A RETURN TO CARE
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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 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 class and 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.

Sticker Shock

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

A n 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 considerable amounts 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 threshold for the vast majority of medical practices and facilities. These closures would significantly impact patient access to care at a time when our population is most vulnerable.
- 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.

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 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-BRMA Practice Leaders Forum.

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

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 congressional-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 could 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.

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.
Gregory N. Nicola, MD, FACR

OCTOBER 2020

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%. How did this happen?

These reductions in payments are not technically targeted toward 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) codes that lead to significant upward revaluation of relative value units (RVUs) finalized for the 2021 program year.2

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 be 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 all 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 opportunities to limit or 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 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.

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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 earlier 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 support the lifesaving benefits of screening mammography. We must act together to help our mammography patients return to care.

By Dana H. Sneatherman, 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


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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 www.acr.org/breastimaging, MammographyGuidelines.org, and ReturntoCare.org.
Transgender patients deserve radiology’s commitment to screening outreach and access.

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 ER 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 Bae Karrington, a 2021 MD and MS/PH 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 determination of 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 care 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 screening for breast cancer in this group of patients could 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 are developing 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/ACR.

¹ Terms at acr.org/transgender-glossary.

REFERENCE
Karrington, B., et al. (2021). "Transgender Breast Cancer Screening for Transgender and Gender Nonconforming Individuals." 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.
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 you specialize supports the transgender community,” Stowell says.

INVITE TREATMENT

Until a national, collaborative push for the equitable care of patients, we are dealing with an ongoing process of educating patients — an all-forward-facing — so, doing the right thing for transgender and gender-diverse persons in radiology.

”Transgender patients who come in to have said that they are reluctant to come back — that they weren’t addressed appropriately — and felt uncomfortable,” 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 to 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 nurses 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 comfortable or empowered, it’s not speaking to me or other number of transgender patients who see that messaging in waiting rooms or through outreach campaigns,” Moy says. Rainbow and transgender rights ribbons alongside the pink may seem more inclusive.

Public displays of nondiscrimination policies, LGBTFAQs+ 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. 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 the way we treat and care for all patients is very important 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.

“ 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 in these conversations around improving transgender care.”

September 21-25 is Breast Cancer Awareness Week, and it’s crucial to realize that colorectal cancer can be entirely avoided through timely screening.

Unlike screening tests for many other cancers, there is significant consensus among doctors and little controversy regarding the overarching benefit and impact of colorectal screening. However, screening rates remain far short of the 80% goal that multiple societies, including the ACR, had set for.

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 (CCT), 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.

“Where this story has taken a very personal turn. As a 45-year-old woman with a family history of colon cancer, I 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 insurance now cover colon cancer 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. While the bowel prep is widely regarded as the most onerous step in either CTC or colonoscopy, I found the low-volume magnesium, barium citrate and barium and iodin-
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 went to see the doctor, his lungs were already 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 lung cancer diagnosis: lung cancer typically does not 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. Third-fourths of lung cancer cases aren’t diagnosed until the disease has spread, reducing the five-year survival rate to just 5%. But if lung cancer is detected early, the five-year survival rate can be as high as 90%. 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.9 Around the same time, CMS selected Montefiore as one of 32 Pioneering 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 with their colleagues.

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 with their colleagues.

The first upgrade came in 2015, when Montefiore adopted a new EMR as a radiology-centered service. “We learned from mammography to make this program successful as a radiology-centered service,” Haramati says.

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-RADS10 — and then switched to LUNG-RADS11 when the ACR published its first set of guidelines in 2014.

PATIENT ENROLLMENT

As the program got underway, the committee’s biggest concern was enrollment. Patients 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 bear the full cost of screening 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 our 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 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 nursing position to act 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 or refer the patient with the option of the referring clinician chooses, the screening staff receive automated pop-up alerts, letting them know that a referral 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 risks 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 results undergo 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 a follow-up scan 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,” Haramati says.

