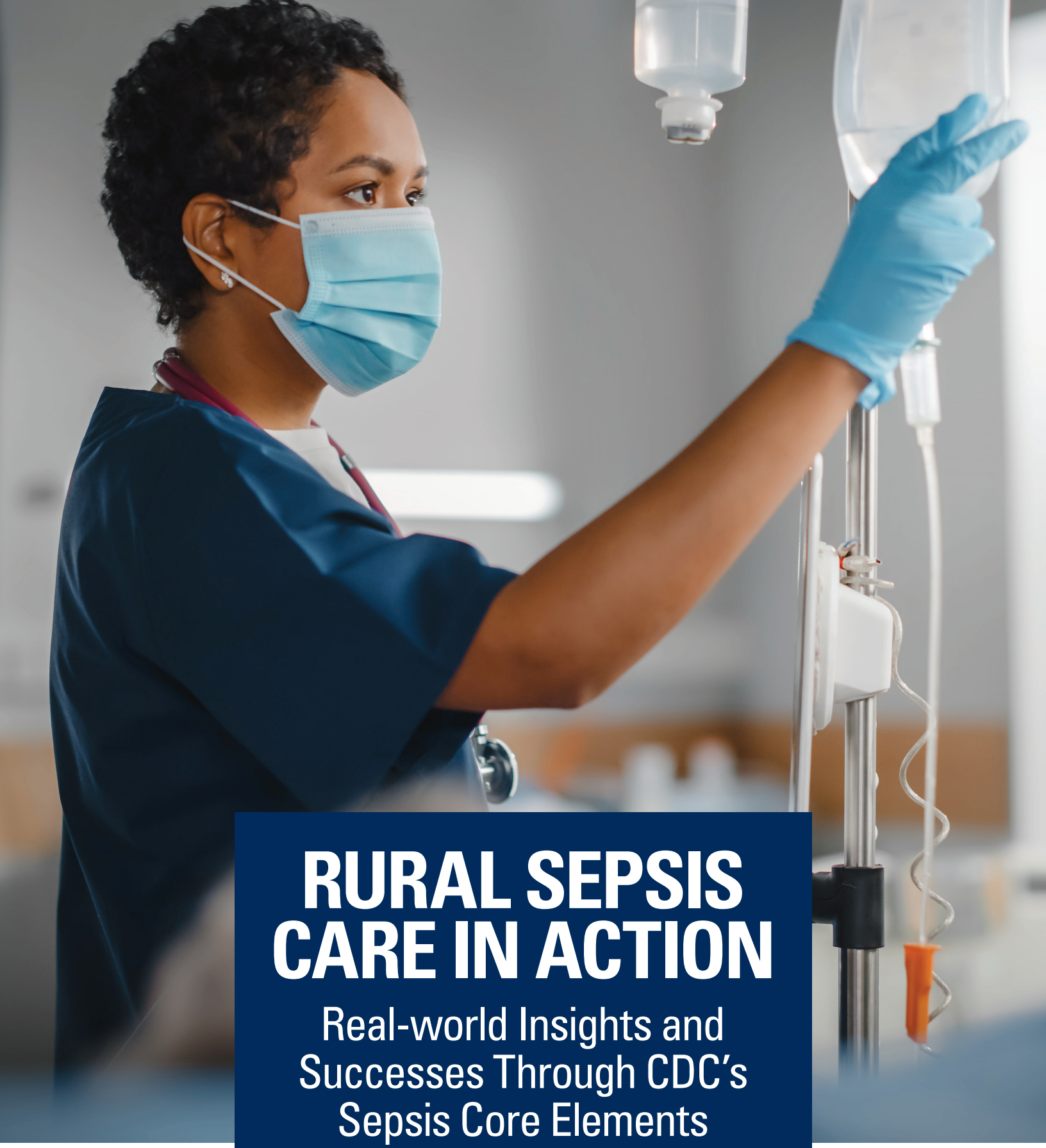

RURAL SEPSIS CARE IN ACTION

Real-world Insights and Successes Through CDC's Sepsis Core Elements

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INTRODUCTION

Sepsis is a life-threatening response to infection and remains a leading cause of death in U.S. hospitals, underscoring the need for timely recognition and coordinated care. To support hospitals in strengthening their response, the Centers for Disease Control and Prevention (CDC) developed the Hospital Sepsis Program Core Elements, a framework to guide organizations in building effective, sustainable sepsis programs.

