

HEALTHCARE ORGANIZATIONS

Improving patient services, streamlining operations and empowering clinicians and staff with Google Cloud



Table of contents

- 03 / Introduction
- 05 / 4medica® Chooses Google Cloud to host clinical data exchange and big data management solutions
- 10 / SADA helps Hunterdon Healthcare migrate 3,000 users to Google Workspace
- 13 / Oregon Anesthesiology Group empowers employees with secure, real-time collaboration with Google Workspace
- 16 / Lahey Health discusses its healthcare organization going Google



Introduction

**Improve patient services, empower your team,
and realize the potential of healthcare data**

Tackle data interoperability challenges, stringent regulations, security requirements, and growing patient expectations with Google Cloud and SADA.

Unify your healthcare data

With Google Cloud's big data solutions, you can aggregate, store, and de-identify your data. Then connect your data to advanced Google Cloud capabilities with the Cloud Healthcare API.

Enhance clinical and operational decisions

Google Cloud offers solutions that give you the ability to quickly find meaningful insights without having to manage infrastructure, keeping limited resources trained on patient care.

Automate manual tasks with AI/ ML

Leverage Google Cloud's AI/ML tools to build and train custom models to identify populations, automatically detect patterns in patient data, and predict clinical outcomes.

Empower clinicians and staff

From Google Workspace cloud-based productivity tools to Chromebooks that enable caregivers to offer more seamless patient experiences, Google Cloud solutions make healthcare collaboration simple.

Build and manage patient- and provider-centric apps

Google Cloud solutions help bridge the gap between care systems and applications, simplifying application development and device integration while supporting FHIR and DICOM standards.

Secure patient data

Google Cloud's comprehensive identity management, network security, and threat detection and response capabilities protect your business against current and future threats.

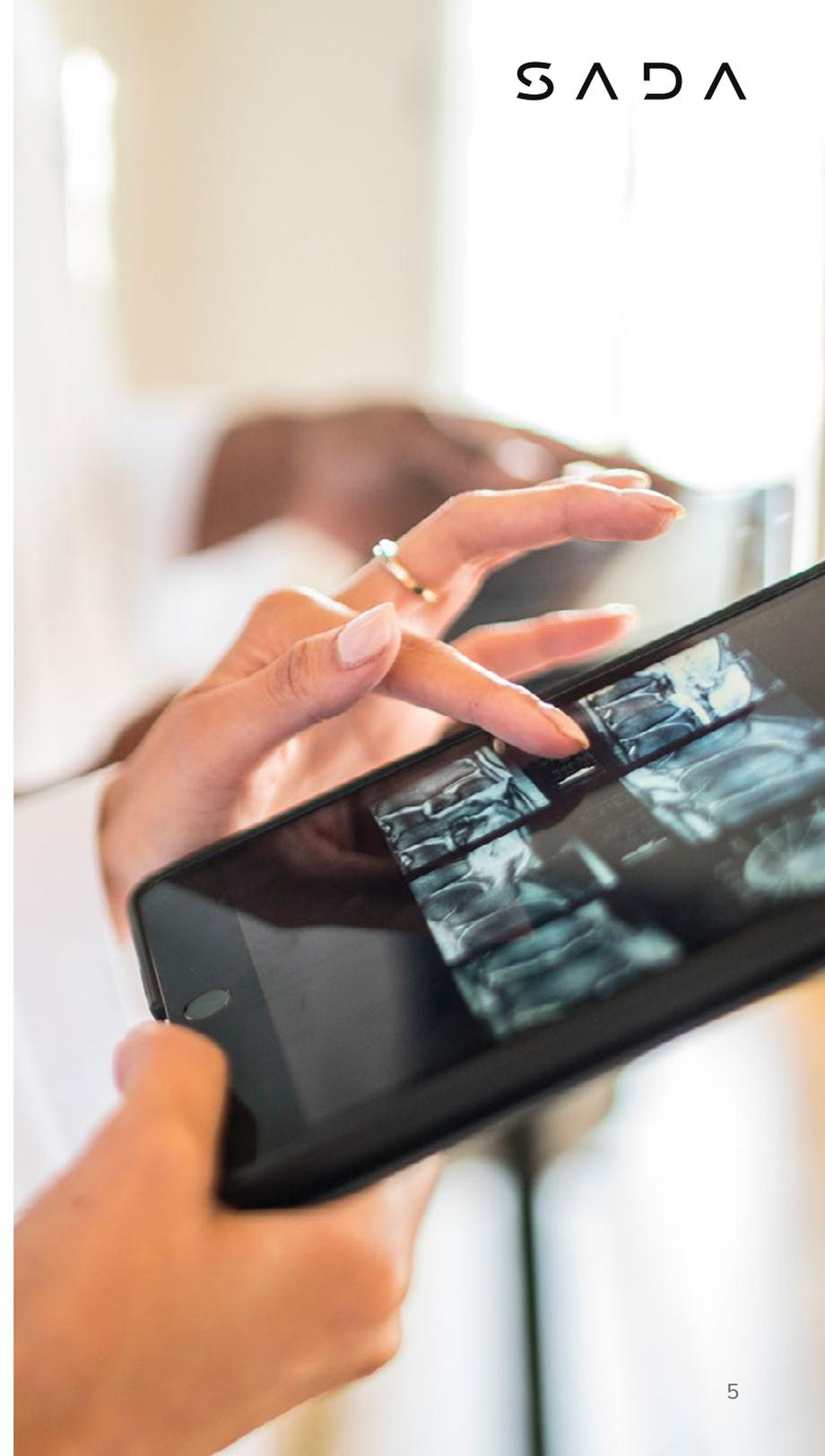
Read on for four inspiring examples of healthcare organizations that utilized SADA's expertise to deliver efficient, informed, and future-ready care with innovative Google Cloud solutions.

