



Six Steps to Success

How to Achieve Your Dose Management Goals



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The latest advances in radiology technology and quality management offer new opportunities to broaden your Dose Management efforts to include both contrast dose and radiation dose. With the right people, plan and systems, your Dose Management efforts can directly impact the complete radiology workflow – setting you up for success in achieving your clinical, operational and financial goals.

Regardless of your organization's Dose Management goals, the hardest part may be figuring out how and where to start. If this sounds familiar, you're in good company. Over the course of hundreds of Dose Management implementations, we've discovered that many radiology departments:

- Are not entirely sure what a Dose Management solution can do for them
- Underestimate the time and resources required to successfully launch and maintain a Dose Management program
- Prioritize improvements in compliance, quality and efficiency, but aren't sure how to get there

This report can help. Packed with practical, actionable advice based on real-world experience, it outlines six steps to Dose Management success, from determining how to measure success and goal-setting to automation and performance management.

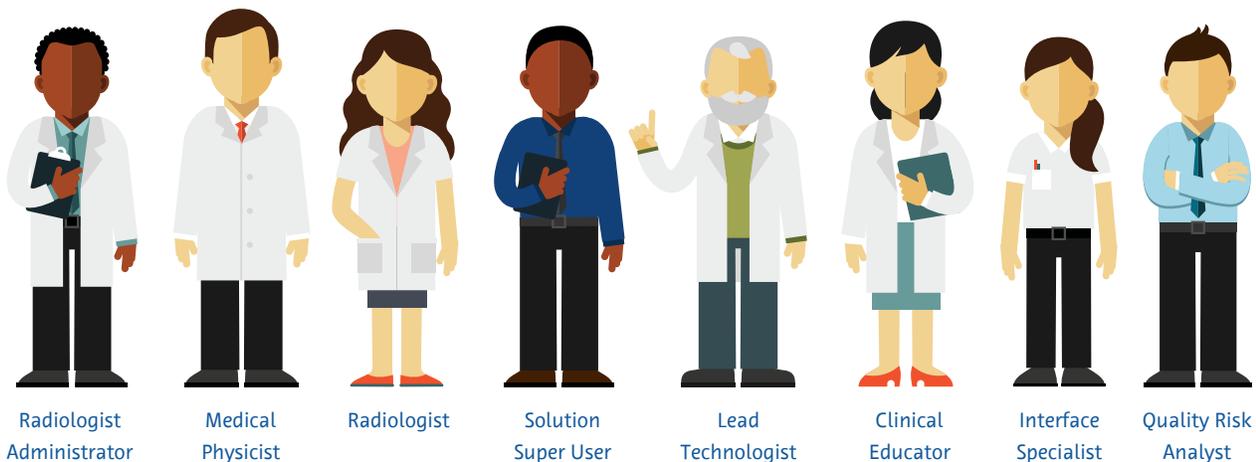
While the road to success never ends, navigating it doesn't have to be hard. The first step is deciding who'll be joining your journey.

Let's get started! →



1. Establish the Management Team

Help ensure the long-term success of your Dose Management vision by establishing the right people in the right roles, and having others trained who understand the process.



Select team members who will not only maintain the Dose Management program but will also be involved in planning through deployment and analysis. Consider who will be charged with managing equipment protocols, and

who should take the role of clinical educator – taking the information gained from the Dose Management solution and relaying it back to staff for quality improvement opportunities.

Empower your Dose Management team, and ensure each member shares a stake in the program's success to help foster engagement.



Although we've identified eight potential Dose Management program roles, one person can often contribute to more than one role.

People leave and take their knowledge with them; be sure to invest in cross-training and appoint backup team members.

2. Set Clear Goals and Objectives

Success isn't a destination – it's a journey. Establish measurable milestones along the road to achieving Dose Management success.

What long-term quality outcomes do you hope to achieve? Many organizations focus on improvements in compliance, quality and efficiency. Here are some common goals and objectives to consider for your department.



