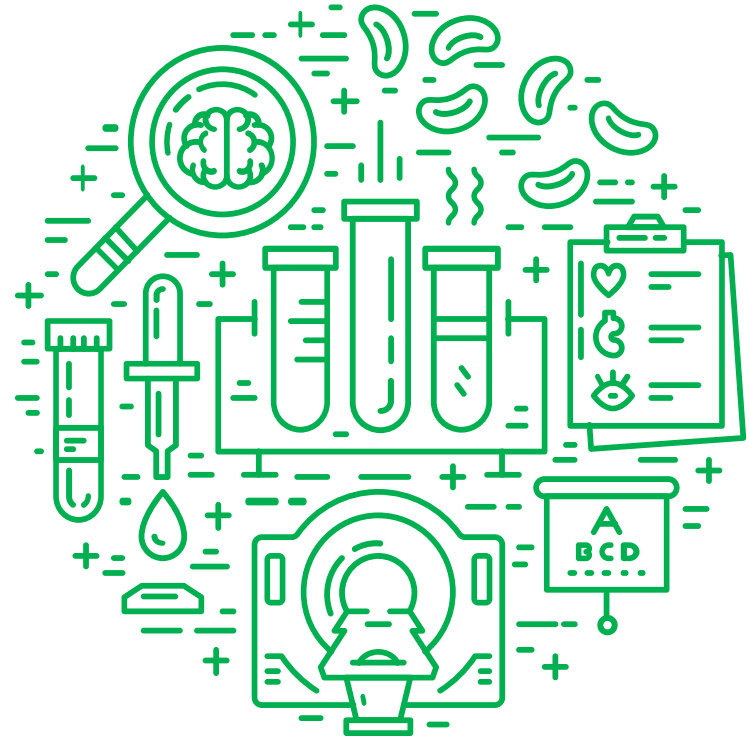




**Infection
Prevention**

Hospital Onset Bacteremia:

Next Frontier in Hospital
Acquired Infections





Disclosures

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Employee of Medline Industries





Objectives

- Understand the origins and impact of HOB
- Identify sources for infection not currently reportable that impacts HOB incidence
- Describe methods to enhance current prevention protocols to encompass HOB as a quality measure



Moving Towards HOB



Hospital Onset Bacteremia (HOB)

The growth of recognized Bacterial or Fungal Pathogen from Blood Culture Specimen
Obtained \geq Day 4 of admission^{1,8}



My facility is



Tracking HOB

0

Talking about HOB

0

Not Talking about HOB

0

Unsure



HOB: By the Numbers



Estimated at least **4x**
higher than CLABSI
rates



#1 Cause of HOB
Respiratory

HOB events have a **3x** higher mortality rate in
patients with ICU Stay, a higher risk of readmission,
higher costs, significantly longer LOS



Origins of HOB



Central Access



Arterial Catheters



PIV



Complications of Infections
(Pneumonia, Meningitis)



Surgical Wounds



CAUTI



IV Drug Abuse



Dental Procedures



Patient's common microbiome





2024 IPPS Rules : Open Comments on HOB and Fungemia



What We Assume:

- Voluntary for at last 2 cycles
- Baseline data benchmarks established
- Data collection for potential penalty phase



What We Need Answered:

- How will other measures be looked at
- How will workflows be changed
- How will staff be burdened

