ACR LEADERSHIP | INTEGRITY | QUALITY | INNOVATION AUGUST 2021 I VOL. 76 I NO. 8

Bulletin

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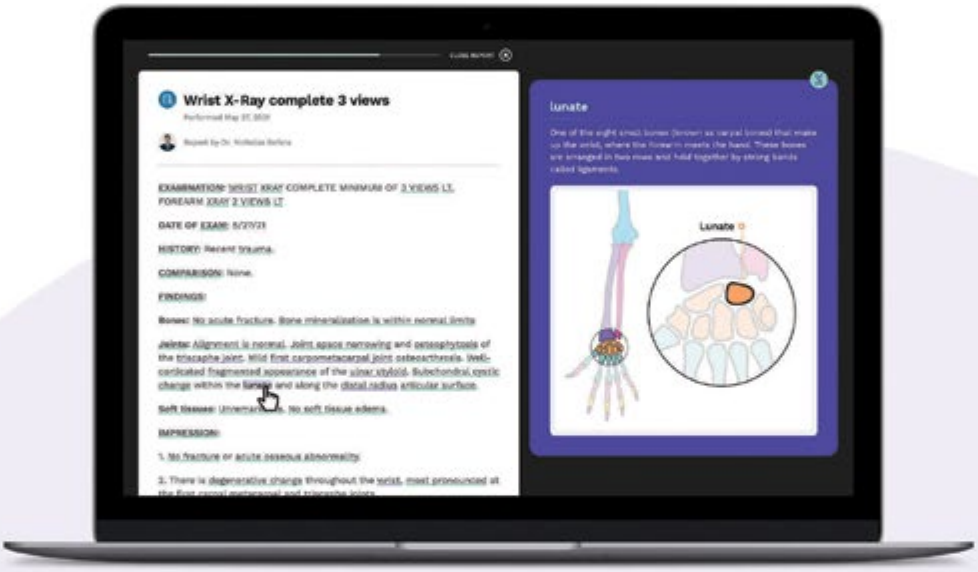

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ALSO INSIDE

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.

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

Scope of Practice

Patients are best served when services are delivered by those physicians and physician-led teams most qualified to deliver quality care and provide for patient safety.

Scope of practice issues and legislation have catapulted to the forefront of medicine. Although the impact is considered more immediate in other specialties, the potential for non-physician radiology providers (NPRPs) to play a larger role in the radiology workforce and limit or replace MD/DO positions is very real and has become a focal point of debate within the Council and the College at large.

Scope of practice regulations and licensure are mostly addressed at the state level because state laws and licensure boards define the legal scopes of practice. In some states, there is a single licensing board. In others, physician assistants (PAs) and/or nurse practitioners (NPs) are governed by separate and independent boards.

Along with other arguments, there has been a long-standing claim by NP and PA advocates that the healthcare system cannot adequately address workforce issues, especially in the context of the Affordable Care Act. Hence, NP and most recently PA organizations are lobbying for independent practice. Given the healthcare crisis brought on by COVID-19, many states and even the VA suspended scope of practice limitations to provide for the immediate care demands of their constituents. For instance, New York Governor Andrew M. Cuomo issued an executive order in March 2020 that eliminated the requirement for NP/PA oversight in that state.[1]

Historically, NPs have lobbied to expand scope of practice definitions for their colleagues. Often citing the Future of Nursing Institute of Medicine report from 2010, NPs insist that states must remove barriers to care by eliminating the need for physician supervision.[2] Recently, national organizations representing PAs have also joined in the debate and are lobbying for more independence. For instance, the American Academy of PAs argued that scope of practice for PAs should not be determined by states but by individual facilities or practices.[3]

Physician-led organizations have been increasingly active in opposing scope of practice expansion for non-physician providers — especially the AMA, which hosts the Scope of Practice Partnership, a coalition of state medical societies and specialty organizations, including the ACR. This coalition has been supporting state medical societies through lobbying CMS, providing grants to fund scope of practice advocacy and campaigns, creating tools and databases, working with the Federal Trade Commission and administrations, and communicating directly with patients (for example, the "Truth in Advertising" campaign). Most recently, the AMA dedicated resources to oppose the American Academy of Physician Assistants' decision to change the professional title of organization members from physician assistant to physician associate.[4]

The ACR believes that patients are best served when services are delivered by those physicians and physician-led teams most qualified to deliver quality care and provide for patient safety.

The ACR believes that patients are best served when services are delivered by those physicians and physician-led teams most qualified to deliver quality care and provide for patient safety. The College has been actively involved in scope of practice issues through its government relations office. This issue is of critical importance to radiology for numerous reasons. Based on recent surveys of ACR members done by the Commission on Human Resources, 40–50% of radiology practices currently employ, or intend to employ, NPRPs.[5] The specialty is also facing critical shortages in its workforce as demands for imaging continue to expand. In addition, potential pressures from healthcare systems and investor-led practices to eliminate costs are perceived by some ACR members, especially early career radiologists, to be a threat to their job prospects. The ACR is actively monitoring legislative initiatives and working with state chapters to lobby against scope of practice creep in radiology.[6] Many examples can be found on the ACR's scope of practice page at acr.org/scope-of-practice.

Some specialties have developed novel approaches to the scope of practice issue. For instance, anesthesiology has been facing mounting pressure for practice independence by the certified registered nurse anesthetists. In addition, the "doctor of nurse anesthesia practice" degree further confuses patients and blurs the lines of practice qualifications.[7] Nurse anesthetists are also promoting the use of the title "nurse anesthesiologist." In their response to this move, the American Society of

continued on page 22

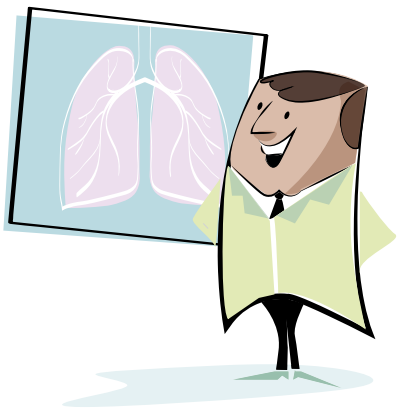
To protect patient access to safe, high-quality care, the ACR tracked and acted on hundreds of bills nationwide in 2020 and 2021 — including those regarding scope of practice. The ACR works with our state chapters to advocate at the legislative, regulatory, and administrative levels for clear, sensible definition of scope for allied health professionals. Learn more at acr.org/scope-of-practice.

Register Now:
Lung Cancer Screening Webinar Series

Join the American Cancer Society National Lung Cancer Roundtable (NLCRT) for a monthly Lung Cancer Screening (LCS) Webinar Series, to narrow the knowledge gaps regarding the new LCS eligibility criteria from the U.S. Preventive Services Task Force. The series is held in partnership with the ACR, the American Academy of Family Physicians, the American Thoracic Society, and the American College of Chest Physicians. The series will run through Nov. 17, and will feature perspectives from key stakeholder groups, including patients, primary care physicians, pulmonologists, radiologists, epidemiologists, and behavioral scientists.

The August 25 session, taking place from noon–1:00 p.m. ET, will look at the role of the primary care provider and nurse navigator in LCS and explore the following topics:

- LCS as a Vehicle to Save Lives and Advance Better Health for Eligible Individuals
- The Assessment of Eligibility for Screening
- Quality SDM and Tobacco Cessation Counseling in Brief Clinical Encounters: Best Practices
- Updated AAFP Recommendations
- Lung Cancer and the Primary Care Provider CME (LuCa)



Register now at acr.org/LCS-Series.

ACR Opposes Name Change for PAs

The ACR has released a statement opposing the American Academy of Physician Assistants' (AAPA) decision to change the professional title of organization members from physician assistant (PA) to physician associate. According to the statement, the physician assistant title accurately reflects the training of these professionals and their role in any physician-led team, and any change would lead to confusion among patients as they make important healthcare choices.

Radiologists are uniquely trained and qualified — even among physicians — to provide radiologic care. The ACR actively opposes supervision or interpretation of radiological exams or procedures by non-physician providers. The ACR continues to work with the Intersociety Commission for the Radiologist Assistant regarding the role and training of the registered radiologist assistant (RRA) — which has a strict prohibition on imaging interpretation and independent practice.

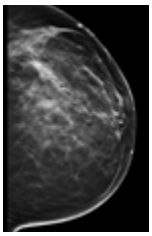
The AMA and the American Osteopathic Association have also opposed the AAPA's rebranding effort, expressing similar concern over potential for confusion and increased patient risk. The ACR will work with other physician specialties on legislation and regulations to ensure that patients receive the highest quality care from physician-led healthcare teams.

To read the ACR's full statement, visit acr.org/Statement-PA.

