## FROM ALERT TO ACTION

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Revolutionizing Sepsis Management with Ochsner's Solutions and CDC's Sepsis Core Elements



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Presented by the AHA Living Learning Network



Dear Colleagues,

It is with great pride that I introduce you to this resource on sepsis management and control developed in collaboration with the American Hospital Association and the Centers for Disease Control and Prevention.

In 2020, we launched a transformative plan to enhance sepsis care with the establishment of the Ochsner System Sepsis Collaborative, led by

our Chief Quality Officer Richard Guthrie, M.D. Through this initiative to align with the CDC's Hospital Sepsis Program Core Elements, and by leveraging innovative tools integrated within our Epic electronic health record system, we have been able to achieve real-time care coordination that remarkably improved our sepsis care metrics.

This work, in partnership with our physicians and advanced practice providers, bedside and virtual nursing, and quality teams, is an example of achieving incredible goals through collaboration. Our efforts have earned us recognition and awards, such as the 2024 HIMSS Davies Award of Excellence, underscoring our commitment and success in this critical field.

This resource shares the strategies, best practices and lessons learned around sepsis management to support fellow health care providers. With our sepsis-related projects yielding a significant reduction in our primary sepsis risk-adjusted mortality index year over year, our experience represents what is possible through dedication, collaboration and a data-driven approach.

I'm immensely proud of our Ochsner teams and the great strides we've made in sepsis control. It is our hope that this resource serves to inspire and equip your organizations with insights to enhance practices and outcomes.

Thank you for your continued efforts in advancing health care to improve the health of the communities we all serve across the country. Together, we can promote change and set new standards in patient safety, quality and care. And thank you to the AHA Living Learning Network for supporting our work.

#### Robert I. Hart, M.D.

Chief Physician Executive, Ochsner Health President, Ochsner Clinic



Sepsis program manager discussing multiprofessional collaboration in sepsis care

### INTRODUCTION

Sepsis is the body's extreme and, at times, deadly response to an infection. According to the Centers for Disease Control and Prevention, it is the third-leading cause of death in U.S. hospitals, contributing to at least 350,000 deaths and 1.7 million hospitalizations annually. One in three people who die in a hospital have sepsis during their hospitalization.

These alarming statistics led the CDC to develop the <u>Hospital Sepsis Program Core Elements</u> to provide a guide for hospitals to organize staff and identify resources. Given the complexity of sepsis care, the seven core elements — hospital leadership commitment, accountability, multiprofessional expertise, action, tracking, reporting and education — serve as comprehensive protocols designed to support the implementation, monitoring and optimization of sepsis programs, ultimately aiming to improve patient outcomes and survival rates.

In partnership with the CDC, the <u>American Hospital Association's Living Learning Network</u> team visited Ochsner Health to highlight and celebrate the health system's achievements in sepsis management, recognizing their alignment with the CDC's Hospital Sepsis Program Core Elements. The recent site visit provided detailed insights into effective, systemwide sepsis strategies and their alignment with each of the CDC's core elements. The visit included direct observation of leadership and multidisciplinary sepsis teams, highlighting defined roles, responsibilities and collaborative practices that support improved sepsis care.

#### **OCHSNER HEALTH**

As a nonprofit health care provider in the Gulf South, Ochsner delivers care at its 46 hospitals and more than 370 health and urgent care centers. In 2024, Ochsner Health cared for more than 1.6 million people from every state in the nation and 63 countries. For 13 consecutive years, U.S. News & World Report has recognized Ochsner as the No. 1 hospital in Louisiana. Additionally, Ochsner Children's has been recognized by them as the No. 1 hospital children in Louisiana for four consecutive years.



HOSPITAL LEADERSHIP COMMITMENT AND ACCOUNTABILITY

Hospital leadership dedicates the necessary human, financial and technology resources to support the sepsis program, ensuring that sepsis care is a strategic priority. They appoint leaders responsible for the program's outcomes and establish clear, measurable goals. Regularly assessing progress toward these goals promotes continuous improvement and accountability across the organization. P143

Improving Primary Sepsis Outcomes Using POC Lactate Testing

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# "Sepsis care is no longer a project — it's embedded in everything we do."

Tiffany Murdock, System Chief Nursing Officer



"This initiative has required tight coordination between clinical leaders, analytics teams, information system developers and change management professionals. But more importantly, it's required a shared commitment to doing right by our patients — and by our providers. That's the only way we've been able to turn something as challenging as sepsis care into an opportunity for clinical and operational excellence."

### CREATING A SYSTEM-LEVEL SEPSIS TEAM

As at other health systems, sepsis was associated with many hospital deaths across the Ochsner Health system prior to 2020. In response to this critical issue, the organization launched a formal systemwide sepsis initiative in 2020 aimed at implementing a standardized, data-driven framework for sepsis care across all facilities. National benchmarking was used to support improvement efforts and compare performance with peer organizations.

