Sg2 EXECUTIVE BRIEFING

A Strategic Approach to Building a High Reliability Organization

The outpatient shift is changing the high reliability paradigm for health care organizations. What historically has been an acute care and IP focus will need to expand across the enterprise as the locus of care moves away from hospitals and into diffuse ambulatory and home settings.

KEY TAKEAWAYS

- High reliability efforts must expand beyond acute care to include the entire patient journey.
- Service line (SL) involvement will help bring a clinical approach to high reliability.
- Culture and management systems provide the foundation on which a high reliability organization (HRO) can be built.

Growth of risk-based payment models incents purchasers to seek highly reliable providers. Medicare Advantage penetration is currently over 40% of the Medicare market and continues to grow. Employers simultaneously are pursuing direct contracting. Additionally, consumers and payers are armed with more accurate, transparent and real-time quality information, making safety and patient outcomes across all sites of care a future competitive advantage. High quality confers diverse benefits: favorable contracting, improved consumer satisfaction and lower costs.

While many HRO journeys begin as a response to a crisis, the highly reliable organization of the future will take a proactive and preventive approach. This strategy has become particularly crucial with the COVID-19 pandemic and the additional strains it has placed on systems and processes that were already unstable.

How Health Systems Respond

More sites of care, workforce challenges and higher disease complexity have led to increased risk and more obstacles to becoming highly reliable. To effectively manage the risk, organizations must apply the same framework for safe and reliable care deployed in IP settings and scale it consistently and concurrently for the whole patient experience—all sites of care, including the home and at and between every step of a patient's journey. At its most basic level, the framework consists of two pillars:

- **Culture.** An executive-led and team-based culture is grounded in learning, accountability and a no-blame-no-shame approach. Implemented consistently across the organization, such a culture creates an environment that enables management systems to be implemented effectively.
- **Management systems.** Interlocking systems and processes create the infrastructure for learning, improving and sustaining performance excellence.

ROOM FOR IMPROVEMENT

Percentage of hospital admissions that result in a patient safety event:*

15%

Number of deaths per day caused by safety breakdowns in hospitals:

680 (third leading cause of death in the US)

*The data represent patient safety incidents voluntarily reported to the Vizient® Patient Safety Organization. Excluded are unsafe conditions and near miss reports and incidents that were reported by or occurred in the ED, observation units and ambulatory care; however, the data may include some outpatient data that could not be excluded, such as care received in some ancillary services or data reported in care transitions.

> *"Hospitals are safer because of the [financial] pressure put on them by payers, but that doesn't get you the whole way."*
>
> —Allan Frankel, MD, Co-Founder, CEO, Safe and Reliable Healthcare

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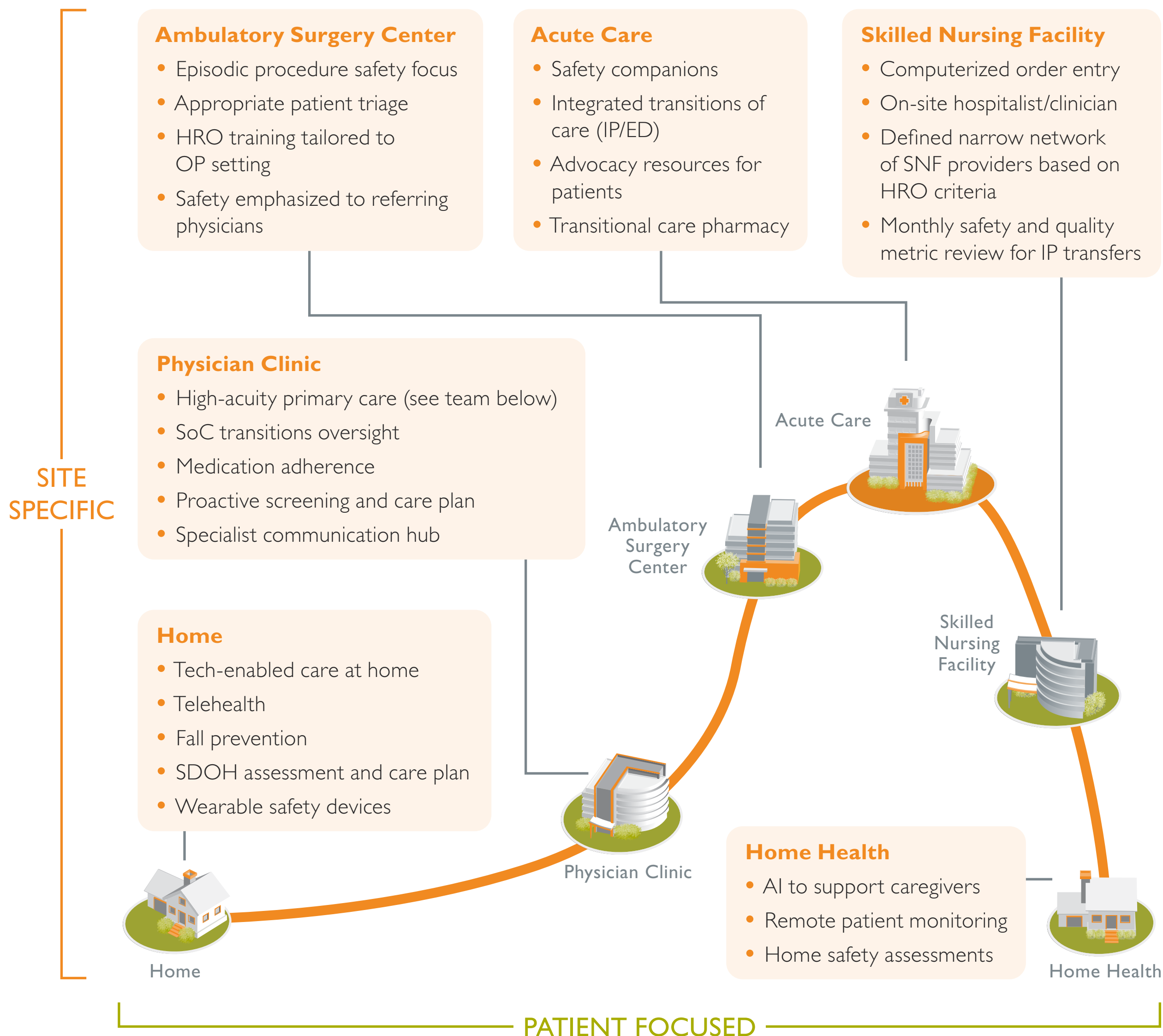
Building a High Reliability Organization That Expands Beyond Acute Care