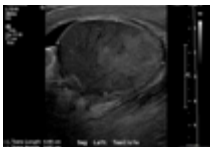
Discover the Best of Case in Point®

Case in Point® (CiP) gives radiologists the opportunity each weekday to work through a subspecialty case developed by a community of residents, their mentors, and expert subspecialty editors. Each case affords participants the opportunity to determine the differential diagnosis, make conclusions, review images, and solidify their knowledge of both unique and important diagnoses — all while earning CME.

Each month, the CiP team sifts through thousands of reviews by the CiP community to find the best cases. In case you missed them, review the most notable cases this year so far at acr.org/CiP-CaseoftheMonth.

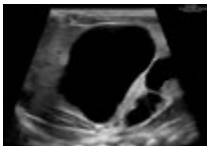


January
A 49-year-old woman presents with a new palpable left-breast lump in an area in which she has a three-year history of chronic intense pain and point tenderness. Review at acr.org/CiP-Jan21.



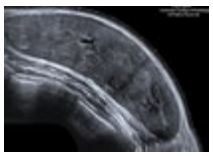
February
A 74-year-old man presents with acute left side inguinal and scrotal pain one week after a left inguinal hernia repair. Review at acr.org/CiP-Feb21.

March
A 36-month-old girl presents with a two-day history of intermittent left lower quadrant pain. Review at acr.org/CiP-March21.



April
A 1-day-old infant girl presents with a history of hydronephrosis found on prenatal US. Review at acr.org/CiP-April21.

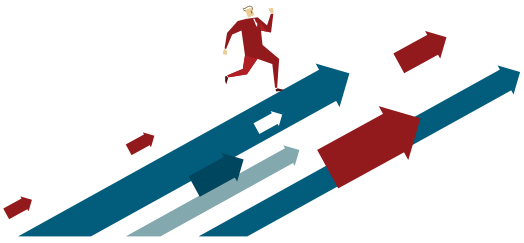
May
A 1-day-old boy presents with bilious vomiting. Review at acr.org/CiP-May21.



June
A 21-year-old woman presents with a 6-month history of an enlarging, painless left breast mass. Review at acr.org/CiP-June21.

For more CiP content and to search for a case by subspecialty, visit the case archive at acr.org/CiP-CaseArchive. To submit a case suggestion, visit acr.org/CiP-Submit.

> **Trade-offs are ubiquitous in business, and practice size is no different. Some of the very characteristics that provide advantage for larger practices result in consequences favoring smaller groups.**
>
> — FRANK J. LEXA, MD, MBA, FACR, AND LAUREN P. GOLDING, MD (READ MORE AT JACR.ORG)



RLI Podcast: Leading for Access

The Radiology Leadership Institute® (RLI) Taking the Lead podcast explores the challenges that transform everyday radiologists into today's leaders. In a recent episode, Amy K. Patel, MD, breast radiologist, 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, discusses her mission to empower women to take charge of their breast health. In this inspiring conversation, you'll learn why Patel decided to go to medical school, when she fell in love with breast radiology, and what inspired her to return to practice and serve the community where she grew up.

Listen at acr.org/RLIPodcast.

ACR CAC Network Meeting Reflects on Local Coverage Activities

The ACR Contractor Advisory Committee (CAC) Network held its annual meeting on June 8 to discuss local Medicare coverage activities. The virtual meeting was led by Sammy Chu, MD, FACR, chair of the ACR CAC Network. The meeting included CAC representatives and alternates from each of the seven CMS Medicare Administrative Contractor (MAC) jurisdictions.

The meeting highlighted 2020–2021 local coverage policies, issues in radiation oncology, local coverage successes and challenges, and an open forum about CAC meetings and engagement with contractor medical directors throughout the year. There have been more than 15 local coverage determinations (LCDs) and 30 local coverage billing and coding articles that impact radiologists. Many of the topics have focused on spine interventions, allowing the ACR and designated CAC representatives to work with spine intervention societies and experts to ensure fair reimbursement policies. The ACR CAC Network leadership is concerned that CMS is minimizing the role of the CAC by contributing to a lack of transparency in the selection of clinical topics and subject matter experts before the release of draft LCD policy to the public. Many of the LCDs and CAC meetings have crossed multiple MAC jurisdictions, leading to more national coverage discussions on local and regional matters.

The ACR CAC Network is committed to identifying, reviewing, and commenting on draft LCDs, Medicare issues, and Medicare reform initiatives, and the ACR has dedicated physician volunteers and staff to prioritize local and national coverage requests. The CAC Network helps assure that the ACR has a community dedicated to the radiologist's best interest and advocates for the implementation of appropriate policies. If interested in joining the CAC Network or learning more about its goals and priorities, please email Alicia Blakey at ablakey@acr.org.

NOTICE:

Changes to 2022 Membership Dues Grace Period

The ACR would like to call members' attention to the following change for the 2022 membership year, which begins Jan. 1, 2022.

The grace period to renew your 2022 ACR membership will end on March 31, 2022. This will give you three months after your 2021 membership expires on Dec. 31, 2021, to pay your membership dues before losing access to member benefits, including member-only resources and the ability to complete and claim online CME for ACR activities for the 2022 calendar year.

For more information, please contact membership services staff at membership@acr.org.

Don't Miss the ACR's Virtual Career Fair

The ACR Career Center is one of the ACR's more popular benefits and has become the go-to place for hundreds of radiology physicians, medical physicists, and experienced AI professionals who are actively engaged in job seeking at any given time. This month, the Career Center is providing a unique opportunity to bring job seekers and employers together by hosting the 2nd Annual ACR Virtual Career Fair. This online event, which takes place Aug. 11 from 3:00–6:00 p.m. ET, will connect employers with talented ACR members in search of new career opportunities.

For more information, visit acr.org/careerfair.

Leading for Well-Being

Not enough time. Too many meetings and red tape. Unrelenting pressure. The system. Work volume.

Shared anonymously from radiologists around the country, these are just some of the concerns that lead to burnout, preventing radiologists from being the physician they set out to be. Most of these issues can be addressed by leaders who listen to their teams and recognize the value of change.

The next phase of the ACR Radiology Well-Being Program (acr.org/WBI) is focused on these leaders and the changes they initiate to improve the well-being of their colleagues. Whether that's making an EHR task easier to accomplish, providing more academic time to grow as a physician, or simply better recognizing staff members for their service, small changes can make a big impact.

The ACR wants to recognize you — the leaders who are making a difference — in a special series of case studies. We're looking for practice managers, department chairs, and team leaders who have made a change — big or small — in addressing one of the common concerns of radiologists: 1) Workload and pressure related to meeting the rapid pace and volume of work, or 2) A lack of balance and support or poor work-life integration.

Sharing your experience can help the entire radiology community and promote your innovative perspective (and your practice). For more information, or to submit your well-being initiative to be considered for a case study, visit **acr.org/WBCaseIdeas.**

Being Well Together

Register for the RLI's Leadership Essentials Program

The Radiology Leadership Institute® (RLI) Leadership Essentials Program offers interactive education that equips residents and fellows with foundational leadership and non-interpretive skills needed to maximize their potential post-residency. Eight topics will be covered between September and December of 2021. Two topics will be covered every month with live Q&A sessions occurring at noon ET on the first and third Wednesday of each month.

During this comprehensive program, residents will:

- Learn from radiology's most notable educators and influencers.
- Hone skills in relevant topic areas including personal finance, mentorship, rookie leadership, and effective communications.
- Work at their own pace.
- Supplement their clinical concentrations with career and leadership training.

Upon completion, participants will walk away with newly found skills needed to succeed in today's modern healthcare environment.

Pricing is set at $125 per resident/fellow. A 20% discount applies for programs with five or more registered participants. To register multiple participants, please email mmcgraw@acr.org.

Learn more at acr.org/RLI.

Radiologist Characteristics Predict Performance in Screening Mammography

According to a new study by the Harvey L. Neiman Health Policy Institute® and the ACR's National Mammography Database Committee, the most influential radiologist characteristics impacting mammography interpretive performance were geography, breast subspecialization, performance of diagnostic mammography, and performance of diagnostic US. Published in *Radiology*, the study analyzed 11 years of screening mammography performance metrics from the National Mammography Database and found that radiologists in the West or Midwest, breast subspecialists, and those who perform diagnostic mammography were more likely to achieve acceptable performance across a range of metrics. Those who perform breast US were less likely to achieve acceptable performance across metrics.

"Most mammograms performed in the U.S. are interpreted by general radiologists and not by breast subspecialty radiologists, who account for less than 10% of all radiologists," says Andrew B. Rosenkrantz, MD, MPA, lead study author, professor and director of health policy in the department of radiology at NYU Grossman School of Medicine and a Neiman Institute senior affiliate research fellow. "As the U.S. population ages and greater numbers of women comply with screening guidelines, the demand for all radiologists to interpret screening mammograms is anticipated to increase."

To view the full study, visit bit.ly/HPI_RadChar.