A system-level sepsis team was established under the leadership of Ochsner's chief quality officer, in partnership with a change manager and an anesthesiologist with expertise in rapid response. The team later expanded to include a practicing emergency medicine physician, who also functions as the associate chief medical information officer, hospitalist leads, as well as representatives from nursing, quality and informatics — forming a robust governance structure to support sepsis initiatives across the organization. This structure evolved into a centralized leadership team supported by site-level subject matter expert panels. These panels are composed of individuals from diverse roles and departments, including clinical and operational leaders, ensuring multidisciplinary engagement and alignment across the system.

Richard Guthrie, M.D., Chief Quality Officer

### SYSTEM SEPSIS COLLABORATIVE CHARTER

To guide the sepsis initiative, a formal System Sepsis Collaborative Charter was developed. The charter clearly defined leadership roles, responsibilities and performance metrics for sepsis care across the organization. This approach reinforced Ochsner's leadership commitment, establishing clear ownership and accountability, promoting transparency and enabling consistent progress tracking laying a strong foundation for systemwide improvements in sepsis outcomes. The charter is reassessed annually to evaluate the problems being addressed, identify key stakeholders and clarify goals. Given that sepsis impacts multiple areas — including mortality, cost, length of stay, resource utilization, and risk-adjusted outcomes - this regular review ensures continued alignment with organizational priorities and patient care objectives.

"We thought leaders would be concerned about the time, but running the huddle only takes a few minutes — it's an efficient and powerful way to keep our leaders engaged in quality improvement initiatives every day."

**Stephen Saenz, PA-C,** Sepsis Program Manager at Ochsner Jefferson Highway

### "Having leadership backing changed everything — we were able to really move the needle."

**Suma Jain, M.D.,** Senior Physician-Chair, Pulmonary Diseases



### **PERFORMANCE IMPROVEMENT LEADERS**

Performance improvement information and updates on sepsis and other critical systemwide health initiatives are communicated in daily leadership huddles, which include participation from executive leaders such as the CEO, CNO, and COO. These huddles cover new data, in-depth analyses and ongoing process challenges. PI leaders play a key role in preparing and supporting executives to understand, own and effectively communicate performance data, fostering informed decision-making and accountability at the highest levels of the organization. Hospital medicine team discussing health care-associated infections and sepsis

### 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, lab and ICU staff — to work together. This collaboration ensures all aspects of sepsis care are covered.

"Preventing ICU sepsis is a team effort that must have infection prevention, performance improvement and nursing all working together."

**Suma Jain, M.D.,** Senior Physician-Chair, Pulmonary Diseases

### SUBJECT MATTER EXPERT PANELS

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In addition to Ochsner's central systemwide sepsis leadership team, site-level subject matter expert panels support strategic alignment and data-driven decision-making. These multidisciplinary teams include physicians, nurses and quality leaders, and are supported by analytics and information services. Panel members — such as executive sponsors, emergency department and hospitalist physicians, nursing leadership, pharmacy, laboratory and electronic health records representatives — provide essential operational insight and front-line engagement for effective sepsis management.

### "Having someone dedicated to the whole floor who can manage and screen for sepsis makes a huge difference."

Andrew Guthrie, M.D., Unit-Based Medical Director, Hospital Medicine

#### **ADVANCED PRACTICE PROVIDER**

A dedicated, unit-based advanced practice provider (APP) plays a central role in enhancing sepsis recognition, response and broader quality improvement initiatives at the unit level. As consistent resources for nursing, case management, social work and quality teams, APPs reduce care fragmentation by streamlining communication and minimizing reliance on multiple specialty teams. With responsibility for all patients on their unit, they ensure continuity, accountability and a proactive approach to care.

APPs monitor EHR alerts for sepsis and clinical deterioration, assess flagged patients and determine if escalation is needed — helping to streamline response, reduce unnecessary notifications and prevent alert fatigue. They collaborate daily with charge nurses and supervisors in focused huddles to coordinate timely interventions and support early identification and care planning.

As sepsis champions, APPs engage patients and families with clear communication, reducing stress and uncertainty. By bridging front-line care, rapid response, quality initiatives and documentation, they are key to standardizing and advancing sepsis care across units.



#### **EMERGENCY DEPARTMENT EXAMPLE**

An example of multiprofessional engagement and collaboration in sepsis management is Ochsner's integrated approach in the emergency department. At triage, every ED patient is screened for sepsis using a tool embedded in the workflow, which guides nurses through key criteria such as history, medications and symptoms. Based on clinical judgment and the tool's output, nurses can activate a Sepsis Alert or Code Sepsis when signs like suspected infection and hypotension are present. Activation triggers a rapid response: Pharmacy is alerted to expedite medications, and physicians initiate bedside treatment immediately. This streamlined process ensures sepsis care begins on arrival, reducing delays and improving outcomes.

