking care of patients, and we didn't have a playbook."

"Within days of the initial event, a number of radiologists from around the country reached out to me, asking if there was anything we needed," DeStigter recalls. "I was so appreciative of that. It really showed me the strength and empathy of the radiology community."

In turn, DeStigter — during the first weeks following the attack — communicated learned best practices to radiologists at other institutions. "You worry about a chain reaction," she says. "I wanted to share our experience and let them know what they could be facing in the event of a total system failure."

"We were running paper reports up to other floors, and providers were coming to the department with imaging questions. But we were in a pandemic! Because of COVID-19, we had to put up signs

and lock reading rooms to keep too many people from coming into our department at once," DeStigter remembers.

"In our radiology department, we practiced and thought we would rely heavily on our emergency backup system in the event of a breach," DeStigter says. "When that got infected, too, we had to go completely to paper." At UVM, they could use their imaging equipment but could not transfer images from scanners to workstations. Radiologists interpreted scans from modalities and QA workstations until a temporary solution was in place. Results were recorded in handwritten reports and they quickly developed templated paper reports. Because network storage systems were down, staff had to buy hard drives to avoid losing data.

DeStigter says, "We quickly established a process on paper, but we are all accustomed to working with voice recognition in standardized reporting systems. Many staff were never trained — or had never had the need — to handwrite a report. We didn't even have enough pens for everyone."

"We know it is a matter of when and not if. More and more people are getting comfortable with that reality."

– DANIEL REARDON, MPA, CHPC

"The only safe way we had to communicate, believe it or not, was through a mobile app service on our smartphones," she says. "We created a list to communicate with radiologists, residents, technologists, and others in the care delivery process. Preparing standardized forms for printable paper reports and creating a list of phone numbers for all staff — not just those in your department — are two things you should do now. Definitely keep good records of everything. "

REGULAR REHEARSAL

According to Reardon, "We know it is a matter of when and not if. More and more people are getting comfortable with that reality," Reardon says. "They are less comfortable with their ability to react when something happens."

Using multi-factor authentication and vetting security vendors is important. Staff training — on phishing, for example — should be commonplace. Reducing your vulnerability by creating a strong "human firewall" is important, but having a tested post-attack response plan in place is critical, Reardon says.

"Do you have the right response protocol in place? Do you know when or if to get a notice out to your patients? Should you be talking to the authorities, and if so which ones? Do you pay a ransom to unlock encrypted files? These are the kind of aftermath scenario desktop exercises you should be thinking about," Reardon says.

"There's really not much a radiology practice can do to completely prevent a cyber attack," Wald agrees. "Radiologists should focus on understanding the various resulting operational scenarios that may ensue." They need to understand how radiology operations will change if IT starts shutting things down, he says.

"You are potentially looking at no PACS, no voice recognition for reports, reading scans directly from scanners, physically locating one or more subspecialty radiologists at critical scanners, and locating referring physicians for direct communication on every single study," Wald says. "You must prepare for this sudden shift and instruct and train your folks ahead of time how to function."

"The best laid plans are what they are, but you have to test them out," Wald says. His group runs downtime tests from time to time. "We intentionally take down systems and practice for brief periods of time. The simulation shows how people might handle a crisis."

Radiologists should also be asking their equipment vendors about how older operating systems are being updated for current security threats, Wald says. In addition, know what kind of support your vendors provide in the case of a breach. "Our vendor, for instance, is required to bring PACS back up within 96 hours of an outage," Wald says. When it comes to details like this, Wald points out, "staying informed isn't expensive."

In order to avoid disruptions to patient care, practices need a disaster response process that amounts to standard operating procedures, Wald says. "You should have hard copies of the disaster plan at each workstation for each modality," he says. "Everyone needs to know where they are and what to do with them."

Documenting everything is critical when normal operations cease, Wald says. "Eventually you will have to restore your reporting manually. Your record will also be your bridge to billing — and that might be a long time off," he says. "You could be looking at two to four weeks for a partial return, and three to six months for a full return."

IMPERFECT SYSTEM

While cybersecurity experts agree that it impossible to guard against all attacks — and that scenario training is invaluable — consistent vulnerabilities in radiology could be identified now.

The medical analytics team at Massachusetts General Hospital (MGH) radiology department developed an application to identify weaknesses in Digital Imaging and Communications in Medicine (DICOM) servers — the standard for managing medical imaging and related data. The MGH team has tested its application multiple times by conducting a worldwide security scan of servers. Thousands of unsecured hospital servers were discovered to be at risk worldwide — having no firewall in place and

accepting information from sources outside of their own hospital network. Half of those compromised servers are in the U.S.

These unsecured servers make cyber attacks easier, says Oleg S. Pianykh, PhD, director of the medical analytics group at MGH Radiology and assistant professor of radiology at Harvard Medical School. These vulnerabilities have largely continued since first scanning DICOM servers in 2014, he notes.

"I believe the only way to fix the radiology data security problem is for a designated group to perform independent vulnerability checks," Pianykh says. "Radiology technology is outpacing security efforts. A DICOM scan approach can be done now. We don't need to spend the next decade looking for an ideal security solution."

A national, system-wide program would be the best option, Pianykh says. At the very least, every radiology training and management project should convey that leaving medical devices and imaging archives wide open at their default DICOM ports and settings is the most common security problem.[3]

"This problem should not be put solely on the shoulders of hospitals," Pianykh believes. "They don't have the resources." You can have as many security policies as you want, but if you do not actively enforce security from the outside — through a completely independent entity — the problem will go on and get worse, he says.

"This might be something ACR can lead the way on," Pianykh says. "For now, we will continue to pursue and expand our project. We can scan hospitals and identify their vulnerabilities. Hospitals could also work with us by submitting their network and domain names for scanning — in turn getting vulnerability results from us. By using the scanning approach already accessible to us, we could make significant progress in a short amount of time."

LINGERING THREAT

More cyber attacks are looming as COVID-19 continues to generate more remote work for employees who are potentially working on less secure mobile devices and networks. Gauging your team's ability to respond to a cyber attack needs to happen now, DeStigter says. "During a cyber attack, things happen quickly and you have to find solutions as you go if you have nothing in place," DeStigter says. "In our case, COVID-19 worsened an already unimaginable situation."

"It would be wise to evaluate your access to resources in light of pandemic restrictions," DeStigter says. "For example, UVM had a third-party vendor in place to assist with security and recovery issues, but no one from the outside was allowed in after the attack so everything was done remotely," she says. "Staff shortages may still be an issue at your facility, making a rapid, organized response even more daunting."