HOB as a Reportable Measure



Intended to be fully automated



Reduced* Surveillance burden for IP



Based on standards, measurement science, and clinical science

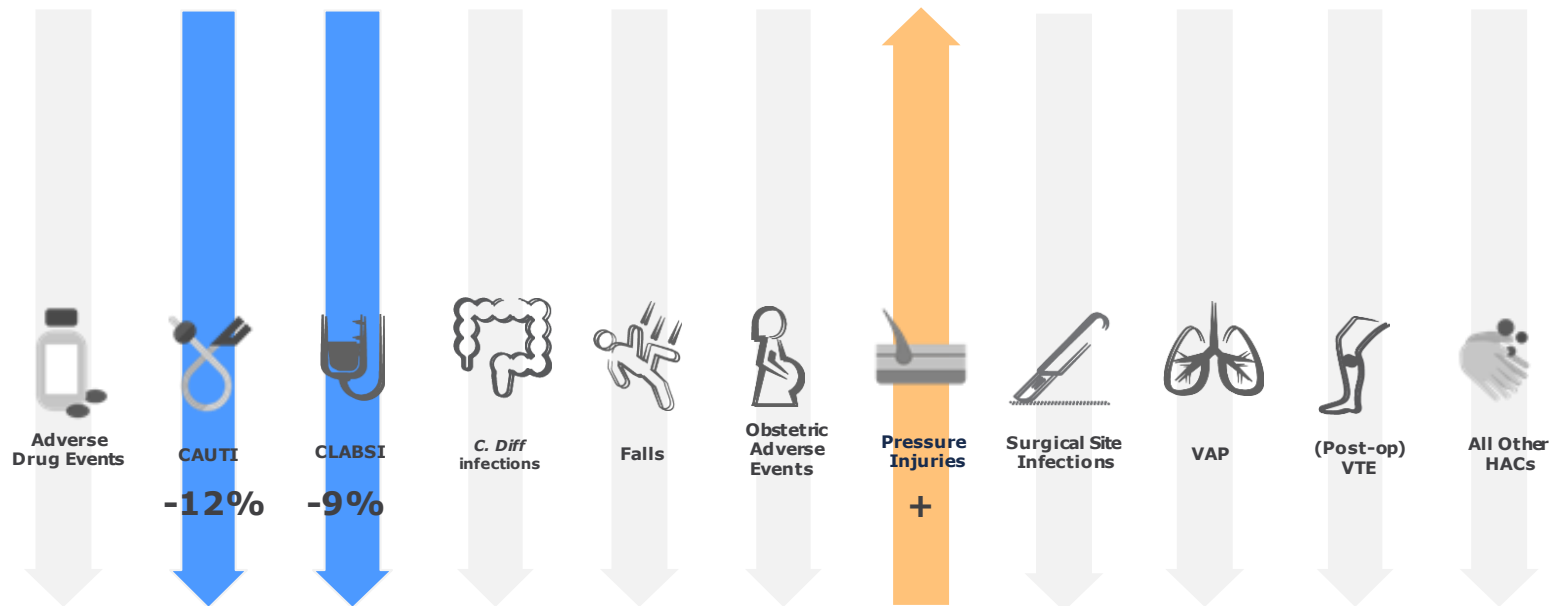


Collected on all positive blood cultures



Manual reporting will not be an option

Post-Pandemic: 2022 - today



What HAC is the top priority for your team in 2024?



CLABSI CAUTI MRSA C.Diff SSI HAPI VAP/NV-HAP

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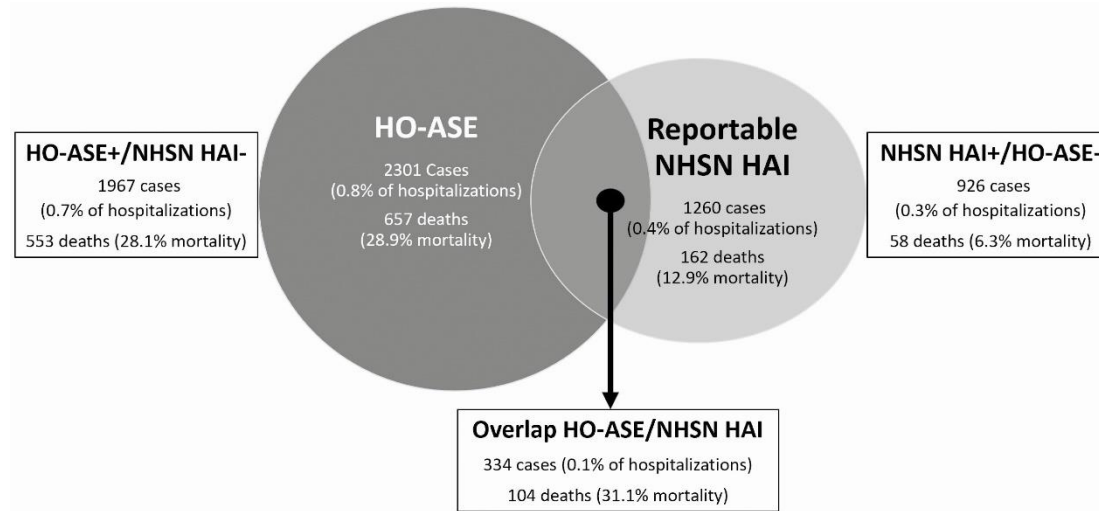
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What is being missed?