### ACTION

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

### FLOOR-TO-CEILING CLINICAL SURVEILLLANCE MODEL

To enhance early detection and intervention for deteriorating patients, including those with sepsis, a "floor-to-ceiling" model was created for clinical surveillance that integrates both bedside care and virtual monitoring.

#### FLOOR Bedside Nurses

Bedside nurses play a vital front-line role in patient care, serving as the primary point of clinical observation. A key example is their use of the Early Evaluation and Detection screening tool. When nurses are concerned about a patient's appearance or status, they can initiate a sepsis screen to escalate monitoring — an approach that underpins many early alert mechanisms. If a patient exceeds defined clinical thresholds or is flagged as high risk by predictive models, more alerts are triggered. These are integrated into both nursing and provider workflows, with content tailored to each role. To support clinical decisions, the team introduced "badness markers" — nonspecific but



concerning indicators like elevated lactate levels. While not sepsis-specific, these signals prompt further assessment.

Collaboration with organizations like Stanford Health Care helped shape this model. Stanford's focus on simple tools to identify generally "sick" patients inspired the creation of a dedicated "watch" workflow for those in an intermediate state — neither stable nor critically ill. These patients receive enhanced monitoring, including hourly vital signs for four hours and lactate testing as needed. Though this deviates from typical floor protocols, it has proved effective in detecting early deterioration.

#### **CEILING** Virtual Surveillance Team

At the upper end of the model, Ochsner employs a virtual surveillance team of highly trained nurses, many with critical care backgrounds. Based in a centralized monitoring center, these clinicians oversee a wide patient population using a custom platform with up to 27 patient monitoring factor columns and advanced filters by unit, location and risk level. They proactively identify signs of deterioration, initiate timely interventions and coordinate with on-site teams, providing consistent, expert-driven support. The team includes six ICU nurses, each with over 20 years of experience. As trusted clinical experts, they apply sound judgment, ask targeted questions and offer real-time education to bedside staff — elevating care quality and decision-making.

Virtual screenings have been faster and more effective than those by general staff. The team's specialized structure promotes consistency, process standardization and early detection of issues like model logic errors or incorrect thresholds. They also support sepsis bundle compliance, often using respectful but firm communication to escalate concerns. Widely valued as a "second set of eyes," the virtual team strengthens early detection, fosters accountability and enhances front-line education. Focused on the first 3 to 6 hours of care — critical for sepsis intervention — the team collaborates with EHR vendors like Epic to refine alert systems. Rather than defaulting to continuous alerts, they advocate for tailored notifications aligned with patient data and clinical priorities. Their integration of technology and expertise continues to drive program success.

"We've empowered all nurses — virtual, bedside and charge nurses — to take action based on protocols. The bedside nurse might receive a high-risk notification and order a lactate. The virtual nurse might screen the list and initiate outreach. It's a team effort."

**Lisa Fort, M.D.,** System Director of Quality – Emergency Services, Associate Chief Medical Information Officer, System Medical Director – Virtual Care Center

#### **RAPID RESPONSE TEAM**

Ochsner has a rapid response team which has evolved from a reactive model to a proactive system focused on early detection and intervention. Proactive rounding, supported by sepsis risk models and deterioration alerts, allows the team to identify and address patient decline before crises occur. Nurses are authorized to call the RRT for early concerns. This promotes a collaborative, no-barriers approach to patient safety. A key advancement is the integration of ICU APPs into the RRT, who can autonomously assess and escalate care without waiting for floor providers. This model, piloted with strong success, led to reductions in floor codes, avoidable ICU transfers, ICU and hospital length of stay and sepsis-related mortality.

"One consistent message: Order sets save lives. Everyone is aligned around them — nurses, respiratory therapists, ED physicians. Streamlining the process helps clinicians stay on track and reduces variability. Our documentation tools, like dot phrases, are continuously being refined for clarity and ease of use. One example is a sidebar we developed in the EHR that's triggered by specific actions, such as ordering a sepsis panel. It starts a sepsis timer and tracks bundle components in real time, using interactive red/green color coding and integrates seamlessly with documentation."

Teresa Arrington, Director of Quality and Performance Improvement; Sepsis Collaborative Lead



### TRACKING AND REPORTING

Hospitals systematically measure sepsis cases, patient outcomes, progress toward program goals, and the effectiveness of sepsis initiatives. This ongoing data collection informs quality improvement efforts and helps allocate resources effectively. The results are transparently reported to relevant stakeholders, fostering accountability and supporting informed, data-driven decision-making.