> **Gathering a larger data set of images related to COVID-19 and to other medical challenges allows radiologists to share and pool their knowledge. This can lead to better patient care. I believe this has never been more important.**
>
> — KENNETH TOMKOVICH, MD

Gregory N. Nicola, MD, FACR

Advocating for Appropriate Valuation

Melissa M. Chen, MD

American Society of Neuroradiology Advisor to the RUC and chair of the ACR Commission on Patient- and Family-Centered Care Economics Committee

Guest Columnist

The knowledge of how the RUC identifies potentially misvalued codes is important in understanding and anticipating which codes may be flagged for revaluation in the future.

Advances in medicine, such as use of endovascular therapy for treatment of acute ischemic stroke, have dramatically changed outcomes for patients with improved morbidity and mortality. Diagnostic imaging exams, such as CT angiogram head and CT angiogram neck, play a central role in promptly triaging these patients for appropriate care — improving the value radiologists provide to patients. Unfortunately, an unintended consequence of this change in practice could result in the code being identified as potentially misvalued by the AMA/Specialty Society RVS Update Committee (RUC).

Many are familiar with the work that the RUC undertakes in the valuation of new CPT® codes and revaluation of procedures we perform as physicians. A process less familiar is how the RUC identifies what it terms potentially misvalued codes. The knowledge of this process is important in understanding and anticipating which codes may be flagged for revaluation in the future.

In response to criticism from the Medicare Payment Advisory Commission and the U.S. Government Accountability Office, the RUC established a workgroup called the Five-Year Identification Workgroup in 2006 — since renamed the Relativity Assessment Workgroup (RAW). The RAW was charged with identifying potentially misvalued services. The work of this group was further catalyzed by the Patient Protection and Affordable Care Act of 2010, which required the Secretary of Health and Human Services to "periodically identify services as being potentially misvalued," and stated that the Secretary may consolidate "individual codes into bundled codes for payment."[1]

The RAW and CMS developed criteria for identifying potentially misvalued services, such as new technology screens, site-of-service anomalies, or high growth. One of these criteria includes a screen to find "reported together" services. When services are performed together, CMS and the RUC believe that resource efficiencies gained may have impact on the valuation, or relative value unit (RVU). When the screen was initially created, services performed by the same physician on the same date of service were bundled under the same CPT code 95% of the time. This 95% threshold resulted in the deletion of 31 individual codes and the creation of 53 new codes that described the bundle of services.[2]

One radiology exam impacted by this screen was CT abdomen/pelvis. Previously, CT abdomen and CT pelvis were separate CPT codes, reportable as six different codes depending on the absence and/or presence of IV contrast. The CPT Editorial Panel restructured the "family of codes," when exams are reported together, to three separate codes: CT abdomen/pelvis without IV contrast, CT abdomen/pelvis with IV contrast, and CT abdomen/pelvis without and with IV contrast. CT abdomen and CT pelvis codes are available when performed alone.

The CT abdomen/pelvis code family was subsequently revalued in the RUC process and resulted in an overall decrease in valuation. As an example, the professional RVU for CT abdomen/pelvis with IV contrast is 27% less than it was when it was previously reported as two separate CPT codes.[3]

In February 2010, the RAW lowered the threshold to services that reported 75% or more together. Since then, the RAW has performed five cycles of analysis of code pairs reported together using the 75% threshold. The last cycle started in October 2017, and the RUC submitted its recommendations for the 2020 and 2021 Medicare Physician Fee Schedule. Many IR codes were captured in the "reported together" screens and were subsequently bundled together, resulting in downward revisions in reimbursement.

CT angiogram head and CT angiogram neck are two separate CPT codes, not previously identified on "reported together" screens because this practice did not meet the 75% threshold at the time of the last screen in 2017. However, now these exams are commonly being ordered together in large volumes to appropriately triage stroke patients and will likely meet or exceed the 75% threshold. This would trigger the codes to be revised by the CPT Editorial Panel — to be bundled together and then revalued by the RUC. While this has not yet occurred, we anticipate it may happen soon.

The work of the ACR Commission on Economics, in concert with the RUC and CPT teams, will remain important to advocate for appropriate valuation of the valuable work we do as radiologists. B

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

Doing It All

General and multispecialty radiologists need more training, not labels.

Robert S. Pyatt Jr., MD, FACR, who practices in rural Chambersburg, Pa., and chairs the ACR Commission on General, Small, Emergency and/or Rural Practice (GSER), led a task force charged with evaluating current and future radiology practice skillsets as they relate to general radiology and subspecialization. The *Bulletin* spoke with Pyatt to discuss the findings of the task force — including a disconnect between the skills of radiology residency program graduates, the needs of the current workforce, and the delivery of top-notch and accessible patient care.

What were some of the task force's findings about labels within the profession?

It is all over the map. You have emergency radiologists who do everything, and pediatric radiologists who are very subspecialized in their work. Someone might be a body imager, but they may also do mammography or read neuro-MRI.

Where did the task force go from there?

The task force decided that what we were looking at were not job titles, but rather job descriptors. We looked at the actual performance on the job, and we found that most radiologists work outside of their subspecialty. This creates some problems, especially with newly graduated fellows and residents, who are not always getting the procedural skills they need. It is really unbelievable to have body imagers, for example, who don't know how to do a paracentesis.

What problems can the absence of certain procedural skills create?

Graduates are finishing their fellowships thinking, "Oh, I'm just going to be reading body imaging, right?" Then they get out there and the reality is that their practice might include doing a paracentesis, reading some mammograms, or doing some nuclear medicine.

One of the themes identified by the task force was a need to address this gap in learning between increasing subspecialization and the needs of a workforce that can work across subspecialties. The gap is widening. This was evident when numerous members of the task force reported challenges with finding radiologists comfortable performing the necessary procedures. For example, there's an increasing need for diagnostic radiologists to be able to do some basic IR procedures.

Within my own group practice, some of the newer people have needed training on how to do breast, stereotactic, or thyroid biopsies. They don't know how to do these procedures, and some of them have no interest in learning. For the bigger academic groups in urban areas, where the density of radiologists is greater, this is not so much of an issue. But in smaller communities — suburban areas and out in the rural areas where I am — it is harder to recruit people. Radiologists might not want to have to do a slew of different procedures. Plus, at the moment, there are plenty of jobs to choose from, which can lead to unfilled patient needs in smaller and rural communities.

What can be done about closing the gap?

To close the gap, we need to improve how we train residents and fellows. We need to broaden their skills, which will make them more valuable to the workforce and give them a broader spectrum of practices that match their desired career. Some of them don't want to widen the scope of their practice. For those who do — they can learn more from the ACR's Education Center.

Part of our recommendations revolve around improving data collection — more access to data, improvements in how we report it, and strategy around what we do with it. The ACR can also convene groups like the Association of Program Directors in Radiology (APDR) and the Society of Chairs of Academic Radiology Departments (SCARD) to work with the GSER Commission and other groups to discuss these issues and determine how we can modify training programs. This is a specialty-wide issue and we'll need to work together.

How does a lack of general or expanded training affect hiring practices?

Instead of going job hunting in the fall of their last year, radiologists-in-training should probably start job hunting a year earlier. When you get to them earlier, they can ask, "What can I take in my final year to be more valuable to your practice?" This can change how people are hiring and get to the heart of this lack of general knowledge.

Are other specialties facing similar challenges with training and identifying what new physicians will actually need to do on the job?

This concept of having residents and fellows more tightly linked with their future jobs in terms of customizing their final training — it's also happening in the field of urology. Studies have found that urologists are graduating from training programs who do not meet the needs of the marketplace. Radiology is not alone in that a gap exists between the content of the training programs and the needs of the workforce.

INTERVIEW BY CHAD HUDNALL, SENIOR WRITER, ACR PRESS

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Radiologist Assistants are the non-physician providers you shouldn't worry about.

There has been a lot of confusion over the scope of practice and reimbursement of non-physician radiology providers (NPRPs). "Much ire is being wrongly directed toward registered radiologist assistants (RRAs or RAs), whose role is invaluable to us," according to Catherine J. Everett, MD, MBA, FACR, president and managing partner of Coastal Radiology Associates, PLLC, and a member of the ACR BOC. "People are lashing out at the wrong group of providers."

The RA's role is fundamentally different from that of a physician assistant (PA) or a nurse practitioner (NP), for instance, based on their background as an RT and their two years of additional education, says Paul A. Larson, MD, FACR, president of the American Registry of Radiologic Technologists (ARRT) Board of Trustees.

"An RA must work under the supervision of a radiologist and may not interpret imaging studies or prescribe medications or therapies," Larson explains. "In contrast, PAs and NPs may work with physicians of any specialty and are increasingly obtaining greater independence from physicians — which may include performing, supervising, or interpreting medical imaging."