The reliable health system of the future will build upon an enterprise-wide foundation. This approach positions organizations to create a cohesive, culturally aligned care pathway—a System of CARE (Clinical Alignment and Resource Effectiveness)—that safeguards care at and between every step of a patient's journey.

HIGH RELIABILITY ACROSS THE CONTINUUM



SYSTEM OF CARE—HIGH RELIABILITY ATTRIBUTES

Operations	Technology/Measures	Key Team Members	Culture
• Daily huddles • High-risk patient identification and accountability • Root cause analysis • Initial and ongoing training	• Real-time patient event notification • Cross-market access to health information • Digital safety board (real time)	• Patient and family • High-acuity primary care team (RN-education and behavioral health specialist, care navigators) • Regional safety officers	• Enterprise-wide communication and accountability • No blame no shame • Staff safety, support and awareness

AI = artificial intelligence; SDOH = social determinants of health; SNF = skilled nursing facility; SoC = System of CARE.

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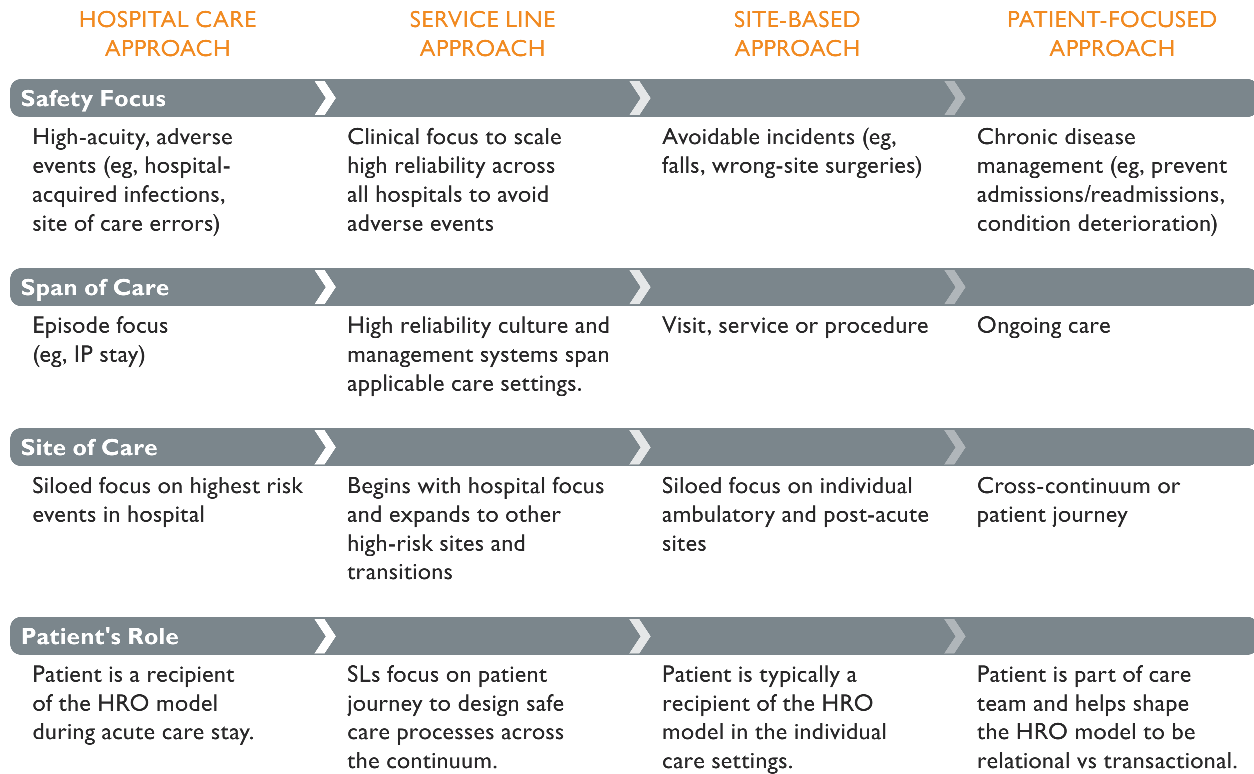
Road Map to a Patient-Focused Approach