4medica[®] chooses Google Cloud to host clinical data exchange and big data management solutions

1. 4medica

Patient record duplication is a serious problem in the healthcare industry, resulting in billing inefficiencies, incomplete data for predictive analytics tools, and even clinical errors that put human life and health at risk. 4medica, Inc., a company that specializes in real-time clinical data exchange and big data management solutions, is dedicated to solving this problem by using technology to address a major contributing factor: the enormous amount of paperwork generated by healthcare organizations.

With a mission to deliver a solution that ensures “one Patient... one record,” 4medica created the industry’s leading software-as-a-service (SaaS) big data master patient index (BDMPI™) and clinical exchange data (ClinXdata) platform. The 4medica B D MPI™ and ClinXdata platform minimize duplicative records, provide a seamless, comprehensive view of patient care history across facilities and providers, securely and efficiently share patient data, and promote better health outcomes.



Unify your healthcare data

4medica's cloud-based SaaS solution offers organizations the ability to deploy its health information exchange platform without installing special hardware or software at customer locations. 4medica builds upon and integrates with existing electronic health record (EHR) systems, practice management software, health information exchange (HIE), platforms and other clinical and administrative applications.

4medica's best-in-class technology has received unrivaled acceptance in the healthcare community. The company processes millions of clinical transactions per month, manages over 70 million patient identities, serves over 40,000 physicians and has over 100 institutional clients across the healthcare industry, including accountable care organizations (ACOs), health information exchanges (HIEs), hospitals, health systems, laboratories, and radiology imaging centers.

Challenges

Since its founding in 1998, 4medica has built a strong core business of providing a healthcare data exchange solution to physicians, labs, and HIEs. However, both the industry and healthcare technology have undergone rapid change in recent years, driven by changing patient expectations and a national focus by both public and private-sector payors on improving outcomes, care coordination, and payment models.