RAs are trained through university-based radiologist assistant programs and are certified by the ARRT. In addition to being certified and registered in radiography by the ARRT, candidates must have earned a minimum of a bachelor's degree (most have a master's degree) from an accredited educational institution and must complete a preceptorship in which a radiologist mentors the candidate and oversees their clinical education.

Radiologist-Led Teams

"This is the one NPRP group with which we have had continuous positive relations," says ACR CEO William T. Thorwarth Jr., MD, FACR. "The distinction between RAs and other so-called non-physician extenders is something our members need to acknowledge and appreciate."

Thorwarth says, "They are purposely named 'radiologist assistants' (as opposed to any other name) by design of the organizations representing them. RAs have no intent to practice independently of radiologists — as other NPRPs are attempting — and have been consistent in acknowledging that they should not interpret studies (preliminary, final, or otherwise)." He adds, "There needs to be a mental unlinking of RAs from other NPRPs who are progressively pushing for independent practice."

"Some radiologists are definitely uninformed about RAs and may have fears based on misinformation," says Michael Odgren, BS, RPA, RRA, RT(R)(CT), a registered radiologist assistant with Diversified Radiology of Colorado, P.C., and board chair of the American Society of Radiologic Technologists (ASRT). "Recent efforts by other mid-level providers to seek independent practice have fueled that fear."

"We hear a lot about the radiologist-led team," Thorwarth says. "We have to understand that a team evolves over time, and our own surveys have shown that up to 50% of radiology practices employ some sort of non-physician radiology providers or extenders."

While radiologists are leading these teams, reimbursement to radiologists who employ RRAs has lagged behind the real world. "The challenge from day one has been an inability to establish a reimbursement mechanism to the supervising radiologists of RAs for the care in which they participate — despite decades of work with CMS and Congress," Thorwarth says. "RAs don't currently provide a CMS reimbursable service. RA patient care needs a fair and proper route to reimbursement."

MARCA Movement

The Medicare Access to Radiology Care Act (MARCA) was reintroduced earlier this summer at the urging of ASRT, ARRT, and other stakeholders. The legislation would provide reimbursement to radiologists for work performed by RAs as part of a radiologist-led team. The legislative language excludes

payment for any independent work by RAs or services provided by any other supervising physician or specialty. "MARCA does not provide for, nor support, independent practice by RRAs or any other NPRP," emphasizes Howard B. Fleishon, MD, MMM, FACR, chair of the ACR BOC.

"We believe MARCA would ensure that only a radiologist could bill for those procedures performed by an RA," Odgren says. "It would keep the practice of radiology within radiology teams. It would keep those practices under a radiologist's control."

"MARCA is not about RA salaries," Odgren emphasizes. "The real issue is allowing radiologists the ability to bill CMS for services provided by their RAs. It is also about the survival of the RA profession as part of the radiologist-led team. We want to keep this as a viable career pathway for RTs who are looking to advance their careers and expand their knowledge."

Perilous Times

Current Medicare billing restrictions are leading radiologists to preferentially hire PAs and NPs — who can bill directly for their work, "despite those practitioners having little if any specific training in imaging procedures," Larson says.

In addition, PAs and NPs can take what they learn in a radiology practice and work for other physicians, Larson says. "They are increasingly obtaining greater independence from physicians. This is limiting the job market for RAs and decreasing the number of RA educational programs and students," he adds.

"We have to keep RA programs open and keep these folks working," Everett says. "When half of radiology practices are using extenders — and the majority of them are PAs and NPs — it is a problem."

"Number one, you have to train them because they have no radiology training," Everett says. "Number two, they don't have to work for the radiologist. They can go work for a neurosurgeon or they can work for an orthopedic surgeon, or even independently in many states."

"High-quality RTs just don't want to leave their jobs and invest the time and effort to become RAs when they hear this sort of thing. Our practice keeps our RAs knowing that there may not be a lot more available anytime soon. They know so much and can handle so many things for patients," Everett says. "The ACR has a responsibility to educate its members about the important work of RAs."

The RA position was born of a partnership between the ACR, the ASRT, and the ARRT back in 2003 to ensure there is a radiologist-specific mid-level provider. From the outset, the role came with safeguards to ensure control of practice and maintain radiologists' responsibility for billing.

"The major concern and hesitation I have heard from RTs who are considering becoming an RA is the limited job market," Odgren says. "I have personally heard from many RTs who say their radiologists would love to have an RA if the radiologists could bill CMS for the RA services," he says. Instead, there are practices who hire and train other NPRPs without radiology-specific backgrounds. "Even worse, they can seek to practice independently, essentially siphoning off business from a radiology practice," Odgren says.

Collaborative Commitment

The ACR, the ARRT, and the ASRT continue to work together to ensure consistency in education, scope of practice, and certification standards for RAs. The Society of Radiology Physician Extenders (SRPE) has also joined these efforts as an organization advancing continuing education and professional development for RAs. These groups stand openly and emphatically against attempts of non-physician organizations, including PAs and NPs, to expand their members' scope of practice in radiology.

"The distinction between RAs and other so-called non-radiology physician extenders is something our members need to acknowledge."

ACR CEO William T. Thorwarth Jr., MD, FACR

"The ARRT, the ASRT, and the SRPE have been consistent, good faith collaborators with us in designing the RA as a profession," Thorwarth says. "They have looked to the College for input every step of the way to define what radiologists are comfortable having RAs do. That collaboration underlies three principles — that they work only for radiologists, they don't interpret studies, and are not actively seeking to practice independently."

"We have these long-term collaborators, but we've been challenged by the ability to implement an appropriate payment mechanism for services provided with RRA contribution," Thorwarth says. "If one accepts the fact that non-physician providers are going to be employed by radiology practices — and many of our members have made that decision — then our focus must be on the type of provider who is best qualified to provide the highest standard of care." B

BY CHAD HUDNALL, SENIOR WRITER, ACR PRESS

Reaching Milestones

The RLI is helping residents ace part of their ACGME-required core competencies with blended, interactive learning from the best in the field.

It is no surprise that radiology residents want a learning experience that goes beyond reading articles and listening to didactic lectures. They want deeper learning and more comprehensive understanding of key healthcare economics concepts to better prepare them as they move forward in their careers. That's why the Radiology Leadership Institute® (RLI) Resident Milestones Program: Economics and the Physician Role in Health Care Systems provides a unique, interactive experience for residents to deepen their knowledge of a rapidly changing radiology healthcare economics landscape — and at the same time, helps satisfy the Accreditation Council for Graduate Medical Education's (ACGME) Physician Role in Health Care Systems sub competency (part of the Systems-Based Practice competency).

The program, developed by the RLI in concert with healthcare economics experts and residency program directors, brings together nationally recognized professionals and seasoned practitioners to provide residents with a state-of-the-art, modern educational experience. The *Bulletin* spoke with Harprit S. Bedi, MD, vice chair for education in radiology at Boston Medical Center; Ryan K. Lee, MD, MBA, chair of radiology at Einstein Healthcare Network and associate professor at the Sydney Kimmel College at Thomas Jefferson University; and Melissa M. Chen, MD, assistant professor at MD Anderson Cancer Center and associate executive director for the MD Anderson Cancer Network, about what the RLI program has to offer residency programs — and why it's unlike anything else of its kind.

How did the RLI Resident Milestones Program come to fruition?

HB: In 2014, we realized that many small and medium-sized radiology programs did not have the healthcare economics subject matter experts to sufficiently teach this content to their residents. Larger programs were querying their local business schools to get someone to teach healthcare economics (which can be an expensive endeavor), but the RLI had actual radiologists who were subject matter experts in this space.

MC: The initial goal was to put together a curriculum to address the healthcare economics milestones that the ACGME requires — and the program keeps up with changes to the ever-shifting medical economics landscape. When the ACGME updated the competencies in 2019, we expanded the program to cover the addition of new content that focuses on the broader healthcare system. The program design really focuses on active learning by encouraging residents to actively participate in a local activity/exercise, such as trying to figure out how reimbursement works at their own hospital or in their own health system.

How is the program structured?

HB: Many educational practices in medicine are sort of old-fashioned, with a lot of lecturing and people listening. I'm much more interested in active learning — looking at modern learning theory using blended and interactive learning to facilitate long-term retention. I wanted to create a curriculum based on this philosophy.

Given the success of the 2015 pilot program, the RLI and the program faculty built on the overall design and expanded the program to cover all five levels of the Health Care Economics sub competency (now referred to as the Physician Role in Health Care Systems). During each level, residents complete four interactive components to ensure a deep learning and comprehensive understanding of the content.

The first component is pre/self-directed learning which allows participants the opportunity to do some learning on their own. Residents are introduced to the main concepts through a series of pre-recorded lectures and articles, to be studied on their own schedule. For the second component, residents build on the pre-learning and work together at their home institution to

Register for the 2021 RLI Summit

This year's Radiology Leadership Institute® (RLI) Summit will focus on radiology leadership in the healthcare ecosystem. During this two-day virtual event, which will take place Sept. 10–11, participants will discover how to bolster their place in the healthcare value chain among contributors, collaborators, and competitors. They will also have a chance to put their ecosystem learnings into practice during hands-on breakout sessions and an interactive case study review with peers.

