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Bulletin

A RETURN TO CARE

ACR

Bulletin

OCTOBER 2020 | VOL. 75 | NO. 10

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ALSO INSIDE

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

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DEPARTMENTS

FROM THE CHAIR OF THE BOARD OF CHANCELLORS

Howard B. Fleishon, MD, MMM, FACR

ACR *Virtualized*

As ACR programs are converted to a virtual format in the face of the ongoing pandemic, the transformation underscores the strength and flexibility of the organization and its members.

It seems like a long time ago since we first learned that a virus would come to our shores — impacting our communities and so much of our daily lives. Since that time, much has happened. We have all realized the ebbs and flows of this pandemic. It's a safe assumption that everyone reading this column has been personally and professionally impacted by COVID-19.

The ACR has had the difficult task of planning our reaction to the pandemic, both for the short- and long-term future of the organization. There are significant financial and strategic implications for the decisions that we are making now and the plans that are being considered for the future.

Over the course of the pandemic, most ACR meetings and services will be virtualized to continue our services, provide value to our members, and lead innovation — while keeping the health and safety of our staff, members, and patients paramount.

Most recently, the month-long course at the American Institute for Radiologic Pathology (AIRP®) was successfully delivered via a virtual platform. The effort and dedication of the ACR staff, particularly the AIRP and IT departments, and the AIRP faculty that was required to make this a reality cannot be understated. To attend the AIRP course, residents traditionally separate from their demanding work schedules and dedicate time and effort to advancing their knowledge base — not only from an imaging perspective but from a pathologic one as well. They also participate by bringing cases to the AIRP to expand the library for those who will follow. We often hear in surveys and comments that AIRP is one of the most important and impactful programs in many radiologists' training. And most do attend as part of their training, with approximately 95% of U.S. residents traveling to the Washington, D.C. area for the course. In addition, the program has seen significant increases in participation on the international stage, with many traveling from overseas to attend. Unfortunately, I did not have the opportunity to attend during training, but, when time permits, I hope to take a sabbatical and experience what the program has to offer.

AIRP isn't the only program that has been converted to a virtual format in the face of COVID-19. The ACR has made a commitment to suspend all elective travel for staff and leadership through March 2021. As a result, all ACR programs will be converted to a virtual format, including the Radiology Leadership Institute® (RLI) Leadership Summit (which took place in September), the 2020 Imaging Informatics Summit, the ACR Conference on Quality and Safety, and the ACR-RBMA Practice Leaders Forum.

Over the course of the pandemic, most ACR meetings will be virtualized to continue our services, provide value to our members, and lead innovation — while keeping the health and safety of our staff, members, and patients paramount. Many of our programs already took place online, and the pandemic galvanized the desire to add a web component to many activities that previously did not have one. Some of the well-recognized benefits of in-person meetings such as networking, interpersonal real-time communications, and direct human connections will have to wait for more accommodating conditions. However, some benefits of this forced virtual conversion have included expanding asynchronous learning, reaching a broader audience, and experimenting with various online formats. Indeed — this will be a learning experience for us all.

In a broader sense, this transformation underscores the strength and flexibility of our organization and its members. The ACR, as a membership-driven organization, is one of the most influential societies in radiology. We understand that our strong position within the profession is based on our core competencies and our solid and diversified financial foundation. Staying adaptable is vital for the future of our profession. With the long-standing support of our members, we have made investments in our staff and IT structures that enable us not only to adapt but to evolve and innovate.

As time goes by, with more information, evidence, and research, we will make our way through this crisis. During this journey, your ACR is committed to not only advocating to secure the future of the profession — but to build upon lessons learned. We are working to transform our strategic planning so that we are more flexible, more nimble, more innovative, and better equipped to provide value for our members, the profession, and our patients — no matter the challenges. B

Sticker Shock

As the nation weathers the worst pandemic in a century, ACR goes to bat for patients facing surprise insurance gaps.

An advocate, as defined by Merriam-Webster, is one who pleads the cause of another. At ACR, we advocate on behalf of both our patients and our profession, and frequently this involves playing both offense and defense, simultaneously. Most recently, this is demonstrated by our ongoing surprise billing efforts.

The ACR, along with our physician colleagues, has been playing offense to protect our patients from surprise medical bills that can occur when gaps in health insurance coverage lead them to receive care from out-of-network physicians or other providers. These bills can be financially devastating to a patient who is already under a considerable amount of stress as they recover from a medical event. Our primary goal is and has been to protect patients from receiving these bills and is the reason ACR continues to support policy solutions designed to:

- Protect patients
- Keep patients out of the middle
- Ensure reasonable provider payment rates
- Support a commercial payer claims database that could be referenced by an arbiter if there is a payment dispute
- Establish a fair, accessible, and equitable independent dispute resolution process similar to New York's model
- Safeguard patient access to care

These principles are critical to any final, equitable surprise billing policy solution. Taken together, they will ensure patients are protected and have access to robust provider networks, while also providing a fair and balanced mechanism for both providers and insurers to resolve billing disputes.

ACR has also been defending patients and its members against intense efforts by the insurance industry to include unfair and one-sided surprise billing legislation in all of the congressionally-passed COVID-19 bills. The insurance industry-sponsored bills would establish a benchmark payment and a virtually inaccessible independent dispute resolution threshold for the vast majority of imaging procedures. This policy would result in as much as a 20% reimbursement reduction for physicians, which coupled with the ongoing financial distress associated with the COVID-19 crisis, could result in the closure of medical practices and facilities. These closures would significantly impact patient access to care at a time when our population is most vulnerable.

Despite prominent lawmakers supporting this policy, physician organizations have thus far been able to demonstrate to Congress that inserting language harmful to patients and physicians should not be a priority, especially as the nation battles the current public health emergency.

When the healthcare emergency has abated, the ACR looks forward to continuing to work with Congress to achieve its surprise billing legislative goals. Until then, we will continue to play defense on behalf of patients and our membership to ensure Congress does not address surprise billing in a manner that does more harm than good. B

Arun Krishnaraj, MD, MPH, is chair of the ACR Commission on Patient- and Family-Centered Care and an associate professor of radiology and medical imaging at the University of Virginia.

ADVOCACY

Get Engaged

The problem of surprise billing isn't going away. Since several of the options currently being considered at the federal level could have significant impacts on the practice of radiology, it is imperative that we remain vigilant and be ready to make our voices heard. There are plenty of ways to engage, including through the ACR and its Radiology Advocacy Network at acr.org/RAN.

Gregory N. Nicola, MD, FACR

Winners and Losers

The ACR is fighting hard to prevent cuts under the MPFS from being enacted.

In 2019, the ACR addressed an estimated 8% reduction in payments to radiologists in the Medicare Physician Fee Schedule (MPFS). Now, a year later and in the middle of a pandemic, the 8% reduction has increased to 11%.[1] How did this happen?

These reductions in payments are not technically targeted towards our specialty and our services in the same way as a multitude of previous reimbursements cuts. These cuts are solely the result of long-standing budget neutrality restraints on payments under the Medicare program, which directs the increases in expenditures within the program to be offset by decreases in other expenditures so that the relative cost of the entire program to the U.S. government remains flat. As previously stated in this column, the AMA Current Procedure Terminology (CPT®) Editorial Panel and Relative Update Value Committee (RUC) moved forward a series of changes to the outpatient Evaluation and Management (E&M) CPT codes that lead to significant upward revaluation of relative value units (RVUs) finalized for the 2021 program year.[2] The "pay for" required by budget neutrality proposed by CMS thus far has been an adjustment to the Part B MPFS Conversion Factor (CF) — a fudge factor to keep overall physician payments relatively flat.

What this means for us is that all physicians will ultimately pay for the increase in valuation in E&M services through the decreased CF, but those who bill proportionately more of the newly revalued E&M services will have the decrease in the CF offset by the higher value for these services. In effect, this methodology chooses winners and losers. Radiologists don't typically bill for E&M services; therefore, we have nothing to offset the decrease in the CF. Medicare estimated a –8% reimbursement impact of this policy on radiologists in the 2020 MPFS for implementation in 2021. The situation worsened in the 2021 MPFS, in which Medicare has a revised impact on radiologists of –11%.