Adult Sepsis Event= Presumed Serious Infection + Acute Organ Dysfunction (eSOFA)



Non-Reportable Sources Causing Sepsis



110 of the HO-ASEs manually chart reviewed found that current surveillance for HAIs required for reporting to NHSN detected **only 15% of hospital onset ASE and that mortality rates associated far exceeded those for HAIs**

This supports recent data showing the majority of Hospital onset bacteremia cases are **NOT associated with an HAI that is currently reported to NHSN**

Non-ventilator HAP was one of the most common causes.

Distribution of Infectious Syndromes Among Manually Reviewed Hospital-Onset Adult Sepsis Event Cases

Infectious Syndrome	No. of Cases of Infection (%)
Pneumonia	43 (39.1)
Ventilator-associated pneumonia	15 (13.6)
Urinary tract infection	8 (7.3)
Catheter-associated urinary tract infection	7 (6.4)
Bloodstream infection ^a	19 (17.3)
Central line-associated	2 (1.8)
Non-central line endovascular source	3 (2.7)
Oral/gastrointestinal source	6 (5.5)
Urogenital source	1 (0.9)
Skin source	1 (0.9)
Unknown source	6 (5.5)
<i>Clostridioides difficile</i>	3 (2.7)
Intra-abdominal infection (other than <i>C. difficile</i>) ^b	16 (14.5)
Skin and soft tissue infection ^b	7 (6.4)
Pleural space/intrathoracic infection ^b	2 (1.8)
Obstetric/gynecologic source ^b	1 (0.9)
Febrile neutropenia without clear source	15 (13.6)
Unknown source	10 (9.1%)

HOB: The Next Frontier in Hospital Acquired Infections

Identifying HOB



HOB: The Next Frontier in Hospital Acquired Infections

Identifying HOB



HOB demographics information	N (%)
Average Charlson comorbidity index	4.97
Average age	56
Average LOS (days)	29.23
Died/In-hospital mortality	93 (23.7%)
Average BMI	29.3 (9.2)
ID consult obtained	233 (59.4%)
Transferred from OSH	165 (42.0%)
CVC POA	106 (27.0%)
NHSN-reported CLABSIs	59 (15.0%)
Arterial Line Present	65 (16.6%)
Foley present	110 (28.0%)
1 PIV present	264 (67.3%)
2 PIV present	171 (43.6%)
3 PIV present	74 (18.9%)
4 PIV present	24 (6.1%)

NSHN-reported CLABSI- 15%

Arterial Lines- 16.6%

1 PIV-67.3%

HOB: The Next Frontier in Hospital Acquired Infections

Identifying HOB



Preventable HOB cause	N (%)
Contaminant	55 (14.0%)
Central venous catheter (CVC)	39 (9.9%)
Surgical intervention (Surg)	26 (6.6%)
HAP/VAP	16 (4.1%)
PIV catheter-related infection (PIV)	13 (3.3%)
Miscellaneous	9 (2.3%)
CAUTI	7 (1.8%)
No source defined	4 (1.0%)
Non-preventable HOB cause	N (%)
Gastrointestinal/Abdominal	62 (15.8%)
Neutropenic translocation	37 (9.4%)
Endocarditis	23 (5.9%)
No source defined	20 (5.1%)
Skin/Soft tissue	14 (3.6%)
Urine	12 (3.1%)
Biliary	10 (2.6%)
Lungs	8 (2.0%)

