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COLUMBIA Weill Cornell Medicine

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Setbacks Can Be Comebacks: A Model for Shared Safety Improvement

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Learning Objectives

- Describe a novel model for rapid organizational learning and agile improvement across quaternary care hospitals.
- Discuss change management and implementation strategies for effective hospital-acquired condition reduction.

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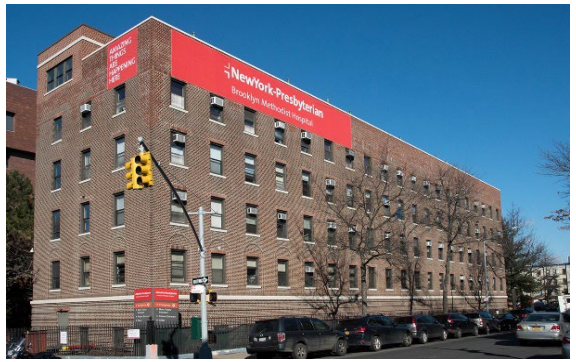
Overview

- Large, complex health systems often face hurdles in achieving consistent, systemwide quality improvement.
- This panel will share how two quaternary care hospitals built a rapid learning model to drive agile improvement across disciplines and leadership levels.
- By focusing on shared goals, structured feedback and nimble data analytics, we created a scalable strategy for implementing change that balances consistency with local adaptation.
- We will explore how lessons learned at one site were translated quickly across institutions, supporting sustained reduction in hospital-acquired conditions and advancing a culture of safety and engagement.
- We will discuss how setbacks became a platform for organizational renewal.

NewYork-Presbyterian Hospital

NYP Allen
2023 Discharges: 12k



NYP Brooklyn Methodist
2023 Discharges: 30k

NYP/Columbia
2023 Discharges: 32k

NYP Lower Manhattan
2023 Discharges:10k

NYP Morgan Stanley
2023 Discharges: 16k

NYP Westchester
2023 Discharges: 12k

NYP Westchester Behavioral Health Center
2023 Discharges: 4k

NYP/Weill Cornell
2023 discharges: 48k

NewYork-Presbyterian Hospital

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- 36K Employees
- 9K Nurses
- 2K+ Residents
- 10K+ Affiliated Physicians