Did CMS make an error in calculation? The answer is no. CMS instead unilaterally decided to adjust additional categories of E&M services upwards, stating that these services were similar enough to outpatient E&M services that upward adjustment was warranted. These additional E&M services included ED, end-stage renal disease, transitional care management, cognitive impairment assessment and care planning, maternity services, therapy evaluation, psychiatric diagnostic evaluation, and psychotherapy services — as well as initial preventive physical examination and initial and subsequent annual wellness visit E&M services.

The bad news is that the upwardly adjusted services would have been revalued by the RUC over the next few years anyway, and eventually placed into the fee schedule with associated CF impact (which has now occurred earlier). The really bad news is that there are other E&M services yet to revalued by CMS, including inpatient and consultative service E&M services. These will eventually also strain the CF and lead to further decreases in overall reimbursement to radiologists. And the news probably doesn't get better as CMS prioritizes bringing innovative E&M delivery methods to Medicare beneficiaries, such as expanding telehealth services.

The U.S. leadership is promoting patient-centric innovation, as reflected in President Trump's Executive Order regarding telehealth.[3] But what about innovation in radiology? Our specialty is at the cusp of an innovation explosion with the continued advent of AI applications transforming clinical practice. Beyond basic concerns about access and keeping practices' doors open, can we possibly bring these innovations to patient care without vehicles for payment? These are questions that will be addressed in the coming years and in a future *Bulletin* column.

In the meantime, the ACR is fighting hard to prevent these cuts from being enacted. The College has convened a multispecialty coalition, including the American College of Physicians and the AMA as well as non-physician providers, to lobby Congress to intervene. Congress has several options not just limited to increase budget defects by writing a yearly check for stabilizing the CF. For example, the American Taxpayer Relief Act of 2012 provided a one-year patch for the previously flawed Sustainable Growth Rate methodology preventing physician payment cuts by redistributing funds from other Medicare programs (including inpatient care, uncompensated care, end-stage renal disease treatments, and Medicare Advantage plans).[4] Given the economic tumult brought on by COVID-19, enacting similar such legislation is an uphill battle. However, history has shown congress can find alternatives to stabilizing the physician fee schedule — without forcing physician winners and losers. B

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

A RETURN TO CARE

It is crucial that radiologists help their referring clinicians reconnect with women ages 40 and older to schedule yearly mammograms postponed by the pandemic.

The impacts of COVID-19 on healthcare continue to evolve. As radiologists, we face unique opportunities — and challenges — as we work to prioritize safe and quality patient care while we navigate this pandemic.

At the start of the COVID-19 outbreak, most non-emergent healthcare was halted — including cancer screening. Unfortunately, cancer incidence does not stop with the pandemic. For some patients, skipping or postponing screening now could mean a delayed diagnosis, an increased cancer burden, and/or worse outcomes in the future.

It is estimated that more than 35,000 breast cancer diagnoses could be delayed and 5,200 more women may die in the U.S. over the next decade as a result of the spring to summer pause in screening due to COVID-19.[1] American women were smart to "play it safe" during earliest phase of the pandemic — but now for women ages 40 and older, "playing it safe" means contacting their doctors about scheduling their yearly mammograms.

While we help our practices recover from the CDC-recommended shutdown, it is crucial that we also help our referring clinicians reconnect with women ages 40 and older and encourage them to schedule yearly mammograms postponed by the pandemic. Women ages 40 and older should weigh their individual risk, ask providers about their COVID-19 safety protocols prior to the appointment, follow staff instructions, and take common sense precautions during the visit (learn more at bit.ly/ReopeningSafe). Not scheduling a mammogram now can allow breast cancers to advance — becoming less treatable and more deadly.

It is up to us, as radiologists, to to support the lifesaving benefits of screening mammography.. We must act together to help our mammography patients return to care. B

By Dana H. Smetherman, MD, MPH, MBA,FACR, chair of the ACR Commission on Breast Imaging and chair of the department of radiology at Ochsner Medical Center in New Orleans

ENDNOTES

1. Sharpless NE. COVID-19 and cancer. *Science*. 2020; 368 (6497)1290.

Return to Care

The ACR, other leading medical societies, and patient advocacy groups have formed the #ReturnToCare Coalition. In areas where COVID-19 conditions allow reopening, the group encourages patients to consult their doctors to discuss getting necessary imaging, treatment, and other care postponed, previously due to the pandemic. Visit returntocarecampaign.org for information and resources to encourage patients to schedule any long-delayed care.

The ACR offers a toolkit of free, downloadable and customizable resources to help radiologists and their referring providers reconnect with women ages 40 and older to schedule yearly mammograms postponed by the COVID-19 shutdown. The resources provide information to explain to women ages 40 and older why and how it is necessary, safe, and in their best interest to consider a return to care for yearly mammograms. The toolkit can be accessed via acr.org/breastimaging, MammographySavesLives.org, and EndTheConfusion.org.

SELDOM SEEN

Transgender patients deserve radiology's commitment to screening outreach and access.

"Imaging needs of transgender patients have historically not been on the minds of radiologists and their staff," says Justin T. Stowell, MD, senior consultant and assistant professor of radiology at Mayo Clinic in Florida, who also sits on the ACR Commission for Women and Diversity, where he leads a gender-focused workgroup. "Even pre-pandemic, these patients had limited access and often felt discouraged from coming in for healthcare services in general. Many just don't trust physicians who often may be uneducated about transgender health issues."

During a time of unprecedented attention to systemic social injustices and healthcare disparities — putting the inequitable treatment of marginalized populations center stage — radiology has an opportunity to serve the transgender community through staff training, collaboration with colleagues, and a heightened awareness of transgender patients' needs and experiences.

By definition, transgender and gender-diverse individuals have a gender identity which does not align with the sex assigned to them at birth (learn more in the ACR Lexicon of Gender-Related Terms at acr.org/transgender-glossary). Gender identities not congruent with sex assigned at birth are often included within the broader social classification of lesbian, gay, bisexual, transgender, and queer (LGBTQIA+) people, however gender identity and sexual orientation are not the same.[1]

COUNT EVERYONE

Conversations around transgender care aren't happening as often as they should, according to Linda Moy, MD, professor of radiology at NYU Langone Health and specialty chair for the ACR Appropriateness Criteria® (ACR AC) for Breast Imaging. The ACR AC are evidence-based guidelines to assist referring physicians and other providers in making the most appropriate imaging or treatment decision for a specific clinical condition — and an upcoming iteration will include transgender breast imaging guidelines for the first time.

Radiologists and referring clinicians may only see or be aware of a small number of transgender patients in their community, Moy says. But that does not negate the need to address transgender health issues. "The 'this doesn't apply to me' way of thinking by clinicians presents a huge obstacle," she says. "Transgender patients constantly face barriers to screening and other healthcare services because of stigma, discrimination, and patients' fears of being balked at," Moy adds. Ignorance and insensitivity around medically relevant services for these patients may start at the front desk, with an RT, or with a referring physician.

"There are incredible unconscious biases that exist in our society," Moy says. "The goal in radiology — especially in screening — is always to make all patients comfortable and relaxed," Moy stresses. "We are the portal that will potentially take the patient to other services."

And this matters to patient outcomes. Gender-affirming therapy may influence an individual's risk of developing sex-specific cancers such as breast and prostate cancer. In addition, transgender patients still require routine age-based screening based on applicable recommendations.

START EARLY

The value of radiology in connecting transgender patients with other services in the healthcare value chain must be taught earlier in medical training, says Baer Karrington, a 2021 MD and MScPH candidate at NYU Langone and NYU Grossman School of Medicine, which is one of the only medical schools to include an objective structured clinical examination focusing on transgender patient care. Many transgender patients end up doing their own research to find out what services they will need. "That becomes more difficult when it comes to finding the appropriate preventive care or screening," Karrington says. "Transgender men, for instance, have much lower rates of cervical cancer screening compared to cisgender women, despite continuing to need this screening if they have a cervix."

Karrington is pursuing adolescent medicine with a focus on gender-affirming care and served as a patient representative in the creation of the new ACR AC on Transgender Breast Cancer Screening (see sidebar). "Transgender patients have already fought to get surgery, to get their hormones, and even to get people to use the name of their choosing. When they get to radiology, they may then be charged with determining, on their own, the types of studies they need and what their risk factors are. That is not fair," Karrington says.

HUMANIZE ACCESS

"Unfortunately, a lot of what drives our decision-making in healthcare may be what insurance companies pay for," Stowell says. "If you are a transgender woman, but your driver's license or other legal documents list 'male' — services can be denied. The insurance company will likely say breast cancer screening is not recommended for men," Stowell notes.