Beyond the pandemic, the financial impact, the scheduling challenges, and the uphill climb to resume outpatient services, your radiology group will grapple with intangibles that linger long after a cyber attack, DeStigter says.

UNDERSTANDING CYBERSECURITY

Cybersecurity threats in the healthcare sector are increasing globally due to the rising value of sensitive health information and availability of digitalized personal health records. Visit acr.org/informatics to view the video presentation "Radiology Business Continuity Preparation for Cyber Disaster," on what imaging departments should consider to maintain communication and operations during and after a cyber attack.

"During a crisis, everyone is under a tremendous strain," DeStigter says. "Staff and patient safety must be prioritized, traditional resident education screeches to a halt, and there is no time to think about downstream legal ramifications of the decisions you are compelled to make in the moment."

"There is an element of demoralization to this type of calamity," she says. "The whole department feels it — being helpless to help patients. Staff wellness hits the lowest of low points." It is incumbent upon radiology groups to implement and routinely review a cyber attack response plan — sooner rather than later, DeStigter says. "Action today may ensure your future, and the well-being of staff and patients," she says.

"We are recovering but are functioning to near-baseline," DeStigter says. "Thankfully, we have seen no negative patient outcomes from our radiology department as a result of the cyber attack, and it appears the malicious actors did not export any patient data. We have added new security to our network — right down to each individual laptop. We know now that you are never 100% safe, but we have never been more prepared to handle the worst." B

BY CHAD HUDNALL, SENIOR WRITER, ACR PRESS

ENDNOTES

1. Alert AA20-302A. Ransomware Targeting the Healthcare and Public Sector. Cybersecurity & Infrastructure Security Agency.
2. Dyrda L. The 5 most significant cyberattacks in healthcare for 2020. Becker's Healthcare. Published December 14, 2020. Accessed February 4, 2021.
3. Stites M, Pianykh O. How secure is your radiology department? Mapping digital radiology adoption and security worldwide. *Am J Roentgenol.* 2016;206(4):797–804.

Leading the Field

ACR recognizes leaders in the imaging community at this year's annual meeting.

Each year, the College awards individuals whose work and dedication advances and strengthens the specialty. Spanning continents and subspecialties, this year's recipients include individuals from across the community of imaging. Commendations will be awarded at the 2021 ACR Annual Meeting, taking place virtually in May.

GOLD MEDAL

The Gold Medal is awarded by the BOC to an individual for distinguished and extraordinary service to the ACR or to radiology. View the list of past recipients at acr.org/GoldMedal.

BARRY A. SIEGEL, MD, FACR

The world of PET imaging would look very different without the work of Barry A. Siegel, MD, FACR, professor of radiology and medicine and former chief of the division of nuclear medicine at Washington University School of Medicine. Throughout his career, Siegel has focused on bringing PET technology to clinical practice through his extensive translational research. Siegel's efforts have resulted in PET imaging emerging as a major clinical and research tool, increasing physicians' ability to predict and monitor patients' response to cancer treatment.

When Siegel began his undergraduate studies at Washington University, he couldn't have known that the institution would become the setting for his groundbreaking research. He completed medical school at the Washington University School of Medicine, followed by an internship at the affiliated Barnes Hospital in St. Louis, Mo., and then by residency in diagnostic radiology and a fellowship in nuclear medicine at the University's Mallinckrodt Institute of Radiology.

At Washington University, Siegel helped develop some of the first practical PET imaging devices and led the way for research into patient-care opportunities. As chief of the nuclear medicine division, Siegel and his team pioneered the use of both conventional and novel agents in studying breast, prostate, cervical, and other cancers. Throughout his career, Siegel has published more than 300 journal articles, 53 book chapters, and 33 books.

Alongside these efforts, Siegel has worked continuously within the ACR. He played a key role with ACRIN (now ECOG-ACRIN) from its inception, serving as chair of the Nuclear Medicine/PET Committee, medical director of the PET Core Laboratory, and group deputy co-chair for molecular imaging. He currently serves as imaging deputy co-chair of the ECOG-ACRIN Cancer Research Group. Siegel has also been actively involved in the ACR Commission on Nuclear Medicine and Molecular Imaging and served as vice chair from 1981 to 1993, and was editor-in-chief of the ACR Professional Self-Evaluation and Continuing Education Program from 1988 through 2002.

Consistent with Siegel's quest for evidence-based nuclear medicine, he and his colleagues developed the National Oncologic PET Registry (NOPR). Under his leadership as the founding co-chair of the NOPR Working Group, the data developed by the registry was instrumental in securing broad CMS coverage for use of FDG-PET in the evaluation of patients with cancer.

Siegel has spent the past four decades working tirelessly to bring PET imaging to the forefront. His work has transformed PET imaging from a tool strictly for brain research to a major clinical and research modality helping patients with a wide range of conditions.

CHERI L. CANON, MD, FACR, FSAR, FAAWR

Cheri L. Canon, MD, FACR, FSAR, FAAWR, professor and Witten-Stanley Endowed Chair of the department of radiology at the University of Alabama Birmingham (UAB) School of Medicine, has been described by one ACR past president as "the best of the best." Canon has risen to a respected leadership position at UAB, he notes, in a time and in a region where diversity is only now being embraced.

Some of Canon's most notable accomplishments have been in the realm of diversity, equity, and inclusion. She serves on the Board of Directors for the Society of Chairs of Academic Radiology Departments and is currently its president, only the second woman to hold this position. In her leadership role with the society, she championed the adoption of parental leave, which was subsequently supported by the Association of Program Directors in Radiology. She was also the co-creator and co-director of the SCARD-GE Healthcare LEAD (Leading, Empowering, and Disrupting) Women's Leadership program. To date, the program is recognized as a model for empowering rising women leaders in radiology.

However, as one colleague pointed out, Canon's leadership and mentoring abilities are not confined to radiology. She is the past president of MOMENTUM, an organization in Alabama that empowers a diverse group of promising women to develop leadership skills that positively impact business, culture, and politics. Her dedication to mentorship and sponsorship over the years is evident in many of the College's current efforts to encourage aspiring radiologists to break down traditional barriers.

Canon has been involved with the ACR since 1996, when she was the resident representative from the Alabama Academy of Radiology at the ACR's annual meeting. She has served on more than two dozen ACR committees/commissions — chairing several — and has served on the ACR BOC, including as vice president. Canon became an ACR Fellow in 2012, just 14 years

after completing her residency. With her work on the executive committee of the Intersociety Conference, Canon drafted the professionalism statement adopted by many professional societies and included as part of maintenance of certification attestation.