Given the high rate of safety incidents in the inpatient setting, it's not surprising that 95% of the high reliability efforts in the US are focused on high-acuity patients. For many, the next step is to bring a service line focus to the system's HRO efforts before rolling them out to individual sites across the continuum (eg, ambulatory surgery centers, SNFs). Ultimately, HRO efforts should aim for a cohesive, reliable and error-proof experience for patients, regardless of where they enter or where they are in their care journey.



	HOSPITAL CARE APPROACH	SERVICE LINE APPROACH	SITE-BASED APPROACH	PATIENT-FOCUSED APPROACH
Safety Focus	High-acuity, adverse events (eg, hospital-acquired infections, site of care errors)	Clinical focus to scale high reliability across all hospitals to avoid adverse events	Avoidable incidents (eg, falls, wrong-site surgeries)	Chronic disease management (eg, prevent admissions/readmissions, condition deterioration)
Span of Care	Episode focus (eg, IP stay)	High reliability culture and management systems span applicable care settings.	Visit, service or procedure	Ongoing care
Site of Care	Siloed focus on highest risk events in hospital	Begins with hospital focus and expands to other high-risk sites and transitions	Siloed focus on individual ambulatory and post-acute sites	Cross-continuum or patient journey
Patient's Role	Patient is a recipient of the HRO model during acute care stay.	SLs focus on patient journey to design safe care processes across the continuum.	Patient is typically a recipient of the HRO model in the individual care settings.	Patient is part of care team and helps shape the HRO model to be relational vs transactional.

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Attributes of an Enterprise-wide, System of CARE Approach

There are key HRO tenets that are applicable to an acute care, site-based or ultimately patient-focused approach. Some are specific to one or more approaches, while others can cross all three.

ATTRIBUTE	APPROACH: Acute Care Focused	APPROACH: Site Based	APPROACH: Patient Focused	CASE EXAMPLE
OPERATIONS				
Daily Huddles What started as an IP practice can be used in ambulatory sites to discuss next steps for discharged patients or those identified as high risk.	●	◐	●	Primary care providers with Vidant Health identify high-risk or complex patients based on an ambulatory risk scoring process through their EHR. The patients are then enrolled in a "smart transitions" program and assigned care teams that monitor medication compliance, ensure access to care, review labs, conduct screenings, schedule any necessary follow-ups, and identify teach-back opportunities. Through the EHR, the team can also connect with other providers in the market (eg, specialists) to ensure continuity and coordination of care. All clinics within the Vidant Health Medical Group implement daily huddles into their operational workflows. The huddles, which include clinical support staff, providers and clinic leadership, provide time to proactively discuss and address unsafe conditions, high-risk patients and process improvement opportunities.
High-Risk Patient Identification A targeted patient population is a good place to start as systems expand their HRO focus.	◐	○	●	
TEAMS				
Team-Based Care Clinical care teams must adopt an HRO model that identifies and monitors high-risk patients and corrects clinical care that could lead to an avoidable admission, readmission or ED visit. The team reevaluates when avoidable admissions occur. For many health care organizations, care coordinators and navigators within primary care help chronic patients navigate the System of CARE, lead daily huddles and triage for appropriate care. These tasks may fall under a service line in other models, but they work closely with primary care.	○	◐	●	Geisinger Health System's primary care provider (PCP) clinics employ care managers who are foundational to its HRO program. If a patient has acute needs that require specialty care, the specialist clinic will assign a navigator who then works with the PCP clinic. At Iora Health, a team-based primary care organization for Medicare patients, the patient is considered a valuable member of the care team. They are involved in decision making, care plan adherence and self-advocacy.
Patient Participation Systems should build processes for patients, as their point of view is crucial to building trust and transparency.	○	○	●	