Beyond insurance coverage, screening and intake forms also matter. Take a patient-centric approach in revising your forms, Stowell suggests. "This is something patients will see during their first encounter with an imaging group. There should be spaces on forms for sex assigned at birth, gender identity, and appropriate pronouns," he says.

Simple changes to screening forms could capture information about transgender patients that guides appropriate care recommendations, Stowell says. Because of their central place in patient care, radiologists have an important part in defining what is appropriate for transgender patients, says Frances Grimstad, MD, MS, an attending in the division of gynecology at Boston Children's Hospital and a clinical instructor at Harvard Medical School.

"If I send a transgender woman who has had a vaginoplasty in for a pelvic US and the imaging practice misidentifies the patient, she may be screened incorrectly," Grimstad says. "When the radiologist interprets the scan, he or she won't understand that this patient should not have a uterus. It isn't because it is surgically absent, rather that it was never there to begin with. Similarly, the radiologist may not realize that there should be a prostate."

Having all the facts about a transgender patient means realizing that requiring patients to disclose irrelevant personal information could be unnecessarily problematic, Stowell says. Some patient forms call for an organ inventory (listing what organs you have), Stowell notes. "Why is that necessary? Maybe just a surgical history would be enough," he says. "There are also questions like, 'If you are a woman, could you be or become pregnant?' Take out the word 'woman,'" Stowell suggests. "The question is only there so the radiologist can explain the potential risks of radiation to a fetus, if necessary."

Mindfulness and sensitivity in your radiology reports are equally important — as the words you choose may dictate a patient's comfort level. "A report with unnecessary mentions of ovaries and a uterus can be uncomfortable to a transgender male," he says. "Some of these patients don't want to acknowledge these body parts, so unless there is an issue related to them, use pertinent negatives with a neutral statement such as 'no pelvic mass.'"

PUSH TRAINING

Such considerations in transgender patient care will grow through more gender diversity training for radiologists and their support staff, Grimstad says. "For radiologists, if they don't understand the kinds of surgeries or hormonal therapies common among transgender patients, they will be interpreting images with incomplete information," she asserts.

"We depend on radiologists to stand up as leaders and ask what a referring physician needs to interpret information appropriately. Referrers have been trained with a very cisgender approach to imaging," Grimstad says. "The reality is that medicine is moving towards a model where we understand that the sex binary and the gender binary have limited us," says Grimstad.

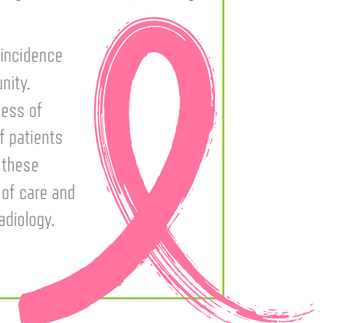
Transgender awareness training should be mandatory for your entire radiology staff, Stowell believes. While radiologists must be informed, so should front office staff, coders, and RTs. For example, says Stowell, "Technologists shouldn't be afraid to ask the patient if there are parts of an exam they aren't comfortable with."

BREAST CANCER SCREENING FOR TRANSGENDER PATIENTS

Transgender patients may undergo gender-affirming hormone treatment or surgical treatment (or a combination of the two) as part of their transition. These medical interventions may begin with puberty and may be used over long periods of time. As a result, gender-affirming therapy can influence an individual's risk of developing certain cancers, including breast cancer.

Currently, there is a paucity of data on the incidence of breast cancer in the transgender community. The AC were developed to increase awareness of screening for breast cancer in this group of patients and among referring physicians. Employing these guidelines helps providers enhance quality of care and contribute to the most efficacious use of radiology.

Learn more at acr.org/AC.



BRINGING AWARENESS TO IMPLICIT BIAS

The AMA and the ACR's Radiology Leadership Institute® have developed an online module to help you learn more about your implicit biases and strategies to help mitigate the unintended consequences of implicit bias. The module is slated to launch this month and will be available on the AMA Ed Hub at edhub.ama-assn.org.

Collaboration with referring clinicians might allow targeted delivery of anticipatory guidance prior to imaging so the patient is aware of what is required during an exam and why it may be necessary for diagnosis. "The patient might also be able to help with part of the exam so it doesn't feel so invasive."

Raising awareness can start with showing staff a video or providing them with transgender resources they can pass along to colleagues and patients, he says. "Simple things, like wearing rainbow or transgender rights ribbons, or displaying them in your facility's waiting areas or check-in stations, show that your specialty supports the transgender community," Stowell says.

INVITE TREATMENT

Until a national, collaborative push for the equitable care of transgender patients gets more traction, radiology groups must do what they can now to foster change. "As a breast imager, we find the detection of breast cancer to be important among all patients," Moy says. Outreach efforts encouraging women to come in for screening mammography, however, can be very biased towards cisgender women, she notes.

"Transgender patients who come in have said that they are reluctant to come back — that they weren't addressed appropriately and felt uncomfortable," Moy says. "Some RTs, doctors, and even patients in the waiting rooms have biases towards transgender patients. We are dealing with an ongoing process of educating people." Education and culture change can be slow, but unfortunately in the time it takes a practice to adapt, transgender patients are missing screening after screening.

CHANGE PERCEPTIONS

A host of indicators may define your practice or radiology department as inclusive or exclusionary in the eyes of transgender patients, Stowell says. If a transgender patient has a negative experience at a facility, they may not come back for much-needed follow-up care. It may even discourage them from getting other healthcare services, like a Pap smear or flu shot, Moy says.

Even signage says a lot. "If a facility is called 'Center for Women's Imaging,' for instance — even if you are offering US and other modalities — you're basically telling transgender men they can't come in to have their gynecological exams there," Stowell says. "Similarly, you're telling a cisgender male with a mammographic issue that he is sitting in a women's center."

While you may not need to change the name of your practice, you can make it clear that restrooms are gender-neutral, Stowell says. You can have transgender literature in your waiting rooms — ranging from magazines to pamphlets for transgender help centers. "No one is forced to pick it up and read it, but it lets transgender patients know they are welcome," he says. Consider your changing area — do patients have privacy? Are your gowns pink, reinforcing the perception of a gendered space?

October is Breast Cancer Awareness Month, and has always been associated with pink to show unity among supporters and survivors. "While pink [ribbons] can make cisgender women feel more comfortable or empowered, they may not speak to the smaller number of transgender patients who see that messaging in waiting rooms or through outreach campaigns," Moy suggests. Rainbow and transgender rights ribbons alongside the pink may seem more inclusive.

Public displays of nondiscrimination policies, LGBTQIA+-affirmative reading materials, and awards of distinction (e.g., the Human Rights Campaign Healthcare Equality Index) can all be nonverbal indicators of a facility's commitment to inclusivity, fostering open communication, and patient retention.[1] These are silent indicators, Stowell says, and transgender patients in your community will look for these things when seeking services.

"Radiology practices are looking to get patients back on track post-COVID-19," Stowell points out. "Making inclusion part of your brand can only help." If you want your radiology group to be forward-facing — so, doing the right thing for *all* patients — an inclusive mindset is key. Radiology is as important for transgender patients as it is for any cisgender patient who needs imaging, Stowell says. "Always be sensitive to what your patient is facing — and to how you present yourself."

For now, radiology personnel can help break down barriers to care by providing a welcoming clinical environment, practicing cultural humility, and staying up to speed with changing recommendations for transgender care.[2]

"In moving forward, what radiologists can do is collaborate with other clinicians who are providing care to transgender patients and find out where we can have the biggest influence," Stowell says. "Imaging is used universally in healthcare, so it makes sense that radiologists be involved early in conversations around improving transgender care." B

By Chad Hudnall, senior writer, ACR Press

ENDNOTES

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2. Sowinski JS and Gunderman RB. Transgender patients: what radiologists need to know. *Am J Roentgenology*. 2018;210(5):1106-1110.

BECOMING THE PATIENT

A radiologist reflects on his own colorectal cancer screening experience — and urges his peers to be screened, starting at age 45.

