The one barrier to value-based care you need to overcome

Systemness: What it is and how it impacts your organization

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The organizational impact of systemness

In healthcare, systemness means integrating all aspects of a health system’s governance, operations, and workflows—across all technologies, clinicians, and locations—to deliver seamless, cost-effective, high-quality care across the continuum.

To accomplish this aim, hospitals and networks should be built around a set of desired outcomes, with patient and staff needs at the center of the system. When a system is designed around a particular set of goals, parts that make up the whole all work in service of those goals and operate synergistically.

Achieving systemness across sprawling care networks is a complex challenge. Many of today’s hospital systems have come into existence through multiple rounds of mergers and acquisitions and are currently coping with multiple institutional cultures, lack of clinical standardization, and mismatches between the community’s needs and the system’s capabilities.

Technology-heavy areas particularly benefit
Technology-heavy practice areas like radiology stand to reap outsized benefits from systemness. In large regional health systems that have grown through acquisition, it’s not uncommon to have multiple protocols for the same study due to individual radiologists’ preferences, on-the-fly protocol changes, and hardware-specific compatibility and reporting issues. The result is a lack of consistency and comparability of study results, patient frustration, inconsistent tracer doses and radiation exposures, and potential repeat scans. Instilling systemness into technology-heavy services like radiology helps tame inconsistency, demand/capacity mismatches, and waste that can accompany growth.1

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Systemness brings order and efficiency to sprawling healthcare providers.

3 steps your team can take to get started

1. Assess the geographic, econometric, and population health challenges across the population your organization serves

2. Audit deployment of key capital assets (physical locations, technology assets, physicians, etc.) across your system

3. Identify gaps in how these assets are deployed and optimize operations for your population

How effective is your enterprise-wide communication?
An integrated, patient-centered care system relies on excellent enterprise-wide communication. The communication within and across these systems is fundamental to achieving real integration. By sharing consistent protocols, comparable data sets, and actionable findings, provider organizations can become capable of expanding precision medicine throughout the entire enterprise. Med tech partners with expertise in implementation and operations can help care networks build true systemness and achieve their strategic goal of delivering the highest-value care at the lowest possible cost.
The big picture impact of real integration

Developing true systemness in a healthcare enterprise can produce a big-picture impact in terms of increased efficiency (and potentially decreased costs) and improved quality of care that can support better clinical outcomes. How is this possible? Systemness can help achieve enterprise-wide changes, such as:

- Increased interoperability
- Higher level of clinical standardization
- Better population health management
- Improved patient satisfaction
- Enhanced staff experience

Increased interoperability
Incompatibilities among the IT infrastructures of the constituent parts of a typical health system stifle efficient operation and may affect clinical outcomes by constricting clinicians’ access to key patient data at the point of decision. By prioritizing systemness, a healthcare organization commits to lowering these barriers and enabling timely, secure access to patient data across the entire care continuum. Enhanced interoperability also contributes to clinical standardization.

Higher level of clinical standardization
Developing and deploying robust, flexible standardized care pathways across the institution is a prerequisite to delivering effective personalizable care, positive outcomes, and operational efficiency. Clinical standardization promotes the use of evidence-based diagnosis and treatment and helps ensure that all patients receive the same high-quality, high-value care at any time and in any location within the organization. These benefits hinge on developing and constantly iterating on care pathways to incorporate the latest scientific findings, prevalent health trends in the population, and the particularities of individual patients.

Better population health management
Standardizing processes and streamlining data collection, analysis, and reporting give the health system an unprecedented ability to view its population collectively and identify important health trends in order to proactively address them. Early identification and intervention among vulnerable populations improves outcomes and can decrease costs, which are hallmarks of the value-based care paradigm.

The innovative Medicalis portfolio from Siemens Healthineers helps create an integrated service line across the organization and provides clinical decision and workflow support along with referral management and other features that help provider organizations bridge between public health management at the health system level and at the departmental level. Medicalis helps Integrated Delivery Networks (IDNs) keep their patients within the system, so they can receive consistent care across the continuum while avoiding patient leakage.

