



Ushering in a New Era in Healthcare: Intelligently Efficient

The COVID-19 pandemic strained an already overburdened healthcare delivery system in the United States and around the world, exacerbating existing challenges felt by providers such as increasing demand, increasing costs, and rising clinician burnout. These challenges are even more pronounced in radiology, where radiologists are spending most of their time away from their patients on task-oriented work, and many of them are reporting signs of stress and burnout.¹

The pandemic brought with it a new level of stress for providers, but also for patients, and technology was the solution that calmed fears, provided relief and most importantly, allowed for communication between providers and patients who were in need of care. It seemed as almost overnight, technology provided access when access was limited, and the flexibility of telehealth increased the workflow efficiency for providers. More importantly, the world witnessed the “proof of concept” for how technology can positively impact the healthcare industry—at scale.

Already in play, the use of advanced technology in imaging has continued to positively impact patient outcomes by generating better diagnostic images than ever before for more informed clinical decisions, but it also means that physicians and radiologists are facing huge volumes of data as a result, adding to their already overburdened workflows. Using technology to help ease that burden, the utilization of data analytics software for operational insights, and the development and implementation of artificial intelligence (AI) based tools for radiology has begun and is helping radiologists more efficiently manage imaging data and keep their workflows manageable.

The utilization of technology in healthcare is not new, but the importance of intelligent applications of technology to improve efficiencies is critical; deploying it to improve patient care and to improve the lives of healthcare providers. In Radiology, managing imaging data and streamlining clinician workflows is essential as radiology moves forward in the battle against COVID-19 and for the foreseeable future as well.

Driving Change due to a Pandemic

The rapid-fire adoption of telehealth is a change that few saw coming, but the statistics are undeniable. Many hospital systems' telehealth options saw little utilization before the pandemic, but the situation changed very quickly. Hospital administrators like Tricia Garrity, Chief Marketing Officer at Children's of Wisconsin noted in a recent webinar that the hospital had begun preparing at the start of 2020 to convert to telehealth. Their goal was to reach 1,500 video visits by the end of 2020. They had completed upwards of 45,000 video visits between March and May 2020. The healthcare industry does not typically change that quickly, but in this case, providers urgently needed a way to provide access and communicate with patient communities in need of care.

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“What COVID-19 has done,” explained Kieran Murphy, President and CEO of GE Healthcare, “is really to unveil the power of technology in healthcare. We’re seeing that first-hand in the wide-spread adoption of telehealth that was experienced as a result of the virus. It was truly incredible to see necessity give birth to invention. The entire healthcare ecosystem began innovating and advancing the use of new technologies to improve the diagnosis and care of patients, and very importantly, to keep healthcare workers safe, in a situation that was absolutely critical.”

Using Data Analytics to Avoid Closure

The COVID-19 pandemic had a dramatic effect on the world’s healthcare providers, with extended shut downs causing significant revenue losses, especially for independent operations like imaging centers. But some practices were able to remain open during the first wave of the pandemic and continue to provide services to patient communities that were in need of care. One such example, Chattanooga Imaging, which provides services to patients with six freestanding imaging centers and fifteen radiologists in the northern Georgia and Tennessee areas, made use of insights from its operational data to adapt to the pandemic environment and continue not only to serve patients, but remain profitable.

“COVID-19 came in like a wrecking ball for us,” shared Sue Kilpatrick, Chief Operating Officer of Chattanooga Imaging.

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“Obviously, anyone in the healthcare industry understands that.”

Kilpatrick reported they did not have to lay off any employees due to the pandemic², but instead used data insights to determine the best scheduling options to meet the needs of their patients. Using [Imaging Insights](#), a data analytics software from GE Healthcare, Kilpatrick and her team were able to quickly obtain data and analytics to improve operational efficiencies and lead more informed patient care. They shifted staff to different imaging centers where there was more demand, scheduled radiologists where they were needed most and chose to only operate certain modalities at certain centers.

“Imaging Insights has absolutely allowed us to survive [COVID-19]. It has allowed us to continue to grow in the environment we are in right now in 2020. We are able to get data so much faster [and] so much more accurate[ly] that we were able to make better decisions for our business,” added Angela Shipp, Director of Operations at Chattanooga Imaging.

Making the Move to Digital and AI

Though the COVID-19 pandemic is still surging across the globe, hospitals and healthcare facilities have developed new operational protocols to limit the spread of the virus and are making efforts to bring patients back in for care that may have been deferred during closures. The ability to see a physician via telehealth, however, is an outcome of the health crisis that everyone would like to keep. AI scheduling tools and reminder texts for appointments are also some of the new technologies that emerged during the pandemic that will likely be permanent operational changes.

New AI tools for clinicians have also been introduced, specifically in radiology, that can remove some of their administrative burden and give them back time to spend with their patients. Under a backlog of deferred imaging requests, as well as huge amounts of imaging data, radiologists are welcoming the assistance.

“What we’re trying to do for radiologists,” explained Murphy, “is change the paradigm to give them more time to focus on the patient and worry less about the administrative tasks. The changes in healthcare that we’re seeing and the increasing use of AI and machine learning is very exciting. All of a sudden, we can really unleash the power of computing and analytics in the imaging space so that clinicians are not just bombarded with large amounts of data, but they can draw insights from data that they’ve never been able to do before.”

Enabling Progress through AI Applications

Now that the front door is open, healthcare will likely see innumerable benefits from the introduction of new technologies in the space. Equipment manufacturers have already developed digital platforms by which they can release new technology applications for their products. Using GE Healthcare’s Edison platform, applications can integrate and assimilate data from disparate sources, and apply analytics or advanced algorithms to generate clinical, operational, and financial insights. The [Edison™](#) applications can be securely deployed via Cloud, Edison HealthLink, or directly onto smart devices. Similar to the crowdsourcing concept, Edison is an open platform, meaning GE Healthcare will partner with market-ready independent software vendors (ISVs) and builders to deploy and deliver advanced healthcare applications.

“The progress we’re making in AI is extraordinary,” noted Murphy. “We’re announcing eight new partnerships on our Edison platform just this year. We need to ensure that we

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move with speed and continue to push the boundaries of what technology can do because we understand that in the drive for improved efficiency and speed, we have to make maximum use of better hardware, better analytics, better software, and AI technologies. Edison helps us collaborate with many partners around the world to make that happen.”

Despite taking center stage in healthcare, AI alone is not a “product”, but a powerful, smart technology that when applied successfully, works invisibly in the background to seamlessly help products work more efficiently, intelligently efficient.

Addressing the challenges to patient care using more automated workflows and AI-powered imaging will allow radiologists to provide more precise and personalized care. AI tools in radiology are continually being developed that will supplement the radiologist’s expertise and enable them to be more involved in clinical information flow and patient care.

For more information on all of GE Healthcare’s Intelligently Efficient Solutions, visit the [GE Healthcare Experience](#)

¹ <https://doi.org/10.1016/j.acra.2019.12.029>

² At the time of this interview.



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