As a disease that is estimated to be newly diagnosed in more than 147,000 patients and kill 53,200 people across the U.S. this year alone, and the third largest cancer killer among both men and women, it's crucial to realize that colorectal cancer can be entirely avoided through timely screening.[1]

Unlike screening tests for many other cancers, there is significant consensus and little controversy regarding the overarching lifesaving impact of colorectal screening. However, screening rates remain far short of the 80% goal that multiple societies, including the ACR, had set.[2] For this reason, many groups, including the U.S. Preventive Services Task Force (USPSTF), American Cancer Society (ACS), and the ACR have advocated for multiple screening options to be made available to maximize screening rates. It is also for this reason that CT colonography (CTC), also known as virtual colonoscopy, was added to the list of Grade A screening options when the USPSTF updated their guidelines in 2015. Among the multiple options available, CTC and optical colonoscopy are the only two exams that reliably detect precancerous polyps throughout the entire colon, resulting in true prevention of colorectal cancer.

Increased screening rates have helped to reduce the overall incidence of colon cancer over the past decade; however, a disturbing increase in the incidence of early-onset colorectal cancer has recently been documented. In light of this alarming trend, the recommended age to begin screening in individuals without risk factors was lowered to 45 by the ACS in 2018, a move supported by the ACR.

This is where the story takes a very personal turn. As a 45-year-old with a family history of colon cancer, it was time to begin my own screening. As a longtime advocate, I naturally chose CTC as a noninvasive, yet equally accurate alternative to colonoscopy for my screening. As the Patient Protection and Affordable Care Act mandates that all private insurers now cover screening CTC, I knew the cost of the exam was covered, and as no sedation was involved, I could drive myself home and immediately resume daily activities afterwards. While the bowel prep is widely regarded as the most onerous step in either CTC or colonoscopy, I found the low-volume magnesium citrate and barium and iodinated oral contrast tagging agents relatively tolerable and not as bad as I expected. The CT scan the following morning was only transiently uncomfortable during CO2 insufflation. My discomfort eased quickly, and the whole exam was finished within 10 minutes. As a radiologist, I was able to check the adequacy of my own colonic inflation while on the CT bed, and that was when I first noticed something very wrong with my exam.

I reviewed my own study and found a large pedunculated polyp on a long stalk, measuring greater than four centimeters, arising from my terminal ileum and prolapsing through the ileocecal valve between supine and prone positions. I showed the images to a good friend and gastroenterologist who was surprised that I hadn't already developed a bowel obstruction. I am forever grateful to him for squeezing me into his schedule two hours later and spending another nearly three hours endoscopically resecting the entire polyp in piecemeal fashion from my terminal ileum, a location that could theoretically be overlooked in the absence of a preceding CTC.

I was very fortunate to be plugged into a health system where a same-day colonoscopic biopsy was feasible (in much the same way that same-day CTC is made available for incomplete colonoscopies). I feel this should be the future of colorectal screening, especially if — and when — increasing numbers of patients begin screening and potentially overwhelm endoscopy capacity. There is no shortage of CT scanners in the U.S. Approximately 9 in 10 CTCs will not need a colonoscopy, reducing both cost and strain on limited resources.[3]

There were a few other important takeaways from that fateful day: In addition to being feasible to perform on the same day, CTC and colonoscopy serve highly complementary roles in colorectal screening. CTC is often better able to visualize the right colon, particularly in the setting of an incomplete colonoscopy, and colonoscopy remains essential for polypectomies.

Secondly, while private insurers cover screening CTC, Medicare and Medicaid's refusal to cover screening CTC continues to unfairly leave millions without access to this alternative screening option — a lower cost option which has been shown to increase overall screening rates and save lives.

Thirdly, 45 is definitely not too young to start colorectal cancer screening, especially when 1 in 7 are now diagnosed under the age of 50.[4]

And finally, pathology of my specimen revealed a benign hamartoma. There is nothing like an existential health scare to gain valuable perspective on life and personal health. I urge you, your loved ones, and your patients to be screened starting at age 45. B

RETURN TO CARE

On average, only 70% of eligible patients receive screening — and that was before the pandemic. Unfortunately, colorectal cancer screening has dropped 86% during the pandemic, relative to averages prior to Jan. 20, 2020. For more information, visit the ACR's Colon Cancer Screening Resources (acr.org/colorectal), RadiologyInfo.org, and the ACR's My CT Colonography Locator Tool (acr.org/myCTC) to find or add a location near you.

By Kevin J. Chang, MD, FACR, director of MRI at Boston University Medical Center and adjunct associate professor at Brown University Alpert Medical School

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

LUNG SCREENING IN AN URBAN SETTING

Radiologists in the Bronx lead a lung cancer screening program targeting an underserved, high-risk urban population.

David Feliciano's friend went to the doctor for what he thought was just a cough, but imaging revealed something much more serious: Stage 4 lung cancer. "By the time he finally got his lungs checked, it was too late, and four months later, he was gone," Feliciano says.

Feliciano, himself a former smoker, learned a valuable lesson from his friend's results: Lung cancer typically doesn't present symptoms until the advanced stages, when the disease is more difficult to treat and nearly impossible to cure.

When it comes to lung cancer, early detection is lifesaving. Three-fourths of lung cancer cases aren't diagnosed until the disease has spread, reducing the five-year survival rate to just 5%.[1] But if lung cancer is detected early, the five-year survival rate can be as high as 90%.[2] Lung cancer screening (LCS) programs, like the one Feliciano is enrolled in at Montefiore Health System in New York, aim to increase survival by catching lung cancer early.

SUPPORT FOR SCREENING

In 2011, the National Cancer Institute published the findings of the National Lung Screening Trial (NLST), which established the evidence to support LCS. The results revealed that annual LDCT screening could lead to a 20% reduction in lung cancer mortality rates, compared to standard chest X-rays.[3]

Around the same time, CMS selected Montefiore as one of 32 Pioneer Accountable Care Organizations (ACO). Under this model, Montefiore focused on providing enhanced care coordination and illness prevention for Medicare beneficiaries, so its administrators instantly saw the LCS program as a way to meet these goals and improve patient outcomes related to lung cancer. "Montefiore had just become an ACO, so it was a propitious moment to get everyone on board with a program like this," says Linda B. Haramati, MD, MS, FACR, director of cardiothoracic imaging at Montefiore.

With the goal of developing a LCS program, Montefiore's head of pulmonary medicine initiated the first meeting among physicians from the surgery, oncology, radiology, and radiation oncology departments. Although all of the physicians supported the idea of LCS, the radiologists took the lead, sharing the NLST data and other screening information with their colleagues.

"The strong body of evidence supporting LCS generated a lot of enthusiasm among participants," says Haramati, who's also a professor of radiology at Albert Einstein College of Medicine. "But we knew from mammography that image-based screening has to be done right to be effective. We're not doing diagnostic imaging; we're screening healthy people, so we had to find a way to target and track eligible patients. Instead of starting from scratch, we decided to apply the lessons we learned from mammography to make this program successful as a radiology-centered service."

INITIAL RESOURCES

In modeling the LCS program after mammography, Haramati and the multidisciplinary committee identified three key resources they needed to launch the initiative: a special order in the electronic medical record, a system to report results consistently, and a coordinator to manage patients and data.

"First, we wanted to make sure that we screened only eligible patients, which at the time were current and former smokers between the ages of 55 and 74 with a smoking history of at least 30 pack-years," Haramati says. "The only real resource we needed from administrators was a special order in our electronic medical record to enroll patients who met the eligibility criteria. They bought into it because the evidence showed that LCS would benefit patient care."

With approval for the special order, Haramati developed an intake questionnaire to ensure that patients referred into the program met the screening criteria. She worked with the EMR's tech team to set up the special order so that when referring physicians enrolled patients, the questionnaire popped up automatically to confirm their eligibility.

Next, Haramati turned her attention to developing a consistent method for reporting results. Since standardized guidelines for LCS did not yet exist, Haramati met with the chief of mammography to develop guidelines based on BI-RADS® — and then switched to LUNG-RADS® when the ACR published its first set of guidelines in 2014.

PATIENT ENROLLMENT

As the program got underway, the committee's biggest concern was enrolling patients. They worried because Montefiore's patients differ dramatically from the NLST population. "The majority of patients in the trial were more affluent than our patients in the Bronx — most of whom come from low socioeconomic backgrounds and have limited access to healthcare," explains Anna Shmukler, MD, a radiologist at Montefiore and co-director of the LCS program.

With CMS' coverage determination still a few years away, Montefiore had to consider the cost of screening for its underserved patient population. "We're the poorest county in New York's 62 counties," Haramati says. "Hospitals in Manhattan were charging between $400 and $700 per scan, but if our patients had to pay that much for exams, it would have been a huge burden on them. So, if their insurance company wouldn't cover it, we charged a reduced rate of $75."