This resource is designed specifically to support rural healthcare organizations by highlighting practical, real-world approaches to improving sepsis care. It focuses on organizations' effective strategies, connects readers with the leaders and teams driving this work, and celebrates successes in early sepsis detection and management.

In partnership with the CDC, the American Hospital Association's (AHA) Living Learning Network (LLN) team convened virtual learning sessions with three rural healthcare organizations to share insights and support the advancement of sepsis improvement efforts. Through the experiences of participating organizations, Cheyenne Regional Medical Center, Kootenai Health and Franciscan Missionaries of Our Lady (FMOL) Health, this resource highlights:

- Practical strategies and tools to improve sepsis care delivery.
- Implementation approaches drawn from rural hospital experiences that show how change was achieved in practice.
- Key lessons and actionable insights to support adoption in rural healthcare settings.

Particular attention is given to areas where rural healthcare organizations in the AHA LLN Sepsis Learning Collaborative have faced the greatest challenges through the core elements framework: multiprofessional expertise, action and education.

By sharing these insights, this resource provides rural healthcare organizations with actionable guidance to strengthen sepsis programs, improve care processes and ultimately enhance patient outcomes.

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PARTICIPATING ORGANIZATIONS

Cheyenne Regional Medical Center (CRMC) is a nonprofit, 201-bed tertiary care hospital located in Cheyenne, Wyo., and is the largest healthcare system in the state. Serving patients throughout southeastern Wyoming, western Nebraska, and surrounding rural and frontier communities, CRMC provides a comprehensive range of acute, specialty, trauma and emergency care services. As a regional referral center for psychiatry, stroke, trauma and cardiac care, the organization is recognized for its commitment to quality, innovation and patient-centered care. CRMC has earned national recognition for excellence in sepsis identification and treatment outcomes and is the first, and currently only, hospital in Wyoming to maintain a Joint Commission-certified Sepsis Program. Additional Joint Commission certifications include Primary Stroke Center and Primary Heart Attack Center designations. The medical center is also designated as a Level III Trauma Center, underscoring its critical role in delivering advanced healthcare services to both urban and rural populations across the region.

Franciscan Missionaries of Our Lady Health System (FMOL) Health is one of the largest not-for-profit Catholic healthcare systems in the Gulf South and the leading healthcare provider for more than half of Louisiana's population. Headquartered in Baton Rouge, La., the system serves communities across Louisiana and Mississippi through a network of hospitals, clinics, physicians and integrated health services. Among its facilities are Our Lady of the Angels Hospital in Bogalusa, a 64-bed rural safety-net hospital serving Washington Parish and surrounding communities, and Our Lady of the Lake Regional Medical Center in Baton Rouge, a premier academic medical center with more than 900 beds that serves as a referral destination for rural patients requiring advanced and specialized care. Together, these facilities provide comprehensive healthcare services ranging from primary and preventive care to complex specialty treatment, emergency care, pediatrics, trauma, cancer, heart and vascular services. FMOL Health employs thousands of healthcare professionals and supports more than 1,100 physicians and specialists across its network. The system is also a leader in graduate medical education through its partnerships with LSU Health, including the only rurally located family medicine residency program in Louisiana. Guided by the mission of the Franciscan Missionaries of Our Lady, FMOL Health is committed to serving all people, especially those most in need, while ensuring access to high-quality healthcare across urban, suburban and rural communities.

Kootenai Health is a not-for-profit, community-based health system serving patients throughout northern Idaho and the Inland Northwest. Headquartered in Coeur d'Alene, Idaho, the organization operates a 381-bed acute care hospital, affiliated hospitals in Cottonwood and Orofino, and more than 20 outpatient primary care and specialty clinics. Serving a diverse population across urban, suburban and rural communities, Kootenai Health employs more than 4,500 staff members and provides a comprehensive range of inpatient, outpatient, emergency, trauma and specialty services. The health system is recognized for its commitment to high-quality care and clinical excellence, holding designations including Magnet Recognition® for nursing excellence, Level II Trauma Center status, and a Level III Neonatal Intensive Care Unit (NICU). Kootenai Health also maintains a strong financial position, earning an "A" financial strength rating from Standard & Poor's, and plays a critical role in ensuring access to advanced healthcare services across the region.