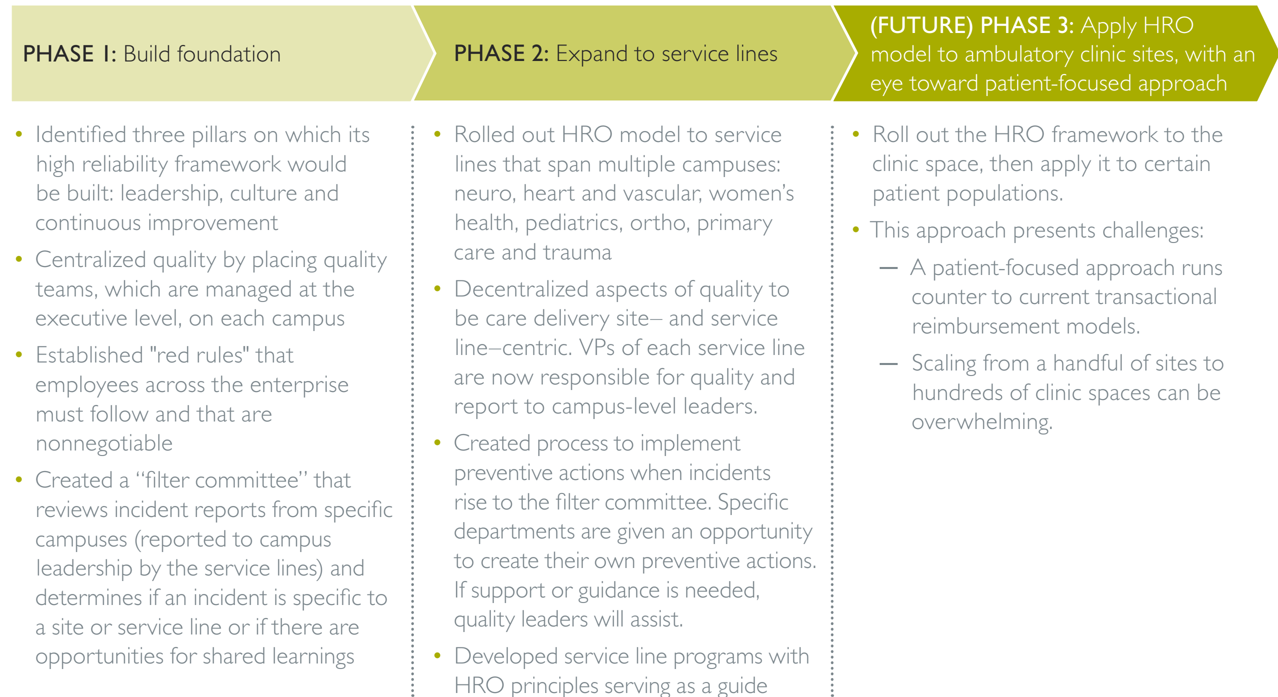
Note: The circles indicate where the attribute is applicable; the darker the shade, the higher the impact.

ATTRIBUTE	APPROACH: Acute Care Focused	APPROACH: Site Based	APPROACH: Patient Focused	CASE EXAMPLE
CULTURE				
No-Blame-no-Shame Culture Organizations must expect accountability from everyone at every level in the system and create an educational, not punitive, culture.	●	●	●	Dr Michael Leonard, board chair of Safe and Reliable Healthcare, recommends providing training and setting expectations prior to each employee's first day on the floor. Systems that have successfully created an HRO can weed out employees not committed to the culture right away. "It's made clear what the culture is. Either embrace it or move on," says Dr Leonard.
TECHNOLOGY				
Data Exchange Seamless data sharing among providers across and outside the enterprise is foundational to fully informed and transparent decision making.	○	○	●	The state of North Carolina has a coordinated care network called NCCARE360. The statewide system allows providers and community partners to electronically connect patients with needed nonmedical resources, allowing them to address social determinants of health. The system also offers a feedback loop to ensure all needs are addressed and the outcomes of the referrals are transparent.
Predictive Analytics AI-enabled solutions help providers easily identify potential dangers or deteriorating conditions, enabling them to stabilize acute and chronic patients and prevent negative outcomes.	●	○	●	EHR vendor Epic created Care Everywhere, an electronic platform that allows interoperable EHRs to connect and exchange information. By the end of 2020, the company said it was facilitating more than 221 million patient data exchanges each month, a roughly 40% increase from the previous year.

Note: The circles indicate where the attribute is applicable; the darker the shade, the higher the impact. **Sources:** Sg2 Interview With Vidant Health, October 2021; Sg2 Interview With Geisinger Health System, October 2021; Sg2 Interview With Iora Health, October 2021; Sg2 Interview With Safe and Reliable Healthcare, September 2021; NCCARE360 website. Accessed January 2022; Epic. In the latest COVID-19 surge, health record exchanges through Care Everywhere reach 221 million in a month [press release]. December 8, 2020.