Even with the relatively low cost, the team worried about convincing patients to join the program. "We were concerned that we'd be catching the disease at a later stage because our patients tend to seek medical care only after they're already symptomatic," Shmukler says.

Haramati knew the best way to reach high-risk patients early was through their primary care physicians (PCPs). With this in mind, Montefiore's radiologists began reaching out to referring clinicians about the screening program. When PCPs ordered CT scans for patients with emphysema or a history of smoking, for example, Shmukler would call them back and explain how to enroll these high-risk patients into the new screening program.

ADDED RESOURCES

The first upgrade came in 2015, when Montefiore adopted a new EMR that allowed for a more automated enrollment process to help referring physicians order screening exams and track follow-up recommendations. The second boost came in 2017, when renowned abdominal radiologist, Judy Yee, MD, FACR, became chair of the radiology department.

"Dr. Yee is a big advocate for image-based screening, so even before she joined Montefiore, she met with me to discuss the need for additional resources in the LCS program," Haramati says. "After Dr. Yee started in her new role, one of the first things she asked for was a nurse practitioner to serve as a clinical coordinator for our program."

Yee partnered with the chair of radiation oncology and the director of the Montefiore Einstein Center for Cancer Care, who each agreed to fund half of the coordinator's salary. In 2018, Maria Serrano, ANP-BC, AOCN, who had more than 20 years' experience as a nurse practitioner at Montefiore, joined the program as clinical coordinator. Leveraging her relationships with referring clinicians, Serrano expanded the screening program's outreach efforts. Serrano and Shmukler began visiting primary care sites throughout the system to present the LCS program in weekly meetings and grand rounds, emphasizing that the program adds little work for referring physicians.

SHARED DECISION-MAKING

Serrano and Shmukler also explain that referring physicians can decide how much of the process they want to oversee. When ordering a screening exam, referring physicians can opt to either order a LDCT for a patient they've already met with to discuss the benefits and potential risks of screening, or they can order a shared decision-making session with the program's clinical coordinator.

Regardless of which option the referring clinician chooses, the screening staff receive automated pop-up alerts, letting them know that a referrer wants to schedule an exam. From there, they call patients to ensure they meet the screening criteria (which now aligns with CMS) before scheduling an appointment for either the exam or a shared decision-making session with Serrano.

During the shared decision-making session, as required by CMS before patients are screened, Serrano explains the risk factors for lung cancer and describes what patients can expect during and after the exam. If the patient decides to proceed with screening, Serrano then orders the LDCT.

RESULTS REPORTS

After a patient undergoes a screening exam, one of Montefiore's six chest radiologists interprets the scan, generally within 24 hours, and the EMR automatically generates a letter to the patient and the referring physician outlining the results. Serrano explains to patients ahead of time that if their results are normal (LUNG-RADS-1 or LUNG-RADS-2), the letter will simply say, "We are pleased to inform you that the results of your recent LCS imaging are normal. See you next year," and they'll get a reminder to schedule their annual exam 12 months later.

If the results are more suspicious (LUNG-RADS-3 or LUNG-RADS-4), Serrano follows up with a phone call to both the patient and the referring physician and urges patients to discuss the results with their ordering doctor. For LUNG-RADS-3 results, the radiologists typically recommend follow-up scans in six months. They send Lung-RADS-4 results to Montefiore's weekly multidisciplinary tumor board for discussion.

"Instead of starting from scratch, we decided to apply the lessons we learned from mammography to make this program successful as a radiology-centered service."

Linda B. Haramati, MD, MS, FACR,

GROWTH GOALS

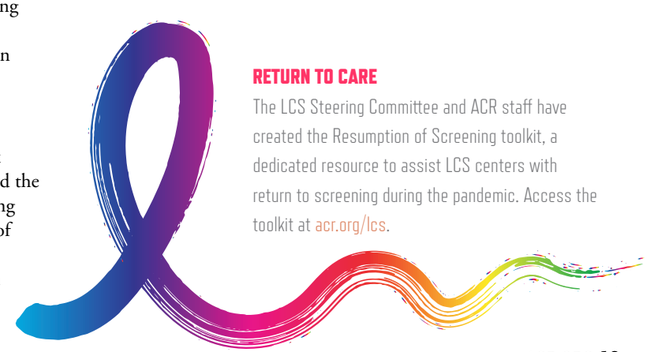
With robust resources now in place, Montefiore's LCS program is poised for steady growth, with two main goals: capture more eligible patients and ensure that enrolled patients return annually. "Ideally, we want 90% compliance with follow-up recommendations, and we've been hovering around 50%. Some patients come back late — 18 months or two years later, instead of annually. Some of them drop out of the system because they got one normal result and decided that's good enough," Haramati says. "It's one of our major priorities to improve that compliance."

The screening team is increasing its outreach and follow-up with physicians to bring more eligible patients into the program and increase compliance. "Informing physicians about the large body of evidence is important," Shmukler says. "We emphasize that LCS saves lives to help them understand how beneficial this program can be for their patients." B

By Brooke Bilyj, freelance writer, ACR Press

ENDNOTES

Endnotes available in the digital edition at acr.org/Lung-Urban.



RETURN TO CARE

The LCS Steering Committee and ACR staff have created the Resumption of Screening toolkit, a dedicated resource to assist LCS centers with return to screening during the pandemic. Access the toolkit at acr.org/lcs.

Building an AI-Enabled Enterprise Radiology Department

Following nine pillars of clinical AI to plan and implement an AI strategy helped Mayo realize AI's benefits.

Despite broad interest in researching how AI applications may be of use in radiology, clinical implementation and seamless workflow integration remain elusive to most practices. In the last few years, the enterprise radiology department at Mayo Clinic in Rochester, Minn., has begun to build the mechanisms required for an AI-enabled radiology practice. This effort aims to leverage the research taking place within our institution that has yielded promising results.

At the core of the effort are nine "pillars of clinical AI" that emerged during the process of planning and implementing our AI strategy. Following these nine pillars can enable institutions to translate AI research into clinical practice — and begin seeing AI's benefits.

Pillar 1: Governance

Critical to successful AI implementation is a governance structure that is responsible for maintaining the vision of the department, prioritizing projects, and maximizing practice impact. AI governance must balance many factors — ensuring clinical needs will be met when selecting algorithms, resources will be well-managed, and collaboration will be fostered between clinicians and other staff.

To address this task, our department established a committee charged with reviewing proposals and weighing the impact proposed applications may have on patient care and current clinical workflows. Based on the priority given to a proposal, the committee assigns appropriate resources to begin implementing the solution.

Pillar 2: Discovery

The discovery process generates and evaluates new opportunities where AI may be useful. While the discovery process is based on the freedom to explore options, coordination with the governance and translation pillars will maximize an AI solution's impact on the practice.

By making our researchers aware of downstream implications of their designs and decisions, we can smooth the transition of bringing new algorithms into the practice — and ensure that algorithms address clinically relevant questions. To achieve fast prototyping, a discovery team — including image analysts, post-doctoral fellows, data scientists, AI engineers, project managers, and scientific programmers — collaborates closely with radiologists and clinicians. All work is performed under a quality management system (QMS) maintained by a quality specialist.

Pillar 3: Translation

Translation is the process of preparing a research prototype for the rigors of clinical practice. It is imperative to consider security, regulation, data provenance, privacy, maintenance and support during this process. Additional extensive clinical validation is necessary for each algorithm and for the clinical workflow to ensure the algorithm can be generalized. We also establish standard operating procedures to ensure application of machine learning best practices.

Pillar 4: Regulatory Process

Regulation of AI by the Food and Drug Administration (FDA) is still evolving. Online learning systems are a chief concern, as algorithms continue to change and learn once deployed. In our process, we always conduct the translation of algorithms under a rigorous QMS to ensure that an FDA clearance path is feasible. The radiology department works with the QMS specialist and the compliance office to develop a strategy that will support the application for FDA clearance.

Pillar 5: Application

Bringing an AI algorithm into clinical practice requires good processes to ensure a smooth, seamless rollout and integration with other available clinical systems. To address the challenge, a team of IT specialists and informatics experts must develop a high-availability infrastructure that can be used to roll out the algorithms into clinical practice when ready. Rollout stages include integration, testing, and production infrastructure. Additionally, it is critical to put appropriate software in place to allow for data routing and monitoring.