MULTIPROFESSIONAL EXPERTISE

Effective sepsis care requires teamwork. This element involves bringing together experts from different parts of the hospital — such as emergency room doctors, hospitalists, nurses, specialists, and lab and ICU staff — to work together. This collaboration ensures that all aspects of sepsis care are covered.

> " Most resistance disappears when people understand the 'why.'" – **Kootenai Health**

IMPROVEMENT JOURNEY

Cheyenne Regional Medical Center

Collaboration is key

Cheyenne Regional's multidisciplinary sepsis approach evolved from a small, physician-led effort into a fully integrated, system-wide model of care. Early efforts relied on a limited committee supported by pharmacy, quality and data, with a primary focus on retrospective case reviews. As the program was formalized in 2021, this core group became the foundation for broader collaboration, bringing in key partners such as infectious disease, antimicrobial stewardship, laboratory and data teams to address early priorities like blood culture contamination and bundle performance.

As the program matured, multidisciplinary engagement expanded in response to identified gaps and emerging needs. New partners, including vascular access, wound care, oncology and pre-hospital EMS, were integrated to strengthen care across the continuum, from early recognition to high-risk patient management. Over time, departments began proactively engaging with the sepsis team, contributing ideas and solutions. A particularly notable example of this evolution was the exceptional collaboration with their Cancer Resource Center and wound care teams. Together, these partners identified opportunities to strengthen patient education and implemented meaningful changes to ensure sepsis awareness was embedded within existing care pathways. This work demonstrated how multidisciplinary expertise could be leveraged to improve patient engagement and outcomes beyond the inpatient setting.

> "There's no secret sauce — it's hard work and building relationships."
> – **Cheyenne Regional Medical Center**

This organic growth reflects a shift from siloed collaboration to a culture of shared ownership, where multidisciplinary expertise is central to driving consistent, high-quality sepsis care.

IMPROVEMENT JOURNEY

FMOL Health

Patient care at the center

> "Rural care is not about having more. It's about having the right process."
>
> **– FMOL Health**

FMOL Health's multidisciplinary sepsis program evolved from a traditional, metric-driven structure to a deeply integrated, patient-centered model spanning both urban and rural populations. Early sepsis efforts relied on standard protocols and retrospective measurement approaches, but post-pandemic reflection revealed limitations in diagnostic accuracy and variability in care delivery. Leadership and clinical teams recognized the need to rethink sepsis as a system-wide, time-sensitive condition requiring coordinated action across the entire patient journey, from rural presentation through hospital care.

To support this shift, the organization built a highly intentional, multidisciplinary structure grounded in stakeholder engagement. Teams were formed across emergency medicine, nursing, laboratory, pharmacy, hospital medicine, critical care, radiology, quality improvement and IT, ensuring that every role involved in patient care was represented. Importantly, rural care considerations were embedded from the outset, with workflows designed to function with limited staffing and resources. Weekly collaborative feedback sessions and shared systemwide dashboards fostered alignment and continuous communication, allowing both rural and urban facilities to operate under a unified model. Over time, this approach created a culture of shared ownership, where multidisciplinary expertise was leveraged at every step to improve accuracy, coordination and patient outcomes.

Key Tips for the Field

- **Start small and expand gradually:** Build a core team first, then add partners over time.
- **Engage stakeholders through shared problem-solving:** Use conversations, not directives, to drive alignment.
- **Co-design solutions with frontline staff:** Increase buy-in and sustainability.
- **Prioritize relationship-building:** Trust is foundational to collaboration.
- **Invest in a dedicated sepsis coordinator role:** This role is essential to ensure continuity across teams, drive strategy, facilitate multidisciplinary collaboration and maintain accountability for outcomes, with a focus on longitudinal performance improvement rather than daily metric success.
- **Expand based on identified needs:** Add specialties (EMS, oncology, wound care) as gaps emerge.
- **Encourage frontline ownership and iterative feedback:** Most improvements should come from those doing the work.

