

Data-driven radiology for improved outcomes with mPower Clinical Analytics

Harness AI, advanced language understanding, and cloud technology for competitive advantage.

The transition to value-based imaging requires a new approach

Today's radiologists must not only monitor and improve clinical quality and help assure patient safety, they must also analyze patient outcomes and report on outcomes measures—all while meeting business goals. Data alone can't achieve this; radiologists need analytics capabilities to extract, aggregate, analyze, and report on the data.

Powerful tools support improved outcomes

Nuance mPower Clinical Analytics unlocks actionable information that delivers improved clinical and financial outcomes and facilitates the transition to value-based imaging.

– **Enterprise search.** Proprietary search and language understanding technologies accelerate access to detailed, actionable information in radiology reports and other clinical data sources. With these capabilities you can easily collect and aggregate clinical and performance data, and even build your own data sets for validation of AI algorithms in your clinical setting.

– **Quality analytics.** Easy-to-use tools enable radiology practices to profile and validate performance and clinical outcomes and affirm radiologists' value in the care continuum.

– **Findings analytics.** Language processing algorithms allow size-based measurement

extraction and tracking to facilitate outcomes reporting and quality improvement.

– **Business analytics.** Detailed reports uniquely support radiology practices in optimizing and refining business processes.

Insights, not just data

mPower Clinical Analytics takes the unstructured radiology report narrative and harnesses proprietary language understanding algorithms to provide valuable insight. mPower's interactive approach instantly provides easy-to-understand, detailed, and actionable information that eliminates the time-consuming, iterative process typical of data analysis, and provides you with an unmatched look at your institution's report quality and business performance.

Power in the cloud

mPower's cloud-hosted platform provides advanced features and tools to support your routine and advanced analytics efforts further. These AI-powered capabilities give you the data and understanding you need to deliver results-driven radiology services and optimal patient care.

Outcomes

Success in the era of value-based care requires radiology to contribute to improved patient outcomes. By applying robust analytics, you can drive key outcomes like the following:



Improve follow-up consistency and compliance



Increase revenues



Improve compliance



Decrease errors and medico-legal risk



Evaluate outcomes and quality



Support AI validation and accelerate adoption



Reduce unnecessary imaging



Reduce length of stay

“NLP search technology can double or triple the positive impact of recommendation tracking systems when used in conjunction with radiologist-initiated entry. Adding this technology is projected to add over \$150,000 in new technical revenue in the coming year.”

Ben Wandtke, MD, MS, Chief of Diagnostic Imaging, FF Thompson Hospital
Associate Professor, Department of Imaging Sciences, University of Rochester Medical Center

– Monitor and close the loop on follow-up recommendations.

Extract follow-up recommendations from reports and identify overdue examinations to avoid adverse outcomes and reduce medico-legal risk. mPower can populate the PowerScribe Follow-up Manager worklist to facilitate follow-up tracking to reduce time-consuming manual processes, and deliver follow-up messages to ordering clinicians via PowerConnect Actionable Findings.

– Reduce length of stay. Track inpatient recommendations to help facilitate care coordination. mPower Clinical Analytics has helped decrease the length of stay up to three days for patients needing interventional procedures.

– Reduce inappropriate imaging. Identify outliers, guide quality improvement efforts, and reduce unnecessary ordering.

– Increase practice profitability. Analyze and monitor processes to drive performance improvement and more profitably deliver effective clinical care.

Mobilize for success with advanced analytics

- Extract specific measurements easily from narrative text to drive clinical and quality improvements.
- Build custom data sets to evaluate and validate AI algorithms within your clinical setting.

– Identify variability in follow-up recommendations to reduce over- and under-recommendations for improved utilization and care delivery.

– Analyze multiple variables simultaneously, build custom graphs, view real-time dashboards, and display cumulative data with ease.

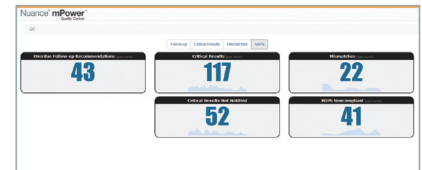
– Harness the power of sophisticated quality control algorithms to optimize clinical and financial performance, including:

- Laterality and sex mismatch
- Ultrasound code mismatch
- Critical results and notification documentation
- Follow-up detection with auto-closure
- MIPS compliance

Benefits of mPower cloud platform

Nuance’s premier clinical analytics solution now harnesses the secure and robust technology of Microsoft Azure, Nuance’s cloud computing partner. Advantages of a cloud-hosted environment include:

- Faster innovation delivery and easier upgrades to minimize service disruptions.
- Enhanced security with industry-leading cloud platform technology.
- Reduced total cost of ownership with smaller IT footprint and reduced maintenance burden.



PNEUMOTHORAX DATA SET

Confusion Matrix

	All Positive	All Negative	
mPower Positive	41	3	Sensitivity/Recall 92.6%
mPower Negative	4	29	Specificity 87.4%
	Precision/PPV 91.0%	NPV 90.62%	Accuracy = 90.91% F1-Score = 0.92

True Positive Reports

4109-458 - CBT325 ICT RECONSTRUCTION - 2018-01-29
INDICATION: Not from roof. Thoracic spine fracture. Neck pain.

– Advanced data handling to accommodate multiple facilities and data sources.

Nuance values data privacy and does not keep your data longer than reasonably necessary. Our data retention policy defaults to 7 years within the hosted environment.

To learn more about Nuance Healthcare solutions, please call 1-877-805-5902 or visit nuance.com

About Nuance Communications, Inc.

Nuance Communications, Inc., is a leading provider of voice and language solutions for businesses and consumers around the world. Its technologies, applications, and services make the user experience more compelling by transforming the way people interact with devices and systems. Every day, millions of users and thousands of businesses experience Nuance’s proven applications. For more information, visit www.nuance.com/healthcare or call 1-877-805-5902. Connect with us through the healthcare blog, [What’s next](#), [Twitter](#), [LinkedIn](#), and [Facebook](#).

