

AeroRemote Insights: Delivering Data to Drive Efficiency and Performance



Gundersen Lutheran Medical Center is the flagship hospital for Emplify Health by Gundersen in La Crosse, Wisconsin, serving patients from Western Wisconsin, Southeastern Minnesota and Northeastern Iowa.

Rachael Julson, Clinical Manager, Regional Imaging
Ashley Tao, PhD, DABR, Lead Diagnostic Medical Physicist/Radiation Safety Officer
Sarah Averbek, Lead Diagnostic Radiologic Technologist

Introduction

Emplify Health by Gundersen is a leading provider of primary and specialized care with seven hospitals and 65 clinics in western Wisconsin, southeastern Minnesota and northeast Iowa. Based in La Crosse, Wisconsin, Emplify Health by Gundersen has continued to grow to meet the healthcare needs across the region by delivering world-class medical care. In 2022, Gundersen merged with Bellin Health, which is based in Green Bay, Wisconsin, and serves northeast Wisconsin and Michigan's Upper Peninsula. Together, Gundersen and Bellin have become Emplify Health, providing critical access to high-quality care throughout the upper Midwest.

Twenty-four of Emplify Health by Gundersen's facilities provide imaging services. Of these, 18 have Konica Minolta Healthcare Americas, Inc., digital radiography (DR) systems, including the KDR® Flex, Overhead Tube Crane (OTC), and several retrofit DR solutions featuring the AeroDR® flat panel detector. Most of the Konica Minolta DR systems are installed at Emplify Health by Gundersen's regional clinic locations and in many cases are the only X-ray system in the facility.

Keith Paulus at Brown's Medical Imaging, a Konica Minolta Healthcare dealer headquartered in Omaha, Nebraska, worked with Emplify Health by Gundersen on the acquisition and installation of Konica Minolta's DR systems. For over 25 years, Brown's Medical Imaging has specialized in the sales and service of medical imaging equipment and solutions nationwide.

According to Rachael Julson, Emplify Health by Gundersen Clinical Manager, Regional Imaging, system reliability is key for these centers. "One of the reasons I'm a huge proponent of Konica Minolta digital radiography is the image quality. It is far superior to other vendors' systems that we've had in the past, and the units are very user-friendly and easy for our technologists to operate."

Emplify Health by Gundersen also implemented AeroRemote® Insights, Konica Minolta’s comprehensive analytics designed to collect and aggregate DR system health and usage data into intuitive dashboards. By providing real-time visibility and predictive insights, AeroRemote Insights helps radiology departments and imaging centers maximize uptime, streamline workflows and allocate resources more effectively—delivering measurable operational and financial benefits while complementing the robust capabilities of existing DR systems.

Julson adds that the organization has a robust X-ray quality program, which has been positively impacted by AeroRemote Insights. “We utilize metrics to manage our technologists in terms of imaging technique selection, repeat rates, and dose and protocol management.”

Next-Level Analytics with AeroRemote Insights 4.0

Konica Minolta Healthcare recently released the latest version of AeroRemote Insights, 4.0, which further streamlines and enhances the user experience. Emplify Health by Gundersen recently upgraded to AeroRemote Insights 4.0, providing a significant leap forward in innovation and user experience with a platform that is substantially faster and simpler to navigate. New are a Superuser profile that provides greater control and customization, including changing operator, workstation and facility names, as well as a global data filtration tool that provides instant access to the right information, helping teams streamline workflows and improve operational efficiency.

“Prior to AeroRemote Insights, we were using a homegrown system where we would download raw data from the unit and input it into a spreadsheet,” says Julson. “When we transitioned from our prior DR vendor to Konica Minolta, we didn’t have that at all. We were just pulling the data from each individual unit and calculating the repeat data that way.”



Only Konica Minolta provides digital radiography productivity dashboards to enable users to get more from their AeroDR® assets. AeroRemote Insights automatically collects and aggregates AeroDR system health and usage data into simple analytical views.