ACTION

Implement structures and processes to improve the identification and management of and recovery from sepsis. This includes standardized screening, clinical evaluation, antimicrobial selection, source control and post-discharge care.

> "Rural hospitals don't necessarily need a large team — you can build a strong program with just a coordinator and a physician champion."
>
> **– Cheyenne Regional Medical Center**

IMPROVEMENT JOURNEY

FMOL Health

A proactive, risk-based approach

FMOL Health's action strategy evolved from retrospective, compliance-based sepsis management to a proactive, diagnostic-driven, patient-at-risk model. Early efforts relied on broad screening and standardized bundles that treated all suspected cases similarly, often resulting in over-treatment and inefficiencies. Through research and clinical observation, the team identified a key gap in diagnostic accuracy, with many patients receiving sepsis treatment without actually having the condition.

> "Nothing we have done here… can't be done in my hometown hospital, that's 25 beds."
>
> **– FMOL Health**

In response, FMOL Health redesigned workflows to prioritize early, objective diagnosis and targeted intervention. This included nurse-led screening at first contact, EHR-based alerts and a host-response diagnostic tool to stratify patients by risk. Care pathways were tailored accordingly, enabling more precise treatment and reducing unnecessary interventions while ensuring timely care for high-risk patients.

Continuous feedback loops, supported by automated dashboards and regular performance reviews, allowed teams to monitor screening accuracy, outcomes and workflow performance. The program also improved efficiency by reducing unnecessary blood cultures, antibiotic use and length of stay. These coordinated efforts led to measurable improvements in mortality, resource use and throughput, while remaining adaptable across both rural and urban settings.

IMPROVEMENT JOURNEY

Kootenai Health

A data-driven framework for sepsis improvement

> "If we can simplify processes for smaller hospitals, everyone benefits." – Kootenai Health

Kootenai Health's approach to sepsis action began with recognizing a need to improve patient outcomes and process standardization. Early efforts focused on establishing foundational processes, such as consistent antibiotic selection, improved early recognition, and escalation protocols for high-risk patients. However, true transformation accelerated with the introduction of a dedicated sepsis coordinator, who conducted a detailed baseline assessment through a "silent period" of observation and comprehensive data abstraction. This allowed the team to identify root causes and prioritize high-impact opportunities for improvement.

From there, the program adopted a data-driven and methodical approach to process change. Initial interventions focused on low-burden, high-value improvements, such as eliminating redundant lactate testing and standardizing workflows to reduce variability. The team deliberately aligned interventions with existing clinical workflows to minimize disruption, while simplifying order sets and processes to improve compliance. Over time, these efforts expanded into broader system redesign, including rapid response structures, EMS protocol alignment, and standardized escalation practices. Continuous monitoring, peer review, and accountability mechanisms ensured sustained performance, contributing to significant reductions in mortality and length of stay. The program continues to evolve through careful testing, iterative refinement and a strong focus on patient-centered outcomes.

Key Tips for the Field

- **Adopt a patient-at-risk model:** Treat suspected patients differently based on risk defined by host response, not a uniform assumption that an abnormal response is present for all.
- **Prioritize recognition early:** Drive better treatment and outcomes through accurate identification.
- **Use structured nurse-led screening at first contact:** Early recognition should begin at patient centered triage.
- **Leverage EHR tools as support, not replacement:** Use alerts as a safety net, not the primary driver.
- **Leverage established ED pathways:** Use existing stroke and STEMI processes to serve as effective models for sepsis workflows and to help teams standardize early recognition, rapid assessment and timely intervention using approaches already familiar to frontline staff.
- **Focus on reducing non-beneficial care:** Limit unnecessary antibiotics, fluids and testing.
- **Use continuous data feedback to drive improvement:** Rely on meaningful dashboards and performance metrics to sustain progress.
- **Measure outcomes beyond compliance:** Focus on mortality, length of stay and resource use.
- **Design for adaptability and scalability:** Ensure processes work across diverse hospital settings.
  - **Expand Data Collection:** Focus on data beyond just SEP-1 and LOS; dive deeper until the data tells the story
  - **Encourage the population definitions:** Ensure you understand which group of patients you're reporting on, as each population has its own considerations

EDUCATION

Sepsis education is provided to healthcare professionals, patients and family caregivers. Healthcare staff receive training on sepsis during onboarding and through ongoing education to ensure they stay current with the latest best practices for recognizing and managing sepsis effectively.