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Background

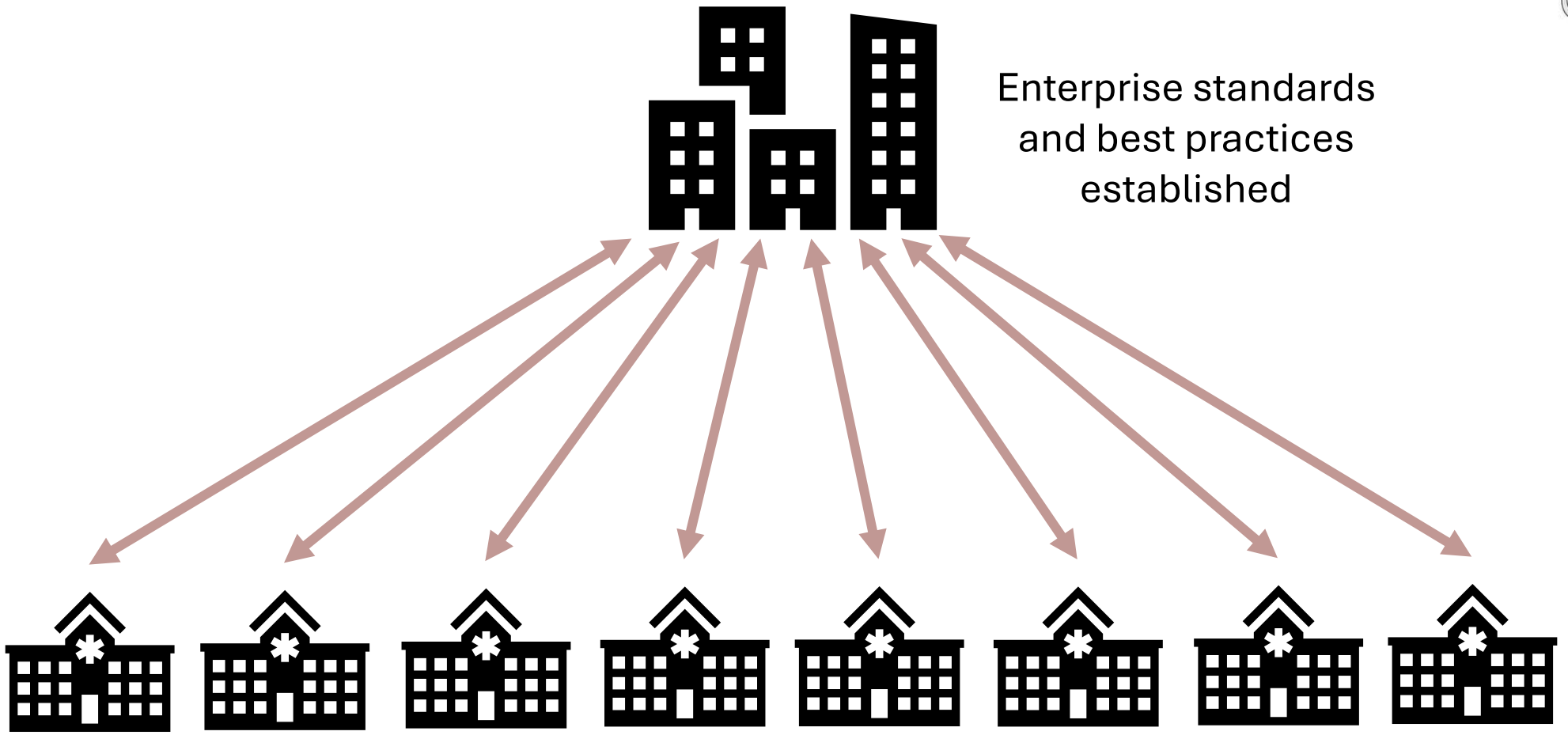
Context

- Healthcare acquired conditions (HAC) are a major cause of patient harm
  - Death, readmission, excess hospital days, cost
- The COVID-19 pandemic derailed national HAC reduction
  - Infections like central line-associated bloodstream infections (CLABSI) were disproportionately worsened