2021 RLI Summit participants will:

- Describe examples of ecosystems.
- Discuss the concepts of ecosystems and how they relate to business competition in radiology.
- Identify how uncertainty/change can impact the understanding of business environments.
- Review case studies as examples to discuss issues around a changing business environment.

At the conclusion of the Summit, participants will come away with a list of all the entities in their healthcare ecosystem, a diagram that shows the core interconnections within their ecosystem, and a better understanding of the major shifts in key relationships reflected in their ecosystem — including power dynamics, key influencers and alliances, and strategic partnerships.

To register for the 2021 RLI Summit, visit acr.org/RLISummit.

participate in a local activity and small group discussions. The whole point is to learn by doing. You can read and listen but now you're required to gather data and reinforce your knowledge by applying it within your practice setting.

The third component is the cross-institutional live group webinars. The residents at each participating institution give a five-minute presentation to share the results of their local activity, which affords them the opportunity to learn how reimbursement and processes differ depending on type, size, and location of institution. Facilitated by the RLI faculty, the webinars also provide a chance for in-depth discussion and the opportunity to ask questions of the experts.

For the fourth and final component, residents complete an assessment at the end of each level, to reinforce learning and ensure knowledge retention.

How is the program unique?

RL: Many radiology residents get relatively little exposure to healthcare economics in their training. When I was a radiology resident many years ago, there was no curriculum at all for these topics. The ACGME has now incorporated milestones for healthcare economics as part of the radiology residency education, however most programs do not have the resources and are not equipped to teach this material as comprehensively as the RLI Resident Milestones Program does.

MC: The residents are coming away from this course better prepared to engage in the real world than I think I was when I graduated from residency. I don't think I had nearly as good of an understanding as they do.

What I am most excited about is how the material reflects what is currently happening in the reimbursement world. In looking at the presentations that the residents put together, it's really apparent that they've taken the knowledge from the course and then applied it to pretty big concepts. It's not just that they can tell you how radiologists are paid — they can actually see the implications for where healthcare is headed in the future, what we should be doing to anticipate those changes, and how we can adapt our practices to these potential changes. B

INTERVIEWS BY CARY CORYELL, PUBLICATIONS SPECIALIST, ACR PRESS

Register for the RLI Resident Milestones Program

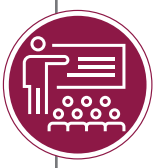
The RLI Resident Milestones Program focuses on collaborative and active learning, with a specific curriculum developed to take residents' learning experience to the next level — leaving them better prepared to effectively apply what they learn as they move forward in their careers. The price for the program is $200 per resident with a minimum of four residents per program. The ACR is committed to offering top-quality yet affordable training to residents and is supporting this program to help ensure the next generation of radiologists are prepared to enter the field of radiology.

To register your residency program, visit bit.ly/RLIMilestones_Register. For questions, email Melanie McGraw at mmcgraw@acr.org.

The RLI Resident Milestones Program

The program is organized into five blocks. During each block, residents complete four interactive components to ensure a deep learning and comprehensive understanding of the topics and their practical application in today's radiology reality.

Pre/Self-Directed Learning:
Residents are introduced to the topic through a series of self-paced activities such as videos, articles, and related content to be studied on their own schedule.



Local Activity and Small Group Learning:
Building on the pre-learning, residents work together at their home institution to participate in a local activity and small group discussions led by local faculty who help the residents gain a deeper understanding of the topic and its application in today's health care market. Residents from each program then prepare a deliverable based on the information and data gathered during the activity.

Cross-Institutional Live Group Webinars:
Residents present their deliverable in a cross-institutional webinar with 4–5 other programs. Facilitated by an RLI subject matter expert, an in-depth discussion follows to ensure that residents understand the topic as well as its relevance to practice.

Assessments:
Assessments will be done at the end of each block to measure competency and participation of each resident to provide the maximum value to each program that participates.

Reducing Variability in Imaging Reports

The ACR RADS provide a standardized framework to report imaging findings and make recommendations.

Matthew S. Davenport, MD

The RADS programs have been effective, in part, because they have been developed by teams of focused, highly-motivated volunteers functioning in a nimble committee structure.

The ACR Reporting and Data Systems (RADS) provide a standardized framework to report imaging findings and make recommendations. The goal of the RADS is to reduce variability and ambiguity in radiology reporting to promote effective communication between radiologists and referring providers, guide clinical management, and enable data-driven performance improvement. Most RADS include image acquisition technical recommendations, reporting terminology and definitions, categories for assessing probability of disease, guidance for report organization, and management recommendations. Generally, the RADS are modality-dependent. The risk assessments are provided in terms such as normal or negative, benign, probably benign, or intermediate risk, and likely malignant or highly likely malignant. The *Bulletin* spoke with Matthew S. Davenport, MD, vice chair of the ACR Commission on Quality and Safety, chair of the RADS Working Group, and service chief and associate chair for operations in the department of radiology at Michigan Medicine, about the role of the ACR RADS in providing standardized terminology, assessment structure, and classification for reporting and data collection in patient imaging.

How are the RADS developed?

The RADS are developed by committees of volunteer member radiologists and relevant referring providers. In the current state, each RADS functions relatively autonomously and reports to the chair of the ACR Commission on Quality and Safety. The spirit, knowledge, intelligence, and enthusiasm of the volunteers serving the RADS program are the reason the RADS are as successful as they are.

What is the history of the RADS and how many are currently available?

The RADS programs have been in existence for decades. The RADS products take analog information and convert that data into a digital format that expresses risk and informs management. In other words, the RADS products convert the words that a radiologist uses to convey findings into a code on an ordinal scale — for example, from one to five.

The earliest RADS product was BI-RADS®. Before BI-RADS, mammography reporting was heterogeneous and inconsistent — it was often hard for referring providers to interpret what radiologists were saying in their reports and, by extension, what to do next. The BI-RADS atlas provided standardized breast imaging terminology, report organization, assessment structure, and a classification system that now includes mammography, breast US, and breast MRI. BI-RADS created a consistent and coherent report, so that no matter which radiologist was providing the interpretation, the referring provider could understand it and take appropriate and meaningful action. Because of the success of BI-RADS, there is substantial interest in developing similar products for other diseases like liver cancer, lung cancer, and head and neck cancer. Currently, there are 10 RADS products overseen by the ACR, with even more in the pipeline.

Why not have a RADS program for every disease state?

The RADS programs are powerful because they take complex information and simplify and homogenize it. The data output of a RADS enables effective communication and data-driven performance improvement. However, the RADS programs have challenges. They are complex and can be intimidating to learn. They are also highly focused, usually on a single disease (e.g., breast cancer or lung cancer). To accommodate all relevant human diseases, one could imagine hundreds or thousands of RADS products — an untenable proposition in the current state.

So, it is important to determine which disease states are common and meaningful enough to warrant a RADS framework. It's a tradeoff between the complexity and administrative oversight required, and the potential value and impact on patient care.

How do you manage the increasing oversight needed to bring more RADS into practice?

The RADS programs have been effective, in part, because they have been developed by teams of focused, highly motivated volunteers functioning in a nimble committee structure. That framework works well when you have 10 RADS products, but as we scale up to 20, 30, or 40 RADS products, we start to deal with a massive amount of administrative oversight and complexity. This

is akin to how the needs of a small business are not the same as the needs of a medium or large business. New issues can emerge such as the need for reasonable harmonization across various RADS or for standardization of the evidentiary basis required to approve new RADS or to make updates to existing RADS.

There must be a shift in the way we think about administering the RADS programs as we grow. As we scale, there comes a need for better administrative oversight. That's why we have started to explore forming a RADS Steering Committee to write guidelines and help inform the RADS products, including evaluating what should and shouldn't be a RADS product, and how RADS products should be created, updated, and governed.

At the same time, we don't want to create bureaucracy for bureaucracy's sake. These RADS groups are extremely successful. So, the intent of the steering committee is to try to maintain the nimbleness, creativity, and volunteer spirit that exist in RADS, while providing some administrative oversight that allows this valuable program to scale without collapsing under its own weight.

You recently co-authored an article in the *JACR*® about PI-RADS®. What are the key takeaways from that paper?

