Data-driven health care

How interoperability improves outcomes and efficiency

sas

contents

Controlling the cost of care. Applying operational rigor. Addressing staffing shortages. Managing the needs of an aging population. Increasing demand for health care. Staying ahead of technology changes and upgrades.

These are a few concerns that keep health care leaders awake.

For a better night's sleep, leaders should examine the interoperability of health data, technology and platforms. Why? The primary source of each pain point stems from the inability to securely and promptly share patient data between care providers, public health agencies and payers.

Interoperability can drive better patient outcomes, improve operational efficiencies, manage costs, and enhance the patient and care team experience. Health care powered by data and technology will be the springboard to the future.

01

A multidisciplinary approach to better care

Health care faces several intertwined issues: unsustainable cost increases, workforce shortages, an aging population, an increasing prevalence of chronic health diseases, and health inequities. While incremental steps have been taken to address the challenges facing health care, more progress must be made across all health care systems.

Coupled with those challenges, providers, insurers and public agencies have unique roles, perspectives and goals, but share commonalities that are fundamental to the future of care. They need health information exchanges or interoperability. Why? Because it has the potential to reduce costs, personalize treatment pathways and improve operational efficiencies.

With interoperability, all health care leaders, practitioners and stakeholders can have a more holistic view of the patient – enabling them to personalize care and plan resources more efficiently. Without proper data sharing, a technology platform and collaboration, none of this would be possible.

Better care coordination: Access to data can reduce duplicative utilization and improve care efficiency and health outcomes.

Higher performance: Studying data trends combined with clinical data and experience helps doctors make evidence-based care decisions.

Operational efficiency: Reduce redundant administrative work and duplicative efforts.

"With a multidisciplinary approach, we can cross-reference the data with the new pathways with a view to improvement, and see across the operating units that will affect the patient. This is how we field the necessary resources based on real needs."

Francesco Copello, Director of the Operational Control and Management Unit, San Martino Polyclinic Hospital (Italy)

02

Convergence redefines tomorrow's medical system

The status quo is not sustainable. Data spread across different systems or in silos prevents visibility – making it nearly impossible for providers, insurers and public health agencies to be effective. A new approach will be essential to transitioning from fragmentation to convergence.

Challenges and opportunities:

- Widespread use of AI and machine learning.
- Increased focus on preventive care and wellness.
- Integration of digital health tools.
- Health care consumerism.
- Global health challenges and public health preparedness.
- Infrastructure and delivery models.
- Policy and regulatory evolution.
- Health equity.
- Responding to the consumerism of health care.

According to KPMG's Future of Healthcare report, there are bright spots to consider as the industry undergoes convergence, advancement and a unique focus on digitalization. Experts see the disruption of traditional health care stakeholders, the entrance of new players like retailers and tech companies, and the reassembly of a new ecosystem that creates opportunities.

Organizations are adapting their visions for care coordination and data integration to deliver tomorrow's health care today.

"Before the care pathway project, our data was siloed and static. We were looking for a solution capable of combining all necessary data for the creation of performance measures, then proposing clear and dynamic restitutions. With SAS, we now have the capability to translate needs and metrics into personalized medicine, visible on dashboards."

Ali Hammoudi, Medical Management Controller, Oscar Lambret Center (France)

03

Say goodbye to the traditional patient-provider dynamic

We all interact with the health care system and will continue to throughout our lives. The slow changes in health care are creating frustration and contributing to the shift from providers to consumers. Transformation starts with placing the consumer at the center of the health ecosystem.

Patients anticipate something different in how they choose, manage and experience care. They desire ease of control and the same level of immediacy and customization that they experience in other service sectors. People want to:

- Explore and understand treatment options.
- Make day-by-day, minute-by-minute health decisions.
- Find equitable, accessible and affordable care like virtual visits.

Now, more than ever, health care leaders have an opportunity to influence health decisions by providing digital tools that can help consumers navigate their health care journey.

90% of surveyed health care provider executives and 100% of surveyed chief marketing officers identified consumerism as a top priority.

