

Evaluating the Impact of Orthostatic Hypotension (OH) Screening on Fall Reduction in Patients Admitted to Medical-Surgical (MS) Units

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Practice Problem

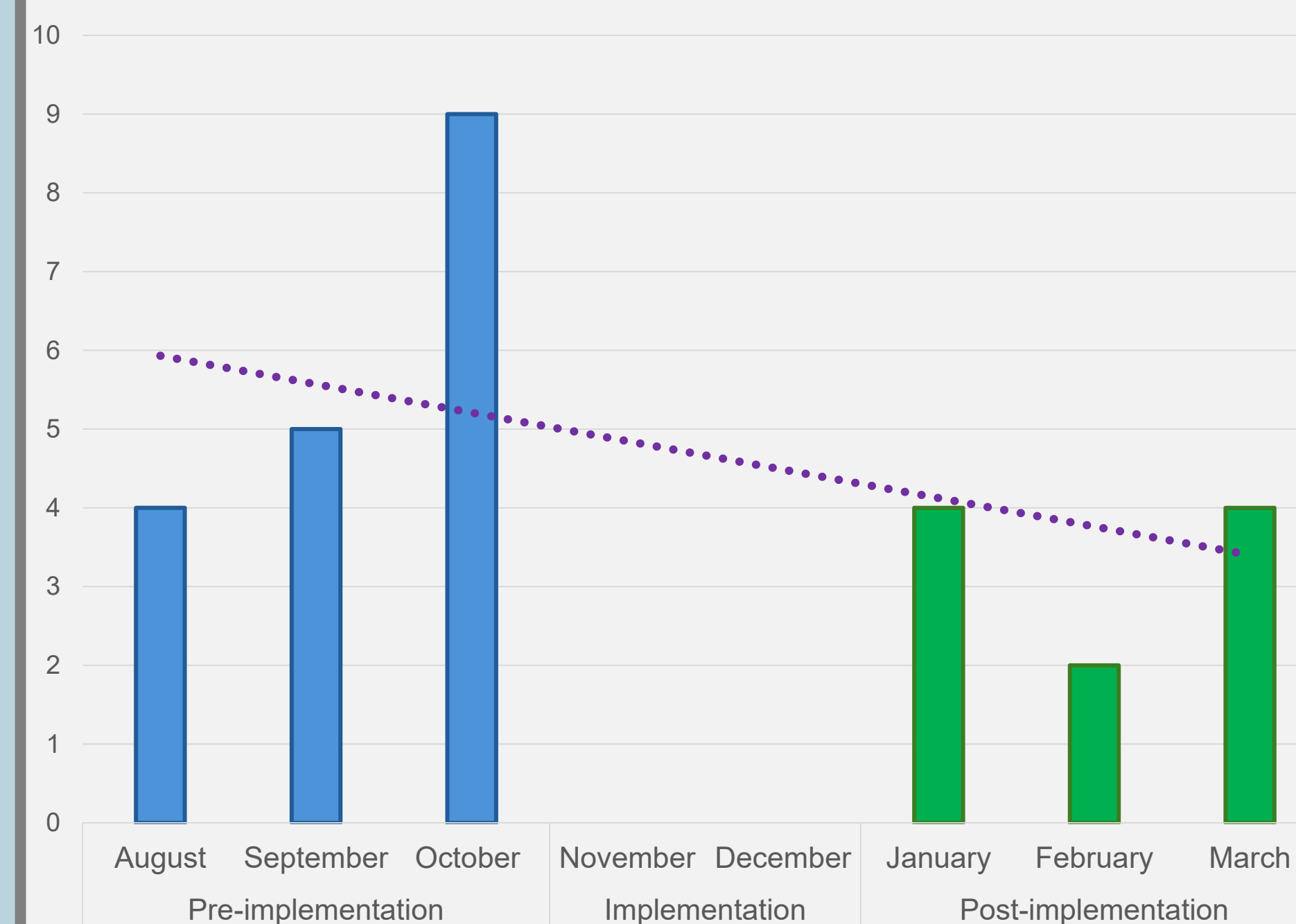
- Despite the implementation of fall prevention interventions at Baylor Scott & White Medical Center Centennial (BSWH-CEN), there was an increase in patient falls among individuals admitted to medical-surgical units, raising concern that orthostatic hypotension (OH) may be a contributing factor.
- In current practice, nurses do not routinely assess patients for orthostatic hypotension (OH), raising concern that this unassessed factor may be contributing to the increased fall rates.
- This evidence-based practice project aims to determine whether OH may be a contributing factor to the increased fall rates.