She was a founding member of the board of directors for the ACR's Radiology Leadership Institute® and serves on the board of directors for the Association of University Radiologists. Additionally, she serves on the board of directors for the Society of Abdominal Radiology and has staffed multiple editorial boards, notably the *JACR*®, for which she has received Recognition of Exceptional Manuscript Review.

Canon serves on the ABR Board of Governors and is the recipient of the ABR Lifetime Service Award. Last year, the American Association for Women Radiologists bestowed her with their highest honor, the Marie Curie Award, and UAB recognized her with the President's Award for teaching. She has delivered many talks by invitation at numerous national and international universities and conferences. She has served as visiting professor at a host of institutions and authored nearly 70 publications — many seen as gamechangers in diversity and inclusion, parental leave, and wellness and professionalism.

PAUL A. LARSON, MD, FACR

Paul A. Larson, MD, FACR, is described by his colleagues as a true luminary, an icon, and an ambassador for radiology — an individual who has worked tirelessly over 33 years to improve the specialty, its practitioners, and its patients.

Larson is a graduate of Northwestern University and the University of Connecticut School of Medicine. He completed his residency training at Saint Vincent's Hospital in Worcester, Mass., and subsequently a fellowship in IR at Medical College of Wisconsin. "Murray L. Janower, MD, FACR, a former ACR President and Gold Medalist, was the chief of radiology and residency director at St. Vincent's and was very influential to my career," says Larson.

After fellowship, his professional career was spent in private practice with Radiology Associates of Fox Valley in Wisconsin, where he remains one of the state's most well-recognized radiologists. He has held many officer positions in the Wisconsin Radiological Society since 1989, including board member, ACR Councilor, chair of the Fellowship Committee, and president from 2005 to 2006.

Larson initially served the College as a member of the Human Resources Commission from 1991 through 1997. This began a long tenure of service to the College, during which he served on over 40 positions within the College's task forces, committees, and commissions. He served on the CSC from 2001 through 2006 and on the BOC from 2007 through 2013.

Larson served as chair of the Commission on Quality and Safety from 2006 through 2012, during which time the College's accreditation program flourished. During his tenure, the Commission supported Image Gently® and helped create Image Wisely®. He also helped lead the College's participation in the Choosing Wisely® campaign. He helped with improvements to the ACR Appropriateness Criteria®, including increased use of references and input from non-radiologists. The Commission also added relative radiation levels for the various exams, which helped set the stage for the ACR Select® clinical decision support tool. Larson had a major role at a much earlier time in transforming the ACR Standards to the Practice Guidelines and Technical Standards, starting with the Task Force on Standards Issues in 2001. That work led to his position as vice chair of guidelines and standards when the Commission on Quality and Safety was renamed and restructured under Jeffrey C. Weinreb, MD, FACR. His service to the College culminated in his role as vice president from 2012 to 2013.

Larson has served in numerous positions with the RSNA, the ABR, his county and state medical societies, his hospitals, and in the Oshkosh community, especially with the Oshkosh Area United Way.

A long-time advocate for RTs, he continues to serve on the board of the American Registry of Radiologic Technologists, and his tenure as that organization's president from 2018 to 2019 was so well-received that he was selected to serve a second term starting in 2021. He will be the first two-time president in 40 years.

HONORARY FELLOWSHIP

The Honorary Fellowship award recognizes the contributions to radiology by individuals who are ineligible for ACR Fellowship. View the list of past recipients at acr.org/HonoraryFellow.

SNEH BHARGAVA, MBBS
India

An internationally respected leader in radiology education, Sneh Bhargava, MBBS, is the medical director of Sitaram Bhartia Institute of Science and Research and chair of the department of radiology at Dharamshila Narayana Super Specialty Hospital, both in New Delhi, India. She is professor emeritus of the department of radiology at All India Institute of Medical Sciences (AIIMS) in New Delhi.

Bhargava received her medical degree from Lady Hardinge Medical College in New Delhi and completed her fellowship in diagnostic radiology at Westminster Medical School (now known as the Imperial College School of Medicine) in London. She returned to India with a diploma in medical radio diagnosis awarded from the Royal College of Physicians and Surgeons.

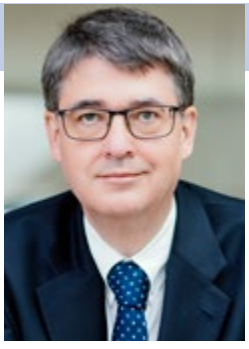
Bhargava joined AIIMS as an assistant professor and later became professor and chair of the department of radiology. She was involved in the development of the department's postgraduate medical school program, in which she worked to set standards for radiology education throughout India. She also advocated for the first CT scanner and US machine for AIIMS, which created new avenues of medical assistance for local patients, as well as patients from Nepal, Bangladesh, and Sri Lanka.

Named the first female director of AIIMS and still the only one in its 60-year history, Bhargava also served as chair of the hospital board of directors. Over her 30-year career at AIIMS, she

helped establish the departments of neuroradiology, cardiovascular radiology, oncoradiology, pediatric radiology, and IR. She also established the Medical Education and Technology Center at AIIMS, to explore the science of medical education and prepare to educate future generations of medical students.

According to RSNA Past President Vijay M. Rao, MD, FACR, "Dr. Bhargava is a true pioneer with an unrelenting zeal for learning. Her tenure at AIIMS has left an undeniable mark on medicine as she trained and mentored generations of radiologists."

Bhargava is a former president of the Indian Radiology and Imaging Association (IRIA) and has served as chair of several committees for the Medical Council of India. She has received numerous lifetime achievement awards, including the Millennium Award 2000 from IRIA. She also received the Padma Shri, one of the highest civilian awards in India, for her distinguished contributions to medicine. She was also awarded an honorary membership to the RSNA at the Society's 2018 annual meeting.



MICHAEL BAUMANN, MD
Germany

Michael Baumann, MD, chair and scientific director at the German Cancer Research Center in Heidelberg, Germany, is described by friends and peers as a brilliant visionary — a dedicated leader in the field of radiation oncology — defined by his reputation for humility and capacity for listening.

Baumann received his doctorate in medicine from the University of Hamburg in 1988, including work in biophysics and radiation biology. He also pursued post-doctoral work at Massachusetts General Hospital and Harvard Medical School — leading to definitive in vitro and in vivo studies in radiobiology.