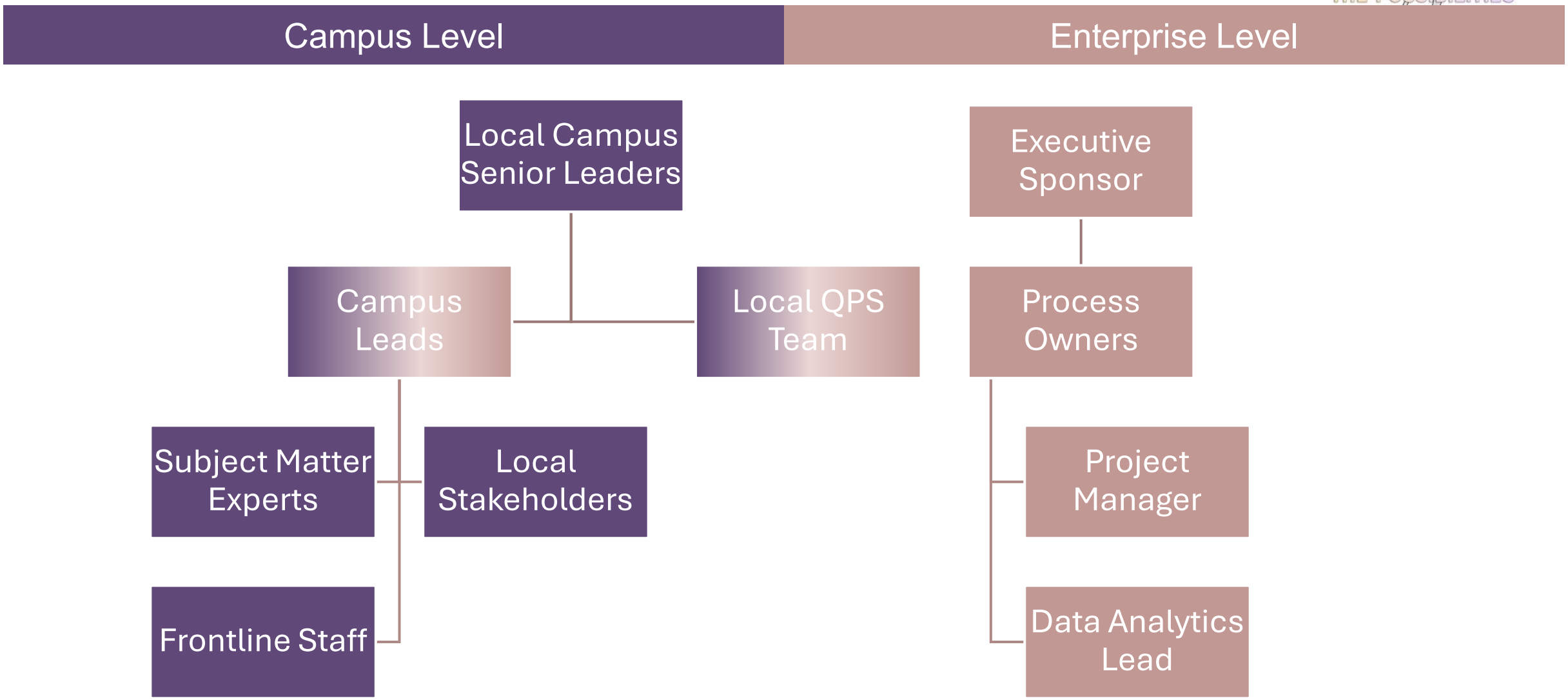
Problem

- Columbia and Weill Cornell performed below expectations for CLABSI from 2021-2023 despite improvement initiatives
  - Below National Healthcare Surveillance Network medians