Compliance

- > Document contrast and radiation dose for all CT scans
- > Quickly identify and address outliers
- > Set contrast and radiation dose reference levels
- > Monitor patients' cumulative contrast and radiation dose over time



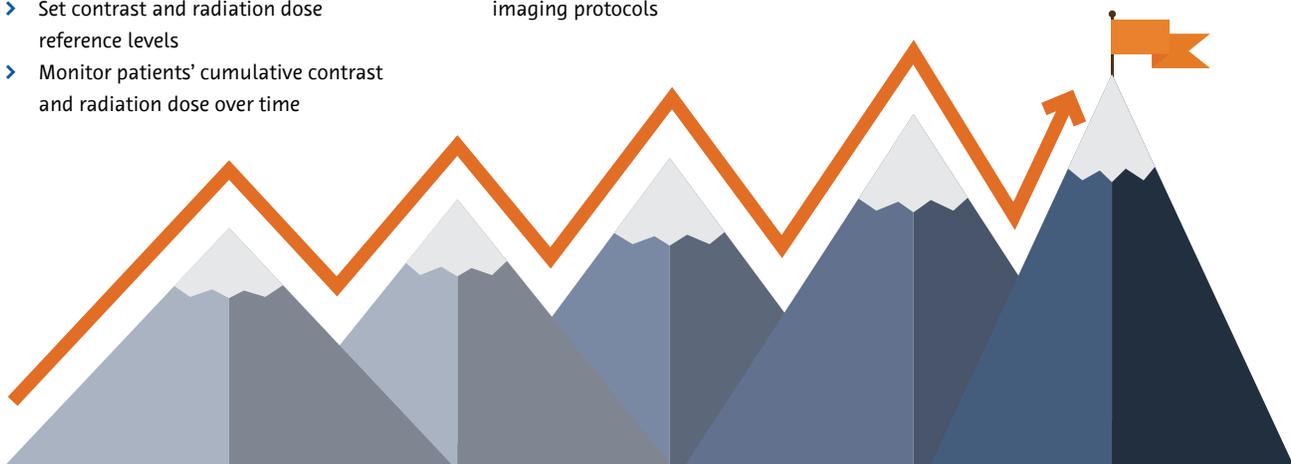
Quality

- > Close information gaps
- > Identify variations in performance, patterns and trends
- > Increase staff engagement and education
- > Evaluate and streamline imaging protocols



Efficiency

- > Eliminate repetitive, manual documentation and dictation
- > Automate dose alerts
- > Mitigate down-coding and billing rework
- > Monitor contrast, equipment and staff utilization
- > Minimize repeat scans
- > Analyze EPH (Exams Per Hour) to quantify productivity



You can establish goals to help you optimize your contrast and equipment utilization, fine-tune staff scheduling and performance, and more.

3. Determine How to Measure Success

Before you can effectively gauge success, you must select the data you'll use to demonstrate improvements in departmental quality.

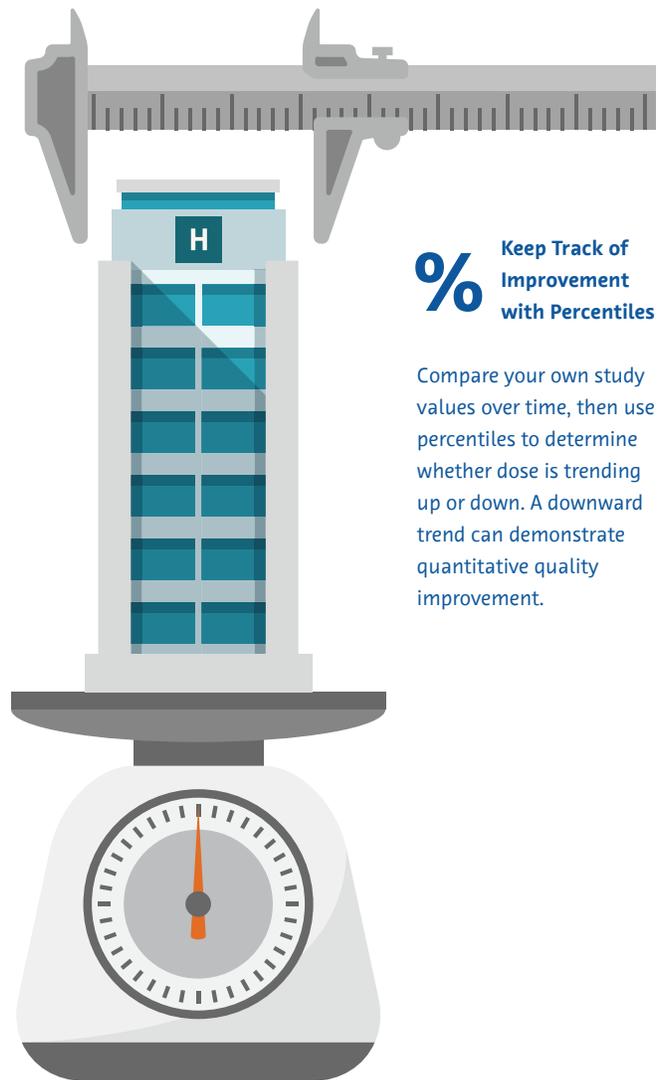
Set up key performance indicators (KPIs) to help demonstrate that your Dose Management efforts are impacting departmental quality. For example, one KPI might track repeat contrast injections from the Emergency Department. Another might be a reduction in dose without losing image quality for specific protocols over time.