4medica realized that it needed to expand its business model and position itself for future growth in a dynamic marketplace. "A tremendous volume of data is transmitted through our network, and our customers expect nothing less than 100% reliability, affordability, and security," explained Gregg Church, President of 4medica. "Human lives and health are at stake. Our system has to offer real-time performance, and if it goes down, it must come back up immediately."

The company had always hosted its clients' data in secure data centers. For the first 10 to 15 years in business, it depended on Oracle, Apache, and PHP-based apps, later implementing a distributed architecture with a Kafka messaging broker and Node.js-based apps. However, as the company continued to innovate and expand, it became clear that it was no longer sustainable to use data centers. 4medica was processing an extraordinarily large and perpetually expanding volume of transactions. It needed to be able to scale quickly yet affordably, so that the company could profit while still providing value to its customers.

"Adding more storage not only cost a lot of money, but it also had to be planned two to three months in advance. We had to move to the cloud to contain our costs and maintain the excellent system performance our customers had come to expect."

Muthu Kuttalingam

Senior Vice President, 4medica

Solution

After evaluating other cloud service providers, Church and Kuttalingam chose Google Cloud due to its affordability, machine learning capabilities, HIPAA compliance, and the company's dedication to the healthcare space. In particular, Church and Kuttalingam saw great potential for the Cloud Healthcare API to become the backbone of everything 4medica was planning to do.

After a negative experience contracting with another company for migration and implementation, 4medica was referred to SADA, a Google Cloud Premier Partner, by Google. "I wish we'd called SADA sooner," Church said. "Things didn't go well with the first company, and our team had to learn everything themselves, the hard way, including how to migrate and come up with a strategy. Finally, we turned to Google for help, and they immediately recommended that we bring in SADA. They told us, 'These guys are great, they know what they're doing, and they'll make sure you get to the finish line.'"

SADA came into the project a couple of months before 4medica was set to go live with Google Cloud. 4medica needed training on Kubernetes and assistance with networking and deployment. SADA ensured that 4medica's network was partitioned so that all of its customers' data was securely isolated in its own zones.

Additionally, SADA helped 4medica optimize their its billing. SADA ensured that 4medica could see how much it spent on each customer -- a metric they had never had visibility into previously.

Results and benefits

With SADA's consultation, 4medica successfully completed its Google Cloud migration and deployment in June 2018. "Our customers didn't even realize that we'd migrated," Church remarked. "We didn't get a single customer call that day; it was a non-event for them. The migration took place without any problems. Kudos to the SADA team and everyone involved, because a major project like this could have been very disruptive."

4medica has realized numerous benefits since migrating to Google Cloud, including:

- A 50% increase in performance. “We didn’t know what to expect; we were hoping that Google Cloud would perform at least as well as the data center did. Instead, it performed significantly better,” said Church.
- The ability to provision new storage within minutes instead of the two to three months the process took when using a data center.
- A significant cost savings on storage. Previously, 4medica employees would think twice before saving data; the reduction in cost now makes this a non-issue.
- A significant time savings on application deployment; what took several days previously can be accomplished in two hours or less in Google Cloud’s containerized environment.

As 4medica closes in on its one-year anniversary of migrating to Google Cloud, Church and Kuttalingam

are looking towards a long, fruitful relationship with both Google and SADA. The choice to use Google Cloud, Church stated, was one of the company’s key growth strategies, and Google technologies have a significant role in the company’s three-to-five-year plans. 4medica is currently using BigQuery, and delving more deeply into Google Cloud’s machine learning tools is a priority for next year. Right now, 40% to 50% of laboratory orders are processed from paper requisitions. 4medica has developed and released a revolutionary patented ML-powered solution to deliver all lab orders electronically, at a lower cost and with greater reliability.

SADA continues to provide support and training services to 4medica, including coordinating in-person training sessions for 4medica’s staff at Google’s Los Angeles office. “Since we’re a small company, our internal resources are limited. Having a good tech advisory partner like SADA helps offset what we have to manage and monitor. It’s a great extension for our company. That’s what a good partner should be. When partnerships are developed how they should be, it makes our lives easier,” said Church.