> "If your education depends on one person correcting everyone, you're not building a system." – FMOL Health

IMPROVEMENT JOURNEY

Kootenai Health

Continued training leads to continued success

Education at Kootenai Health developed as an adaptive and resource-conscious strategy to build awareness, reinforce processes and sustain engagement. Early efforts focused on building clinician awareness of the importance of timely sepsis identification and management, emphasizing the impact of standardized, evidence-based care through targeted education of frontline staff in the ED, ICU and inpatient nursing units. Given limited dedicated resources for formal training, the program relied on integrating education into existing workflows and daily practice, rather than creating large-scale, stand-alone training programs.

> "You need to show how each change adds value to every team member."
> – Kootenai Health

Over time, education became more creative, targeted and relationship-driven. Strategies included onboarding education for new nurses; real-time coaching during clinical care; peer-to-peer feedback through case review; and informal engagement methods such as quick-reference tools, visual reminders and interactive activities like sepsis trivia. The coordinator's consistent presence on the floor helped build trust and reinforced learning in a non-punitive way. Education also extended beyond the hospital to EMS and regional partners, ensuring alignment in pre-hospital care. While patient education remains an area of ongoing development, efforts to improve communication through documentation and bedside discussions have strengthened patient and family understanding. Overall, education evolved into a continuous, embedded process that supports both clinical practice and culture change.

IMPROVEMENT JOURNEY

Cheyenne Regional Medical Center

Creating a real-time, relationship-based education

> "The most meaningful training happens when the patient is right in front of you."
>
> **– Cheyenne Regional Medical Center**

Cheyenne Regional's education efforts began by addressing a fundamental gap: Staff needed a strong internal understanding of sepsis before they could effectively educate patients. In the early phase (2021-2022), the team focused on building this foundation through informal methods such as unit huddles, trivia and introductory sessions, which helped establish a shared baseline for sepsis recognition and management. As the program matured, education became more structured, with standardized onboarding for new staff, quick-reference tools integrated into workflows and internal learning events like a sepsis symposium. Through trial and error, the team learned that high-frequency or passive approaches led to fatigue, prompting a shift toward more targeted and meaningful educational strategies.

A key turning point came with the adoption of real-time, relationship-based education. In-the-moment, non-punitive bedside conversations proved most effective, fostering trust and encouraging clinicians to engage and seek guidance. At the same time, education expanded beyond staff to include patients and the broader community, with tailored approaches for high-risk populations and outreach in settings such as nursing homes and senior centers. Today, education operates as a continuous, multi-level system that spans staff, patients and the community, and is continuously refined through feedback and evolving needs.

Key Tips for the Field

- **Embed education into daily workflow:** Avoid relying only on large, formal training sessions.
- **Prioritize in-the-moment education:** Use effective, real-time coaching during patient care.
- **Build trust through a non-punitive approach:** Encourage engagement and openness to feedback.
- **Be present on units and support frontline staff:** Build rapport to improve change adoption.
- **Use simple, practical tools:** Implement quick references, visual reminders and job aids.
- **Make education engaging and creative:** Boost participation with trivia, incentives and informal touchpoints.
- **Reinforce learning continuously and ensure with every onboarding:** Establish ongoing education.
- **Tailor education to resource constraints:** Use efficient, high-impact approaches that maximize reach and effectiveness.
- **Extend education beyond the hospital:** Include EMS, referring hospitals and community partners.
- **Prepare staff to educate patients:** Equip nurses and providers with clear messaging on sepsis.
- **Leverage documentation as an education tool:** Provide clear diagnoses to help patients and families understand their condition.
- **Focus on practicality over perfection:** Deliver what is feasible and impactful within existing resources.