PICOT Question

In patients admitted to Medical Surgical units, what is the effect of identification of OH thru routine BP screening on the fall rate compared to standard care over a 3-month period

Number of Falls per Month



Practice Changes

- Nurses and patient care technicians (PCTs) were encouraged to obtain orthostatic blood pressure measurements during position changes (sitting to standing) to identify orthostatic hypotension (OH).
- A patient education handout was developed to provide key talking points and promote fall prevention when OH was identified.

Patients Teaching Points

- ✓ Do not stand up quickly from sitting position
- ✓ You are at a higher risk for falling when you stand up quickly
- ✓ Ask for assistance when you want to stand up from sitting position
- ✓ Standing up from sitting includes, from chair, from bed and from commode – Please ask for assistance
- ✓ Your safety is VERY Important to us. Help us prevent you from falling – Call Don't fall



Outcomes/Results

- Project outcomes revealed that a total of **57%** of patients experienced a measurable decrease in blood pressure. Among these, **30%** had a BP drop of less than 20 mmHg, **27%** met the diagnostic criteria for orthostatic hypotension (OH) defined as a reduction of ≥ 20 mmHg.
- During the three months prior to implementation, a total of 18 patient falls were recorded—4 in August; 5 in September and 9 in October. Following implementation, falls decreased to 10 over the subsequent three months, with 4 in January; 2 in February and 4 in March. This represents a **44.4%** reduction in fall rates, indicating a substantial improvement in patient safety outcomes.

Conclusions

Routine OH screening is an effective, low-cost strategy to reduce falls in hospitalized patients. Incorporating OH checks into standard protocols can reduce falls and improve patient safety and outcomes.

Implications for Practice

- Expand OH screening to broader in-patient units
- Train staff on OH assessment techniques
- Integrate findings into electronic health record alerts and care pathways (*long term*)

Literature/Evidence

The Iowa Model was used to guide the literature analysis for identifying the clinical problem, appraising the evidence, and determining the relevance and applicability of research findings to practice.

- Strong association shown in large meta-analyses
 - A systematic review and meta-analysis of **50+ studies** (**≈49,000 patients**) found that OH is **significantly associated with falls**, with an **odds ratio of 1.73** ($\approx 73\%$ higher risk of falling). (Mol et al., 2019)
- Asymptomatic OH increases falls
 - Many patients **do not report dizziness or symptoms**, yet still have OH (Claffey et al., 2022)
 - Asymptomatic OH was associated with **~2 times higher risk of unexplained falls** (OR ≈ 2.01).
 - Clinical Importance - patients may be at risk **even without obvious signs**. (Claffey et al., 2022)
- Meta-analytic evidence show association of OH to falls. Ricci Francesco et al. (2015) reported that orthostatic hypotension is associated with significantly higher risks of cardiovascular events, syncope, and all-cause mortality, factors that also contribute to increased fall risk.
- Early identification and appropriate management of OH are essential strategies for reducing falls and improving patient safety (American Geriatrics Society & British Geriatrics Society, 2011; Montero-Odasso Manuel et al., 2022).

Implementation/Pilot Testing

- The project was introduced to leadership in October 2025.
- Core team members were identified which included the Chief Nursing Officer, the Director of Nursing, the Director of Patient Safety and the managers of the medical-surgical units.
- Project was discussed with the Fall Committee in November prior to implementation.
- Staff and stakeholders received education and participated in hands-on training sessions.
- "Patient Teaching Points" handout was created and shared in November & December to promote standardized patient education and consistent fall prevention messaging.

References



Acknowledgements

Special thanks to Rachel Spencer (CNO), Stephanie Turley (DON), Tamra Acierni (Director of patient safety), Katie Choy (NPD Director), Jessica Stark & Latarisha Hudson (Med-Surg managers) and Fall committee members.

SEPSIS SAVVY: ENGAGING NURSES IN FAST RECOGNITION & ACTION

Hannah Cooley, MSN, RN, RNC-IAP, C-EFM & Marci Lasiter, MHA, RN, C-EFM
Baylor University Medical Center – Dallas, Texas

LEARNING GAP

Infection is a leading cause of maternal morbidity and mortality. Early recognition enables timely intervention, resulting in improved outcomes. Chart audits revealed maternal sepsis screening was often documented incorrectly. This gap contributed to delays in provider notification and subsequent delays in initiating the sepsis bundle. Evidence from CMQCC and Texas AIM priorities validated the need for improved recognition, accurate documentation, and timely response to maternal sepsis.

