

Healthcare AI, Radiology solutions

A Real View of...Cloud-based data analytics and insights for clinical excellence

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With cloud-based access to powerful analytics and data-driven insights, radiologists have more power than ever to shape the quality of patient care, remove the pitfalls of failed patient follow-up, drive more revenue, and simply work more efficiently.

Nuance Healthcare Diagnostics Vice President and General Manager Karen Holzberger sat down with Dr. William Boonn to get a clinician's view of why the new mPower Clinical Analytics offering – part of the mPower suite of clinical excellence solutions – represents such a significant step forward for radiologists and for healthcare professionals everywhere.

In nearly every aspect of healthcare from diagnosis, to treatment, follow-up, healthcare services delivery, population health and beyond, clinicians look to the data. So, you would think that the constant flow of data from today's health IT systems would be a good thing. It is, but it's actually *too much* of a good thing. Clinicians are deluged with data but without any easy or intelligent way to access, analyze, and apply that data to create clinical insights. Until now, that is. I sat down with Dr. William Boonn to get his real view of one of the most important breakthroughs in clinical analytics today, the new [mPower Clinical Analytics](#) ("Clinical Analytics") solution that puts practical tools for data exploration and insight into hands of clinicians.

KH: The new Clinical Analytics solution for radiology comes at a critical time for radiologists and represents a number of important practical and technology breakthroughs. Can you unpack it for us?

Dr. Boonn: Yes, there are many significant developments. The mPower Clinical Analytics solution is driven by the combination of increasing professional, technical, and financial pressures that radiologists and healthcare professionals are facing, and the cost and deployment benefits that the cloud brings to address those pressures. The solution also is influenced by the opportunity to make a fundamental step forward in healthcare outcomes and economics.

KH: We talk to physicians, administrators, and health IT managers about those pressures every day. How does the new Clinical Analytics solution intersect with those issues?

Dr. Boonn: A perfect storm of factors have affected radiology during the past few years. The shift from service-based to outcomes-based reimbursements is a big factor. Along with that are pressures on controlling costs while increasing productivity and generating new revenue flows. At the same time, demand for radiology services is growing, which in turn creates a greater need for reporting and follow-up recommendations. And finally, there is a massive amount of image and report data being generated daily, but no simple way for clinicians to access it for analysis and insight. The new cloud-based mPower Clinical Analytics solution is built specifically to solve those problems. It's not enough to address those issues with limited, selective deployments of data analytics. They need to be tackled in a coordinated and comprehensive way, and that's what this new solution does.

For example, radiologists must find, extract, and interpret patient information from reports—it's a time-consuming and difficult process when done manually. Analytical algorithms, on the other hand, can do that both automatically and on-demand according to a clinician's specific needs and areas of inquiry. In this way, this clinical excellence solution helps radiologists reduce care delays, evaluate MIPS measures, and strengthen quality improvement efforts directly. It gives them a lot of very practical power to create positive change.

KH: You mentioned the important role of making Clinical Analytics cloud-based. How does that factor in?

Dr. Boonn: Radiologists need instant access to the structured and unstructured data common in radiology reports, as well as the analytical algorithms to incorporate into their workflows with best practices, clinical intelligence, and actionable insights. The cloud makes it possible to do that on a large scale without the need for expensive or new IT infrastructure. It makes the analytics scalable and accessible when and where the physician needs those tools. It's what makes the widespread and practical use of analytics possible.

KH: What are some of the specific use cases and benefits that radiologists can expect from this cloud-powered clinical analytics solution?

Dr. Boonn: We're directly addressing the top half-dozen challenges facing radiologists today. These are hard problems that also have been among the most frustrating. Most of these issues can be remediated by using the data generated by thousands of imaging studies and reports daily. The problem is that there has been no good way to access, analyze, report on, and use that data. It's virtually been a case of "data, data everywhere and not an insight to be had."