SADA helps Hunterdon Healthcare migrate 3,000 users to Google Workspace

2. Hunterdon Healthcare

Hunterdon Healthcare exists to prevent disease, illness, and injury; to seek cures; relieve pain; give comfort, and inspire a healthy way of living. In 2018, Hunterdon Medical Center admitted over 9,000 patients and had over 32,000 Emergency Department visits and over 570,000 outpatient visits. The 178-bed teaching hospital provides a full range of preventive, diagnostic and therapeutic inpatient and outpatient hospital and community health services.

Challenges

Hunterdon Healthcare has embarked on a plan to simplify and modernize its vast application portfolio. “For the past 20 years, we’ve had a boutique approach to IT, where each department independently acquired the software that it needed,” says Daniel Morreale, VP and CIO of Hunterdon Healthcare. As a result, the organization has many duplicative systems, which will need to be consolidated over time. Along with these planned changes, the team knew that it was time to replace the Novell GroupWise email system. “We needed to upgrade to the 21st century so that we could be more collaborative,” he says. “Our previous email system had limitations with file size, required external products for archiving and sequestering and presented challenges around security and usability.” It was important to the organization to add instant messaging activity, a stronger archive solution and video communication.



Solution

After an extensive review of vendors, gathering input from users and IT, Morreale selected Google Workspace in the spring of 2016. Google Workspace would support the transition to a modern, cloud-based email system and offer a full suite of productivity applications, allowing the organization to gradually move away from legacy systems. Morreale was familiar with SADA and its deep Google Cloud expertise already, making the IT consulting firm a natural choice to help Hunterdon migrate and transition to Google Workspace, he says.

By June of 2016, Hunterdon had moved its entire workforce of approximately 3000 users to Google Workspace. But that was just the first step; from there, with the help of SADA's change management team, the greater challenge was helping employees all the way up the chain understand and adopt new workflows to get the full power out of Google Workspace.

To that end, Hunterdon IT and SADA delivered group

and one-on-one trainings, along with webinars and YouTube training videos. "SADA has really helped due to its deep knowledge of the product and how it's used in other places," Morreale says. "The one-to-one environment for learning has been very effective to change old behaviors."

SADA delivered regular monthly trainings in 2017, as Hunterdon worked to increase adoption of the broader offerings of Google Workspace. This, however, will be more of an organic approach, stated the Hunterdon team. "We don't want to push a mass migration to the other apps, but instead we will highlight the benefits and let it grow. We are already seeing this happen. One of our departments had more than 130,000 documents in Google Drive after the first 30 days."

Results and benefits

Rapid and successful adoption of Gmail: In surveys, the Hunterdon IT team reports an 84.6% satisfaction rate with Google after six months of use and is pleased with how the company has responded to the new Google environment. Employees regularly stop members of the IT team in the hallways to share positive feedback. “I’m an IT guy, so I am always surprised when users are happy,” Morreale reported.

Customized training helps users transition faster: SADA’s collaborative approach toward workforce training was instrumental in helping employees get over the hump of change, says Denise Amiano, from Morreale’s team who worked closely with the SADA change management team: “It’s been so great working with SADA to create customized trainings based on our diverse user needs. They are always willing to go in whatever direction we need to go.”

Expected software licensing cost savings: Hunterdon needed to renew its Microsoft Office license in 2016, yet in three years, Morreale anticipates a cost savings of \$1.3 million a year from moving to the cloud-based Google Workspace.

Expected savings on storage: The strategy is to increase employee usage of Google Drive, considering the ample cost savings on storage Hunterdon can achieve by moving data out of its own data center. “We are sitting on 600 TB of data and growing, which is really starting to push the limits of our infrastructure.”