TARGET AUDIENCE

Perinatal Nurses: Labor and Delivery | Antepartum | Postpartum

IMPLEMENTATION

Catch it: Maternal Sepsis Badge Buddy distributed across all maternal units to support quick recognition of sepsis and to promote standardized RN-to-provider communication.

Coordinate it: Coordinated nursing and lab teams to reinforce the importance of labs as an early step in management.

Check it: Maternal Sepsis Checklist implemented to ensure no missed steps.

Celebrate it: Maternal Sepsis Week activities gave staff the opportunity to solidify their knowledge.

PLAN

Multidisciplinary Maternal Sepsis Workgroup

- From FY24-FY25, sepsis order set used in only 75% of sepsis cases.
- Other sepsis metrics, such as lab draws, antibiotic administration, and RN documentation/communication, showed room for improvement.
- Workgroup created tools to improve maternal sepsis screening documentation and increase sepsis order set use and components.
- Maternal Sepsis Badge Buddy**

Assist with identification of sepsis signs using SIRS criteria. SBAR guidance.

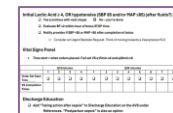
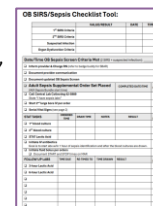


Scan for Badge Buddy PDF

- Maternal Sepsis Checklist**



Scan for OB Sepsis Checklist PDF

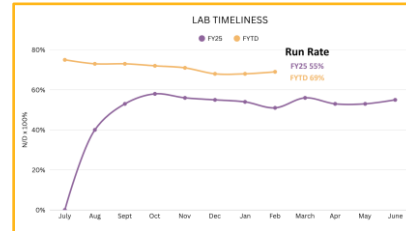


Maternal Sepsis Week

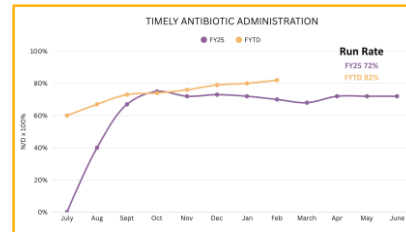
- Featured education and awareness activities like a sepsis trigger matching game with a Velcro posterboard for nurses to "document" findings and role-play case studies to practice decision-making.
- Tools distributed.

EVALUATION & OUTCOME

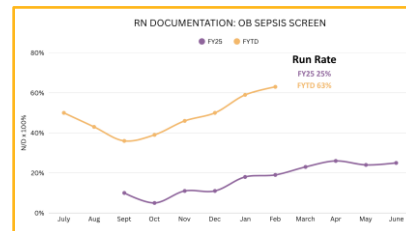
Education was presented and reiterated from FY25 May-June. Post-education audits showed an increase in the below metrics. Staff reported greater confidence in recognizing sepsis and communicating with providers. These results show clear improvements in knowledge, which helps build a safer culture for mothers across units.



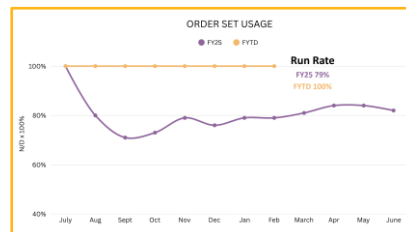
N = Cases when Lab presented to bedside <60 minutes from order time
D = Total cases with sepsis workup



N = Cases when antibiotics administered <60 minutes from order time
D = Total cases with sepsis workup



N = RN recognized SIRS/sepsis criteria and updated OB sepsis screen with communication to provider
D = Total cases with sepsis workup



N = Cases where correct Adult Sepsis Order Set utilized
D = Total cases with sepsis workup



References

SEVERE SEPSIS – HOSPITAL VS. THE PATIENT’S EXPERIENCE

Aim Statement: closing the severe sepsis inpatient information gap – ensuring the patient and their caregivers comprehend their diagnosis and recovery before discharge.

Donna Runnels, Quality| Risk Management |IC



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Carrollton 75010

The Hospital: hemodynamic stability, clearing infection, source control, and protecting organ function

The Patient: surviving the terror, managing pain, and trying to comprehend what is happening.