Pillar 6: Sustainability

Radiology is a dynamic field, with a rapid cadence of new imaging modalities, clinical best practices, workflow

continued on page 22

Navigating a New Normal

With COVID-19 still in the spotlight, an ACR member discusses how the importance of supporting the needs of medical workers is more important than ever.

The pandemic has devastated many radiology practices, imaging centers, and academic departments. Pediatric radiology centers could fare slightly better because of children's apparent increased immunity to COVID-19.

And while some pediatric radiology centers were suddenly faced with changes in schedules and reduced personnel, they also learned — out of necessity — how to improve their staffing, workflows, and communication.

In an interview with the *Bulletin*, Neil U. Lall, MD, a radiologist with Children's Healthcare of Atlanta and vice chair of the ACR YPS, shares how the pandemic has affected his work in a pediatric environment — as well as the lessons he's learned about the profession and the overall healthcare landscape.

How has the nature of your work changed due to COVID-19?

I have had a different experience from other radiologists in that COVID-19 hasn't been as prevalent in the pediatric world, so I have been somewhat insulated from it. While some hospitals had to divert a lot of manpower to directly caring for COVID-19 patients (with some physicians going through "redeployment" into frontline specialties), this was much less of a concern for us, given our patient population.

We were able to keep operating but we did throttle back most outpatient imaging that was deemed non-urgent. I think there was less fear of coming into a medical facility among our patient population than there was among older adults. However, we did see cutbacks in schedules and in outpatient imaging, with only urgent cases being handled for a while. Imaging started to come back around the beginning of May, and as of August, caseloads are almost back to pre-COVID-19 levels.

There are strict universal mask requirements throughout Children's Healthcare of Atlanta. Scripts and other written guidance have been provided to RTs so that they are more prepared to talk to parents who refuse to wear masks. Although most staff are physically back to work, some of the administrative assistants continue to work remotely.

What adjustments have you made to your workflow as a result of the pandemic?

We've definitely made significant changes to workflow. Remote workstations were not optimized before COVID-19, but we now have a reliable set-up that can serve as a back-up, if needed.

We've become more effective in remote resident education, developed electronic channels for remote resident cases, and increased our ability to provide virtual supplemental lectures. I believe all of these things have resulted in an overall improvement in the education that we provide.

Around the time of the stay-at-home orders, we were adding on an additional site. Because the radiologists were no longer all in the same location, we had already been developing different ways to communicate, including instituting a text-bxased system for communication with RTs. The virtual communication techniques that we developed while working remotely helped to make that transition smoother and more effective when the pandemic hit.

Are there any ACR resources that have been particularly helpful to you as you navigate this new normal?

It's great that the ACR has been compiling information and maintaining a dedicated COVID-19 resources page. The recommendations on how to reopen your practice (and English and Spanish infographics) were very helpful, in addition to the recommendations on centralization and standardization (available at acr.org/COVID19). There were also benefits from having a virtual ACR Annual Meeting for the first time. More radiologists were able to attend caucuses virtually than if the meeting had taken place in person. We could also communicate with each other, through chats, during presentations. I think we have seen that virtual education can open up new doors for the future.

Why do you value your ACR membership?

I always saw advocacy as a membership benefit and felt that all ACR member resources were very helpful. However, with healthcare currently in the spotlight, the importance of funding and supporting the needs of the healthcare industry and its workers is paramount. Because so many changes are happening so rapidly, it's more important now than ever to have a voice at the table. B

Interview by Lisa Berretta, ACR Membership Services

Who Are ACR Members?

We need your input to get a better sense of who our members are and what environments they work in. This confidentially-kept information will assist the College in better understanding members' needs and ensuring we're meeting them with appropriate resources and services.
Please complete the fields in the My Profile tab when you log into My ACR on acr.org.

Promoting Health Equity

The *JACR*® is exploring systematic changes to foster care equality — and the journal wants your proposals.

Health Equity: Everyone's Responsibility

Radiologists are in a prime place to inspire broad change and to create teams that are focused on addressing disparities. The September 2020 *Bulletin* special issue not only provides a better understanding of the emerging disparities, but offers actionable steps to craft a better path towards equity — together. Read more at acr.org/bulletin.

Reducing health disparities has long been on medicine's radar, but COVID-19 has put a brighter light on how structural inequities directly impact access and outcomes for a wide swath of patients. The October 2021 issue of the *JACR*® will look at radiology through the lens of health equity and social justice. Proposals for the focus issue are due Oct. 30, 2020, and will explore how provider-led initiatives can create a just health system that serves all patients (see the call for papers at acr.org/healthpapers).

The *Bulletin* spoke with the issue's co-editors, Melissa A. Davis, MD, MBA, assistant professor at Emory University School of Medicine, and Efrén J. Flores, MD, officer of radiology community health improvement and equity at Massachusetts General Hospital, to discuss their work in the health equity movement and the types of research submissions they're looking for.

What does health equity look like in radiology?

EF: Health equity ensures that all patients have fair access to the care we provide in radiology, regardless of background. Equity related to medicine intersects with other social justice causes — like, for example, fair access to opportunities involving education, housing, work and living conditions — so that everybody has a chance to achieve the best possible outcomes in life.

MD: There's been a lot of great research around the demographic makeup of radiology and inequities around lung cancer screening for people of color. But we haven't really had the discussion about marrying social justice and health equity in our specialty, and how we can elevate our impact on marginalized groups from a patient-centered perspective.

The call for papers states that articles that focus on social and structural inequities in healthcare – including "techquity" – will be considered. What is techquity?

MD: Radiology has always been at the forefront of technology when it comes to medicine, and we need to leverage that technology to decrease health inequities — and be specific about this intent. With machine learning and AI, there is the promise that we'll be pushing radiology forward. The way we ensure that we don't propagate current inequities that already exist, introduce compounding biases in the tools we're creating, and close gaps is what I see as "techquity."

How can radiologists get involved in the movement?

MD: Take a human-centered approach, and ask questions to ensure that, as radiologists, we're providing the care that patients expect to be provided. Talk to patients and establish a rapport so you can have these conversations. Ask patients how they were treated before, during, and after their appointment. Talk about their follow-up care and understand any barriers they are running into.

EF: Anywhere there's a gap or a need in your healthcare institution — that's an opportunity to collaborate with your colleagues and with community stakeholders outside your institution. Try not to feel overwhelmed by all of the barriers that need to be addressed. Start small — many small wins build to a bigger win.

What can people expect from the issue?

EF: We plan to cover many topics related to overcoming barriers to care and promoting health equity and social justice. For example, one of the topics of interest is exploring health equity through the lens of a quality and safety priority and expanding the business case to invest resources in health equity. When a radiology practice or hospital system is evaluating how to advance health equity efforts in their community, they must evaluate this as an opportunity to advance the quality of care provided. This requires the commitment of financial resources to achieve this goal. This commitment to enhance health equity efforts can be financially feasible and can offer radiology practices new opportunities to offer better care delivery for patients — and promote trust among our patient populations.

MD: We'll be examining the current state of radiology and how we can build a workforce that's more diverse and inclusive. I'm hoping this will be an issue where we put forth all the health inequities that we see within medicine and radiology and explore ways to improve and impact those things systematically.

We want to make sure we have a diversity of perspectives too. Typically within research, one of the inequities we see is that it's harder for marginalized groups to get published. I'd love people from throughout medicine and at all levels to submit and share their ideas and research. B

Getting Started in Quality and Safety

The ACR has a wealth of resources to support your daily tasks of managing and improving Q&S.

A knock on my office door from a resident. A question at the end of a lecture to medical students. An email to my inbox, sender unknown. "I am interested in working in quality and safety, but don't know how to get started."

Quality and safety (Q&S) is not simply an administrative task, but rather a specialty in and of itself, requiring depth of expertise, as for any other specialty. There is no single route to becoming a competent expert in Q&S. Your path will be defined by your particular interests. Q&S is remarkable for its breadth of content, ranging from culture of safety to dose reduction to patient-centered care. Whatever your focus, you will, by necessity, build the knowledge base and skills you need to excel in that area. If you are interested in producing and leading change, you must understand the broader field as well. Since there are few training programs in this area, it will take initiative to study sufficiently to prepare yourself for this work.

So, how do you get started?

