Reflections on Moving Beyond Compliance to Improve Quality with Dose Management

Becky Volk, Bayer in Radiology Clinical Performance Specialist and former hospital director of radiology, offers insights about how encouraging your team to view compliance as a jumping-off point—not the end point—for quality can lead to meaningful quality improvements.

How has your clinical experience prepared you for your role as a Clinical Performance Specialist at Bayer in Radiology?

Before I started with Bayer in Radiology, I spent 28 years as the director of radiology at multiple hospitals. In those roles I typically served on key hospital-wide committees like the patient safety and quality committees, where I gained experience with root-cause analysis and cross-departmental quality initiatives. I brought that quality orientation with me to Bayer, where I’ve found that focusing on customers’ raw metrics lets me help them see tangible ways to lower patient radiation doses and improve quality. That’s the focus I bring to my interactions with customers.

How do you define the difference between compliance and quality?

Compliance is focused on documentation, setting reference levels and monitoring over time and comparing benchmarks and standards. Whereas, quality is focused on identifying variations in performance, patterns and trends, evaluating and streamlining imaging protocols to improve patient care, outcomes and customer satisfaction.

People tend to do what you inspect, not what you expect. In the context of computed tomography (CT), an important example of improving quality is decreasing the dose to patients, which is an attainable goal in many cases.

How can the Bayer Radimetrics® Enterprise Platform help drive quality?

It’s difficult to overestimate how important it is to have your vital information stored in such a way that you can easily visualize it to focus on the most significant data points. Radimetrics® made this possible because the platform contains actual relevant data not just data copied into a spreadsheet at set intervals.
That means our system can show you data trends and charts and graph as the data is populated. For example, when I built a chart in Radimetrics® to compare kVp for head CTs both before and after a kVp reduction, it was dramatic to see those data points decline on the dashboard as the policy change took effect. The ability to filter values of interest enables managers to set and achieve quality improvement goals based on knowledge, not just assumptions.

**How are you able to work with Bayer customers over time to improve their CT operations?**

We begin building rapport with our customers when we provide their initial onsite training and understand their needs around patient radiation dose history. We work with them to find out how they are managing modality protocols, handling protocol adherence and determining outliers, and if they are doing external and internal benchmarking. A successful Radiation Dose Management program will help hospitals identify opportunities for improved quality care and efficiency by helping them to identify next steps to investigate root causes of issues, making improvements to workflow, and adjusting protocols -- but you need to first understand how the system can enhance their workflows.

We have also developed a clinical help desk for our customers. They can call our Clinical Performance Call Center and ask us quick questions about dosing, practice alerts, or changes to protocols. This is becoming a very popular benefit for our customers as an extension to our Clinical Performance Services offering.

**How can Bayer in Radiology customers get the most out of their initial training?**

We find that having a positive, effective initial training sets the stage for us to be able to help our customers over the longer term as partners. To that end, we strongly suggest that radiology managers, physicists or directors should attend the initial training for best results as the relationship develops.

We have found that the operational duties of CT technologists can be all-consuming. That means they might not have the bandwidth to search for quality improvements in the same ways as managers who don’t have to be hands-on all the time. I always try to get either a manager or director in the training room for a portion of the training. That’s when I want to show them the

“We consistently hear from our customers that our Services offerings are what makes our product even more valuable to them. A Radiology Administrator at one of Becky’s recent Radimetrics clinical training implementations, commented on the tremendous value of her approach to not only training on the functionality but also how she taught the Lead Technologist to benchmark between facilities. The analytics are being used to support their patient safety and quality initiatives.”

– Christopher Swisher, Head of Customer Success – U.S.
quality dashboards we can produce for them. Once they see how we can help them, they do get really excited about working with us and their new system to improve quality for their patients and I know it’s the start of a good collaboration.

We also have resources and learning tools on our MyRadiologySolutions customer portal for continued learning and access to best practices.

### Strategies & Best Practices

**Supporting Quality**

**Investigating Root Causes**

1. Validate reported value and compare to threshold
2. Use Scatterplot to see where exam falls in relationship to patients of like size (CTDInvol/PT Diameter). Compare technical factors
3. Was it a repeat scan and documented according to site policy (DLP, #Acq)
4. Protocol Adherence—used protocol for multiple body areas or unattended area
5. Unavoidable patient variable
6. Technical Deviation
7. Protocol Root Issue
Radiation Dose Management Program

A successful Radiation Dose Management program will empower your workflow and help you stay compliant.

1 Collect Dose Information
2 Analyze Historical Data
3 Establish Thresholds
4 Identify Outliers
5 Investigate Root Causes
6 Document Dose Review
7 Implement Corrective Action
8 Validate Results

Document the Dose
Establish and Maintain Protocols
Review Dose Outliers & Compare to Benchmarks

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