At a time when many academic and practicing radiation oncologists favored molecular and cell biology over in vitro modeling, Baumann saw the synergistic value of classic radiobiology models for the advancement of oncologic sciences. This led to numerous preclinical and clinical studies throughout his career toward the advancement of radiobiology and radiation oncology. His work includes over 430 scientific papers ranging from in vitro laboratory science to large-scale clinical trials to investigating biologically-driven, image-guided radiotherapy strategies to improve outcome for patients.

Baumann has been editor-in-chief of *Radiotherapy and Oncology* since 2014 and serves on the editorial boards of multiple radiation biology publications. Baumann founded the Dresden site of the National Center for Tumor Diseases in 2015, later moving to Heidelberg, where he continues to serve as scientific director and chair of the Management Board of the German Cancer Research Center and as national spokesperson of the German Cancer Consortium.

Baumann's commitment to the international battle against cancer has been rewarded with a host of awards and honors. He is a member of the German National Academy of Sciences-Leopoldina and an Honorary Fellow of the Royal Society of Surgeons in Ireland and Honorary Member of the Polish Society for Oncology and of the Polish Society for Radiation Oncology. He has Honorary Professorships from Trinity College, Dublin, Ireland, and from Tianjin Medical University, China. Baumann has delivered honorary lectureships at Harvard Medical School, Oxford University, the MD Anderson Cancer Center in Houston, and the Royal Marsden Hospital in London.

Teaching has been at the core of Baumann's work to eradicate cancer. He has mentored more than 50 doctoral students during his career. As one of Baumann's colleagues put it, "He has strength and passion when discussing topics near to his heart and his deep care for cancer patients as people transforms those around him."

FIONA J. GILBERT, MD
United Kingdom

Fiona J. Gilbert, MD, professor of radiology and head of the radiology department at the University of Cambridge, is described by her colleagues as one of the leading academic radiologists in the United Kingdom and the world. Gilbert completed medical school in Glasgow, Scotland, and trained in medicine and then radiology at the Aberdeen Royal Infirmary in Scotland. In 1989, as breast cancer screening was coming to the fore, Gilbert established the Breast Cancer Screening Service in the northeast of Scotland, a program she directed for the next 10 years. In 1996, Gilbert was appointed professor of radiology and head of the department at the University of Aberdeen. She was involved in the review and curation of all bone tumors in Scotland for 10 years as a member of the Scottish Bone Tumor Registry. In this capacity, Gilbert provided imaging expertise in a multidisciplinary panel composed of pathologists, orthopedic surgeons, and oncologists to ensure that the people of Scotland received the best oncologic care for MSK malignancies. Gilbert also helped set up the Scottish Interval Cancer Database and provided quality assurance to these programs, as well as educational support for both symptomatic and screening services for over 20 years.

Gilbert was appointed chair of radiology at Cambridge University in 2011, where she has continued to fight for the best care possible for the population she serves. Gilbert holds the posts of academic lead for radiology at Cambridge University Hospitals NHS Foundation Trust, as well as chair of the Cambridge Health Imaging Committee. She served as an anchor for imaging expertise in breast cancer at the National Cancer Research Institute, where she chaired the Imaging Advisory Group and co-led the PET research committee giving advice on imaging for clinical trials. She provided all of this national service in parallel to her duties at Cambridge University, as well as her service to professional societies including the Royal College of Radiology, where she participated vigorously in breast cancer initiatives and promoting research.

Gilbert has published more than 230 articles in peer-reviewed journals and secured millions of dollars' worth of funding from 77 grants. She is president of the European Society of Breast Imaging, chair of the Breast Imaging Subcommittee of the Scientific Program Committee of the RSNA, and past chair of the Breast Committee of the European Congress of Radiology.

The Distinguished Achievement Award recognizes highly notable service to the College and the profession of radiology. View the list of past recipients at acr.org/DistinguishedService.

DISTINGUISHED ACHIEVEMENT AWARD

DONALD W. MORAN

Donald W. Moran will receive the College's Distinguished Achievement Award for his extensive contributions to ACR efforts on provider reimbursement, economics, and healthcare policy.

Moran's career in health policy and advocacy began with an undergraduate degree in mathematics from the University of Illinois, followed by graduate work at the University of Michigan. He began his career in Washington, D.C., as a senior policy advisor for a leading member of Congress and culminated his federal career as the third highest executive staff and head of the domestic budget operation for the Office of Management and Budget, as part of the Executive Office for President Ronald Reagan. Moran was in his early thirties when he assumed these responsibilities. From there, Moran joined the private sector where he provided valuable data, analytics, and insight that informed healthcare regulation and reimbursement strategies as a senior partner for The Lewin Group, a healthcare consulting company for both the federal government and private sector clients. He started his own consulting firm, the Moran Company, in 1998, after a 24-year career in the health and human services fields.

"Don's role in crafting the policy that Congress adopted to roll back the Multiple Procedure Payment Reduction returned millions of dollars to radiologists in the country," says ACR Past President James A. Brink, MD, FACR. "Moreover, his guidance in developing the PAMA legislation enabled millions of Medicare beneficiaries to avoid the burden of preauthorization, a clear hindrance to timely access to medical care." Moran has also been instrumental in supporting the College's government relations and economics teams in their efforts to reduce the impact of reimbursement reductions that were planned for 2021. He played an invaluable role in overturning CMS on their E/M policy with legislation that will benefit every member of the College in the passage of the Consolidated Appropriations Act of 2021. B

Nominees for 2021 Positions

At the annual meeting, the ACR Council will vote on the following slate of candidates recommended by the College Nominating Committee.