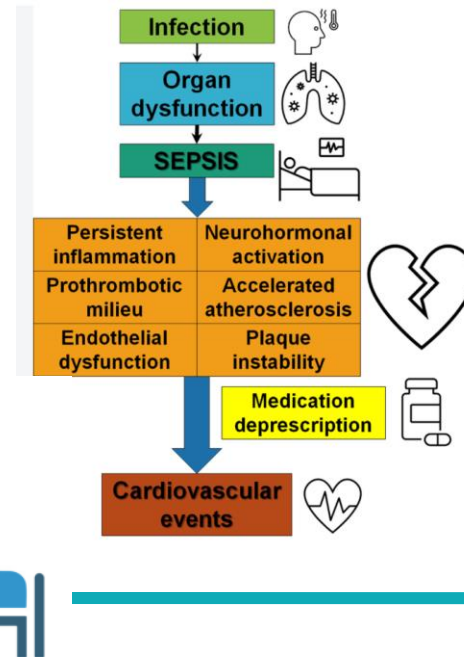
Interventions

The Hospital: broad-spectrum antibiotics, lab testing, IV fluid bundles, and vasopressor titration. Avoiding a cardiovascular event

The Patient: sepsis is not an infection itself, instead your immune system released chemicals into the bloodstream that cause widespread inflammation that can damage your organs and dangerously lower your blood pressure

Meeting CMS Bundle Criteria

Inpatient stay, ICU, disorientation and delirium

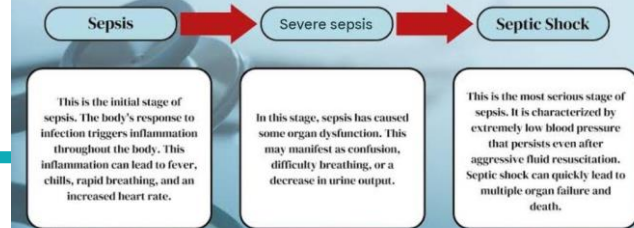


The Hospital: stopping the infection, supporting the patient’s blood pressure, tracking the patient’s recovery

The Patient: What happening during your hospital stay. While you were very sick or resting, your medical team followed strict, rapid response steps to save your life.

Awareness

The 3 Stages of Sepsis



Discharge

The Hospital: meeting clinical metrics for physical discharge and medication reconciliation.

The Patient: Recovery from sepsis takes time, and your body continues to heal long after you leave the hospital; lingering fatigue – mood changes. Watch for red flag – higher risk of getting sick again. When to call your doctor: new fever, severe chills, fast breathing, sudden confusion, or severe pain.

Closing the information gap of a hospitalized patient with severe sepsis through their transition of care.



OB SEPSIS

John Peter Smith Hospital

JPS Health Network
Fort Worth, Texas



Our Journey with Maternal Sepsis

In the beginning, W & L Leadership discovered that:

- OB Sepsis is being under-diagnosed.
- OB Sepsis is being under-reported.

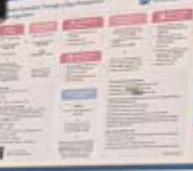
Goal: Improve diagnosis and treatment of OB sepsis and improve health outcomes.

- Update OB sepsis algorithm
 - Update OB sepsis procedure
- Steps to Success:
- Recognition of gap in existing OB sepsis care plan
 - Collaborative efforts and design to develop and MCHS & Sepsis
 - Re-evaluate and refine algorithm
 - Re-evaluate and refine P & P
 - Clear evidence & real-time audit on sepsis and review sepsis using OB process beginning 1/2023



What we learned... TOOLS FOR SUCCESS

- Post EVERYWHERE
- Educate to the use of the QR Code for additional information
- Update and revise



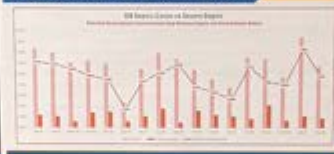
Our Journey with Maternal Sepsis

TEAM FORCE



We created a Maternal Sepsis Team to address and improve our OB/Sepsis care and any other issues related to OB/Sepsis.