  - Worse than Vizient 50th percentiles for academic medical centers

QPS Goals Structure



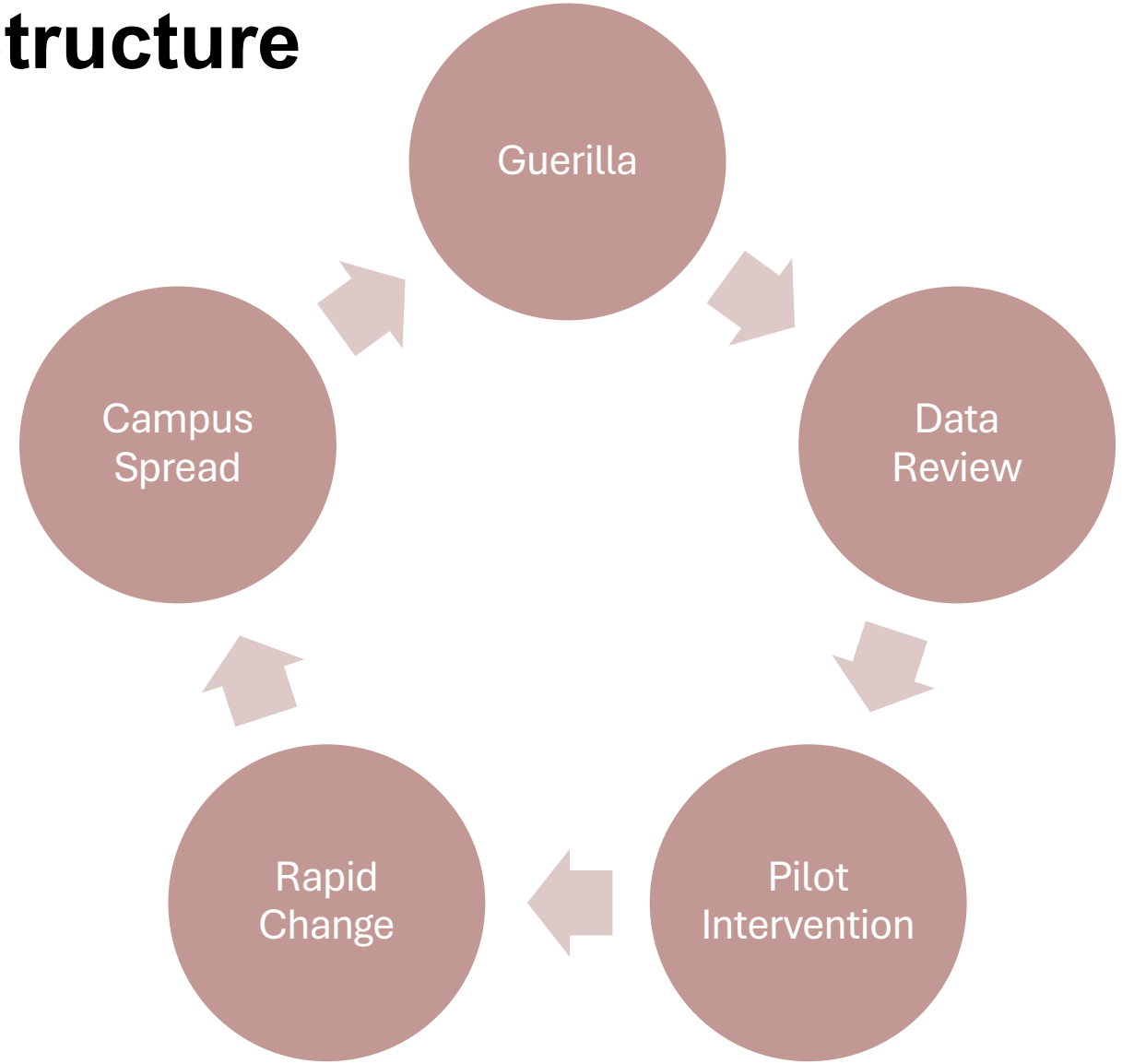
QPS Goals Roles and Shared Accountability