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 later — 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. “Referring 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.”

By Brooke Bily, freelance writer, ACR Press

ENDNOTES

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

RETURN TO CARE

The LCS Sharing 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/returntocare.
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 and implement our AI strategy. Following these nine pillars can enable our enterprise radiology department at Mayo Clinic in Rochester, Minn., has begun to build the mechanisms required to begin implementing the solution.

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 project 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 of those proposals. Every AI application 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 applications where AI may be useful. While the discovery process is based on the freedom to explore options, coordination with the governance and translation pillar 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. AI 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 rigor 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 established 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 improvements that are continuous. To address this challenge, our department has developed a procedure for an AI-enabled radiology practice. This effort aims to leverage the research taking place within our institution and implement our AI strategy. Following these nine pillars can enable our enterprise radiology department at Mayo Clinic in Rochester, Minn., has begun to build the mechanisms required to begin implementing the solution.

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 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 this 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 wasn’t fear of coming into a medical facility among our patient population than there was among older adults. However, we did see surges 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-based 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) have been 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.

Interview by Lisa Berretta, ACR Membership Services
Promoting Health Equity

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

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 ACR® 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/handlepaper).

The Bulletin spoke with the issue’s co-editors, Melissa A. Davis, MD, MBA, assistant professor at Emory University School of Medicine, and Efem 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?

Effectively addressing health equity requires 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, far access to opportunities involving education, housing, work and living conditions — so that everybody has a chance to achieve the best possible outcomes in life.

What can people expect from the issue?

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Getting Started in Quality and Safety

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

If you’re new to quality and safety, try not to feel overwhelmed by all the barriers that need to be addressed. Start small — many small wins build to a bigger win.

Feeling like monkey business.

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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 passed away the next day. The initial parties settled out of court for $2 million.

The Implications
Since this case never reached a jury, there is no way to tell if the case could have been successfully defended on the basis of how the patient was treated. 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. 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. The authors further noted that radiologists did not do well when reading faster than their baseline rate.

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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 alleging — 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 each structure on every image. This is often done quite rapidly as we scan through all the images. Allowing 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 court.

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. 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 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 “tax radiologist” is a novel allegation, it is one that could receive recognition and approval from jurors.

The Take-Home Points
The “tax 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.

Educat ing 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 use, it has been presented to multiple medical-legal topics. The ACR Legal Office would like to acknowledge its contribution to the field of “RADLAW.”

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. However, the trial courts have mostly allowed “guidelines,” such as the ACR PP, to be admitted as relevant to the decision-making process in a case, but not as a document that defines the legal standard of care.

ENDNOTES
Something We Take Home

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 uncertainty 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 able to be there. We were receiving updates about hospital guidelines — and the poem they wrote together that brought them into the national spotlight.

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 sunny 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.

CK: I feel like we have a great working relationship with our radiologists. In general, we appreciate it when radiologists are understanding of exterminating circumstances (when we can’t get the best possible images. We’re in rooms, 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.

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

KS: The doctors, they use us so they can see inside. We know we are needed so we set our fears aside. But they gave it our all, we really do try.

CK: There is fear, doubt, and anger lingering outside. But we give it our all. We really do try.

What prompted you both to write the poem, Corona?

KS: It feels like we are never in a science fiction show. We have to be careful and wear PPE.

CK: We have 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 at 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 poems with the world: when we come to work, we work together, and we do the best we can.

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

Third place: Virginia Radiological Society 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, CARROS, Connecticut, Delaware, Georgia, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, North Carolina, Pennsylvania, Tennessee, Utah, Washington

Building an AI-Enabled Enterprise Radiology Department continued from page 14

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 despite AI adoption. 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 interact 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.

By Panagiotis Kofartas, PhD, Daniel Bloch, PhD, and Sasha Choueifey, MD, assistant professors at Mayo Clinic in Rochester, Minn.
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