Departments may use internal or external benchmarks to determine the distribution of dose across defined populations (e.g., age, patient size or CT protocol-specific).



You could compare your dose values to those recommended by external organizations, such as the ACR or AAPM.



% Keep Track of Improvement with Percentiles

Compare your own study values over time, then use percentiles to determine whether dose is trending up or down. A downward trend can demonstrate quantitative quality improvement.

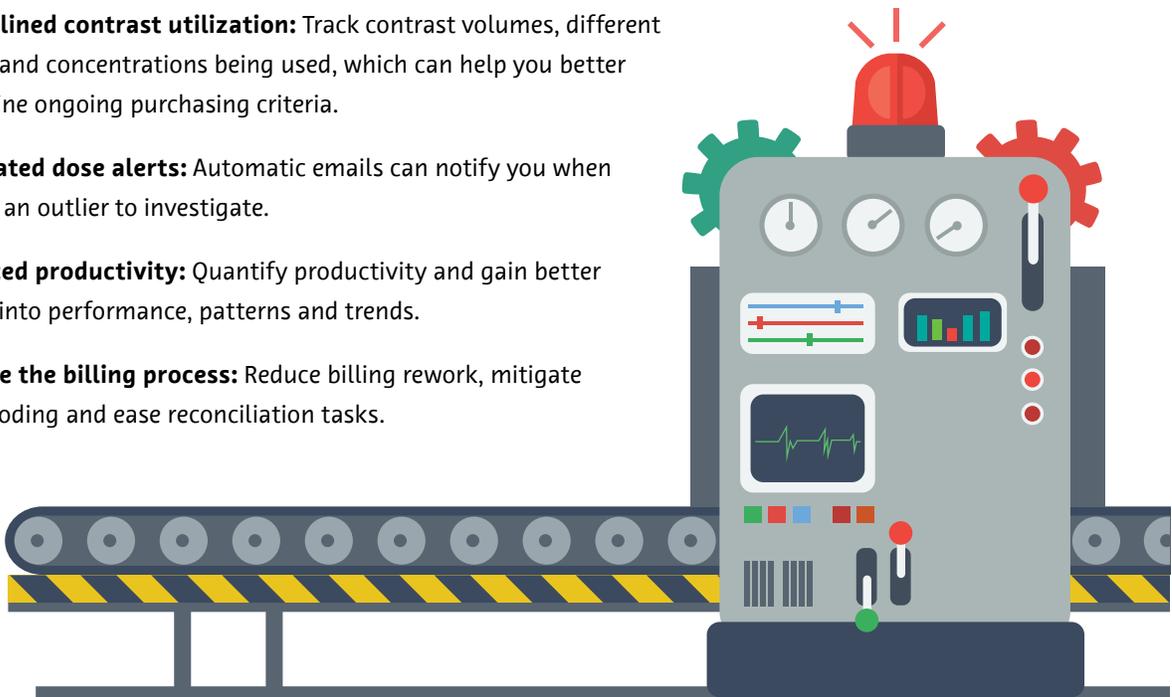
Once you've begun collecting data, you can track the progress of any data point, including average acquisition count by protocol and per technologist, scan-length comparison or outliers over time.

4. Automate, Automate, Automate

Dose Management solutions can help boost performance and accuracy by automating radiology workflows, documentation and reporting.