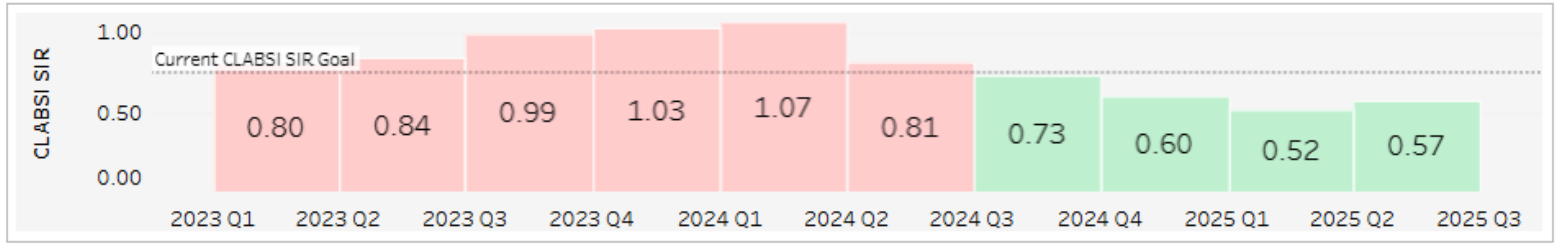
The Team

- Both Columbia and Cornell experienced a sudden increase in events in January 2024
- A cross-institutional, multi-disciplinary team was quickly assembled to identify root causes and develop a rapid cycle improvement plan.
- The rapid action team
  - Providers
  - Nurses
  - Quality and patient safety (QPS)
  - Infection prevention and control (IPC)
  - Informatics
  - Executive sponsors: Vice President for Quality and Safety and Chief Medical Officers

Reimagined Structure



Integration of Data



Potential CAUTIs for 2024
(Target: 0.63 - Vizient Mean)

Campus	Max Events to Meet Goal*	Events to Date (APR 2024)	Max CAUTIs Remaining to meet 2024 Goal by October
1	2	0	2
2	9	2	7
3	19	10	9
4	1	0	1
5	1	1	0
6	2	1	1
7	26	18	8
NYPH SUM	60	32	28
8	1	0	1
9	14	3	11
NYP SUM	75	35	40
Per MONTH	8	9	7