ACR President
Beverly G. Coleman, MD, FACR

ACR Vice President
James V. Rawson, MD, FACR

Council Speaker
Amy L. Kotsenas, MD, FACR

Council Vice Speaker
Timothy A. Crummy, MD, FACR
Madelene C. Lewis, MD

BOC, Chair, Commission on Leadership and Practice Development (Slotted) — Three-Year Term
Richard Duszak Jr., MD, FACR

BOC, Chair, Commission on Medical Physics (Slotted) — 2nd Three-Year Term
Mahadevappa Mahesh, MS, PhD, FACR

BOC, Chair, Commission on Pediatric Radiology (Slotted) — 2nd Three-Year Term
Richard A. Barth, MD, FACR

BOC — ARRS Representative (Selected) — Three-Year Term
Reginald F. Munden, MD, DMD, MBA, FACR

BOC — Canadian Association of Radiologists (CAR) Representative (Selected) — Two-Year Term
Ania Z. Kielar, MD

BOC — RSNA Representative (Selected) — 2nd Three-Year Term
Mary C. Mahoney, MD, FACR

BOC, Member At-Large (Slotted) — Three-Year Term
Harris L. Cohen, MD, FACR
Catherine J. Everett, MD, MBA, FACR
Tan-Lucien H. Mohammed, MD, FACR
Richard Strax, MD, FACR
Syed Furqan H. Zaidi, MD

CSC — Four seats are available for a two-year term.
Sayed Ali, MD, FACR
K. Elizabeth Hawk, MD, MS, PhD
Elizabeth A. Ignacio, MD
Nolan J. Kagetsu, MD, FACR
Patricia J. Mergo, MD, FACR
Jennifer E. Nathan, MD
John N. Nichols, MD, FACR
Kurt A. Schoppe, MD
Gaurang V. Shah, MD, FACR
David C. Youmans, MD, FACR

College Nominating Committee — Three seats are available for a two-year term.
Atul Agarwal, MD
Carol P. Becker, MD, BA
David T. Boyd, MD, MBA
Gwendolyn M. Bryant-Smith, MD
Benjamin L. Franc, MD
Boyd N. Hatton, MD
Betsy Jacobs, MD
Valerie L. Jewells, DO, FACR
Elizabeth Levin, MD
Colin M. Segovis, MD, PhD

One Private Practice Representative will be sent to the 2021–2022 Intersociety Summer Conference.
Suresh K. Mukherji, MD, FACR

The election manual, featuring detailed information on the candidates, will be available to all councilors prior to ACR 2021 at acr.org/Annual-Meeting.

Sustainable Images

Advancing radiology services in underserved countries benefits everyone — both at home and abroad.

"Radiology professionals in our partner institutions are always appreciative of your time. These are smart people who soak up knowledge — and who want and need more," says Carlin A. Ridpath, MD, RAD-AID program director overseeing multiple projects in Nepal. In that role for more than three years, Ridpath and her team of volunteers have held hands-on workshops on MSK US. She is currently working with the Hospital and Rehabilitation Center for Disabled Children, and the RAD-AID team is in the process of installing PACS in the country's handful of hospitals. The program also supports residents through RAD-AID's learning center, which offers access to subspecialty lectures/webinars, including cardiothoracic and abdominal lectures.

Ridpath recently presented at the 12th annual RAD-AID Conference on Global Health Radiology, which focuses on low-resource regions and medically underserved communities. The gathering of community leaders, volunteers, partners, and supporters from around the world stressed the importance of RAD-AID, how far it has come, the number of lives touched, and ambitious plans for the future. The *Bulletin* caught up with Ridpath to discuss why efforts to establish and maintain better radiology services in underserved countries are a win-win for volunteers and international project sites alike.

Why did you get involved with RAD-AID?

I felt entrenched in my day-to-day duties as a radiologist. I wanted to do something different for people who needed radiology services outside of my immediate sphere. Giving your time to something like RAD-AID can actually be a cure for burnout. Yes, it's work, but you get back as much as you give, if not more.

The other thing that drew me to RAD-AID was its commitment to sustainability. There are other international radiology programs that seek to improve access to radiology services in underserved countries, but they do not have the same infrastructure as RAD-AID. Many organizations do not stay true to their original mission statements, but I have learned that RAD-AID is all about sustainability after the initial setup at a project site. Another strength of RAD-AID is avoiding a cookie-cutter approach. Each region or community you are trying to assist has unique needs and barriers to care.

What is your approach to bolstering radiology in developing countries?

You must have a strong foundation if you want to make a difference across borders. That foundation starts with assessing the ability to build radiology capacity and the needs of a region or community. RAD-AID has a Radiology Readiness Assessment tool — a data collection resource developed to determine how we might help in a particular area. When we receive a request for assistance to improve or expand imaging services or technology, we consider a country's existing infrastructure, its regional challenges, and how our volunteers might meet patients' unique medical needs.

I wanted to do something different for people who needed radiology services outside of my immediate sphere. Giving your time to something like RAD-AID can actually be a cure for burnout.

Do you feel you are making a difference through your work with RAD-AID?

I have asked myself, "How can RAD-AID help in Nepal?" The Nepalese are largely a rural people and MSK injuries are common. They have access to plain film and US, but it can be difficult to diagnose soft tissue injuries with these modalities. We did a conference there with hands-on training for MSK US and about 90 Nepali radiologists attended. The Nepali Radiologists' Association said it was the best turnout they had ever seen. These are opportunities where we can really make a difference.

What are some asks of RAD-AID from underserved countries?

More education is always needed. Before COVID-19, we did in-person lectures and workshops. Most of the countries we work with just do not have advanced imaging. It is great if you supply a CT scanner, for example, but you have to make sure that machine is running — before and after you leave. I have heard too many times that something breaks down and just sits unused because the facility cannot afford to fix it — and that's if anyone local is qualified to service the equipment. A big element of RAD-AID is revisiting sites as often as possible. These visits will resume post-pandemic to send RTs and to teach locals about maintenance of their equipment.

How does RAD-AID handle expenses?

RAD-AID has grants available for many volunteers, and there are online applications at RAD-AID's website (see sidebar). Some RAD-AID volunteers decide to donate the cost of their travel to a site, which RAD-AID greatly appreciates so that limited grant funds can be given to those who are not able to cover the cost of travel. Some of our funding for volunteers is available through RAD-AID's partnerships with professional societies, such as the ASRT, the Canadian Association of Medical Radiation Technologists, the Society of Radiographers, and Sonography Canada for RTs, sonographers, and radiation therapists; the American Association of Medical Dosimetrists for radiation densitometrists; the Society of Nuclear Medicine and Molecular Imaging for nuclear medicine professionals; the Society for Imaging Informatics in Medicine for radiology informatics specialists; the Society of Interventional Radiology for IRs; and the SBI for breast radiologists. RAD-AID also has partnerships with several large radiology private practices — such as Radiology Partners, vRad, and Envision Physician Services — so that staff at these practices have resources to volunteer on RAD-AID teams. So, if volunteers apply to RAD-AID and are also members of RAD-AID's partner organizations, they may qualify for funded positions. Others may choose instead to donate the cost of their travel as a charitable contribution. There is a flexible range of options to get support from RAD-AID for global health projects.

Much like COVID-19 compelled healthcare professionals to shift gears to use more Zoom calls and host virtual seminars, RAD-AID has shifted its approach toward more remote learning and instruction. It is not as personal, but it is less expensive than physically traveling to the sites — so there are ways to volunteer remotely and on-site.