Read

Dive into the radiology Q&S literature to familiarize yourself with the language and processes of improvement and learn how other practices approach problems. Also, keep an eye out for useful articles in the general medical literature. Be discriminating about what you read. There is a lot of misinformation or misinformed opinion out there that passes for Q&S expertise. Prepare yourself to be able to quickly differentiate between true expertise and uninformed opinion.

Ask questions

How does your practice accomplish the daily tasks of Q&S? For instance, how is the quality of RT and physician work managed? Who prepares for accreditation inspections and what content do they focus on? Who is responsible for patient experience? Who responds to medical errors?

Browse

Explore the ACR website to look for resources to support those daily tasks of managing and improving Q&S. Knowing what resources are available from the start will help you maximize efficiency and avoid reinventing the wheel.

Show up

If you start showing up in the places where you are interested in belonging, you may eventually be invited to participate. Find out where Q&S is discussed, both in your practice and at higher levels in your organization. Ask if you can sit in on a few meetings; listen closely and learn, then volunteer to help when appropriate. I guarantee opportunities will appear.

Learn from experts

Many opportunities exist to learn from the experts. Start by attending the high-yield annual ACR Q&S Conference, which will be virtual and easily accessible this year (see sidebar).

Make a list

Make a list of everything that drives you crazy in your daily work. Then, choose a small, focused, solvable problem on that list, look to the literature for how others have managed the problem — and get to work.

Build friendships

Meeting other people locally and nationally who are also passionate about Q&S is extremely rewarding. Connect with people on areas of shared interest first, then get to know them through those conversations. Eventually, you will seek them out to troubleshoot, collaborate, or open doors for one other. You will accomplish so much more together than working alone.

Prepare to lead

Almost all work in Q&S requires change, and all change requires leadership. You will need to be ready to lead. Fortunately, the ACR's Radiology Leadership Institute® is available to help you develop the necessary skills. B

By Jennifer C. Broder, MD, vice chair of quality and safety at Lahey Hospital and Medical Center and vice chair of the ACR Commission on Quality and Safety

The 2020 ACR Virtual Annual Conference on Quality and Safety is a two-day virtual event that will breathe new life into your quality improvement efforts. You'll discover how communication can improve safety and optimize patient care in radiology practices. Learn more and register at acr.org/qualityconference.

The "Lax Radiologist"

Educating a jury as to how scans are read is key to a juror's understanding of how radiologists practice.

Can you be sued for not spending enough time interpreting an imaging study? A recent South Florida case has raised concerns that a patient may allege this claim in future lawsuits.

The Case

A 64-year-old man taking blood thinning medications hit his head on a filing cabinet while tying his shoe. Paramedics transported him to the hospital, where he was evaluated in the ED and non-contrast CT scans of the head and cervical spine were ordered and performed. The radiologist found a scalp hematoma but allegedly failed to diagnose an acute subdural hematoma. The patient was discharged and sent home. His condition deteriorated and he was eventually admitted to a different hospital, where he was diagnosed with massive intracranial bleeding. The patient passed away the next day. The initial parties settled out of court for $2 million.[1]

The Allegation

The initial head CT scan showed a scalp hematoma with a contrecoup subdural hematoma, but the radiologist only mentioned the scalp hematoma. The radiologist was trying to reach a settlement when the plaintiff's attorney subpoenaed the director of radiology to produce a printout of the record of each keystroke the radiologist made on his PACS computer the day he reviewed the CT images of the plaintiff. The subpoena showed that a total of 6 minutes and 27 seconds was spent looking at 691 images of the CT scans of the head and cervical spine. The plaintiff's attorney alleged that this amounted to one-half a second per image — claiming that the radiologist was lax in his reading of the CT scan. Painting the radiologist as lax in his duty to the patient enabled the plaintiff's attorney to leverage the CT scan to negotiate a larger settlement.[2]

The Implications

Since this case never reached a jury, there is no way to tell if the case could have been successfully defended on its merits. Errors in perception can occur in the absence of negligence.[3] Mistakes are inevitable in the practice of medicine and will occur even with the best-trained radiologist. There is a recognized 4% error rate in radiology for daily work, which has been relatively stable for five decades.[4]

Realistically, the "speed per image" allegation would probably not be raised if there was not an error in interpretation. There is no standard of care for what constitutes a reasonable amount of time to spend interpreting a particular imaging study. Furthermore, no articles in the peer-reviewed literature address time spent per image. There has been considerable anecdotal data concerning the relationship between reading speed and accuracy, but there is no valid evidence to suggest that a "fast-reading" radiologist is reckless or that a "slow-reading" radiologist is more careful.[5] However, a limited study of five radiologists tried to assess how radiologists perform when they read outside of their normal reading speed. The researchers initially concluded that there was a positive correlation between faster reading speed and the number of major misses and interpretation errors.[6] The authors further noted that radiologists did not do well when reading faster than their baseline rate.[7]

Since there is no established standard for the viewing time of an image or a series of images, this leaves the field wide open for attorneys to allege — based upon expert witness testimony — that the radiologist did not spend enough time in reading the imaging study.

While looking at an image for less than a second might seem reckless, the radiologist actually scans through the images in cine fashion looking for abnormalities, rather than stopping and looking at each individual image. CT and MRI images are usually reviewed by scrolling through the various series, most often in two or more planes simultaneously — similar to how one would view a movie. In addition, some of the many images may be oblique reformatted images, additional thin cuts, and/or 3D reconstructions.

When looking for stroke on diffusion weighted imaging or blood on gradient echo, we look for a focal signal abnormality or change in signal, rather than looking at every structure on each image. This is often done quite rapidly as we scan through all the images. Alleging that the radiologist was lax because they did not spend enough time per image ignores the way that most radiologists actually read the scans. Nevertheless, this will not stop a plaintiff's attorney from using this against us in a court of law.

A South Carolina radiologist reported that he was asked in deposition about keystroke monitoring on PACS to determine the amount of time he spent reviewing a particular MRI scan and the total number of images reviewed.[8] You do not even have to be aware of keystroke monitoring since you will probably be asked in deposition how much time you spent reading the imaging study. This can occur whether you are a defendant or an expert witness. Be careful how you answer, as it is then quite easy to calculate the average time in seconds spent on each image.

Most radiologists scroll through the images, in two or more planes, and don't spend an equal amount of time on every image. If this is how you read scans, make sure you are able to explain this in a concise and understandable manner that jurors can comprehend. Be prepared to actually demonstrate this to the jury if you go to court or are deposed. While the "lax radiologist" is a novel allegation, it is one that could receive recognition and approval from jurors.

The ACR

The ACR does not currently have a Practice Parameter (PP) that addresses the minimum interpretation speed per image. Even if the issue is later addressed by a PP, these documents are educational tools and not intended to establish a legal standard of care.[9] However, the trial courts have mostly allowed "guidelines," such as the ACR PP, into testimony as relevant to the decision-making process in a case, but not as a document that defines the legal standard of care.[10] B

Michael M. Raskin, MD, JD, MPH, FACR, is a member of the ACR and the Florida Radiological Society. He frequently publishes and presents on medical-legal topics. *The ACR Legal Office would like to acknowledge his contribution to this month's "RADLAW."*

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The Take-Home Points

The "lax radiologist" allegation is a novel approach but one that may resonate with jurors. While we scroll through many images, often in two or more planes simultaneously, jurors may still buy into the "time per slice" argument and conclude that the radiologist was rushing through the images.

Educating the jury as to how radiologists read scans is key to a juror's understanding of how we practice. Although keystroke monitoring has not yet been presented to a jury for their deliberation, it appears to have been successful in leveraging a larger-than-normal settlement in this case. Expect to see it used again in the future.

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Something We Take Home

(L-R) Cindy Kunkel, RT (R), and Kim Stricker, RT (R), are pictured in the ER at Tower Health Reading Hospital in Pennsylvania.

Two RTs discuss their experience working at a busy ER during the peak of the COVID-19 pandemic — and how they uplifted each other and their community during their darkest days.

As the American Society of Radiologic Technologists celebrates its 100th anniversary, the *Bulletin* is featuring RTs going above and beyond for their patients and colleagues. Two such RTs, Cindy Kunkel, RT (R), and Kim Stricker, RT (R), spoke with the *Bulletin* about their experiences working in the busy ER at Tower Health Reading Hospital in Pennsylvania during the peak of the pandemic — and the poem they wrote together that brought them into the national spotlight.

