MedAxiom
AN ACC COMPANY

INTEGRATING CLINICAL DATA AND IMAGING ACROSS CARE SETTINGS

USING A SCALABLE, CLOUD-BASED TECHNOLOGY SOLUTION

CV BUSINESS WHITE PAPER

With Support From: **ScImage®**

Boone Health and Missouri Heart Center share how ScImage's cloud-based technology provided the foundation to shift to an enterprise approach for truly integrated patient care.

MedAxiom
AN ACC COMPANY

INTEGRATING CLINICAL DATA AND IMAGING ACROSS CARE SETTINGS: USING A SCALABLE, CLOUD-BASED TECHNOLOGY SOLUTION

SYNOPSIS

Without intentional transitions care is often fragmented, redundant and costly. Patients may experience less than excellent outcomes with delayed decision-making, or be lost to care altogether. Securely connecting health data, images and care planning across broad geographies and care settings is a core need for organizations to achieve a level of integration necessary for these types of intentional care transitions. Beyond connecting data, images and encounters, intuitive workflows and predictive clinical analytics that support evidence-based decision-making and guideline-driven medical therapy as patients move within and across service lines are important elements for future value-based models of care.

To achieve this level of integration and care collaboration organizations need a radical shift from the traditional costly model of piecemealing legacy technology platforms to a scalable, cloud-based technology solution. Working with ScImage, Boone Health in central Missouri recently made this leap with the PICOM365 Cloud architecture – shifting to an enterprise approach for truly integrated patient care.

With this change the organization created a highly secure enterprise platform that seamlessly integrates all forms of data and images from every imaging modality and electronic health record (EHR) system, making their patients' clinical information accessible to the care team from anywhere. This has been accomplished at a substantially lower cost than a traditional on-premises transition.

The shift to ScImage as an enterprise platform now provides the full suite of cardiology components available in PICOM365 – positioning the cardiovascular service line (CVSL) for growth and new technology adaptation into the future. Every diagnostic and interventional modality is seamlessly accessed on the platform with full interpretation and structured reporting capability from any location. This has allowed Boone Health and Missouri Heart Center, their cardiology partner, to create intuitive, efficient workflows across the CVSL, integrating data and information from within the health system and from disparate EHR sources at referring practices and other hospitals where the group practices.

BACKGROUND

Boone Health is a nearly 400-bed, full-service hospital providing care and service to people in 25 mid-Missouri counties. The CVSL is a strategic priority for Boone Health. In partnership with Missouri Heart Center, a multispecialty cardiology group, the organization is positioning the service line for growth and expansion into the future. Leveraging a 20+ year ScImage relationship in their cath lab, and an equally mature relationship between Missouri Heart Center and ScImage, Boone Health partnered with the ScImage team to design and execute a truly integrated model of care with the enterprise