What can volunteers expect when they get involved with RAD-AID?

There is no minimum time commitment for RAD-AID volunteers, and we are very grateful for any amount of time they can give. Medical students are highly encouraged to participate; RAD-AID has a global health curriculum for medical students to earn a certificate and experience in medical imaging outreach. Volunteers should know they will never be sent to a host country where there is unrest, political or otherwise. Volunteers' safety comes first.

Volunteers should understand that efforts at each project site address different needs. For example, there are limited radiology

continued on page 22

What is RAD-AID?

RAD-AID began in 2008, with a mission to advance radiology in low-resource areas around the world by providing education, equipment, infrastructure, and sustainable services. RAD-AID counts more than 13,500 volunteers serving over 80 hospitals in 35 countries. Learn more at rad-aid.org.

The RAD-AID team is pictured visiting Tribhuvan University Teaching Hospital (TUTH) in Nepal in September 2019. (L-R) SoHyun Boo, MD, associate professor in the department of neuroradiology at West Virginia University, Carlin A. Ridpath, MD, RAD-AID program director, Anamika Kasyap, MD, assistant professor in the department of radiology at TUTH, Sundar Suwal, MD, assistant professor in the department of radiology at TUTH, and Tom Perry, Rad-Aid IT specialist

New IDEAS

A new trial is recruiting patients for its dementia imaging study focusing on underrepresented populations.

New IDEAS, a follow-up study to the pioneering IDEAS study (Imaging Dementia: Evidence for Amyloid Scanning), has begun recruiting patients, with a goal of recruiting more than 50% of whom self-identify as Black/African American and Hispanic/Latinx — populations that were underrepresented in the original study. The goal of New IDEAS, sponsored and managed by the ACR and in partnership with the Alzheimer's Association, is to determine whether using a brain amyloid PET scan helps clinicians provide a more accurate diagnosis and make better treatment decisions for patients with Alzheimer's disease and other types of dementia. In addition to a focus on recruiting minority populations, the study is collecting saliva and blood samples to validate and test emerging genetic and plasma biomarkers for Alzheimer's and other types of dementia.

"The New IDEAS study aims to be among the most racially and ethnically diverse Alzheimer's disease studies ever launched," says Gil D. Rabinovici, MD, the Edward Fein and Pearl Landrith Distinguished Professor in Memory and Aging at the University of California San Francisco and principal investigator of the New IDEAS study. "The study champions will actively conduct outreach and build relationships in Black/African American and Hispanic/Latinx communities across the country."

Building on IDEAS

The first IDEAS study of more than 16,000 Medicare beneficiaries demonstrated that using amyloid PET as part of the diagnostic process had a significant impact on patient management in people with mild cognitive impairment or dementia in which the cause was uncertain. In an analysis of more than 11,000 participants, patient management after amyloid PET changed in 60.2% of patients with mild cognitive impairment and in 63.5% of patients with dementia. Further research is needed to determine if amyloid PET is associated with improved clinical outcomes.[1]

Working With CMS

Brain amyloid PET can detect one of the hallmark brain changes related to Alzheimer's — amyloid plaque accumulation — in those with mild cognitive impairment or dementia of uncertain cause. Although such scans are FDA-approved, they are not yet covered by CMS, as determined by the 2013 National Coverage Determination on Beta Amyloid PET in Dementia and Neurodegenerative Disease. Therefore, the ACR, the Alzheimer's Association, and the New IDEAS study team worked closely with CMS to fulfill the agency's requirements for reimbursement of the study participants' amyloid PET scans under its Coverage for Evidence Development provision. In addition to the Alzheimer's Association, ACR is partnering with Eli Lilly and Co., GE Healthcare, and Life Molecular Imaging — which manufacture FDA-approved beta amyloid PET radiotracers.

Focusing on Diversity

A limitation of the original IDEAS study cohort was a lack of racial and ethnic diversity, with 88% of participants identifying as non-Hispanic/Latinx White. This likely reflects discrepancies in minority access to specialist care, as well as the need for tailored approaches to successfully recruit minority populations into research studies. The new study will focus on community recruitment to connect with patients in both clinical and non-clinical settings.

Strategic awareness-raising and tailored recruitment strategies will be led by teams from Vanderbilt University Medical Center and the University of North Carolina, with track records in community-engagement approaches and research methods in minority and diverse communities. B

BY ANGIE PIER, CLINICAL RESEARCH COMMUNICATIONS SPECIALIST, ACR CENTER FOR RESEARCH AND INNOVATION™

ENDNOTE

1. Rabinovici GD, Gatsonis C, Apgar C, et al. Association of amyloid positron emission tomography with subsequent change in clinical management among Medicare beneficiaries with mild cognitive impairment or dementia. *JAMA*. 2019;321(13):1286–1294.

NEW IDEAS
Imaging Dementia—Evidence For Amyloid Scanning

The New IDEAS study team is currently recruiting more than 7,000 Medicare beneficiaries from around the U.S. The patient population includes those with either typical or atypical clinical presentations of mild cognitive impairment and Alzheimer's — as well as those with early-onset (before age 65) cognitive impairment. Study participants will be consented and enrolled at participating dementia specialist sites and then referred to imaging facilities that perform the standard-of-care amyloid PET. If you would like to become a participating site or imaging facility, visit ideas-study.org/Getting-Started to review the protocol and submit a site feasibility questionnaire.

A Point of Hope

A radiologist launches a study exploring convalescent plasma therapy as a lifeline for COVID-19 patients in a community in Georgia.

While the world watched the COVID-19 virus trace a devastating path to North America in early 2020, Matthew B. McClain, MD, of Rome Radiology Group, P.A., in Georgia, was paying close attention to news of the virus and tracking possible treatments. An interest in convalescent plasma therapy led McClain to approach his local hospital about studying the treatment to help patients in his community. The *Bulletin* spoke with McClain to discuss his experience participating in clinical investigational research and how convalescent plasma therapy may help COVID-19 patients.

This project was another job on top of an already busy career. But I would do it all over again because I was able to contribute to the community and to local healthcare.

Matthew B. McClain, MD

How did you approach conversations with local stakeholders about convalescent plasma therapy benefits and distribution methods?