Source: McKinsey health care provider survey

04

Moving beyond legacy technologies

The current technology stack across health care and the IT infrastructure needs an overhaul. The industry must invest in technology and services to enable faster, more efficient and productive insights.

Technology organizations must figure out how to provide services enabling this transition. Health care organizations must also have a strategy for using technology. Otherwise, it's useless.

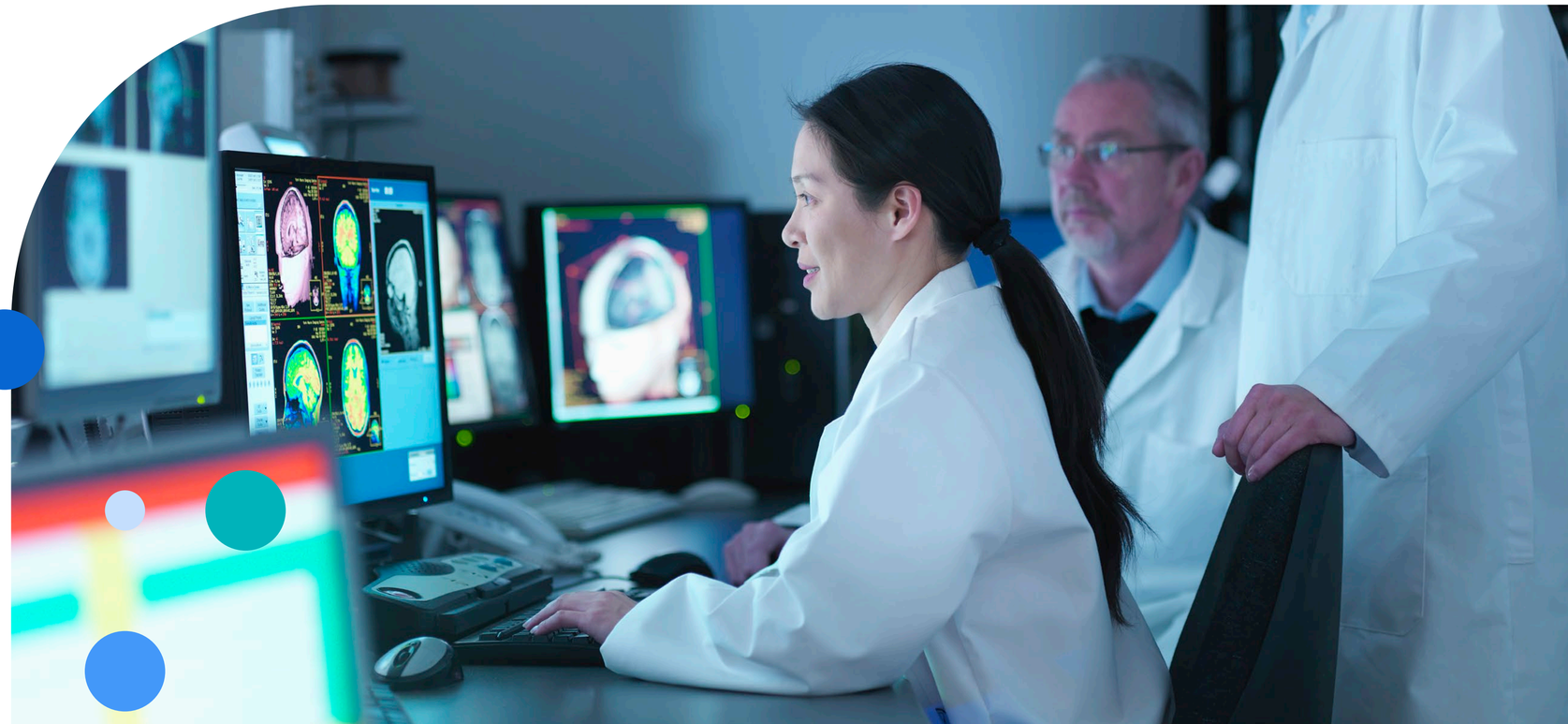
At the core of these challenges, and at the core of the advancement of technology, we continue to see one common thread. Knowledge.

And where does knowledge come from? Data.

And how does data become action? Through a strategy that is informed by reliable and trustworthy data.