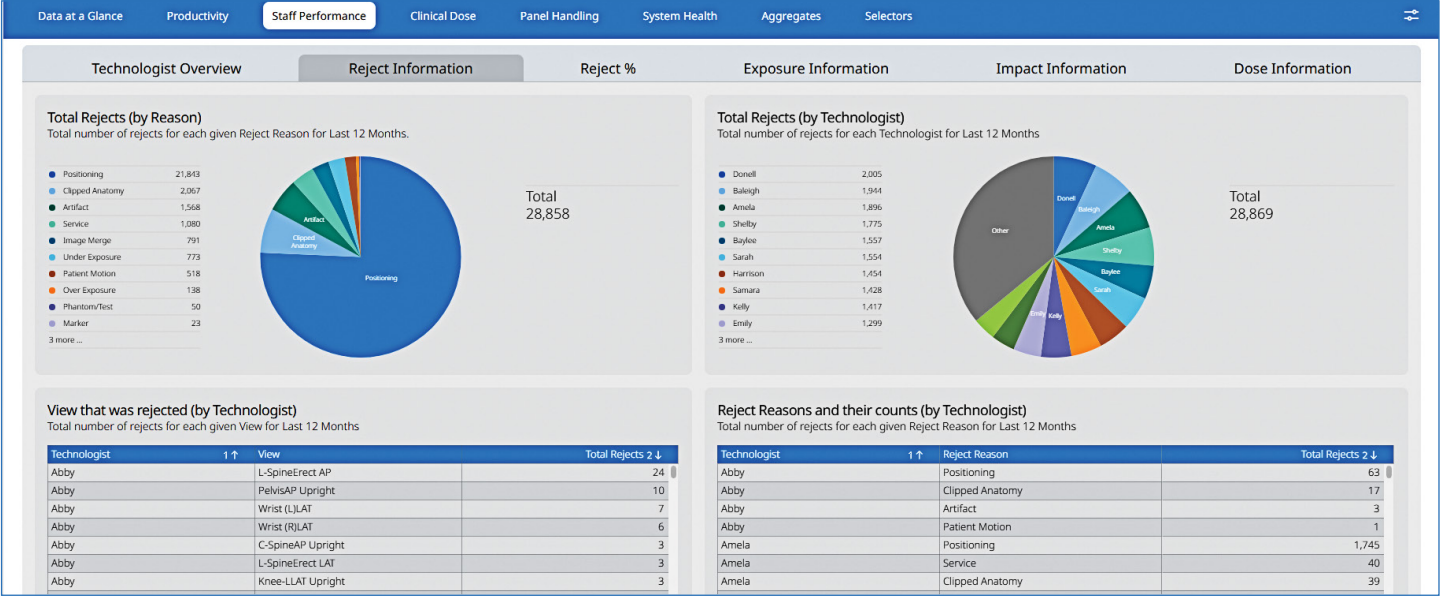
From Manual Monitoring to Instant Information

AeroRemote Insights helps Julson manage numerous clinics and technologists who cover multiple locations. Prior to implementing the solution, any adjustments to protocols or imaging techniques were monitored manually on a log sheet. Evaluating the impact of the modifications and making any further changes required Julson to drive to each site located hours apart.

“There was a time when we had the technologists keep a paper log of the technique they used, the size of the patient, and all the technical factors to optimize the techniques across the equipment and to pinpoint any issues,” Julson says. “Now we have the ability to log in at any time, review and analyze the data, and make changes remotely. All the information is consolidated, so we can get an overall picture of how our technologists are doing even across different sites.”

Julson and her Emplify Health by Gundersen team members, Ashley Tao, PhD, DABR, Lead Diagnostic Medical Physicist/Radiation Safety Officer, and Sarah Averbek, Lead Diagnostic Radiologic Technologist, all utilize AeroRemote Insights to manage DR imaging protocols, assess patient dose, evaluate technique and image quality, and gauge technologist performance based on exposure index (EI) and deviation index (DI) targets.

“If it’s a Konica Minolta site that I’m looking at, AeroRemote Insights is the first thing I go to. I can pull all the data for each Konica Minolta unit right from my workstation, and usually within a half hour I have all the reports that I need downloaded,” says Averbek. “With our old system, I’d have to really drill down into the data to see if something was site-wide or just a technologist.”



AeroRemote Insights provides intuitive and informative dashboards to enable department managers, physicists, safety officers and lead technologists to quickly gain a deeper understanding of exam reject/repeat (shown), exam exposure levels, procedure volumes, and staff productivity and performance.