Automation, aggregation and standardization can make study data more accurate and accessible, while also providing huge gains in efficiency. After implementing Dose Management programs, radiology departments can experience measurable improvements that span everyday processes:

- **Reduced manual documentation:** Automation can streamline study documentation while improving its accuracy, with accelerated reporting via outbound interfaces to PACS, RIS and Speech Reporting.
- **Streamlined contrast utilization:** Track contrast volumes, different brands and concentrations being used, which can help you better determine ongoing purchasing criteria.
- **Automated dose alerts:** Automatic emails can notify you when there is an outlier to investigate.
- **Enhanced productivity:** Quantify productivity and gain better insight into performance, patterns and trends.
- **Improve the billing process:** Reduce billing rework, mitigate down-coding and ease reconciliation tasks.



Exams Per Hour (EPH) reports can help you quantify enhanced productivity by revealing how often equipment is utilized and how many examinations a technologist performs.

5. Commit to Continuous Improvement

Establish and embrace a cycle of investigation and validation to take full advantage of your Dose Management solution.

Dose Management programs can deliver powerful contrast and radiation dose insights. The secret to success is dedicating the resources to understand findings, then applying what you learn.

Begin by collecting study data from scanners and smart CT and MR injection systems, then start crunching numbers. Compare new study information to historical data, establishing thresholds, and setting alerts to help you quickly identify outliers and investigate their root causes, such as an outdated protocol or a misplaced IV line.

Document each step of your review as well as the corrective actions your department takes, validating your results along the way. If you're not seeing sufficient progress, revisit the process.



Don't take your results at face value – validate them. Review how changes are impacting the department then determine which steps need to be revisited.

6. Monitor and Tighten Up Performance

Take time to step back and assess your performance. This is your opportunity to fine-tune protocols, equipment use, quality improvement goals and more.

Analyzing your performance is key to demonstrating improvements, particularly those related to quality. Consider the following questions:

- › Are protocols optimized and standardized?
- › Is staff education effective?
- › Did you reduce repeat scans?
- › Are your dose alerts set up appropriately?
- › Have you reduced your contrast costs?
- › Is your equipment (and staff) utilized efficiently?

Dose Management software can also help you visualize how changes you make impact actual performance. You can choose to review trends by day, week, quarter or year.

By mining the data of your Dose Management solution, it's possible to uncover unexpected findings that can quickly lead to quality improvement opportunities. Radiology departments have discovered:

- › Protocols that were simply created incorrectly
- › Max tube current, when scanning outside of the localizer
- › Excessive/long scan length (Z creep)
- › Improper table centering, FoV settings
- › Higher or unnecessary kV in pediatric protocols



Reduce repeat scans:
By injection site, equipment and operator.



Track cumulative dose:
Contrast and radiation at patient and enterprise levels.

Take a deep dive into your data, and make the solution work for you. Using the Dose Management platform and ensuring it's properly maintained will yield the highest quality information.

Recap

How to Achieve Your Dose Management Goals

With the right people, process and plan, the road to Dose Management can lead to success. Follow these six proven steps to help you achieve your Dose Management goals.

❑ **Step 1: Establish the management team.**

Having the right people in the right roles and others trained who understand the process will help ensure long-term success of your Dose Management vision.

❑ **Step 2: Set clear goals and objectives.**

Decide what you want from your Dose Management solution. Improvements in compliance, quality and efficiency are often the major targets.

❑ **Step 3: Determine how to measure success.**

To effectively gauge success, determine the key performance indicators (KPIs) you'll use to demonstrate improvements in departmental quality.

❑ **Step 4: Automate, automate, automate.**

Automation, aggregation and standardization can make study data more accurate and accessible, while also providing huge gains in efficiency. Identify where your department can gain the most from automation.

❑ **Step 5: Commit to continuous improvement.**

Be resolute in your Dose Management process – from collecting dose information to validating results. Ensuring adherence to a structured process keeps staff on the same page and builds a solid foundation for quality data and continuous improvement.

❑ **Step 6: Monitor and tighten up performance.**

What workflows can you add, analyze and improve? Take a moment to step back and assess your performance. This is your opportunity to fine-tune protocols, equipment use, quality improvement goals and more.



“Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives.”

— William A. Foster, attributed, *Igniting the Spirit at Work: Daily Reflections*

For more information and resources on
Dose Management, visit radimetrics.com.

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