I had an interest and read quite a bit about the use of convalescent plasma in the treatment for coronavirus in China and the use of convalescent plasma in recent history with Ebola, MERS, and SARS. I contacted two local hospitals in Georgia, and one chief medical officer quickly dismissed the suggestion — she felt it wasn't a practical idea. After numerous rejections from other hospitals, I tapped into my network of physician colleagues and was connected to Arturo Casadevall, MD, MS, PhD, and Shmuel Shoham, MD, of Johns Hopkins Bloomberg School of Public Health, who provided me with their investigational new drug application — as well as an introduction to Michael J. Joyner, MD, a physician-researcher at the Mayo Clinic.

No expanded access program (EAP) had been written yet, which is how the FDA allows organizations to deliver investigational new drugs while collecting and evaluating data. The Mayo Clinic's national EAP offered the quickest route to deploying convalescent plasma collection and administration in Rome. To participate in the EAP, I founded Plasma Therapy, a nonprofit that collects plasma donations from patients who have recovered from the disease to treat those who are struggling to survive. I sat down and wrote the first of two applications for the FDA. These are long documents that are required to start a study of this nature on your own, but that's how seriously I was taking this emerging pandemic. After authoring the documents, I went back to the hospital that had initially passed on the project. Once I was able to demonstrate that we had a practical plan, the hospital leadership were willing to listen and ultimately agreed to participate in the trial.

What were the initial results of the trial?

This program was a practical scientific study — it was meant to evaluate the population of patients who receive plasma without a placebo control. There has been and remains a question of efficacy, and a lot of it is about the quality of the plasma, the characteristics of the antibodies in the plasma, and the timing of administration. Early studies suggest that using it too late doesn't provide any measurable benefits but giving it early may be critical.[1]

What advice do you have for other radiologists who are interested in conducting similar investigational research?

You have to be prepared to do a mountain of work — and not take no for an answer. Since I work in private practice, I haven't had the opportunity to do much research so I did a lot of work from the ground up and had to go through the process of reinventing the wheel. This project was another job on top of an already busy career. Getting people on board took quite a bit of effort. It took a lot of convincing and demonstrating that we had the knowledge base and wherewithal to coordinate this type of project.

But I would do it all over again because I was able to contribute to the community and to local healthcare. It was not a silver bullet — but it was a point of hope to people as we continue to fight this virus. B

INTERVIEW BY MEREDITH LIDARD KLEEMAN, FREELANCE WRITER, ACR PRESS

ENDNOTE

1. Mayo Clinic Staff. Convalescent plasma therapy. Mayo Clinic. Published August 29, 2020. Accessed February 8, 2021. Access at bit.ly/Mayo-ConvalescentPlasma.

Read a story. Leave a story.

We Are ACR is available to you, your colleagues, your patients, and patient advocates to contribute uplifting stories and personal testimonials of how you're battling the effects of the pandemic. Please write a short piece, 1,000 words or less, or record a brief video to share your thoughts and action items so that your ACR community can learn more about your work. Visit acr.org/WeAreACR to share your story today.

Cost Estimation

One radiology practice gives patients access to benefits specialists ahead of scheduling imaging exams, leading to more accurate out-of-pocket cost estimates and an improved bottom line.

Pricing in medicine is a source of endless frustration for patients and for healthcare providers, including radiologists. Medical expenses are the most common cause of personal bankruptcy, so patients are right to be worried.[1] "Financial toxicity" describes the devastating effects medical bills have on patients' well-being, which may outweigh the benefits of receiving medical care. Non-adherence to treatment increases as a patient's financial burden increases, leading to poor outcomes.[2] In the last decade, a proliferation of high-deductible health plans has shifted more costs to patients. In theory, these high-deductible plans give people incentive to shop for the best deals on health services. However, reality shows that people covered by high-deductible plans instead save money by avoiding medical care.

A major reason people have difficulty price shopping in healthcare is the opaque and obscure nature of healthcare billing. Few medical practices in the U.S. list service costs in a way that patients can understand. Hospital chargemasters are price lists available by federal law since 2019, but they bear little resemblance to what a patient will be charged, what their insurer will agree to cover, or the amount that the patient will ultimately be expected to pay. A lack of transparent pricing is related to the nation's patchwork coverage by different insurance plans, which produce marked variability in the out-of-pocket amount that is left for patients to cover. Prices shift again when the issues of in- versus out-of-network status and tiered policies are considered.

Fortunately, medical practices employ experts who understand the specific benefits and services that patients are entitled to receive under their insurance policies. These benefits specialists help patients navigate the system and can offer payment plans or adjustments. However, patients are usually placed in contact with benefits specialists after being denied for services or receiving a bill that the patient considers unexpected or is unable to pay. More recently, some medical practices — including providers at our hospital, Children's Hospital of Philadelphia (CHOP) — have moved benefits specialists to the front line, allowing patients to request an accurate estimate of out-of-pocket costs for the services that their physicians recommended, paving the way for a more positive patient experience.[3] For example, patients in high-deductible plans and/or those requiring repeated advanced imaging might choose to time their appointments according to their plan's coverage year. Moreover, access to this type of planning during an inpatient visit can help patients navigate the scheduling of outpatient services, allowing families to plan accordingly.

In our hospital setting, patients can reach benefits specialists in the cost-estimation center by requesting a quote by email, phone, or through the patient's health portal. Alternatively, the services may be offered at the time of exam scheduling. In our hospital-based practice, the number of estimates provided has more than doubled in three years of service, reaching 1,737 for the most recent data year. Patients report that the cost-estimation service helps them plan for the upcoming expense, giving them more control over its impact on their budget. In some cases, patients chose our practice after appreciating the transparency of the process.

While helping patients plan their medical payments, our practice has also seen revenue losses for these exams decrease by threefold in the first year of service to sevenfold in the most recent data year. With experience, our estimates have become more accurate. Erring toward overestimation has led to the unusual situation of medical bills being smaller than expected. The cost-estimation service is especially valuable for patients and families on a fixed budget, who may find care more accessible when the out-of-pocket costs are clear and payment plans are arranged in advance.

As healthcare finance evolves to shift more burden to patients and healthcare costs continue to soar, doctors need to consider cost as an essential part of patient care.[4] Proactively providing reasonable out-of-pocket cost estimates and scheduling services to maximize patients' benefits coverage is a step in the right direction. Diagnostic radiology is well-positioned to provide these estimates; imaging exams rarely vary from the requested service, often resulting in predictable out-of-pocket costs. For practices struggling to recover from COVID-19-induced loss of outpatient volume, providing cost estimates up front may help us understand how economic distress contributes to low visit numbers.[5] Out-of-pocket costs in healthcare shouldn't be a mystery and providing the answer benefits both patients and medical practices. B

Transparent Conversations

No matter how one might define it, price transparency in imaging should be on every radiologist's radar. In an era when patients will shoulder more of the financial burden for their healthcare, radiologists must ensure that patients do not predicate their imaging decisions solely on price. Visit acr.org/price-transparency for more on how to frame these crucial conversations with patients.