CASE STUDY
MEMORIAL HERMANN HEALTH SYSTEM

Houston-based Memorial Hermann Health System started its HRO journey in 2007 after an adverse event led to a patient's death. It took several years to completely build out and educate on the HRO model after gaining buy-in from system leadership. The system, which started its journey in the IP space and expanded from there, serves as a good example of how a health system can lay the foundation for a patient-focused HRO approach across the enterprise.



Key Learnings

- Start with foundational metrics (eg, Merit-Based Incentive Payment System, accountable care organization metrics) and expand from there. Metrics will be both enterprise-wide and service line specific.
- Improve quality metrics to create a trickle-down effect on patient satisfaction and financial metrics.
- Allow a high reliability framework to influence service line–program design.
- Gain buy-in from the board and system leaders; without it, the needed culture to be a high reliability organization will never be established. Change and continuous improvement cannot happen without the right culture.
- Understand the organization's microcultures on each campus to identify how a system-wide mission is carried out on a local level.
- Create educational opportunities, rather than punitive action, from incident reports.

Source: Sg2 Interview With Memorial Hermann Health System, October 2021.

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Deploying a Patient-Focused and Analytic-Driven HRO Strategy Across the Enterprise

With the appropriate culture and management systems in place, health care organizations moving beyond a site-specific HRO strategy can look at acute and post-acute events as potential opportunities to improve care reliability for high-risk, chronic populations. Metrics elevate the safety equation beyond the site to include care processes and how they can be improved to limit admissions that could expose the patient to avoidable risk. Ideally this approach combines historical measures of the patient population managed in a provider clinic and real-time care team alerts when a high-risk patient receives acute care services.

Example Scenario: Valley Health System

The following scenario tells the story of Valley Health System (VHS), a fictitious four-hospital system that has successfully incorporated high reliability organization concepts across its inpatient hospital departments. As care continues to shift beyond the hospital, VHS wants its HRO efforts to follow suit.

Market Overview

Many payers in the market are moving toward value-based contracts for Medicare Advantage and managed Medicaid, and employers are looking to contract with high-quality providers that have demonstrated highly reliable care and appropriate utilization. The health system's board has a goal to improve safety and outcomes for the most vulnerable (ie, high-risk) populations.

Strategy

VHS wants to implement a patient-focused HRO strategy across the System of CARE to attract payers, patients and employers in the community.

Based on comparisons to Vizient's industry-informed benchmarks, VHS identified patients with congestive heart failure (CHF) as an HRO opportunity. It focused its HRO strategies on the following three areas:

Primary care clinics

Hospital to SNF transitions of care

Emergency department revisits

The system also realigned its medical group to ensure HRO management processes and incentives are aligned across sites and clinical information is integrated to provide a common patient record across sites. It also measured patient safety risks and addressed potential care gaps. The HRO concepts and culture were also implemented across ambulatory care settings of focus.

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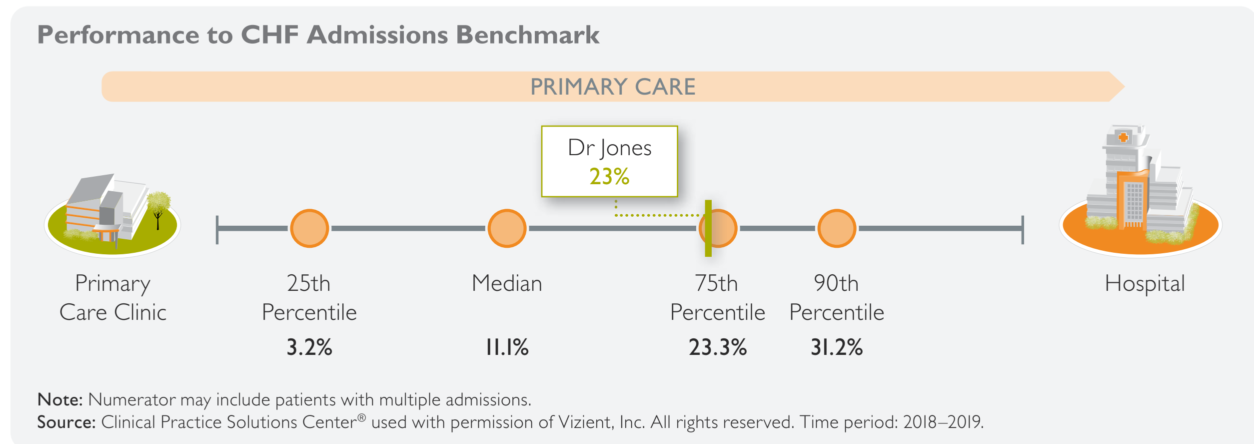
VHS conducted the following analyses to establish its own benchmarks and identify opportunities.