NewYork Presbyterian Internal Data

Discovery

- **Root cause analysis revealed four key drivers**
  - Renal replacement therapy
  - Catheter maintenance
  - Central venous catheter (CVC) utilization
  - Blood culture practices
- **Gemba walks, surveys, and patient interviews revealed several important gaps**
  - Knowledge and ownership of catheter maintenance
  - Lack CVC utilization criteria
  - Suboptimal blood culture technique
  - Inconsistent assessment for secondary sources of infection

Interventions

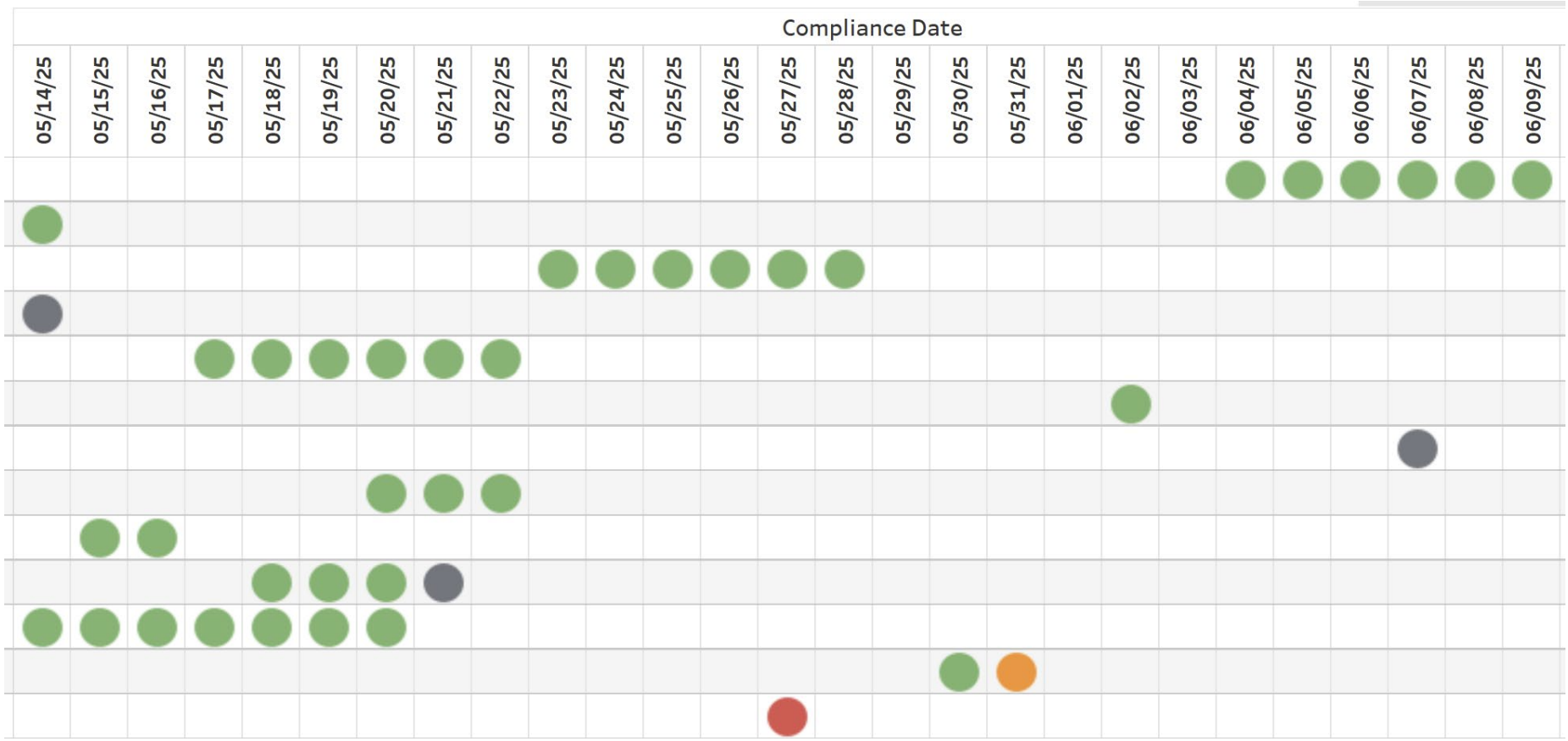
- **Catheter Maintenance**
  - “Project Blitz” supplied hands-on catheter maintenance simulation to direct care nurses
  - QPS and IPC performed weekly line maintenance audits with feedback
  - Chlorhexidine treatment protocols were standardized with visual aids and daily audit of compliance dashboards
  - Hand hygiene competitions and an IV pole-mounted alcohol handrub pilot were implemented
- **CVC Utilization**
  - Vascular nurses, pharmacists, IPC, QPS, nutrition, and providers standardized evidence-based guidelines for vesicants
  - Implemented a checklist and stewardship process for CVC requests
  - Daily outreach and tiered escalation to unit dyads encouraged timely CVC removal