"The need for data standardization is an imperative. Providers and payers alike need a streamlined approach to reconciling incompatible file formats in order to increase the speed of information transfer and improve the quality of care and patient experience."

Steve Kearney, Global Medical Director, SAS



05

Overcome barriers to interoperability

In the highly regulated, protected spaces of health and life sciences, speed isn't exactly the target. Instead, safer, more effective and more accessible care is the objective. Technology, solutions and tools of the future can help the industry collectively move forward. The potential to overcome barriers to access, making health care more affordable and accessible to all, is within reach.

An efficient interoperability ecosystem provides an information infrastructure that uses technical standards, policies and protocols to enable seamless and secure capture, discovery, exchange and utilization of health information.

The interoperability of technology across the industry is a significant challenge – and one that leaders are eager to solve. As the technology has progressed, the exchanges have broadened to include patients and providers, public health organizations and payers. Ultimately, better care coordination leads to decreased costs and efficiencies.

A great example of embracing the power of data for improved patient care is happening at the Erasmus University Medical Center. Erasmus is implementing data-driven applications across the hospital, predicting and preventing complications and optimizing the use of operating rooms, intensive care units and beds.

"By using analytics in such a way that we can understand the true value of the data, we can improve our quality of care, come up with better care solutions and work more efficiently."

Michel van Genderen, Internist-Intensivist, Erasmus Medical Center (Netherlands)

06

Applying AI and generative AI

The Forrester report Predictions 2024: Healthcare found that health systems will expand their AI capabilities, creating new patient experiences and efficiencies for staff. While immensely powerful, generative AI forms just one part of a more extensive, more diverse toolbox of AI solutions available.

GenAI can help accelerate investigative processes and provide efficiencies in a myriad of ways, and isn't limited to one specific area of the health care ecosystem. For example, when applied to investigative case management systems, GenAI can help identify intelligence gaps captured in notes, summarize what tasks have (or haven't) been taken throughout a lengthy investigation, and suggest the next steps.

Medical record review is another opportunity. Confirming clinical notes to substantiate services billed is a highly manual and tedious process. Using document vision to read hundreds or thousands of documents and applying AI to parse through it all and identify relevant sections for a reviewer is a tremendous efficiency gain.

In addition, generative AI can help improve medical image analysis, synthetic data generation, enhanced clinical decision making, customized patient interactions and more.

As more health care professionals put AI to work, there will be impressive advancements in health care – personalized medicine, efficient administration and enhanced patient care – while also addressing challenges such as cost, access and efficiency.

"Organizations worldwide are shifting how they work. There's a greater focus on being agile, adapting quickly and providing value to meet changing needs. This shift is especially prevalent in health care."

Marinela Profi, Product Marketing Manager, SAS

The Healthy Nevada project, developed by the Renown Institute for Health Innovation, offers genetic testing to Nevada residents and is one of the first community-based population health studies in the US. Using AI and analytics, they can predict, treat and prevent diseases by understanding how genetics, environment, social factors and health care interact to improve health outcomes in Nevada.

The results:

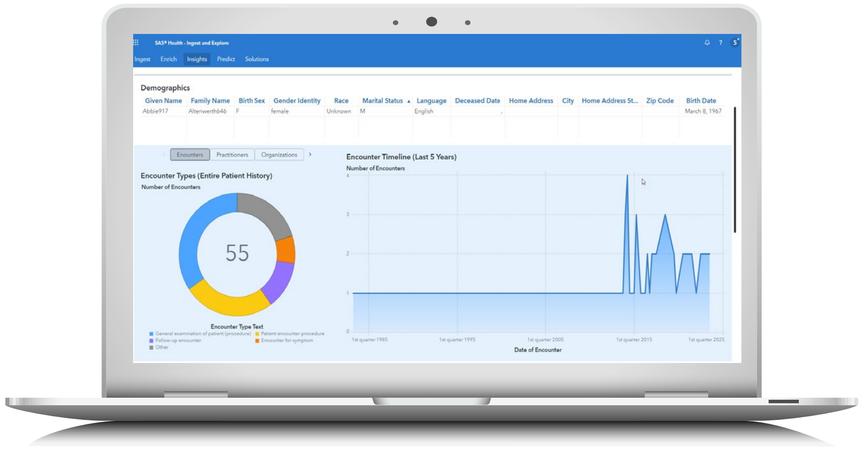
- Combine genetic data with data from other sources to gain new insights.
- Identify patients at risk.
- Enable early detection and prevention.
- Predict and treat health outcomes for individuals and the population.
- Accelerate research to improve population health.
- Enhance personalized medicine.