High Risk | Manage
3-5% of the population

Rising Risk | Prevent
20-30% of the population
**Improved patient experience**

Far from a “soft” metric or goal, patient experience is a uniquely important and quantifiable representation of the value, clinical and otherwise, that patients derive from their interactions with a healthcare organization. Systematic thinking contributes to an improved patient experience in a few ways. Increased efficiency and standardization of processes like scheduling, notifications, and billing can make these processes more transparent and easier to navigate. Standardizing clinical and non-clinical processes inspires confidence and improves outcomes. Standardized and centralized patient access to key health data further increases transparency and enables patients and families to advocate more effectively for their needs. And tracking performance against internal and external benchmarks allows for continuous refinement of processes and pathways to make them more patient-friendly, effective, and efficient, while preserving room for personalization when it matters.

**Enhanced staff satisfaction**

Clinicians derive professional satisfaction from clinical interactions, not from completing forms and entering data. A key benefit of systemness is relieving the clerical burden for clinical staff, allowing them more time to interact with patients and consult with colleagues. Depending on the specifics, many clerical tasks can be simplified, standardized, automated, or transferred to non-clinical staff. True systemness also inspires confidence by giving doctors access to evidence-based standards of care and clinical decision support tools across the organization. These tools can go a long way in minimizing clinical variations while also enabling the organization to more effectively track and improve performance, thus delivering superior value.
What’s standing in the way

Considering the tremendous clinical, operational, and financial benefits of systemness in healthcare, why do relatively few institutions achieve real systemness? The answers generally involve a mix of cultural, structural, organizational, and communication issues.

Many of today’s healthcare networks are the result of decades of consolidation through mergers and acquisitions. While seemingly affording economies of scale to healthcare networks, consolidation also brings with it a number of challenges, including:

- IT incompatibility
- Institutional culture clashes
- Lack of centralized, network-wide processes and care pathways
- Limited access to patient data throughout the network

These conditions are common following consolidation and work against the benefits of systemness.

IT incompatibility

This is an important consideration, especially with specialized and complex assets like diagnostic laboratories. Different coding, report formats, terminology, and interpretations among constituent parts of a healthcare system can cause confusion, uncertainty, repeat tests, and decreased quality of diagnosis and treatment. In the laboratory diagnostics pace, IT solutions like the Atellica® Diagnostics IT suite of software integrate and centralize management of labs across the system.

Administrators are sometimes reluctant to integrate and systematize mismatched and legacy systems, rationalizing that another acquisition is always on the horizon and will necessitate another round of standardization. In addition, some acquisitions create inefficiency by introducing redundancy in facilities, staff, and equipment. While these challenges are daunting, it is always in the best interest of the healthcare enterprise to address them immediately.
By creating a system that reflects the needs of the population it serves, administrators can guide long-term growth and development along justifiable, economically viable lines and avoid the pitfalls of unnecessary acquisition or expansion. Building partnerships with companies that have deep implementation experience can help ensure that a health system's acquisitions advance its larger strategic goals. Med tech partners like Siemens Healthineers can help healthcare provider organizations modernize their fleets and also implement “future-proof” maintenance and upgrade partnerships to enable continuous process and performance improvement.  

Resistance to centralized control
In both clinical and non-clinical domains, people may resist standardization and centralization of control. That is why change management is essential to success in integrating new resources and assets into a healthcare network. The potential benefits to the organization, and to patients and staff, have to be explained in detail. Involving staff in the development of new standardized processes and clinical pathways not only gives them skin in the game, but also helps the organization to draw from the experience and creativity of its most valuable assets: the people who work there. A collaborative and respectful process goes a long way toward getting buy-in and building consensus, especially among employees of recently acquired hospitals, clinics, and other facilities.  

Unwarranted variations in care
Stemming from the issues presented above, unwarranted variations in care are a major hurdle to overcome when building systemness in healthcare. To cite just one example, a study of four hospitals in the San Francisco Bay Area of California revealed wide variations in radiation doses within and between hospitals for common CT studies, with a 13-fold average variation between the lowest and the highest doses for a given study. These variations arise from a variety of sources, including physician and technologist biases; heterogeneous imaging fleets; lack of standardized practices and pathways; and lack of access to key clinical data and decision support tools. Reducing unwarranted variations enables a healthcare enterprise to expand precision medicine across the continuum of care.  

Mismatch between assets and population needs
Another side effect of growth through consolidation, this is often seen as redundancy in some functions (e.g., imaging), coupled with shortfalls in other areas like primary care and wellness. Tough decisions have to be made in order to match the healthcare system's capabilities and capacity to the needs of the specific population it serves. The importance of accurately assessing the community’s needs is matched in importance by the need for timely and efficient implementation.  