Interventions

- **Blood culture acquisition**
  - Direct care nurses received training on blood culture technique
  - A blood culture appropriateness algorithm was created and decision support tool piloted in the EHR
- **Secondary source identification**
  - Real-time EHR alerts identified patients with bacteremia and a CVC
  - Bacteremia huddles with IPC, local leaders, and primary care teams identified potential sources of bacteremia and appropriate diagnostic testing

Escalation Pathways

CHG Treatment Patient Dashboard



Escalation Pathways

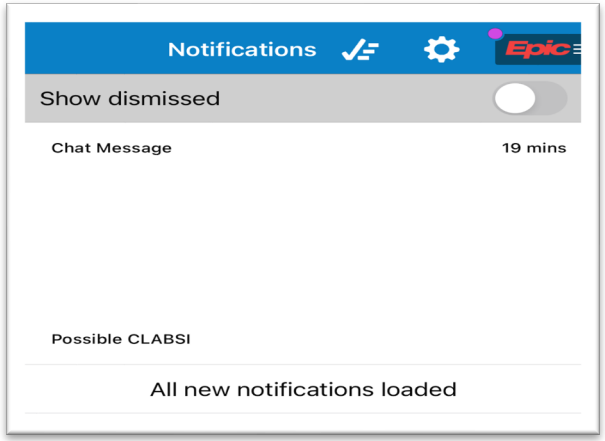
Long-dwell de-escalation

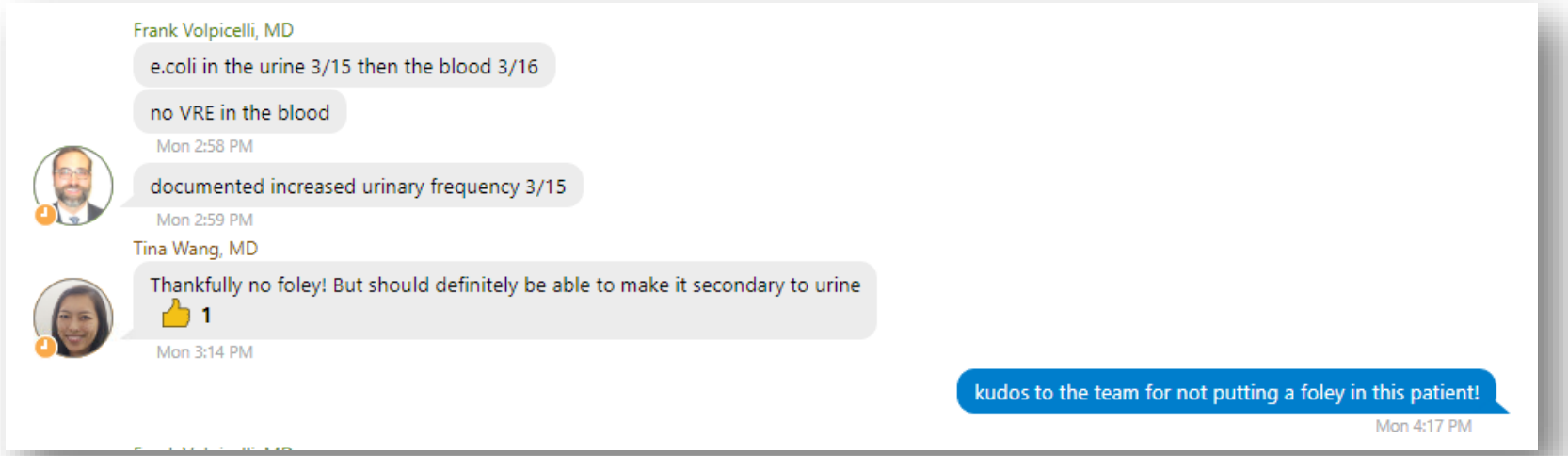
Please see below for a summary of the **New** and **In Progress** line necessity assessment escalations.