Our Journey with Maternal Sepsis



What we learned... TOOLS FOR SUCCESS

- Post EVERYWHERE
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- Update and revise



Our Journey with Maternal Sepsis

AUDIT



Our Journey with Maternal Sepsis

Team Aim Statement



What we learned... TOOLS FOR SUCCESS

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- Update and revise



Our Journey with Maternal Sepsis



Our Journey with Maternal Sepsis

- ### COLLABORATION
- Sepsis Multidisciplinary Monthly Meeting
 - Education for new RN residents, and annually for staff and drs.
 - Cases Presented at Resident Induction
 - OB/Sepsis Collaborative Case Presentations, Quarterly
 - Case Review
 - Sepsis Consults
 - Interdisciplinary Levels of Care Collaborative with participating hospitals across the region

Our Journey with Maternal Sepsis

- ### Active Labor - Repeat Lactic Acid
- Enlighten lactic acid for patients in active labor meeting sepsis criteria
 - Collect lactic acid 1 hour post delivery
 - Evaluate, if lactic acid is > 2.0 mmol/L, repeat lactic acid is automatically ordered (per the OB Sepsis Order Set)
 - Document provider notification in the LMA (Nursing)
 - Document deviations from protocol per clinical decision (Pharmacist)
 - Advocate care by initiating additional orders or interventions, as indicated
 - Link care during handoff, communicate POC and pending orders

What we learned... TOOLS FOR SUCCESS

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Our Journey with Maternal Sepsis

It's not just our Mommies... It's our Babies too... Implementation on the infant side

What makes us proud...

- We have been applying OB Sepsis, in partnership with our Hospital Sepsis Program, for many years now, and have had several quality initiatives to improve Sepsis rates here at JPS. We are proud of the work we have done and continue to do regarding decreasing rates of Maternal Sepsis.

What Makes Us Successful...



What we learned... TOOLS FOR SUCCESS

- Post EVERYWHERE
- Educate to the use of the QR Code for additional information
- Update and revise



Background

- Vasopressin is an adjunctive vasopressor utilized in adults with septic shock who have ongoing hemodynamic instability despite IV fluids and norepinephrine.
- The 2026 Surviving Sepsis Campaign (SSC) guidelines suggest initiating vasopressin when patients with shock require escalating doses of norepinephrine; however, the threshold at which to add vasopressin is unclear.¹
 - SSC guideline panelists recommend adding vasopressin at a median norepinephrine dose of 0.3 mcg/kg/min (range 0.25 – 0.5 mcg/kg/min), while some studies suggest the optimal timing is at a lower norepinephrine dose.²
- The purpose of this study is to determine whether initiating vasopressin at lower baseline norepinephrine doses hastens the time to hemodynamic stability.

Methods

- Study design:** Single center, retrospective study
- Inclusion criteria:** Adults diagnosed with septic shock who were admitted to the medical ICU and received concomitant norepinephrine and vasopressin infusions
- Exclusion criteria:** Death within 24 hours of admission, receipt of an initial vasoactive agent other than norepinephrine, or pure cardiogenic shock
- Study groups:**
 - Early group:** Vasopressin initiated at norepinephrine doses < 0.3 mcg/kg/min
 - Delayed group:** Vasopressin initiated at norepinephrine doses ≥ 0.3 mcg/kg/min
- Outcomes:**
 - Primary outcome:** Duration of vasopressor therapy required to achieve hemodynamic stability (defined as a MAP > 65 mmHg and no use of vasopressor agents for 4 hours)
 - Secondary outcomes:** In-hospital mortality, initiation of new renal replacement therapy