### PERFORMANCE IMPROVEMENT TEAM REPORTING

The performance improvement team plays a key role in fostering a culture of transparent, systematic follow-up by tracking sepsis management and outcomes to evaluate initiative impact and progress toward goals. They provide timely reports to stakeholders to ensure visibility into sepsis performance. PI team members lead and participate in daily huddles to improve communication, escalate concerns and resolve issues. These huddles support early risk identification of sepsis, timely interventions and coordinated follow-up to improve outcomes.

This structured approach is supported by regular, organizationwide communication. PI staff provide ongoing updates to department leaders and executives, ensuring alignment and accountability. Weekly systemwide reports highlight safety concerns, performance trends and lessons learned — reinforcing a data-driven culture of continuous improvement.

Performance data is also transparently shared with local committees and the Medical Advisory Committee, a governing board body that meets monthly to focus on quality and safety. Key successes and improvements also are featured in monthly systemwide sepsis collaborative meetings to foster engagement and recognize progress.



#### ED AND INPATIENT SEPSIS PERFORMANCE DASHBOARD

One example of an effective tool for tracking sepsis treatment and outcomes is Ochsner's ED and inpatient sepsis performance dashboard. Designed to integrate clinical care with performance improvement, the dashboard provides a comprehensive view of raw patient counts and compliance with sepsis process measures and features an automated, objective "universal time zero" time stamp to ensure standardized measurement across cases. The dashboard is built to drive accountability by highlighting trends in process measure compliance and enabling targeted interventions. Its flexible, actionable design supports informed decision-making and continuous improvement across care teams.

"We treat sepsis as both a big challenge and a big system. Individual hospitals are given the flexibility, within a shared framework, to develop approaches to sepsis care that align with their unique resources. Data on sepsis care is collected and shared broadly, and everyone is encouraged to contribute ideas and improvements, regardless of where they come from."

Stephen Saenz, PA-C, Sepsis Program Manager at Ochsner Jefferson Highway

2023 System Sepsis Core Measure Abstractor Workshop

### **EDUCATION**

Sepsis education is provided to health care professionals, patients and family caregivers. Health care 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.

### SEPSIS COLLABORATIVE EDUCATION SUPPORT

Ochsner supports ongoing sepsis education and staff engagement through its systemwide Sepsis Collaborative, which is built on partnership, two-way communication and shared ownership of improvement efforts. To promote continuous learning, the collaborative offers a variety of resources — such as on-demand materials, evidence-based best practice education and highlights of participant initiatives — via the Sepsis SharePoint site and speaking opportunities.

The collaborative meets bimonthly for one hour, providing a consistent, manageable forum for engagement while respecting participants' clinical and operational responsibilities. Meetings are intentionally interactive, featuring rotating guest speakers — including OB-GYNs, pediatricians and other specialists — as well as regular input from front-line staff. The format emphasizes dialogue and collaboration over passive presentations, encouraging active involvement.

To ensure relevance and responsiveness, the collaborative conducts biannual surveys to gather input on priority topics. This feedback directly informs session planning and helps align content with evolving needs and challenges across the system.

### **PATIENT SAFETY PRIORITIES**

In addition to sepsis education and engagement through the Sepsis Collaborative, staff are empowered to act on safety concerns — including those related to sepsis — through performance improvement initiatives that foster shared accountability. All team members, including support services like nutrition and transport, are encouraged to speak up and contribute to patient safety.

"We try to stay ahead of the game with families — keeping them informed every step of the way so they understand what's happening, why decisions are being made, and what to expect. Clear communication helps build trust and supports better outcomes."

Andrew Guthrie, M.D., Unit-Based Medical Director, Hospital Medicine "Empowering support staff has been a game changer they feel they have a voice now in patient safety."

**Julia Galvani,** Southshore Regional Assistant Vice President of Quality

"We prioritize celebrating successes. Whether a team met its goal, came close or discovered a key learning, we highlight that in our bimonthly collaborative meetings."

**Teresa Arrington,** Director of Quality and Performance Improvement; Sepsis Collaborative Lead



### ABOUT AHA'S LIVING LEARNING NETWORK

Funded by the CDC, the AHA Living Learning Network is a forward-thinking virtual community of hospitals, health systems, state hospital associations and public health organizations. The AHA LLN first convened in 2020 to focus on the COVID-19 response. It has evolved with the current needs of the health care field to address sepsis management, infection prevention and control (including health care-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.

**Ochsner Health** is a member of the AHA LLN and has consistently contributed to the network through peer-to-peer sharing. The LLN team extends its gratitude to Ochsner Health system for hosting an open and inspiring site visit, which showcased the organization's innovative and impactful work in sepsis care. This visit provided a valuable opportunity for peer-to-peer sharing, and we look forward to continuing our collaborative efforts to improve patient safety and the quality of care.



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Living Learning Network



AHA team members, Louisiana Hospital Association members and Ochsner Sepsis Team at Ochsner Jefferson Highway

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