The first benefit is to reduce the length of patient stays. By modeling industry best practices, mPower Clinical Analytics has been shown to decrease length of stay by up to three days for patients needing interventional procedures. It does that by tracking data on inpatient recommendations and facilitating care coordination. Data makes that easier and far more accurate.

The second is to improve regulatory and billing compliance by analyzing the data to facilitate MIPS and other reporting requirements. Radiologists can use that data to optimize billing and reimbursement, and document clinical outcomes. The trick is to use the analytics to remove the complexity and automate the billing and compliance requirements as part of the radiologist's normal workflow.

The third area is to reduce variability in follow-up recommendations and compliance based on documented best practices and outcomes. mPower Clinical Analytics automatically extracts follow-up recommendations from reports and creates detailed, consistent profiles. That gives radiologists a way to make and track follow-up recommendations and identify overdue examinations. Several studies have shown a greater than 60% failure rate for follow-up recommendations. That can lead to delays in patient care, increased medicolegal risk, as well as lost revenue opportunities for radiology practices. mPower Clinical Analytics can identify and track overdue follow-up recommendations to ensure that patient receives appropriate and timely care based on their imaging findings. That's very powerful.

Next is to use the data to identify ways to increase revenues. Physicians and administrators can explore underserved or at-risk populations based on industry benchmarks and clinical results from across the industry. mPower Clinical Analytics helps practice managers deliver effective and important clinical care when and where it's needed.

The fifth is to reduce inappropriate or unnecessary imaging, which is much better for patients. The data mining algorithms can identify outliers, guide quality improvement efforts, and reduce unnecessary ordering of images, all based on documented outcomes and industry best practices. In a way, it's the flipside of identifying revenue opportunities by using radiology resources productively and profitably.

Finally, you have greatly improved security and IT costs and deployments. mPower Clinical Analytics is

hosted in Microsoft Azure, a HITRUST CSF certified infrastructure, which makes upgrades easier and minimizes service disruptions. Single sign-on, password policies, user management, and multi-factor authentication all contribute to enhance security and usability. You eliminate the security lapses that come from something as simple as weak passwords. Those are the little things that can make a big difference.

KH: What's the big-picture takeaway for radiologists, administrators, and C-level healthcare executives?

Dr. Boonn: First, clinical excellence solutions for the most pressing problems for radiology and for healthcare at large are available – now. It's a giant step forward in overcoming the practical issues that tie up valuable resources and get in the way of what physicians want to do in the first place, and that's to care for patients.

Second is the empowering and freeing role that the cloud and AI are playing in advancing the state of radiology. I know there have been concerns among some radiologists that AI was a long-term threat to their professions. But mPower Clinical Analytics is a great example of how these technical advances can augment and improve their ability to apply their skill and expertise, and reduce the administrative burdens they deal with now. It also will open new areas for research and treatment in radiology and other areas of healthcare.

Finally, I think it's appropriate that radiologists are the ones leading the way ahead just as they did with the first PACS systems more than 20 years ago. Radiologists have always been the technology trailblazers. Now they're going to lead the way with [cloud and AI technologies](#).

KH: Thank you, Dr. Boonn.

Author Paulo Coelho wrote, "Beautiful sunsets need cloudy skies." It's a phrase that means something to me in the context of this discussion with Dr. Boonn. We need cloud-based infrastructure to make the best, most beautiful things happen. With access to data-driven analytical insights, radiologists have more power than ever to innovate and influence quality patient care, remove the pitfalls of failed patient follow-up, drive more revenue, and simply work more efficiently – in the cloud.

The Real View is a Q&A blog series with Karen Holzberger, Vice President and General Manager of Nuance Healthcare's Diagnostic Division. The Real View cuts through the hype and gets to what's real, here, and now. The blog series features interviews and insights from health IT movers and shakers – and uncovers disruptive technologies that solve challenges, optimize workflow, and increase efficiencies to improve patient care.

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