PI-RADS is a widely used RADS program that's informed by people from across the world to improve early diagnosis and treatment of prostate cancer. The paper our group published in the *JACR* — "Prostate Imaging and Data Reporting System Version 2 as a Radiology Performance Metric: An Analysis of 18 Abdominal Radiologists" — shows how you can use PI-RADS scores as individual radiologist quality assurance measures to ensure you're getting the results you expect. It is desirable to have a narrow band of expected positive predictive values for clinically important cancer at each PI-RADS score from three to five. Likewise, it is desirable to have a narrow band of expected negative predictive values for clinically important cancer at each PI-RADS score from one to two. We want those data to be in a consistent range so that the referring urologist is not receiving markedly different results depending on who reads the scan. If the data is out of expected boundaries, the radiologist can course-correct on future scans.

This is one of the beauties of the RADS: In medicine, we often think about physicians wanting to be exceptional and go above and beyond. But, ironically, being exceptional in this case means that other radiologists are not performing to the same standard, so all patients are not getting the same outcome. Here, we are aiming for everyone to do a consistently excellent job. In the paper, we try to establish benchmarks for what a radiologist should be seeing in terms of positive predictive values for PI-RADS 3, 4, and 5.

There's a Goldilocks Zone — a sweet spot of exactly where you want to be. If the positive predictive value is too high, it suggests that the radiologist isn't calling enough findings, and if the positive predictive value is too low, it suggests that the radiologist is either calling too many findings or is unclear about the rules for that category. Our paper tries to determine what the Goldilocks Zones should be. Again, broadly speaking, RADS products take analog word data and convert them into digital data that can enable effective communication and inform performance improvement.

What actionable steps should radiologists take now to start implementing RADS?

If a group is interested in pursuing a RADS adoption in their practice, change management is key. There will be people in the group who want to do it, people who are on the fence, and people who don't want to do it. Consider discussing the implementation of RADS as a team. What are the pros and cons? Consider including the people who are ordering the exams and receiving the reports in the discussion. How will this affect their (and your) practice?

If a group decides to use one of the RADS, it is helpful to have educational sessions (for example, take advantage of some of the new RADS educational modules). Sometimes a 100-page lexicon can be a bit intimidating. Another helpful tactic is to use peer learning sessions, where cases are discussed in a welcoming group environment, and the reason for assigning a particular RADS score can be discussed. Implementing a new RADS often requires a champion to socialize the idea inside the group and among the referring providers, and to deliberately systematize the RADS so its full potential can be utilized (e.g., automated data extraction to promote performance improvement). B

INTERVIEW BY LINDA SOWERS, FREELANCE WRITER, ACR PRESS

What are the ACR RADS?

The ACR RADS provide standardized imaging findings terminology, report organization, assessment structure, and classification for reporting and data collection in patient imaging. The goal of the RADS is to reduce the variability of terminology in reports and to ease communication between radiologists and referring physicians. The risk assessments are provided in terms such as "normal," or "negative," "benign," "probably benign," or "intermediate risk," to "definitely malignant," or "high-risk." Learn more at acr.org/ACR-RADS.

The Legal Landscape of Data Sharing and Protection

Registry developers play a critical role in making sure data contributors view medical registries as trustworthy repositories — and can do so by proactively bolstering their compliance measures and their ability to protect registry data.

Medical registries are becoming increasingly indispensable tools to garner insights on disease progression, manifestation, and treatment. The COVID-19 pandemic has pulled medical registries to the fore as a way to accelerate strategies to combat the virus. Building on its long history of registry development, the ACR recently announced a joint effort of the ACR Center for Research and Innovation™ (CRI) and the ACR Informatics team to launch an innovative conglomeration of its registries, called the ACR National Clinical Imaging Research Registry™ (ANCIRR) — including several COVID-19 registries.

Current and future registries housed under the ANCIRR will collect images and clinical data from multiple practice settings — enabling researchers to address complex scientific questions and produce results applicable across various care settings, geographic locations, and populations (learn more at acr.org/ResearchRegistry). This column will explore the legal and regulatory landscape that the CRI navigates in ensuring proper data sharing, collection, and protection — an environment rife with landmines that can too often hinder meaningful registry development and scientific advancement.

Looking Back at Medical Registries

Medical registries are not new to the ACR. The ACR launched its first registry, the National Radiology Data Registry (NRDR®), in 2008. The ACR has continued on this path of registry development, establishing or collaborating on — among others — several *coverage with evidence development registries*, including the Imaging Dementia — Evidence for Amyloid Scanning study and the National Oncologic PET Registry.

The COVID-19 pandemic accelerated ACR's activities in partnering with entities that were interested in establishing datasets that could reveal trends and medically relevant patterns in disease manifestation and patient experience. As the virus progressed around the world, medical teams and researchers found, however, that they were outpaced by the disease and would need tools that could capture and curate medical data from multiple sources as quickly as possible and combine that data into registries that would facilitate meaningful analyses. Several groups undertook the challenge of corralling the abundance of COVID-19 data that medical centers were generating. Federal agencies, such as the

National Center for Advancing Translational Science, spearheaded working groups that collected, combined, and prepared anonymized clinical data from U.S. patients diagnosed with the virus. Recognizing that the treatment of COVID-19 generates imaging data, the National Institutes of Health (NIH) funded the Medical Imaging and Data Resource Center (MIDRC) — a multi-institutional initiative, driven by the medical imaging community, to accelerate innovation and the transfer of knowledge during the pandemic (learn more at midrc.org).

Reviewing Data Sharing Policies

Much of the COVID-19 data that has been generated in the last eighteen months is controlled and maintained by private medical or public academic centers. Data protection is key in maintaining patient trust and abiding by the stringent requirements of HIPAA. Data sharing with organizations that create multicenter medical registries, although permitted by HIPAA, has historically been anathema to these tenets when the data being sought is protected health information (PHI). However, COVID-19 has changed the perspective of some medical and academic centers when it comes to data sharing and the potential to contribute to the larger public good. New opportunities exist for the creation of government-sponsored databases which will make de-identified data available to the public (MIDRC) and there are other opportunities to create secure, privately managed databases that include PHI that may be critical to answering other research questions (such as the COVID-19 Imaging Research Registry™).

Indeed, the ability to quickly develop a COVID-19 vaccine was directly attributable to the prior experience of the U.S. in data sharing. The data sharing norms established by the U.S. government-led Human Genome Project, an effort to map the entire sequence of human DNA, greatly sped up the development of the mRNA coronavirus vaccines. A Chinese lab announced the discovery of the novel coronavirus on Jan. 9, 2020, sequenced it over the next weekend, and released the genome sequence to the public immediately thereafter. By the end of January 2020, labs around the world were developing vaccines based on the genome sequence — despite not yet having an actual sample. Without a commitment to open data, coronavirus vaccines might still be months away.[1] In this vein, the NIH has expanded its data sharing policy, effective January 2023, and views data sharing as essential for the expedited translation of research results into knowledge, products, and procedures to improve human health. The new policy will require NIH-funded researchers to develop a plan for sharing scientific data generated with federal funds.[2]

Navigating the Regulatory Landscape

The objective of developing a medical registry is to create a set of searchable and analyzable data to discern trends and understand disease manifestation. In most instances, the owner of the registry is not the only entity interested in using the registry to conduct scientific inquiry. Medical registries intrigue anyone who is interested in improving patient outcomes, benchmarking, and using clinical decision support. In making its registries accessible to as many researchers as possible, the ACR must manage the regulatory, compliance, and legal responsibilities of a registry owner. This requires an understanding of the obligations imposed by federal and state regulations, such as HIPAA, and state privacy laws that govern any PHI. Additionally, the ACR must adhere to the legal obligations of the data use agreements it enters to receive clinical and imaging data from contributing sites — whether that data is de-identified or not.

Exporting medical data to multi-institutional registries may be conceptually appealing to medical and academic centers, but it is not a common exercise. Overly-restrictive terms and conditions that these entities tend to include in their contracts reflect their paramount interests in ensuring that they can trust registry owners to protect and properly use their contributed data. Many agreements restrict the use of contributed data outside the U.S. The level of trust an institution has in the registry owner will dictate how readily the institution agrees to share its data. Finally, the registry owner must have systems and processes in place that ensure proper use of the registry by third-party researchers.

In making its registries accessible to as many researchers as possible, the ACR must manage the regulatory, compliance, and legal responsibilities of a registry owner.

Even if the hurdles of data access are cleared, other aspects of the regulatory and legal landscape can serve as obstacles to creating a usable dataset. Some medical and academic centers are willing to share their data but impose constraints on how it can be used. For example, data contributors may limit use only for research, or only allow use of de-identified versions of the contributed data. Others impose non-transferable license rights — effectively prohibiting a further transfer of license rights to third-party researchers and foreclosing use in other datasets. In other instances, a data contributor may only permit non-commercial use of its data. Presumably, a commercial use would entail accumulating the data to sell to another party or charging researchers for access to the registry. Any broader interpretation, such as limiting use to non-commercial entities or researchers, would severely limit the value of a registry for research purposes. Being prepared with an Institutional Review Board-approved protocol that describes the strategy of the registry has generally helped data contributors understand that the intended use of

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Legal Resources

The ACR proves its members with several resources to help ensure that radiology practice business operations stay up-to-date in a changing legal environment, including a free online HIPAA toolkit, a guide to professional practice of clinical medical physics, and a medical-legal issues in radiology handbook. Visit acr.org/legal to access these resources.