Addressing HOB



HOB Source



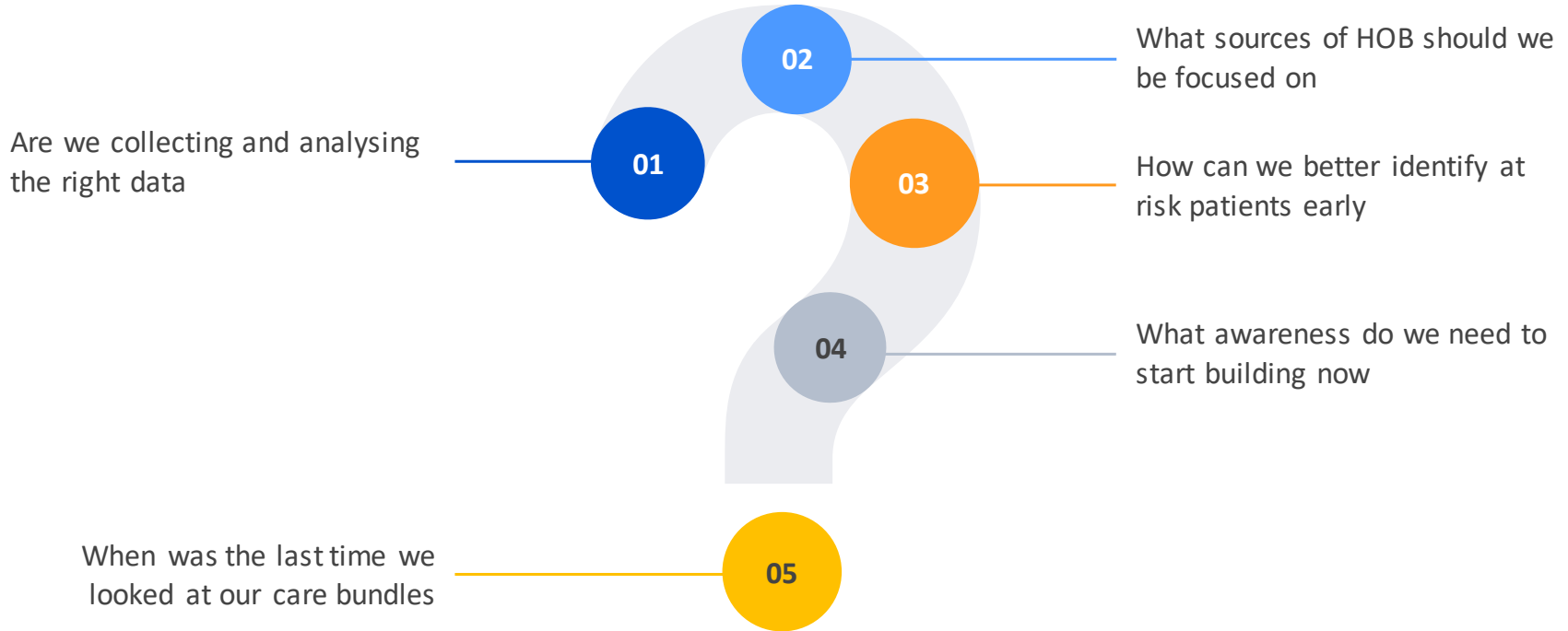
Prevention



Mitigation



Prevention is the Best Intervention



Areas I would like to focus related to HOB



- 1st | Education for Bedside Staff
- 2nd | Product Bundles
- 3rd | Creating a Task Force
- 4th | Continuing Training and Education on HOB for Leadership
- 5th | Baseline Data Collection



HOB: The Next Frontier in Hospital Acquired Infections

Final Thoughts



- HOB is the future of outcomes surveillance and P4P metrics
- Preparation is key to mitigate the impact
- Proactive tools and resources will reduce Operational costs
- Collaboration internally and with healthcare industry partners is key



HOB: The Next Frontier in Hospital Acquired Infections

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