PICOM365 Cloud solution. With the go-live in April 2021, all imaging modalities and data resources were shifted to the PICOM365 platform, supported by specialty suite custom workflows and EHR integration. Through image and data share relationships with two hospitals in the region and three large physician practices with multiple outreach sites made possible by the PICOM365 platform, Boone Health and Missouri Heart Center established the framework for program growth across the large geography of Central Missouri.
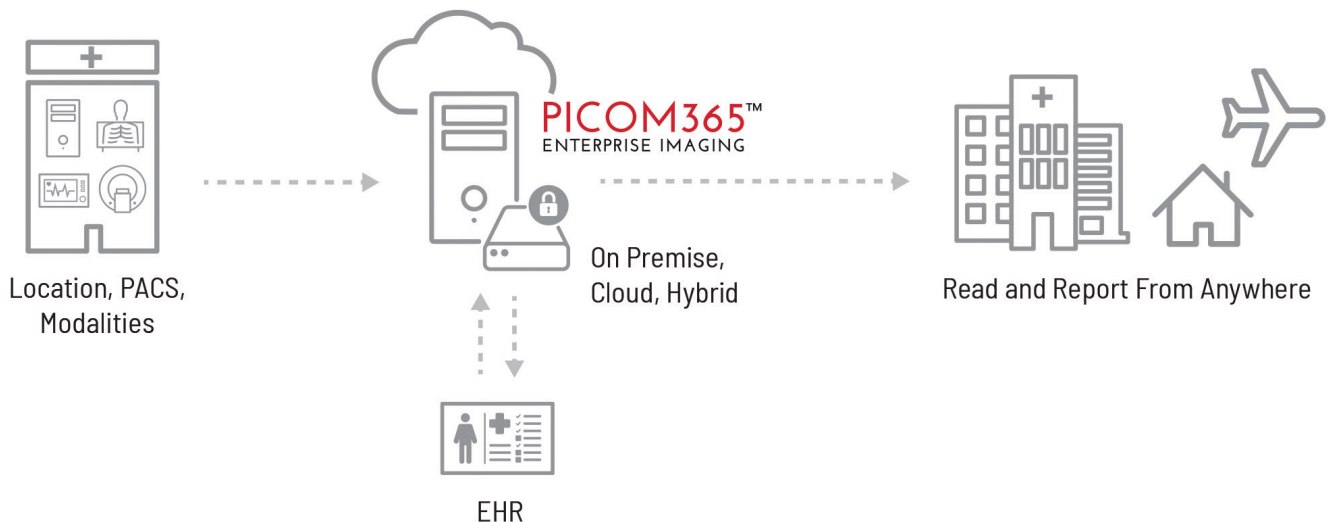
VALUE PROPOSITION

The shift to enterprise imaging provided the opportunity for the CVSL physicians and administrative leaders to define their goals for an enterprise approach to cardiovascular care and service integration. Designing and creating intuitive and efficient workflows to support the cardiologists, while removing as many administrative burdens as possible, was a high priority with the transition. A core competency of the ScImage team and the PICOM365 cardiology suite is designed specifically to achieve this goal – removing traditional barriers to allow cardiology providers to work efficiently, with workflows customized for subspecialty practice across the spectrum of cardiovascular care.

Every diagnostic modality is seamlessly accessed on the platform with full interpretation and structured reporting capability from any

location. Imaging and data are integrated from within the health system and from disparate EHR sources at referring practices and other hospitals where the group practices.

Simple But Secure Image and Data Access and Share

Because it is built on Microsoft Azure, PICOM365's secure end-to-end imaging and reporting workflows feature the most advanced, real-time threat analytics along with data encryption at rest and in transit. Redundancy across Azure's physical datacenters, infrastructure and operations assure rapid, seamless and secure access for providers from any location in the world.

Location, PACS, Modalities

PICOM365™
ENTERPRISE IMAGING

On Premise, Cloud, Hybrid

Read and Report From Anywhere

EHR

While highly secure, as a native cloud, single database platform PICOM365 simplifies access to patient data. A virtual private network is not required and a 360° data exchange integrates into any legacy picture archive and communications system (PACS) or EHR. The healthcare team may access data and images without moving across siloed systems. A secure, multi-factor authentication structure quickly accommodates on-the-fly requests for physician offices, consulting/referring physicians and patients. This eliminates the risk of protected health information loss or breach with removable media.

Non-Invasive Cardiac Diagnostic Services

The full range of non-invasive cardiovascular diagnostic services are embedded in the PICOM365 platform, with orders based, bidirectional EHR and imaging modality integration, accommodating electrocardiogram (ECG), stress, Holter, echo, nuclear, computed tomography (CT), and magnetic resonance (MR). The collection and presentation of data are automated, including modality measurements, technologist observations and baseline data points from the modality. Prior studies are available to the cardiologist for side-by-side comparison. Structured reporting tools provide drop-down functionality, easy customization and built-in voice recognition. Imaging appropriate use criteria (AUC) are embedded in ordering and structured reporting. The same post-processing interpretation

and reporting tools providers are accustomed to are in embedded in the PICOM365 platform. With the enterprise model at Boone Health, any other diagnostic study or report needed for clinical decision-making and diagnosis is immediately available to the cardiologist through the same platform.