How Reliable Are VHS Clinics in Reducing CHF Admissions?

Hospitalization for worsening CHF-related symptoms is a strong predictor of mortality. In addition, each time a patient is admitted to the hospital they face a 15% chance of a safety event occurring. By improving care coordination and management of patients with CHF in the ambulatory setting, VHS can avoid CHF admissions. An analysis of admission rates among its medical group's primary care physicians found that the admission rate for Dr Jones, a PCP with a panel of 1,900 patients, was high above median benchmarks.



Note: Numerator may include patients with multiple admissions.
Source: Clinical Practice Solutions Center® used with permission of Vizient, Inc. All rights reserved. Time period: 2018–2019.

- Further analyses determined Dr Jones's CHF admission rate was high in part because patients' lack of medical understanding and adherence were leading to symptom exacerbations.
- Daily care team huddles were deployed to identify and triage high-risk patients and assign them to appropriate team members (eg, PCP, care navigator, clinical pharmacist, behavioral health specialist) during patient visits. The head RN at the practice was charged with leading the huddles and overseeing triage.
- Valley Health System's medical group realigned its medical providers under one reporting structure that spans all settings to enhance provider communication. Through this system, high-risk patients are tracked, and the clinical care team is notified in real time of events such as ED visits, admissions and discharges so that follow-up can take place immediately. (See the following analyses.) Care coordinators were tapped to lead the follow-up assignments and address social determinants of health needs.
- All nonscheduled admissions and ED visits are scrutinized during regularly scheduled clinical care team meetings to identify care gaps leading to those events and how care processes can be improved to mitigate them.

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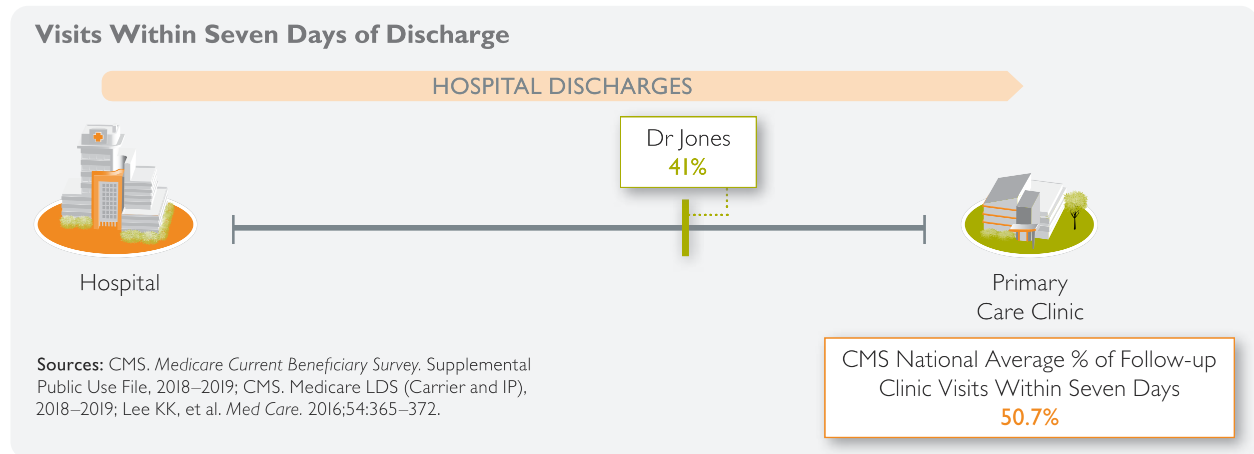
What Opportunities Exist to Ensure Primary Care Clinics Conduct Postdischarge Follow-ups?

Data suggest that a follow-up visit within seven days of a CHF-related discharge can reduce the odds of readmission from 29% to 12%. Dr Jones identified an opportunity to improve follow-up care.