How was working at the 10th busiest ER in Pennsylvania a different experience during the peak of the pandemic?

KS: I've never experienced anything close to this. What made it so different from past events was just the *unknown* of it. Nobody really knew what we were dealing with or what to expect. Our flu season is usually bad in Pennsylvania — our ICUs get pretty full. So we were waiting, wondering, "How serious is this — is it going to be like the flu season? Or is it going to be worse?" One day we'd be told, "Okay, do this," and then the next day, "No, no, no, actually you need to do *this*!" We wondered, is this our new normal? There were a lot of uncertainties and we were just dealing with it all the best we could, given what we knew at the time.

CK: We annually do 70,000 procedures in our ER. The interesting thing is our ER became very empty at the beginning of the pandemic, so we went from being busy to having a lot of downtime. We did see many COVID-19 patients, mostly doing portable chest X-rays, but other patients did not come to the ER. With the statewide shutdown in place, all of a sudden there were no car accidents, falls, etc. People were afraid to come to the ER. I have been working in radiology for 39 years and have never experienced anything like this. It was a very strange time.

It was definitely very stressful in the beginning, watching what was happening in New York and worrying if we were going to experience the same volume or if we were going to get sick and take it home to our families. We were receiving updates about hospital guidelines in the morning and the afternoon. Things were changing constantly. However, the worst thing was watching very sick patients being admitted to the hospital without their families, and knowing their families would not be allowed in with them.

What prompted you both to write the poem, *Corona*?

KS: Well, we'd written one for Christmas about two years ago. Then one day in the midst of the pandemic we were talking — I was feeling frustrated and overwhelmed with everything we were going through. We said, "You know, we need something funny and uplifting." So we just decided, "Let's write a poem about our experience right now." And we did! It was something fun and positive to do during a time when there was a lot of anxiety and so much was unknown.

What were some of the lessons you learned following the first COVID-19 surge?

KS: We definitely learned a lot from our experience with PPE, as many facilities did. We learned how to disinfect better and to extend our cleaning protocols to things like our portable equipment. And schedule-wise, we learned how to handle the volume very well — spreading out our patients in the ICUs and making sure our staff members were safe.

Do you have advice for how radiologists and RTs can work together better, particularly during the ongoing pandemic?

KS: I feel like we have a great working relationship with our radiologists. In general, we appreciate it when radiologists are understanding of extenuating circumstances if/when we can't get the best possible images. We're in aprons, covered in equipment, many of us are doing portable chest X-rays where patients are prone and on cooling blankets, and we're trying not to move them because they're so sick. We do our best to collect the best possible image — but sometimes we get what we get.

Also, try to remember to be kind to and compassionate with your frontline colleagues. You never know what they may have had to experience in a particular day. For example, at our hospital, a lot of people have had to watch their family members pass away via FaceTime. So our nurses faced the unimaginable task of facilitating a FaceTime call between a dying patient and their loved ones. It was heartbreaking. But they were so compassionate in terms of helping these families get some sort of closure. I've seen an RT sit with a patient so they didn't have to die alone. Seeing these patients and their family members, knowing that's the last memory they have together — it's sad for us too. It's something we take home. That's what we wanted to showcase by sharing our poem with the world: when we come to work, we work together, and we do the best we can. B

Interview by Cary Coryell, publications specialist, *ACR Bulletin*

Corona

We now have this new illness called the novel coronavirus.
It may be quite deadly, but we won't let it divide us.

We have to be careful and wear PPE.
But is there enough? I guess we shall see.

Today they say this, tomorrow they say that.
The community keeps feeding us and now we are all getting fat.

We are all allowed one mask, the inventory is low.
It feels like we are actors in a science fiction show.

The doctors, they use us so they can see inside.
We know we are needed so we set our fears aside.

We see people so sick and some may even die.
But we give it our all, we really do try.

There is fear, doubt, and anger lingering outside.
But in these walls, we stick together and keep going on with pride.

ENDNOTE

1. Reading Hospital. Reading hospital emergency department highlights. 2020 Reading Hospital – Tower Health. Updated July 1, 2020. Accessed Aug. 18, 2020.

And the Winner Is . . .

Thank you and congratulations to the participants of the 2020 Chapter Renewal Outreach Challenge. The value of membership is only increased by the work our chapters do to support members in their communities — whether that's by locale or by specialty.

The winners are:

First place:
Texas Radiological Society who renewed 23.6% of their remaining members

Second place:
Washintgon, D.C. Metropolitan Radiological Society who renewed 23.1% of their remaining members

Third place:
Virginia Chapter who renewed 21.6% of their remaining members

The honorable mentions go to:

The first chapter to join the challenge:
Florida Radiological Society

Chapter with the most entries to join the challenge:
New York State Radiological Society

Thank you to the following participating chapters:

Alabama, Arizona, Arkansas, California, CARROS, Connecticut, Delaware, Georgia, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Pennsylvania, Tennessee, Utah, Washington

Is a New Job in Your Near Future?

The ACR Career Center, one of the most accessed member benefits, is actively responding to the evolving transition of employment among radiology professionals.

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Creating an account will allow you to access resources, take advantage of the CV review service, and receive customized Job Alert emails applicable to your specialty and location interests. In addition, you are able to pursue career counseling that includes interview advice at your convenience.

Find a job today at acr.org/CareerCenter.

Building an AI-Enabled Enterprise Radiology Department

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changes, and optimization. Radiologists, informatics experts, and AI researchers must jointly update models with fresh training data, deploy new versions, and adapt and control deployed algorithms. Ongoing coordination with governance is also critical to ensure sustainable staffing levels and resources over time.

Pillar 7: Financial Considerations

Internal funding, the potential for commercialization, and billing processes are major financial concerns when creating an AI-enabled radiology practice. The long-term return on investment and billing for AI that is incorporated into a workflow remain open questions for early AI adopters. Institution-level leaders with appropriate expertise address this task for us.

Pillar 8: Patient and Provider Experience

In the radiology workflow, even the best AI algorithm will be rejected if poorly implemented and deployed. To ensure smooth clinical integration, a systems engineer needs to identify the best way to integrate each project within the clinical practice. The needs of the patient must also be considered, including answering questions such as, "How will patients react when AI is used to predict a clinical outcome?" and "What will it take to teach clinicians how to work with an algorithm?" In our AI implementation, the needs of the patient and clinicians/radiologists are always top of mind.

Pillar 9: Digital Practice Alignment

No clinical department operates in a vacuum within a large institution. Our radiology AI strategy interfaces with and informs institutional initiatives to create a digital practice that extends beyond the radiology department to intersect multiple specialties.

While every AI journey is unique, institutions face many of the same challenges in translating AI research into clinical practice. These nine pillars of clinical AI have helped us create a successful AI-enabled radiology practice. We hope this approach will help other institutions build their own AI-enabled success stories. B

By Panagiotis Korfiatis, PhD, Daniel Blezek, PhD, and Sadia Choudhery, MD, assistant professors at Mayo Clinic in Rochester, Minn.

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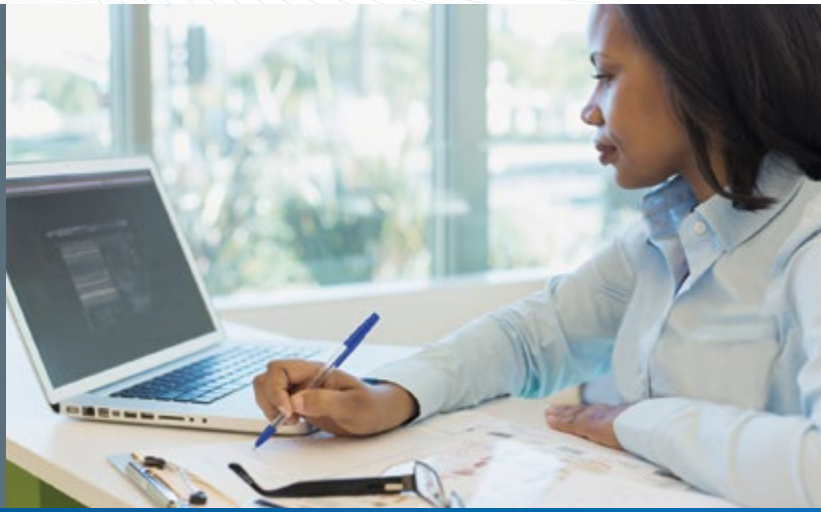

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