Cardiac CT and MR

With evolving guidelines and technology, the use of CT and MR continue to expand in cardiology, making collaboration with radiology increasingly important. This has been a distinct advantage with the ScImage enterprise solution, allowing the Boone Health cardiology and radiology leaders to work together on shared workflows, worklists and templates.

Interventional Lab Services

The legacy, standalone hemodynamics system in the interventional labs has been replaced with the Fysicon QMAPP system, integrating interventional cardiology, vascular and electrophysiology diagnostic and interventional imaging and reports into the PICOM365 single database platform. QMAAP is the most compact, advanced hemodynamic measurement system in the world. Connecting at the table, the amplifier's compact design is comparable in size to a ream of office paper, yet it provides all the functionality of traditional hemodynamic systems.

"Switching from several well-known PACS vendors in the industry was an initial concern for Boone Health. Our concerns were quickly dispelled by the product performance and the herculean efforts of the ScImage support team. Our desire for a consolidated enterprise imaging solution for our independent hospital was a driving force behind our switch, and we have been pleasantly surprised. Our decision to integrate eight PACS systems and associated support contracts into one Cloud PACS has provided Boone Health with the expected benefits of reduced costs, eliminating multiple hardware and support agreements. With this integration, we are more efficient than ever, but the real strength of PICOM365 is in the always-available Cloud interface. It's user-friendly, simple, extremely flexible, yet able to meet the demands and rigors found in all our imaging environments. Clerical and clinical users no longer need to search multiple systems – all patient data is available at their fingertips in a single hardened solution."

Jimi Barbarotta
IT Technology Specialist — Infrastructure

In the labs the PICOM365 platform can integrate imaging for up to five monitors for data display and almost limitless modality viewing. In the electrophysiology (EP) lab mapping studies are integrated into the interventional report. Prior studies and procedures are instantly accessible. Seamless access to CT, chest X-ray or any other diagnostic study can be accomplished at the table, an excellent time-saving advantage for the team in complex and/or emergent interventional procedures.

Structured reporting tools are customized to accommodate interventional cardiology, structural heart, diagnostic and interventional vascular, and EP procedures. Hardwired tools are also provided to assist the cardiology team with meeting requirements for AUC and clinical registries.

Provider Experience and Productivity

Working with the ScImage team, cardiology providers and technicians have been equipped with workflows customized within service lines and further within imaging subspecialties. The same post-processing interpretation and reporting tools the cardiologists are accustomed to are in place, but with the added advantage of removing the need for them to be tethered to a workstation. With the PICOM365 web-based platform, physicians may securely access, review, interpret and report from anywhere in the world. Work is easily prioritized and level-loaded across the provider team, and providers have more control over the demands of their workday. Continuing to refine these advantages over time will position the organization and the physician enterprises to reduce the risk of burnout and create attractive opportunities for recruitment.

Moving from Volume to Value – Better Outcomes and Better Patient Experience

Working with the ScImage team, providers and clinical teams at Boone Health created intuitive workflows and predictive clinical analytics to support evidence-based decision-making and guideline-driven medical therapy. EHR integration and features embedded in the structured reporting tools support clinical flags. This helps ensure patients receive the right care, at the right time and follow-up intervals, by the right provider. Rapid, secure image and information share features assure that the care plan is communicated, and the patient gets into the appropriate queue for immediate acute treatment, if necessary, and for follow-up. For example, unique images may be highlighted in reports and imbedded links provide instant access to the entire study through a zero-footprint viewer. Care transitions can become more intentional, with fewer delays and less redundancy, keeping the focus on the patient's individual health and wellbeing while still being guided by evidence-based standards.