Visits Within Seven Days of Discharge



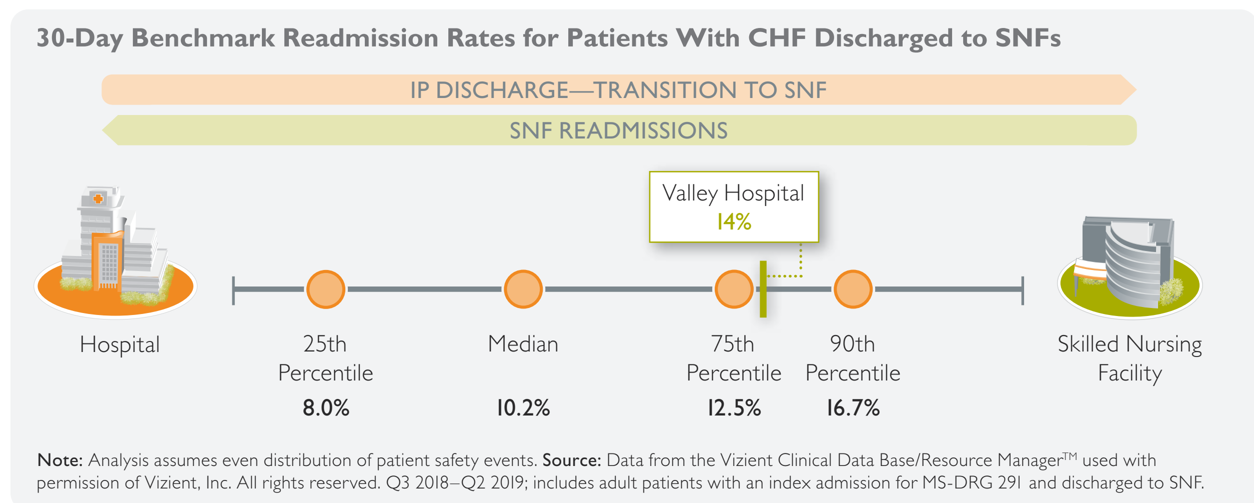
Sources: CMS. *Medicare Current Beneficiary Survey.* Supplemental Public Use File, 2018–2019; CMS. Medicare LDS (Carrier and IP), 2018–2019; Lee KK, et al. *Med Care.* 2016;54:365–372.

Hospital and system HRO teams are notified via a monthly report when clinic visits don't occur within seven days of a hospital discharge.

Are VHS Hospitals Reliably Transitioning Patients With CHF to Skilled Nursing Facilities?

VHS found a high rate of readmission among patients discharged to SNFs. A root cause analysis was performed for every patient readmitted from a SNF to identify care improvement opportunities.

30-Day Benchmark Readmission Rates for Patients With CHF Discharged to SNFs



Note: Analysis assumes even distribution of patient safety events. **Source:** Data from the Vizient Clinical Data Base/Resource Manager™ used with permission of Vizient, Inc. All rights reserved. Q3 2018–Q2 2019; includes adult patients with an index admission for MS-DRG 291 and discharged to SNF.

- VHS developed HRO strategies that strengthened transitions-of-care processes among the hospital discharge planners, SNF nursing teams and clinic care navigators.
- Hospital physician leaders and care coordinators developed partnerships with top-performing SNFs and integrated patient information and care plans. Information on adverse drug events, falls, infections and care plan changes are shared across organizations.

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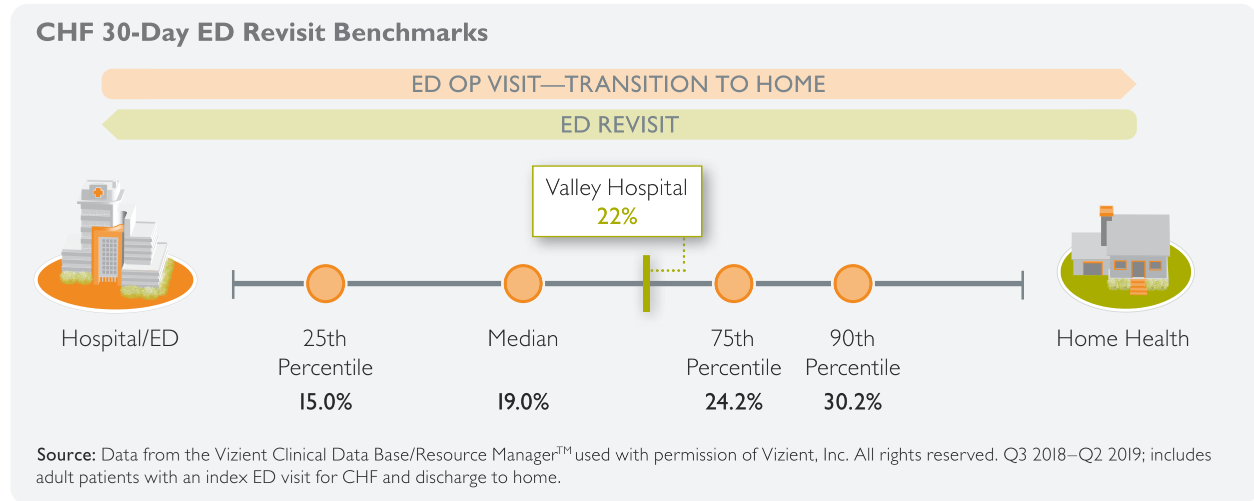
Is the ED Focused on Reliable Care Transitions Back to the Community?

A clustering of ED visits is associated with a significant increase in mortality. VHS found the number of revisits to its hospital ED was significantly higher than the Vizient median benchmark.

CHF 30-Day ED Revisit Benchmarks



Source: Data from the Vizient Clinical Data Base/Resource Manager™ used with permission of Vizient, Inc. All rights reserved. Q3 2018–Q2 2019; includes adult patients with an index ED visit for CHF and discharge to home.