ENDNOTES available in the digital edition at acr.org/bulletin

Summer L. Kaplan, MD, MS, is assistant professor of clinical radiology at CHOP and the Perelman School of Medicine at the University of Pennsylvania. Hansel J. Otero, MD, is assistant professor of radiology at CHOP and the Perelman School of Medicine.

March 2021 marks one year since the onset of the COVID-19 pandemic in the U.S. What did radiology get right and what didn't it get right?

"Radiologists quickly became leaders in telemedicine, which not only allowed for social distancing (while still providing excellent care), but also created a reserve of physicians who could be called upon in case frontline workers fell ill. In addition, radiologists throughout the country worked diligently to modify image protocols to minimize exposure to COVID-19, without compromising the diagnostic value of the studies. Though we played an important role in flattening the curve, delayed and cancelled imaging during the pandemic has had a devastating impact on our patients — particularly those who needed cancer follow-ups and screenings. The long-term effects of this delay will not be evident for some time, but we have certainly seen a drastic decrease in new cancer diagnoses and an increase in the number of patients presenting with progressive disease in the last few months."

– Hala Mazin, DO, radiology resident at Advocate Health Care and president of the Chicago Radiology Society's RFS

"COVID-19 drastically changed the practice of radiology and the experience of our patients. Some practices were better able than others to quickly adjust and implement new safety practices, supply channels, stakeholder communications, home radiologist reading stations, and innovative learning opportunities. We shared pandemic best practices in realtime, ensured high-quality patient care and patient and team safety, implemented new learning and research strategies, and made difficult decisions to adapt practices to a new normal."

– Richard E. Sharpe Jr., MD, MBA, assistant professor of radiology at Mayo Clinic Arizona

continued from page 17

subspecialists in Nepal, so RAD-AID is focusing on getting more subspecialist expertise for education. Each project is based on RAD-AID's Radiology-Readiness Assessment for best leveraging volunteers' experience to impact radiology development at the site through culturally and medically appropriate strategies. Volunteers are also carefully matched through the application process to a RAD-AID management team member for projects on interdisciplinary teams that involve physicians, nurses, RTs, IT specialists, and others. The countries partnering with RAD-AID are so diverse — radiologists and residents looking to volunteer can pretty much choose where they want to volunteer based on personal skills and interests.

How important is it to have ongoing, constant communication with people at the project sites?

It is critically important from a sustainability standpoint. When trust is established, so is open communications on follow-up issues or changes within the program. We have weekly calls within RAD-AID to catch up on what is happening in different countries to determine how we should modify, adjust, or accelerate what we are already doing there. However, RAD-AID managers do not micromanage. We assist when asked and when needed. Consistency is important, and it starts with the program manager. I have developed some really good relationships with the radiologists in Nepal. They know they can reach out to a reliable contact — someone familiar with their challenges since the onset of the site assessment.

Carlin A. Ridpath, MD, and a Nepali radiologist demonstrate an US unit at Patan Academy of Health Sciences Hospital during Ridpath's visit to Nepal in May 2018.

Would you say the future of RAD-AID is bright?

Absolutely. The younger generation has a passion for global health, and ACR may attract more young members by supporting international volunteer opportunities. RAD-AID has many different needs, across all modalities and specialties. In addition to diagnostic imaging, our programs include radiation oncology, 3D printing, nursing, medical physics, and maternal-infant health. RAD-AID aims to invest more resources in radiology professionals in the U.S. and abroad to foster greater international collaboration in charitable outreach to low-resource communities.

While some programs have slowed down during the COVID-19 pandemic and pivoted toward remote support, as the global situation becomes safer, we will be pursuing our work at full steam. B

INTERVIEW BY CHAD HUDNALL, SENIOR WRITER, ACR PRESS

ACR Bulletin (ISSN 2160-4754) is published monthly and printed bi-monthly by the American College of Radiology, 1891 Preston White Drive, Reston, VA 20191-4326.

From annual membership dues of $900, $12 is allocated to the *ACR Bulletin* annual subscription price. The subscription price for nonmembers is $90. Periodical postage paid at Reston, Va., and additional mailing offices. POSTMASTER: Send address changes to *ACR Bulletin*, 1891 Preston White Drive, Reston, VA 20191-4326 or email to membership@acr.org.

For information on how to join the College, visit www.acr.org or contact staff in membership services at membership@acr.org or 800-347-7748.

For comments, information on advertising, or reprints of the *ACR Bulletin*, contact bulletin@acr.org.

Hone Your Diagnostic Skills with ACR® AIRP® Categorical Courses

Earn CME!

As a practicing radiologist, you may have limited access to the latest skills in radiologic-pathologic correlation. Learn from top educators who will show you how the underlying pathology of a lesion relates to its imaging appearance. **Update your rad-path skills and join us virtually** for these upcoming ACR AIRP categorical courses.

Improve your diagnostic accuracy in identifying specific diseases, treatment and potential complications.

Musculoskeletal Imaging
March 22–25, 2021

This course covers the vast majority of musculoskeletal diseases, including trauma, neoplasm, infection, arthritis and internal derangement, metabolic, systemic and congenital abnormalities.

Neuroradiology Imaging
March 29–April 1, 2021

This course provides a comprehensive review of neuroradiology, including spine, head and neck imaging.

Thoracic and Cardiovascular Imaging
April 1–2 and 5–7, 2021

This course is designed to illustrate basic concepts and radiologic-pathologic correlation in chest imaging in order to enhance practitioner knowledge and skills.

airp.org | 1·800·373·2204 |

Accreditation Statement for Physicians
The American College of Radiology is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Designation Statement for Physicians
These AIRP activities have been approved for *AMA PRA Category 1 Credit™*.

For information about the accreditation of this program, please contact the ACR at info@acr.org.

Courses are provided by the American Institute for Radiologic Pathology, an affiliate of the American College of Radiology®.

ACR® AMERICAN COLLEGE OF RADIOLOGY

AIRP® AMERICAN INSTITUTE FOR RADIOLOGIC PATHOLOGY

03.21

Challenge Yourself at the

VIRTUAL MICRO-COURSES

ACR EDUCATION CENTER™

Explore available courses at acr.org/micro-courses