Baseline Characteristics

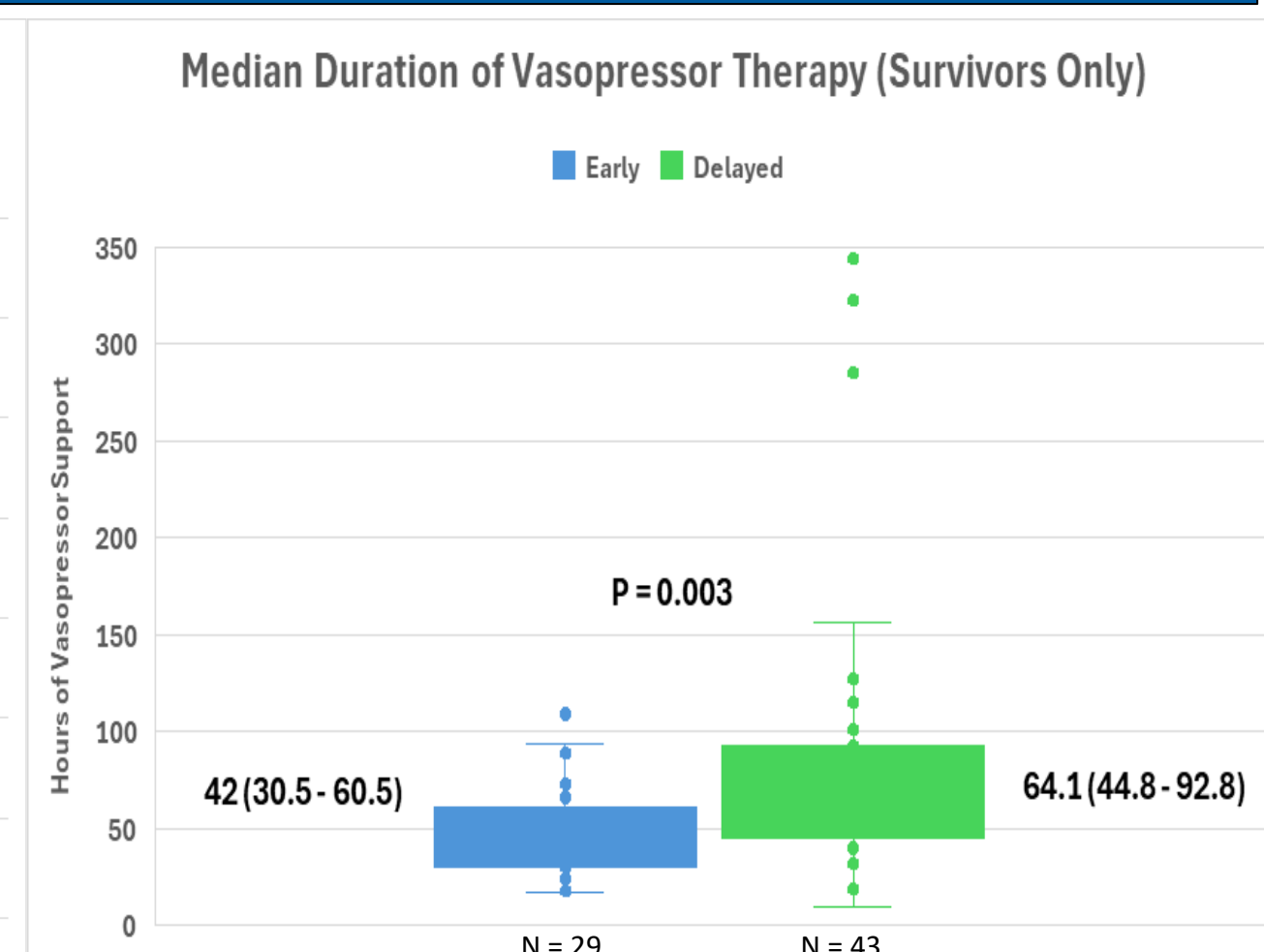
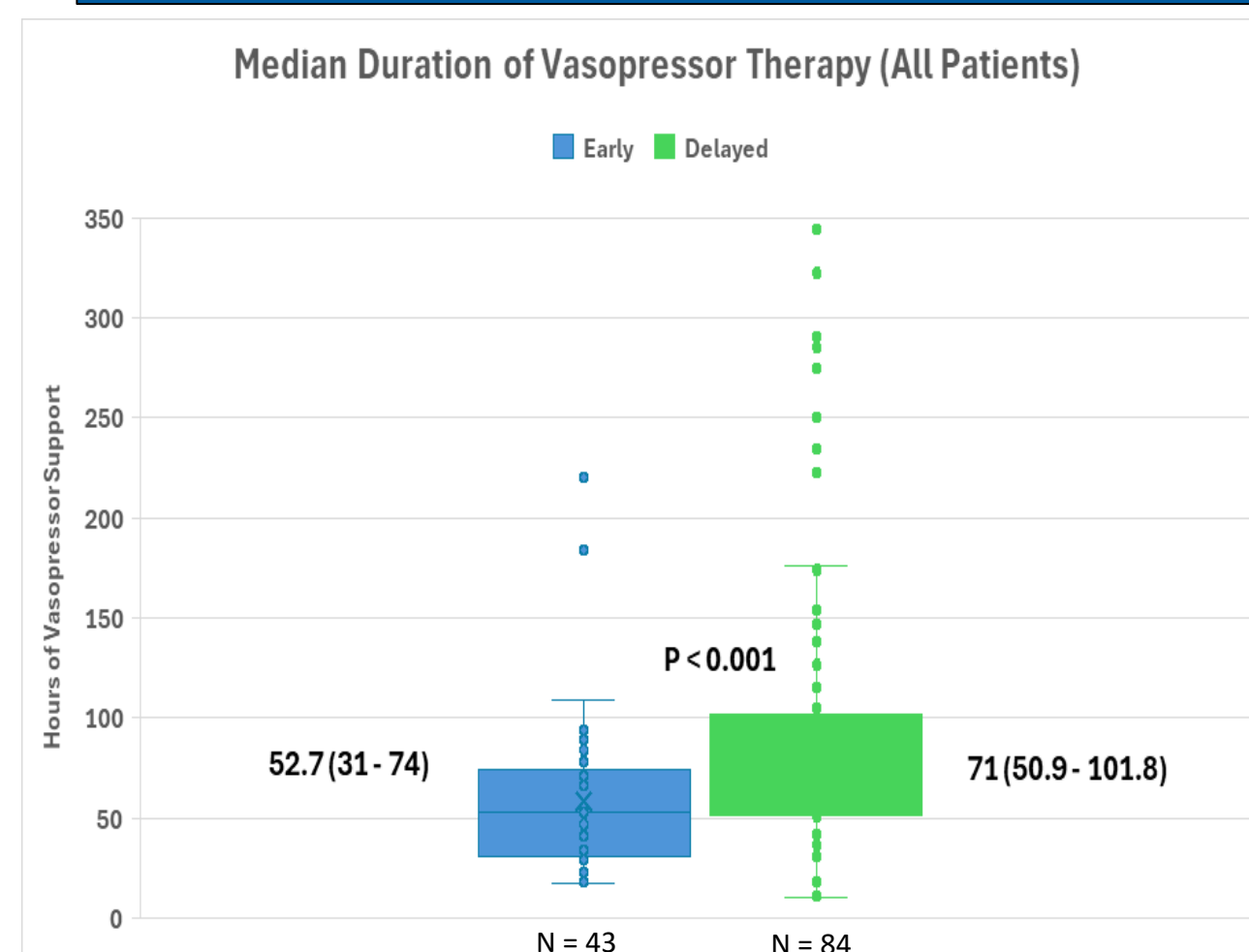
	Early (n=43)	Delayed (n=84)	P-value
SOFA score	8 (7-10)	8 (7-11)	0.9
Lactate at NE start (mmol/L)	3.8 (2.8-6.1)	5.3 (3.2-8.9)	0.07
Time from NE to vaso (hours)	5.2 (2.4-8)	4.9 (1.9-10)	0.92
NE dose at time of vaso start (mcg/kg/min)	0.22 (0.19-0.25)	0.36 (0.3-0.5)	< 0.001
Median vaso dose (units/minute)	0.03 (0.03-0.04)	0.04 (0.03-0.04)	0.51
Adequate empiric ABX coverage	35 (81.4%)	71 (84.5%)	0.8

SOFA: Sequential Organ Failure Assessment; NE: Norepinephrine; Vaso: Vasopressin; ABX: Antibiotic; RRT: renal replacement therapy; ICU: intensive care unit; LOS: length of stay

Secondary Outcomes

	Early (n=43)	Delayed (n=84)	P-value
In-hospital mortality	14 (32.5%)	41 (48.8%)	0.009
New RRT	9 (21.9%)	27 (33.8%)	0.21
Max NE dose (mcg/kg/min)	0.35 (0.3-0.6)	0.5 (0.3-0.84)	0.04
Need for additional vasopressor(s)	6 (13.9%)	22 (26.2%)	0.17
ICU LOS (days)	5 (2-7)	6 (3-9.9)	0.01
Hospital LOS (days)	12 (7-21)	12.5 (6.5-20)	0.44

Primary Outcome



Conclusion

Initiation of vasopressin at norepinephrine doses < 0.3 mcg/kg/min resulted in significantly faster resolution of shock and may positively impact ICU-related morbidity and mortality

References

- Prescott HC, et al. Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock 2026. Intens Care Med 2026
- Kalimouttou A, et al. Optimal vasopressin initiation in septic shock: the OVISS reinforcement learning study. JAMA 2025;333:1688-1698.