FMOL

Representing emergency departments, dedicated sepsis teams, clinical caregivers, and performance improvement leaders, the teams from FMOL Health demonstrate the collaboration, compassion, and commitment that drive excellence in patient care.

Kootenai Health

Through collaboration, clinical expertise and a shared focus on continuous improvement, physician leaders, the sepsis team, emergency department staff and quality improvement professionals at Kootenai Health work together in a coordinated effort to strengthen sepsis care across the organization

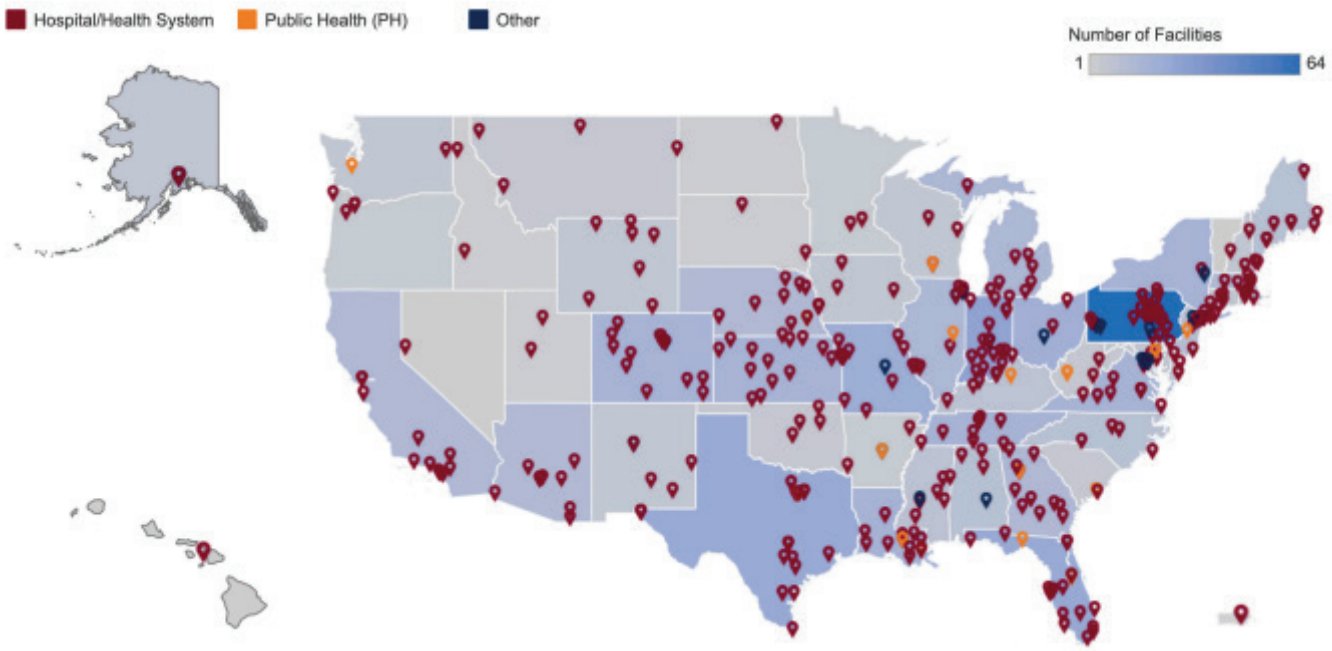
Cheyenne Regional Medical Center

Cheyenne: Representing emergency and critical care clinicians, sepsis program leaders, infectious disease and antimicrobial stewardship specialists, and pre-hospital partners, the teams at Cheyenne Regional Medical Center work together to improve the early recognition and management of sepsis.

About AHA's Living Learning Network

Funded by the CDC, the AHA's LLN is a forward-thinking virtual community of hospitals, health systems, state hospital associations and public health organizations. The AHA's LLN first convened in 2020 to focus on the COVID-19 response. It has evolved with the current needs of the healthcare field to address sepsis management, infection prevention and control (including healthcare-associated infections), patient safety, quality improvement, rural health and public health. Through virtual events, real-time peer-to-peer sharing, a blog series and more, the LLN is connecting the field in new and exciting ways.

To learn more about the LLN and to join its 2,000-plus membership, visit www.aha.org/center/living-learning-network.



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