Lack of data analysis capabilities
Benchmarking and monitoring performance are central to a fully integrated healthcare system. The need to monitor outcome-based performance is on the rise as compensation may be tied directly to such measures. In addition, effective data analysis gives the healthcare system the opportunity to increase efficiency in both clinical and non-clinical functions. Many healthcare systems are seeking partners to help implement and manage performance analytics, as this lies outside of the experience of many hospital administrators. Solutions like teamplay from Siemens Healthineers can help institutions collect and analyze performance data across their imaging fleets and benchmark that data against other organizations, giving the institution a leg up on performance improvement.
What you need to overcome them

Today, healthcare networks face particular pressure to move from a collection of semi-autonomous facilities to an integrated, connected, patient-centric system whose parts work in synergy under centrally defined, evidence-based models of care delivery.

The modern healthcare enterprise is incredibly complex and increasingly connected, so it seems natural that administrators are looking for partnerships that allow them to focus on clinical excellence.

Healthcare provider organizations are seeking industry partners who offer guidance on long-term, sustained transformation and the changes necessary to achieve those strategic goals. Med tech companies like Siemens Healthineers have extensive experience and broad capabilities within both of these domains and are well equipped to help healthcare provider organizations compete effectively and achieve demonstrable improvements in outcomes and patient experience, which are key factors under value-based care payment models.

Partners who have strong IT/digital technology capabilities in the healthcare context are also in high demand because IT solutions can standardize and systematize processes and reporting across a heterogeneous medical technology fleet. In addition, an IT partnership should allow the healthcare enterprise to analyze performance across the entire system. Siemens Healthineers is such a partner, with an ambitious commitment to digitalizing healthcare. Teamplay, for example, allows quick, intuitive access to imaging data from the institution’s own fleet, as well as the ability to benchmark against other institutions. This cloud-based solution supports systemness in the radiology department and beyond.
Of course, none of these changes will have the desired effect if clinical staff aren’t on board. Change management is a key part of any meaningful transformation, and health system administrators should seek partners who excel in this challenging discipline as well.

Finally, partnerships are most effective when they are flexible, proactive, and built for the long term. Change is constant, and the need to refine systems to increase value and decrease costs is never-ending. An ideal partner is in it for the long haul and has the vision to anticipate major shifts in the healthcare landscape.

Med tech partners that build, install, and support both hardware and complementary IT solutions give provider organizations a chance to implement precision medicine at scale by deploying integrated, synergistic systems in radiology and other key departments.

Value Partnerships from Siemens Healthineers are designed around healthcare provider organizations’ needs in both the short and longer term. They are enduring partnerships that enable healthcare enterprises to deliver high-value care while fostering innovation throughout the care network.
How we view systemness

At Siemens Healthineers, we believe that systemness is a key to success under value-based care models. While there are significant obstacles to implementing systemness throughout a healthcare organization, it is a worthy undertaking and one that should be part of an ongoing commitment to optimization and standardization of clinical and non-clinical operations.

True systemness in healthcare means that data flows seamlessly across connected facilities and equipment. Effective, timely diagnosis and treatment depend heavily on this data flow—diagnostic lab data, for instance, informs an estimated 70% of medical decisions. Thus, implementing systemness across radiology and diagnostic laboratory facilities is a key determinant of the efficiency and performance of the health system as a whole.

Planning for and implementing systemness throughout a healthcare enterprise requires significant expertise in digital technology, clinical science, change management, and process optimization. Healthcare provider organizations who enter partnerships with med tech companies that excel in each of these areas set themselves up for greater integration, increased interoperability, more transparency, and improved patient and staff experience.

Known for our innovative medical technology and services, Siemens Healthineers has vast experience in designing and implementing integrated, synergistic systems involving hardware, software, training, support, change management, and even facility design and master planning. We help our partners leverage these complementary strengths to foster the development of systemness across the healthcare enterprise.
Effective healthcare systems are built around patients.
At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey toward expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare.

An estimated 5 million patients globally benefit every day from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics, and molecular medicine, as well as digital health and enterprise services.

We’re a leading medical technology company with over 120 years of experience and 18,500 patents globally. With about 50,000 dedicated colleagues in over 70 countries, we’ll continue to innovate and shape the future of healthcare.

The outcomes and statements provided by customers of Siemens Healthineers are unique to each customer’s setting. Since there is no “typical” hospital and many variables exist (e.g., hospital size, case mix, and level of service/technology adoption), there can be no guarantee that others will achieve the same results.

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References