Supporting broader organizational goals: Hunterdon, like many healthcare systems, is grappling with transformative changes in the way that patient care is delivered and managed. Google is the optimal platform to help it achieve goals of better outcomes and processes. “Efficient workflow is critical,” Morreale says. “The easier we make it for people to collaborate and get out of silos, the more comprehensive impact we can have on changing population health along with the profitability and effectiveness of our organization.” “I could not have picked a better company to work with on this initiative,” Morreale says. “SADA has been extraordinary, responsive, and creative!”

Oregon Anesthesiology Group empowers employees with secure, real-time collaboration with Google Workspace

3. Oregon Anesthesiology Group

Oregon Anesthesiology Group (OAG) is comprised of over 200 Board Certified/Eligible anesthesiologists, providing a wide spectrum of treatment settings in state-of-the-art anesthesia and perioperative medical care for over 20 hospitals and surgery centers throughout the state of Oregon.

Challenges

OAG struggled to find messaging and collaborative tools to increase efficiency of communication amongst a large staff, where real-time and reliable contact is essential. OAG's staff also required a larger email inbox capacity, and the ability to update and collaborate over documents, in a cost-effective and simple way. It also needed to find ways to be able to archive and discover old email messages.



Solution

SADA provided over-the-phone assistance with data migration and training to help OAG deploy and implement Google Workspace. OAG bought extensive training in order to aid end-users in discovering the functions of Google Docs in its workplace. SADA also helped guide the implementation process of archiving and discovery, providing step-by-step guidance towards customizing settings that OAG required.

Results and benefits

With SADA's assistance, OAG has successfully migrated to Google Workspace. The employees now benefit from a larger email inbox with the real-time collaboration tools they needed to increase efficiency and ease of communication. Administration also now enjoys the ability to monitor and search for emails in a much more streamlined and organized manner.

"We simply cannot imagine going with Google Workspace without having SADA there to guide us through all of the configuration and setup options. As a seasoned IT professional, I can say that SADA made the difference between being frustrated with trying to figure out Google's design vs. quickly getting the answers I needed, from a source that has an excellent understanding of the service Google is offering. SADA professionals are knowledgeable, experienced and responsive to the unique requirements of their customers. I would not hesitate to recommend SADA as a reseller of Google Workspace; in fact, SADA made the difference between staying with Google Workspace and going with an in-house solution."

Mark Goodman, MS

Sr. Programmer Analyst, Oregon Anesthesiology Group

*Please note: At the time of this case study, Google Workspace was known as Google Apps