- Internal assessment indicated ED care processes did not include post-visit care coordination or effective transition-to-community providers.
- Care coordinators were hired to flag high-risk patients. The ED care coordinators work with clinic-based care coordinators to determine next steps (eg, admit, change medications, schedule follow-up visit). A system was put in place to monitor all care transitions after an ED visit for appropriate handoffs.
- Monthly meetings were set up between ED and clinic-based care coordinators to discuss the cause of 30-day ED revisits and how they can be mitigated.

CASE STUDY
GEISINGER HEALTH SYSTEM

Pennsylvania-based Geisinger Health identified a unique opportunity to extend high reliability care beyond the hospital setting. The goal was to improve care coordination, such that the patient would continue to be supported postdischarge, while improving safety and reducing avoidable acute care readmissions. The system introduced several initiatives to meet this goal.

- A "Meds-to-Beds" program to ensure patients receive needed medications prior to discharge through an on-campus pharmacy that eases access
- Virtual reviews of the patient's care plan with their family prior to discharge
- Home inspections and remote patient monitoring devices to track a patient's movements inside the home to proactively identify risk for falls
- An "Anticipatory Management" program and real-time patient status report to encourage care teams to employ primary prevention techniques for early risk detection and mitigation
- Daily team huddles that include nurses in the clinics and in care management, operations staff who help guide and run the clinics, and physicians
- Quarterly system-wide meetings with all members of a patient's care team to identify high performers, outliers and optimization opportunities

As a result of these initiatives, Geisinger can maintain a high level of consistency and communication to anticipate what their patients will need and how they will utilize health care services.

Source: Sg2 Interviews With Geisinger Health System, October and November 2021.

CASE STUDY
IORA HEALTH

This team-based primary care organization provides comprehensive and seamless care for patients aged 65 or older on Medicare. Each team is built to have more time with their patients. The high-touch care model focuses on screening and prevention. Iora's patient safety team ensures clinics embody the organization's HRO care model.

- The model is anchored by care teams. Individual care teams include a primary care provider; a nurse who provides triage, patient education and transitions-of-care support; and a behavioral health specialist.
- A lay, community-based health coach acts as an advocate and guide for patients across the continuum.
- The patient is considered a valuable member of the care team and is involved in decision making, care plan adherence and self-advocacy.
- Iora maintains partnerships with high-quality health systems and specialists in its service areas, and it coordinates care with providers and care team members across acute, ambulatory and post-acute settings.

A synergistic combination of active communication, meticulous data collection, safety culture and investment in patient well-being makes Iora's team-based care model successful at maximizing safety and minimizing potentially risky acute and post-acute care utilization.

Source: Sg2 Interview With Iora Health, October 2021.

Getting Started

Organizations that have never expanded their quality and patient safety programs beyond the Joint Commission and other organizations' accreditation mandates would be well served starting in the acute space, focusing on avoidance of adverse events as opposed to waiting for an adverse event to prompt action.

Building a System-wide HRO Strategy

- ☑ Convene an organization-wide HRO team to oversee the expansion across the continuum. The HRO team is responsible for assessing culture and management systems, implementing HRO processes and reporting systems, and aligning organizational accountability. Consider board involvement to hold the leadership team—to whom the HRO team reports—accountable.
- ☑ Prioritize high-risk care sites and care transitions based on patient acuity, care complexity, patient comments and historical safety events. Include workforce assessment to determine burnout risks.
- ☑ For highest risk sites, assess culture and management systems to develop a baseline for improvement.
- ☑ Implement education, management systems and technology to report and track system failures at high-risk sites. Ensure management systems, culture and feedback loops are in place to correct unsafe (and sustain safe) processes.

Implementing a Patient-Focused Approach

- ☑ Follow high-risk patient journeys across the continuum to understand care process challenges and risks from the patient's perspective.
- ☑ Involve service line leaders to implement and oversee disease-specific management processes and to own cross-continuum safety and quality outcomes.
- ☑ Build primary care HRO teams within medical homes to identify, manage and track high-risk populations across sites, during care transitions and, ultimately, at home. Ensure systems provide transparency to care plans, real-time acute care events and clinical information across the continuum. Build a retrospective process to ensure multidisciplinary post-event case review and care process corrections.
- ☑ Continuously monitor and improve.

Sources: Binder L. Holding hospitals accountable for patient safety. *Harvard Business Review.* August 30, 2021; Vizient Patient Safety Organization, 2021; Watkins S et al. Patient safety and physician well-being: Impact of COVID-19. *ASA Monitor.* January 2021; Cheney C. New survey report details coronavirus pandemic's negative impact on physicians. *HealthLeaders Media.* August 6, 2021; Sg2 Analysis, 2021.

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