Survey Says

The ACR DSI finds that its tools are in sync with members' needs for deploying AI.

In April 2021, the *JACR*® published the results of the first ACR Data Science Institute® (ACR DSI) AI survey of ACR members. The survey was designed to help us understand how radiologists are using AI in clinical practice. With over 1,800 responses, it is, to our knowledge, the largest published survey of its kind in the U.S. For some, the results might be a bit surprising.

Despite the tremendous hype around AI over the past five years, our survey found that less than 30% of ACR members are using AI in their clinical workflows. What's more, this number could be overstated since some respondents might consider their current breast CAD tools to be AI. While these survey results do not seem to justify the AI hype, a significant number of radiologists are currently using some form of AI now, and more than 25% of radiologists expect to purchase AI tools in the not-too-distant future. We believe radiologists need to continue to prepare themselves for a future with AI.

Looking at Key Survey Takeaways

- Despite the AI hype, there is room for growth: Just over 30% of radiologists are currently using AI as part of their practice.
- Many radiologists plan to purchase AI in the near term: Of practices not currently using AI, up to 25% plan to purchase AI tools in the next one to five years.
- Radiologists are using AI for a variety of tasks: The top uses of AI include image interpretation, worklist management, image enhancement, automated measurements, and departmental operations.
- Inconsistent AI performance is an issue: Inconsistent performance was observed by 94% of the survey respondents. Algorithm bias — whether patient, scanner, or conspicuity — was responsible for the majority of reported inconsistent AI performance.
- Radiologists want performance measures: Approximately 60% of respondents indicated they want some form of external validation of AI models across representative datasets, and an equal number indicated they would like to be able to assess the performance of an AI model on their own patient data before deploying it into their clinical workflows.
- Radiologists find value in using AI: While 95% of radiologists would not trust AI algorithms to run autonomously, most were satisfied with their overall experience and found AI provided value to them and their patients.
- A range of FDA-cleared algorithms are in use: Algorithms for screening mammography (9%), pulmonary embolus (6.4%), MR brain analytics (5.9%), and brain hemorrhage (5.7%) topped the list for most current users.
- Self-developed algorithms are popular: More of those using AI in clinical practice (9.8%) were using algorithms they created themselves than any single commercially-developed algorithm.

Overcoming Barriers to AI Implementation

Our survey identified a number of barriers to AI implementation. When participants were asked what they need to adapt to a future with AI, most wanted to know that AI will work well in their practices prior to purchasing models. At the ACR DSI, our

Evaluate-AI toolkit currently includes a catalog of FDA-cleared algorithms that provides users a summary of information provided by the developers during the FDA clearance process to help radiologists find and vet commercial products that might be a good fit for their practices.

The ACR is making significant upgrades to its image and data exchange platform (TRIAD®), currently used by almost all member sites for ACR Accreditation programs and/or research. As the new iteration of ACR Connect® is deployed, the Evaluate-AI module in the ACR AI-LAB™ will become fully functional. This will allow sites to use ACR Connect to search their image archives and assemble representative test cases to evaluate AI algorithms using their own data, either on site or in a secure cloud, to evaluate commercial AI models. Radiologists will also be able to use the ACR Assess-AI registry, which is part of the ACR's National Radiology Data Registry (NRDR®) program, to monitor longitudinal performance once the models are deployed into the clinical workflow.

Finally, ACR ASSIST® modules are being developed for each of the ACR DSI's structured AI use cases, so that AI output can be more easily integrated into structured reporting systems. This enhances not only clinical integration but provides a platform for integrated AI performance monitoring. All of these tools have been developed to ensure radiologists are prepared for a future with AI so we can harness its power to provide safe and effective care for our patients.

Providing AI Developers With Help

While AI developers were not part of the current ACR DSI AI survey, the ACR DSI continually engages with vendors and recently conducted a separate industry survey. We found that developers are interested in programs that will inform potential AI users about their products, such as the newly-created ACR DSI catalog of FDA-cleared algorithms.

Developers are also interested in access to datasets that will provide multisite validation. As we continue to enhance ACR Connect over the coming months, we believe the ACR DSI Certify-AI can provide an opportunity for developers to validate their products across a diverse array of practice locations and types. Integration of real-world performance monitoring into the clinical workflow using the Assess-AI registry allows aggregation of data from multiple sites to provide developers with information they can use to monitor and improve the performance of their products.

Providing Potential Pathways for Reimbursement

When asked what ACR DSI can do to improve the potential of AI in medical imaging, over half of those who responded indicated that they would like to see pathways to fair reimbursement for implementing AI. Reimbursement pathways for clinical AI will be important for advancing AI into routine clinical use.

The ACR DSI is working with the ACR Commission on Economics to evaluate the best approaches to AI reimbursement. Currently the Medicare program has two potential pathways for AI reimbursement:

- The New Technology Add-On Payment (NTAP) could reimburse hospitals using certain AI models on a case-by-case basis.
- The Medicare Coverage of Innovative Technology (MCIT) could provide payment for AI models as soon as they are cleared by the FDA.

Both of these programs provide reimbursement that could jumpstart discussion of AI reimbursement through the traditional fee-for-service Medicare programs. Additionally, alternative payment models that include AI could eventually provide another avenue for radiologists to demonstrate value to the healthcare system.

While the survey results indicate a modest penetrance of AI in clinical practice at the present time, more than 25% of radiologists are looking to purchase AI in the future — and that number is likely to grow. Based on the survey results, the ACR is continuing our efforts to provide AI resources that members can use to demonstrate their ongoing value to our patients and health systems. B

BIBB ALLEN JR., MD, FACR, IS ACR DSI CHIEF MEDICAL OFFICER AND A DIAGNOSTIC RADIOLOGIST WITH GRANDVIEW MEDICAL CENTER IN BIRMINGHAM, ALA.

MOST POPULAR ALGORITHMS

Survey respondents indicated the following algorithms are most commonly used in practices.

9.0% Screening mammography

6.4% Pulmonary embolus

5.9% MR brain analytics

5.7% Brain hemorrhage

9.8% of algorithms are reported as self-developed

Read the full article in the *JACR*® at bit.ly/JACR_AI. To view an infographic on the full survey, visit acr.org/Using-AI.

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Using One Voice

The Committee on Chapters provides an avenue for communication about state needs — amplifying the united power of ACR members to shape priorities of the Council and the ACR leadership.

The ACR exists to serve its membership, and state chapters are a vital link between members and ACR elected leadership bodies. State chapters are organizing units — gathering radiologists, radiation oncologists, radiation physicists, and other associated professionals to identify key issues for local and national focus. Chapters provide ACR members with the opportunity to attend meetings, connect with colleagues, discuss matters of radiology practice and patient access, and speak with one voice. That voice is heard yearly when the ACR Council, the legislative body of the College, convenes in Washington, D.C. This meeting is the culmination of a year of work by leaders, members, and chapters to shape the agenda and prepare for decision-making.

The ACR Committee on Chapters functions between state chapters and the national organization. The Committee on Chapters provides a natural avenue for communicating about state needs — amplifying the power of ACR members to shape priorities of the Council and the ACR leadership bodies. Likewise, the Committee on Chapters connects state chapter leaders to one another, as well as to ACR resources. Each chapter has individualized needs and strategic goals, and ACR content experts are available to guide and support those efforts.

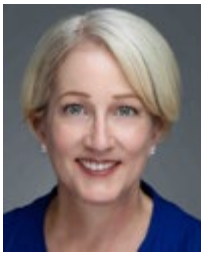
The mission of the ACR Committee on Chapters is to:

- Enhance and facilitate the relationship between the ACR and its chapters
- Assist chapters in the development and implementation of programs and services helpful to their members
- Provide recognition of chapters that excel in fulfilling the missions of their chapter and of the ACR

The work of the Committee on Chapters includes:

- Resourcing state chapters
- Connecting chapter leaders to share issues and best practices, such as through the annual Chapter Leaders Workshop
- Focusing on innovations, particularly around membership, meetings and education, government relations, and quality and safety
- Assisting chapters in communicating the value of the ACR to preserving and advancing the work of the radiology specialty

In the coming year, the Committee on Chapters hopes to build on its current work, while rethinking how it can best advance state chapter initiatives. Chapters can expect outreach from ACR's Chapter and Member Engagement Manager Katie Kuhn, CAE, to each chapter president as part of our role in communication and connection. Chapters can also look for opportunities to engage on focused topics and leadership development through the ACR virtual gatherings — such as the meeting on scope of practice, initiated by the ACR State Government Relations Committee this past spring. As ACR BOC Chair Howard B. Fleishon, MD, MMM, FACR, noted in the May 2021 *Bulletin*, "Rather than assume what members want, we need to invite them into the process and build relationships based on broad input."