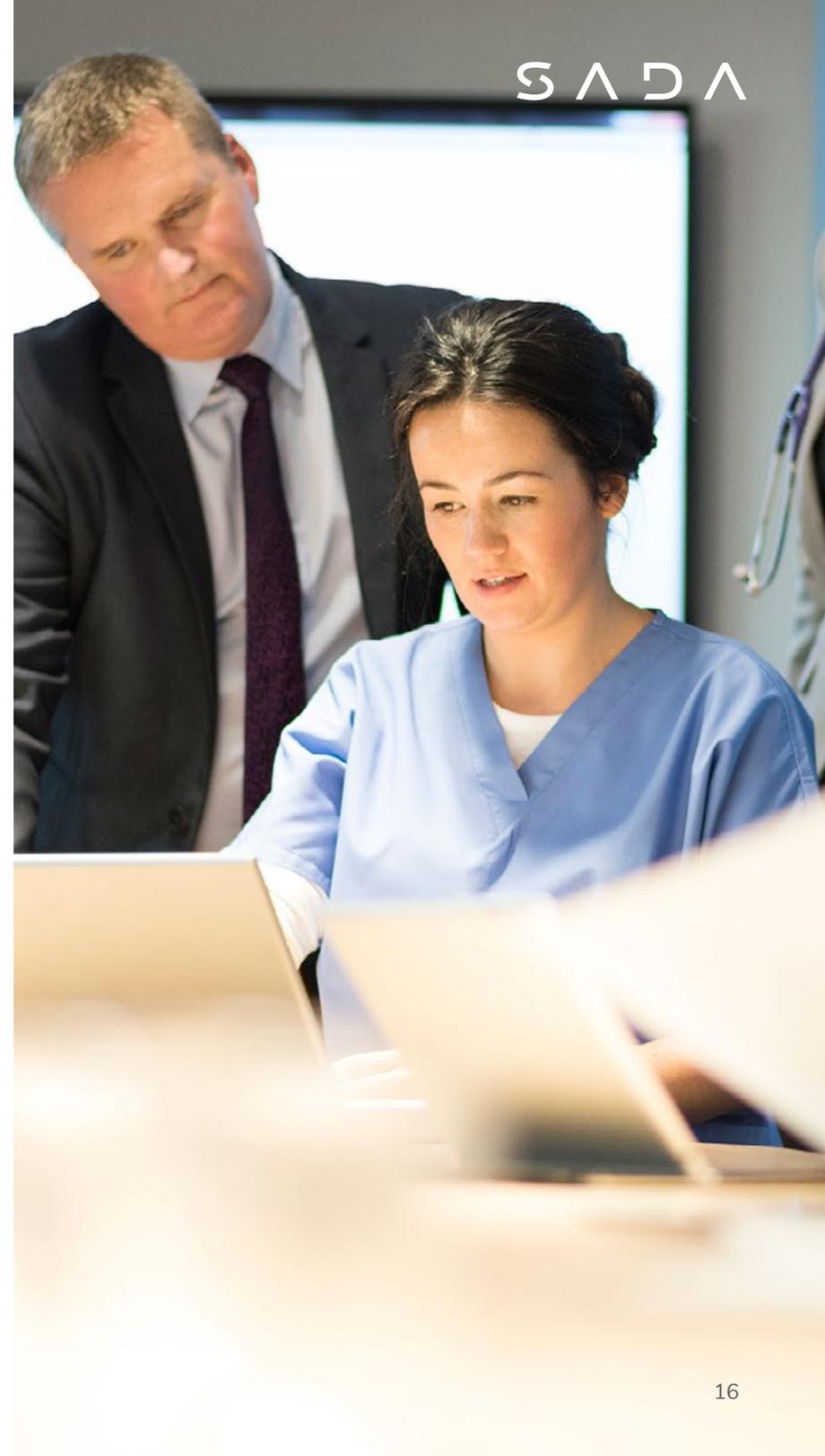
Lahey Health discusses its healthcare organization going Google

4. Lahey Health

Lahey Hospital & Medical Center is one of the world's premier healthcare organizations. Lore Chapman, Vice President of IT at Lahey Health, shares its journey with SADA to move over 17,000 employees to Google in just 91 days.



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About SADA

At SADA, we climb every mountain, clear every hurdle, and turn the improbable into possible – over and over again. Simply put, we propel your organization forward.

It's not enough to migrate to the cloud, it's about what you do once you're there. Accelerating application development. Advancing productivity and collaboration. Using your data as a competitive edge. When it comes to Google Cloud, we're not an add-on, we're a must-have, driving the business performance of our clients with its power.

Beyond our expertise and experience, what sets us apart is our people. It's the spirit that carried us from scrappy origins as one of the Google Cloud launch partners to an award-winning global partner year after year. With a client list that spans healthcare, financial services, media and entertainment, retail, manufacturing, public sector and digital natives – we simply get the job done, every step of the way.

Your challenges are ours. We're ready. Let's go.

"We love working with SADA, and we love Google Cloud. Google Workspace is really impacting how people work together, how we share information, and how we approach productivity."

Chris Voigt
CTO, Privia Health

"With Google Google Workspace and SADA's services, CHA has transformed how our staff and caregivers work, providing collaborative tools to better patient care."

James LaPlante
Sr. Director, Technology &
Biomedical Services,
Cambridge Health Alliance

"Having a good tech advisory partner like SADA helps offset what we have to manage and monitor. It's a great extension for our company. That's what a good partner should be. It makes our lives easier."

Gregg Church
President, 4medica

**A few of
our clients**