Averbek can see trends as they are happening. For example, if she sees a technologist consistently repeating a lateral chest exam, then she knows there is a need for some additional education on the technique. If she notices that a site’s repeat rate goes up, she can take a closer look at the protocol and the system itself to determine if it is a site-wide issue or specific to one technologist. With each repeat view, there is more radiation dose to the patient, as well as taking more time to complete the X-ray examination, which could lead to patient backlogs.

“I’m using my time wisely and providing the education or information to the site or technologist who needs it,” Averbek adds. Each month, Averbek conducts a continuing education meeting for technologists based on the data she gets from AeroRemote Insights.

Smart Analytics for Safety and Quality Control

For radiation safety, Dr. Tao can quickly see the patient dose outliers and address them more quickly. If a technologist reports a technique that is high on a particular view, Averbek and Dr. Tao can look at the data in real-time on the Staff Performance dashboard to determine if it is just that technologist, several of the technologists or the site as a whole.

“If the median DI is high, then we want to look at it closer,” adds Dr. Tao. “Maybe it’s an ROI issue, a technique issue or just a target issue. From a physics perspective, just seeing the analytics of how it breaks down by exam, such as the DI statistics, has been a game changer. Before, I would have to manually download the acquisition log, pull the statistics, look at the distribution and filter by exam. With AeroRemote Insights, it’s all here – I just need to click on it. It is one of the better interfaces that we interact with.”

Dr. Tao regularly uses AeroRemote Insights as part of the organization’s quality management/quality assurance program. She can analyze the data, set appropriate EI targets, and ensure the technologists are using the correct protocols and positioning. AeroRemote Insights helps her align with the program’s goals and targets.

The system can also alert the team if there is a potential maintenance issue. For example, if there is an artifact in images, Averbek can send in the biomed team to verify the DR detector is working correctly and recalibrate it if needed. AeroRemote Insights tracks minor and major detector events to proactively alert support in the dashboard, Impacts. Typically, Emplify Health by Gundersen does not have an issue with panel drops.

“It helps that Konica Minolta makes one of the lighter panels that we have,” says Dr. Tao. “However, if there are panel drops, or an increase in panel drops, it’s nice to have the feature in the solution to see that.

Avg EI/DI/S (by Technologist)

Operator Username	Exposure	Average S Value	Average EI Value	Average DI Value
CRR	7,177	473	298.33	-1.17
DC	678	496	287.61	-1.42
DCJ	6,489	485	253.16	-1.63
DMM	1,176	485	269.42	-1.47
KAC	618	514	328.31	-1.49
KLC	5,615	502	324.48	-3.36
SMT	2,069	237	657.57	0.48
TJW	10,951	489	232.03	-1.75
VLM	9,150	456	296.50	-3.00
VRW	3,418	413	357.73	-0.71

At Emplify Health by Gundersen, Dr. Tao regularly uses AeroRemote Insights as part of the organization’s quality management/quality assurance program to set appropriate EI targets and ensure technologists are using correct protocols and positioning.

A Collaborative Partnership Built on Innovation and Support

Konica Minolta collaborates with its customers to customize AeroRemote Insights to each site, further helping them manage their department, staff and equipment. That process doesn’t stop with the implementation of AeroRemote Insights: it can be changed to meet new and evolving needs.

With the new filter feature in the 4.0 version, Averbek can apply the same filter to each data tab, saving time. Dr. Tao has noticed that 4.0 is faster and data is presented better than the prior version. Dr. Tao is working with the Konica Minolta service and development team to further interrogate the data that it captures from each Konica Minolta DR system.

Julson also appreciates that AeroRemote Insights is cloud-based, so it doesn’t a lot of involvement of the IT staff to get it up and running. “It’s plug-and-play; as soon as we have a new X-ray unit installed, we are able to connect and view it,” she adds.

Collaborating with Konica Minolta has been key to the success that Emplify Health by Gundersen is achieving with AeroRemote Insights.

“Just about everything that we’ve asked for Konica Minolta has been open and willing to try,” says Julson. “We started collaborating when AeroRemote Insights was new, and from the start they have provided us with different filters or graphics, taken our feedback and made updates. There is a lot the solution can do, but some data is more important to us than others. The Konica Minolta team has been so collaborative with building this to be a valuable tool for our quality program that it continues to be one of the reasons why they are a preferred vendor.”