> As a clinical user in the role of Lead Cardiovascular Sonographer, implementing PICOM365 as Boone Health's Cloud-based PACS system greatly enhanced the efficiency and transparency of our department's workflow and quality of reporting. The portability of accessing PICOM365 anywhere in the Cloud along with the ability to correlate multiple modalities in one place dramatically improves turn-around-time. The uniquely customizable user interface allows individuals to personalize the settings for their specific needs and preferences. As an IAC accredited facility, the tools provided by PICOM365's analytics and report designer applications are invaluable for tracking and maintaining quality improvement measures. I am thoroughly impressed by the excellent customer service provided by ScImage, and appreciate their responsiveness to feedback and dedication to product development.
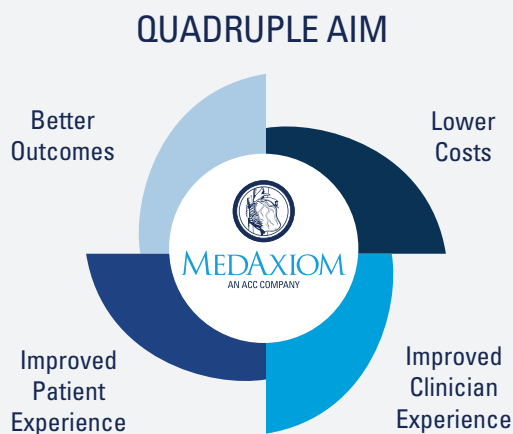
Cara Thornton, MHS, RDCS, RVT, RDMS
Lead Cardiovascular Sonographer
Boone Hospital Center
Columbia, MO

Scalability and Financial Considerations

With a vision for growth and expansion as a high performing, regionally integrated cardiovascular program, scalability was an important consideration for Boone Health as they planned their data and image infrastructure. Future storage capacity for imaging studies will never be an issue for the organization with the web-based PICOM365 platform, and the vendor-agnostic architecture easily manages the continued evolution of technology in cardiovascular services.

From an upfront cost perspective, a gated, rules-based data and image migration strategy available with PICOM365 has helped Boone Health manage some upfront costs and develop a budget for managing more predictable longer-term costs. Immediate savings were achieved by the elimination of many software support services and substantial savings will be possible in the long-term with large reductions in hardware and licensing costs. ScImage projects the organization will reduce their overall IT spend by up to 80% annually.

QUADRUPLE AIM

Better Outcomes

Lower Costs

Improved Patient Experience

Improved Clinician Experience

CONCLUSION

A solution for integrating clinical data and imaging across care settings is a basic requirement for value-based healthcare models. Paired with intuitive workflows and predictive clinical analytics, data and image integration support evidence-based decision-making and guideline-driven medical therapy for cardiovascular patients. This helps drive progress towards the Quadruple Aim: better outcomes, lower costs, improved patient experience and improved clinician experience. For Boone Health and a growing number of other high-performing cardiovascular programs, the ScImage PICOM365 Cloud solution provides a critical piece of the foundation needed to successfully navigate toward the value-based models of care in the future.

ABOUT MEDAXIOM MedAxiom, an ACC Company, is the cardiovascular community's premier source for organizational performance solutions. MedAxiom is transforming cardiovascular care by combining the knowledge and power of hundreds of cardiovascular organization members, thousands of administrators, clinicians and coders and dozens of industry partners. Through the delivery of proprietary tools, smart data and proven strategies, MedAxiom helps cardiovascular organizations achieve the Quadruple Aim of better outcomes, lower costs, improved patient experience and improved clinician experience.

Learn more at
medaxiom.com

ABOUT SCIMAGE Founded in 1993, ScImage remains a private, customer first company with a mission to provide innovative enterprise imaging solutions to the healthcare industry. ScImage's unique single database PICOM365 enterprise platform delivers end to end imaging workflow for Cardiology, Radiology, Women's Health, Orthopedics, Ophthalmology and more. Scalable from a single physician practice to a multi hospital enterprise, PICOM365 is customizable and can be delivered on premise, in the Cloud, or as a hybrid. The perfect synchrony created between on site and Cloud resources allows PICOM365 to provide secure VPN less image exchange solutions among legacy silo systems, Cloud users, and various EHR systems.

Learn more at
www.scimage.com