EVELYN Y. ANTHONY, MD, FACR, IS CHAIR OF THE ACR COMMITTEE ON CHAPTERS, A PROFESSOR IN THE DEPARTMENT OF RADIOLOGY AT WAKE FOREST BAPTIST HEALTH, AND SENIOR ASSOCIATE DEAN FOR FACULTY AT WAKE FOREST SCHOOL OF MEDICINE.

Resources for ACR Chapters

There are 54 chapters, representing each of the United States, the District of Columbia, Puerto Rico, Canada, and the Council of Affiliated Regional Radiation Oncology Societies. The main activities of the ACR's chapter program are the Chapter Leaders Workshop, the Chapter Visitation and Chapter Recognition Programs, and ongoing support for state government relations efforts. Visit acr.org/chapters or email chapters@acr.org for more information.

What do you think about the College's goal of addressing health disparities?

"I immigrated to the United States when I was seven years old and I still remember seeing people who did not look like me speak a language that was not Korean for the first time. I appreciated the ACR's focus on diversity and inclusion at the annual meeting this year. The lectures discussing the increasingly diverse U.S. population was news I had heard before — but it was nice to hear it again in that forum. It is clear that radiology is pushing for more equality, equity, and justice. Any change starts with acknowledging that something needs to be changed and I believe that we are doing just that."

— Jai Won Jung, medical student at Georgetown University School of Medicine and a recipient of the ACR 2021 Medical Student Scholarship

"At ACR 2021, it was interesting to learn that Black women have a higher incidence of the more aggressive breast cancer types and poorer breast cancer health outcomes, making it essential to do breast cancer screening earlier in high-risk women.[1] Unfortunately, Black women are also not well-represented in randomized controlled trials for mammograms, which may lead to skewed results and ultimately inadequate guidelines for breast cancer screening.[2] There is certainly an urgent need for mammography screening of breast cancer in minority women in their 40s."

— Tonuka (Tina) Chatterjee, medical student at Meharry Medical College and a recipient of the ACR 2021 Medical Student Scholarship

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

RADLAW

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the data aligns with the requirement that the research is non-commercial.

Finally, both contractual constraints and regulations can render a registry unusable. Compliance with HIPAA regulations, by removing those elements that constitute PHI, can often render data unusable. While PHI may be de-identified so that it is no longer PHI, the requirement that data be deleted limits the value of de-identified data in future research.

Looking Ahead

Mastery of the precepts of data privacy and data sharing are required to ensure the continued burgeoning of medical registries. Entities interested in developing registries play a critical role in making sure data contributors view medical registries as trustworthy repositories — and can do so by proactively bolstering their compliance measures and their ability to protect and secure registry data. Medical advances await and medical registries will be among the vehicles that get us there. Your legal advisor can help you navigate the ever-changing landscape of data sharing and privacy to ensure your registry successfully launches. B

BY ENID S. BANTON, JD, SENIOR ATTORNEY, ACR CRI

ENDNOTES

1. Deming, D. Balancing privacy with data sharing for the public good. *The New York Times.* Published February 19, 2021. Accessed June 21, 2021.

2. NIH Data Sharing Policy. National Institutes of Health. Updated November 3, 2020. Available at bit.ly/NIH-DataSharing. Accessed June 21, 2021.

SCOPE OF PRACTICE

continued from page 4

Anesthesiologists promoted the use of the title "anesthesia assistants," emphasizing the requirement for these providers to work under the supervision of an anesthesiologist.[8]

The registered radiologist assistant (RRA) credential was developed in 2002, as a result of recommendations by an ACR task force. These training programs provide a pathway for talented and dedicated RTs to acquire new skills. These providers have always been, and continue to be, required to work under a radiologist's supervision and be part of radiologist-led teams. Their professional societies and certification bodies have consistently worked with the ACR and upheld the principle that RRAs not practice independently or provide interpretation. This principle is also evident in relevant state and federal laws and regulations. RRAs have been specifically trained, licensed, and certified to fill the needs of those practices utilizing physician extenders.

Scope of practice issues will continue to be contested in state legislatures and regulatory agencies. The ACR has and will continue to be consistent in standing against independent practice of non-physician providers related to radiology/IR/radiation oncology services. We will lobby aggressively against NP and PA efforts for independent practice and interpretation in medical imaging. We have supported state chapters in their efforts to address local legislation. We are in the process of developing additional programs and support for chapters facing well-funded organizations pressing to break down scope of practice limitations. The ACR will always stand for its members and their patients to provide the highest quality of care, with the safest conditions that radiology-led teams are best qualified to deliver. B

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Feeling Like a Fish Out of Water in Your Hospital Boardroom?

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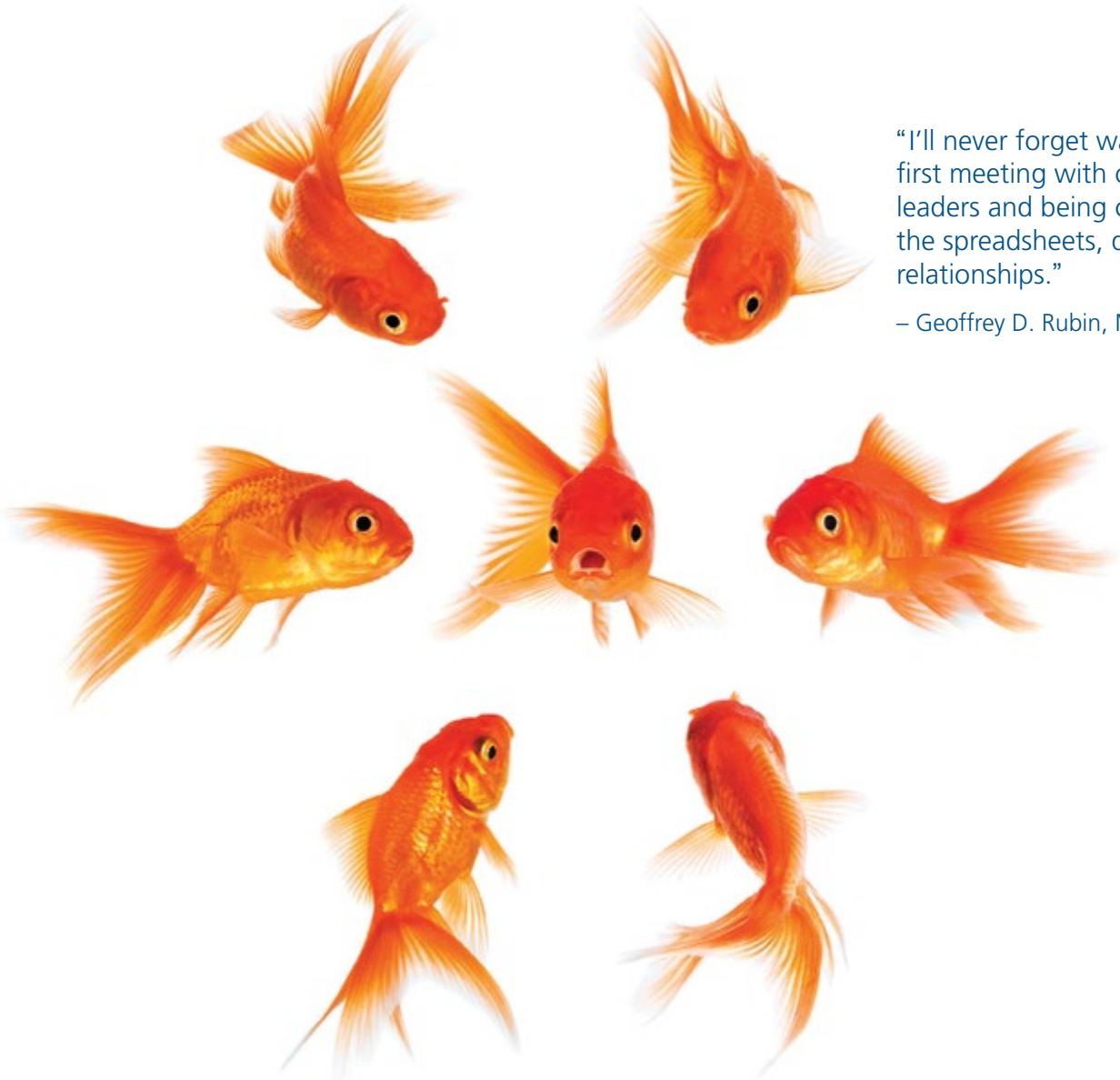

"I'll never forget walking into my first meeting with other health system leaders and being completely lost in the spreadsheets, data, politics and relationships."

– Geoffrey D. Rubin, MD, MBA, FACR

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