

# Radiology Analytics: A Clear Path to Improved Performance

Claudette Lew



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**Samantha Sizemore**  
Chief Operations Officer  
Holston Medical Group  
samantha.sizemore@  
myhmg.com

A wealth of data is available in every imaging practice. Implementing analytics to unearth insights from this data can drive operational improvements and business planning in radiology. Typical business processes used in other industries committed to data-driven decision making rely on iterative, methodical exploration of information with an emphasis on statistical analysis.

Similar analytics methods are being utilized in radiology as the industry moves toward new payment systems and a higher demand for operational efficiencies and cost savings. Holston Medical Group (HMG) Chief Operations Officer Samantha Sizemore is committed to bringing more data science into decision making and operations by using Philips' IntelliSpace Radiology Analytics.

A physician-owned, multispecialty practice with 23 locations and 153 physicians, HMG serves more than 130,000 patients in Tennessee and Virginia. Using Philips' Enterprise Imaging platform, Sizemore has been able to quickly synthesize complex streams of information into readily accessible metrics, mining the data to find clinical and operational efficiencies.

## Data reveals impact

Involved in Philips' early development of the Radiology Analytics platform, Sizemore recalled some of the drivers behind her need to access HMG's radiology data to run the business more effectively. She compared it to having blinders on. "You don't know what you don't know," she said, "but once you take those blinders off, you're able to clearly see all the areas where you can make improvements and truly impact your business."

Radiology Analytics combines deep clinical expertise with technological innovation to connect patients, care teams, and data across health systems. Access to the HMG data and these analytics helped Sizemore to improve workflow throughout HMG and allowed realignment of resources for imaging procedures, resulting in shorter wait times for imaging exams.

"The impact has been nearly instantaneous. Intellispace allows you to identify areas for change and allocate the right resources into areas with the highest impact. You can start seeing the change after the first quarter," she recounted.

## Transforming from data collection to operational correction

One of the first areas Sizemore leveraged with Radiology Analytics technology was report turnaround time. Six years ago, she recalled, HMG radiologists were turning reports around in 48-72 hours. Once Sizemore had information that compared the timing of the studies with the resources for reading them, she could easily pinpoint inefficiencies and take action to correct them. She was able to share the data with the external group contracted to read reports for HMG and worked with them to make the adjustments that would better meet HMG's needs.

"I was able to see the turnaround time by modality and timing, and also better evaluate our process for dictation and reporting," Sizemore explained. "We could review by individual radiologist. With the changes and improvements we made, we are turning all reports around on average in 24 hours now, and some, within just two to three hours."

Though some changes may seem insignificant with respect to the entirety of a healthcare facility, one small change can have a big impact on patient care.

"One of the major positive impacts of this change," Sizemore said, "was the effect it had on our patients. We know that sometimes the worst part is not having the exam itself, but having to wait on the results. We can remove an enormous amount of anxiety from our patients' experience by improving our turnaround times. We can tell them they'll have their results the next day which manages their expectations and lessens the worry."

After turnaround times, Sizemore looked into scheduling allocations versus



*Philips IntelliSpace Radiology Analytics simplifies data analysis so you can see the clear path to improved performance. User-friendly, predefined reports help uncover deeper details about your operations with less effort.*

peak times for reading requests. She found that her ultrasound department was inundated with STAT echocardiogram requests on Tuesday afternoons. The sonographers who performed the echocardiograms were under stress and overburdened with work. Armed with a deeper dive into her data, she could see that many HMG cardiologists had more office hours than procedures on Tuesdays. As they were seeing more patients, the staff received more STAT requests during that time. Increasing staffing for echocardiograms on Tuesdays and decreasing staffing on days with fewer requests alleviated the burnout on the ultrasound staff and improved their working environment. Based on this data and resulting scenario, Sizemore was also able to extrapolate the same trend to other specialties and made similar resource adjustments to better balance staffing with request expectations.



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### **Analytics for the bottom line**

Comfortable with using the intuitive Radiology Analytics interface, Sizemore began leveraging other data for a broader impact—a financial impact. Upon reviewing referral patterns of HMG physicians, she noticed that some patients were referred to HMG's outpatient diagnostic centers, and some were referred elsewhere. She then sought feedback to understand the issues surrounding external referrals.

"The responses provided insights to do things differently," Sizemore said. "In some cases, there were things we needed to improve upon, and in other cases, I was

able to educate them on cost differentials they may not have been aware of."

If referrals remained within HMG, Sizemore's staff could be lifting some of the administrative burden by handling the pre-authorizations. She also pointed out that patients may appreciate the lower costs associated with an outpatient facility versus a large hospital center. The insights from the data allowed for a communication strategy that increased the facility's internal imaging referrals.

### **On the horizon**

The learnings gleaned from HMG's data using Radiology Analytics have proven invaluable to Sizemore and her team. They are now working on analyzing their internal and external referral programs.

"I can identify our most active referring physicians and facilitate an open relationship to meet their needs," she said. "Maintaining those relationships and updating these and all of our customers and patients with information about some of the newest equipment we have or about a potential new outpatient center on the horizon is key to keeping Holston Medical Group on the cutting-edge. We need to be visible to our patient and referring physician community to remain competitive. The information we access with Philips' Radiology Analytics is helping us do that."