Learn more

07

Data and AI in action

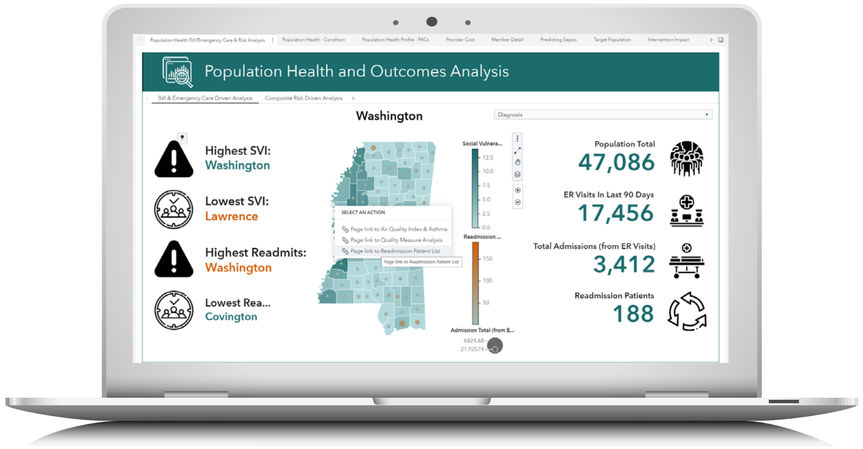
From public health agencies to providers to insurers, health professionals trust health care data analytics from SAS to help them make sense of complex health and non-health data.



Tailor-made for health care

SAS Health benefits can help:

- Simplify health data management and accelerating analytic discovery with an end-to-end enterprise solution.
- Easily ingest your data that follows industry-standard formats, such as FHIR, in less time.
- Deploy a low-code/no-code environment for data exploration, advanced analytics and model deployment.
- Drive trusted health innovations and unlock analytic insights faster for confident decisions.



Discover greater productivity

Navigating the complete data and AI life cycle can feel daunting. You need a foundation – that's SAS® Viya®, which is just that. As a cloud-native data and AI management platform, SAS Viya enables organizations to scale cost-effectively, increase productivity and innovate faster, backed by trust and transparency.

SAS Viya benefits:

Integrate teams and technology – enabling all users to work together to turn critical questions into trusted decisions.

- Provide visual exploration, data discovery and reporting.
- Discover care gaps and essential connections in data.
- Use machine learning and natural language explanations to understand why something happened and uncover hidden insights in data.
- Visualize insights from geographical areas to make data understandable quickly.
- Get low-code/no-code functionality so anyone can create or consume insights that lead to better decision making.

08

Accelerate transformation with a trusted SAS partner

At KPMG, technology and innovation can help deliver higher-quality care, reduce costs and create a more patient-centric experience. Our suite of transformation technology solutions can help you engineer a different future — one of new opportunities designed to create and protect value.

KPMG was recently named #1 for quality AI advice and implementation in the US by Source; one of America's best management consulting firms by Forbes; and a leader in the IDC Marketscape: Worldwide Operations Improvement Consulting Services 2023-2024 Vendor Assessment.

KPMG's alliance with SAS, the global leader in data and AI, provides collaborative, tech-enabled solutions.

"A fundamental change is needed globally in the organization of health care systems. Looking to the future, health care needs an inclusive approach to transformation covering technology and data, consumerism, workforce and communities."

Hylke Kingma, Partner Digital Health, KPMG in the Netherlands

Onward: The future of health care is powered by data and AI.

To learn more, please visit **health care data analytics.**

To contact your local SAS office, please visit: **sas.com/offices.**