Date Reported	Patient Initials	Unit	Room Number	Device Type	Comments
				Central Venous Line	Vascath is more than 15 days. Patient is awaiting for TDC in IR. As per IR they are short staff and earliest they can do is on this Friday. If bumped will be on next week. If we can escalate that will be great
				Urinary Device	1/16/25 foley changed, u- cultures sent as per MD team . Due to urinary retention, per the urology attending attestation in their last note they said to keep foley throughout hospitalization

Escalation Pathways

Blood Culture Alerts

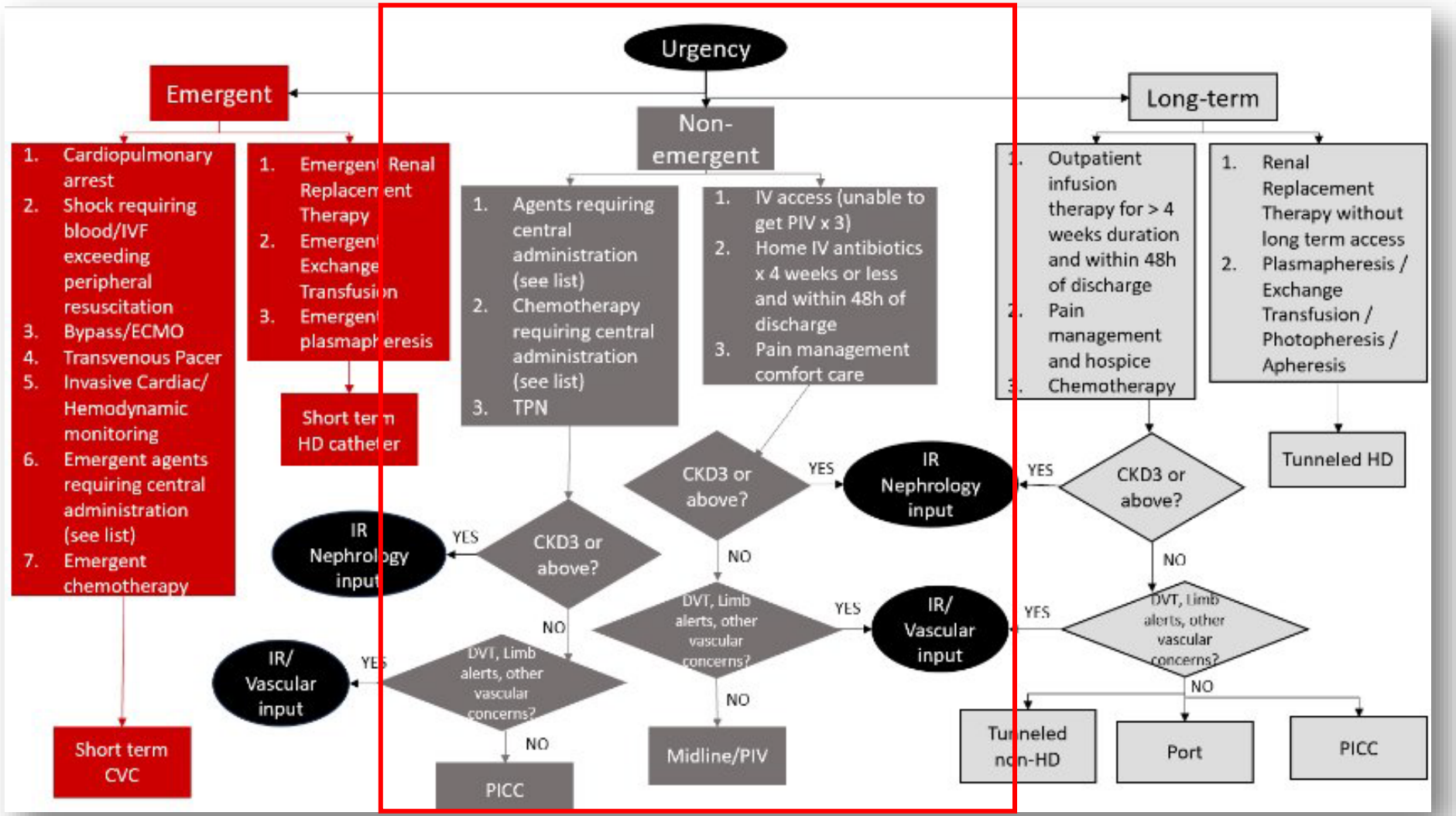




Vascular Access Stewardship

- **Define:**
  - A lack of standardization and accountability in the PICC placement process was driving high inpatient central line utilization
- **Deliver**:
  - Standard criteria for evaluating inpatient PICC appropriateness
    - Vascular access nurses
    - Pharmacists,
    - Nutritionists
    - Providers
  - Stewardship support

Vascular Access Stewardship

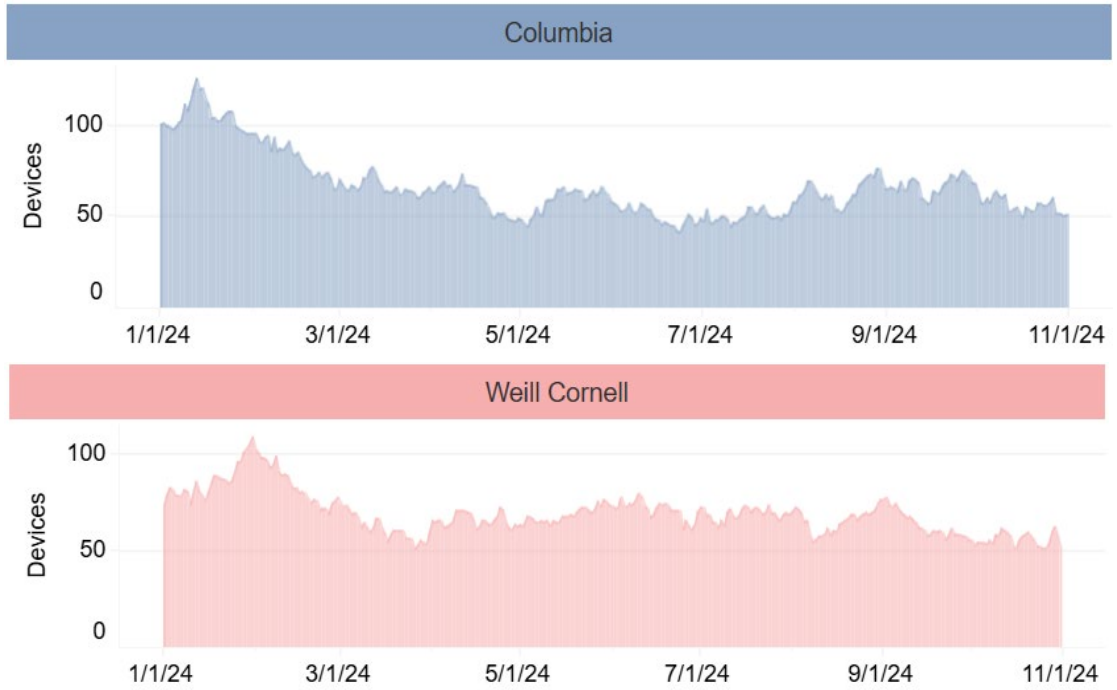


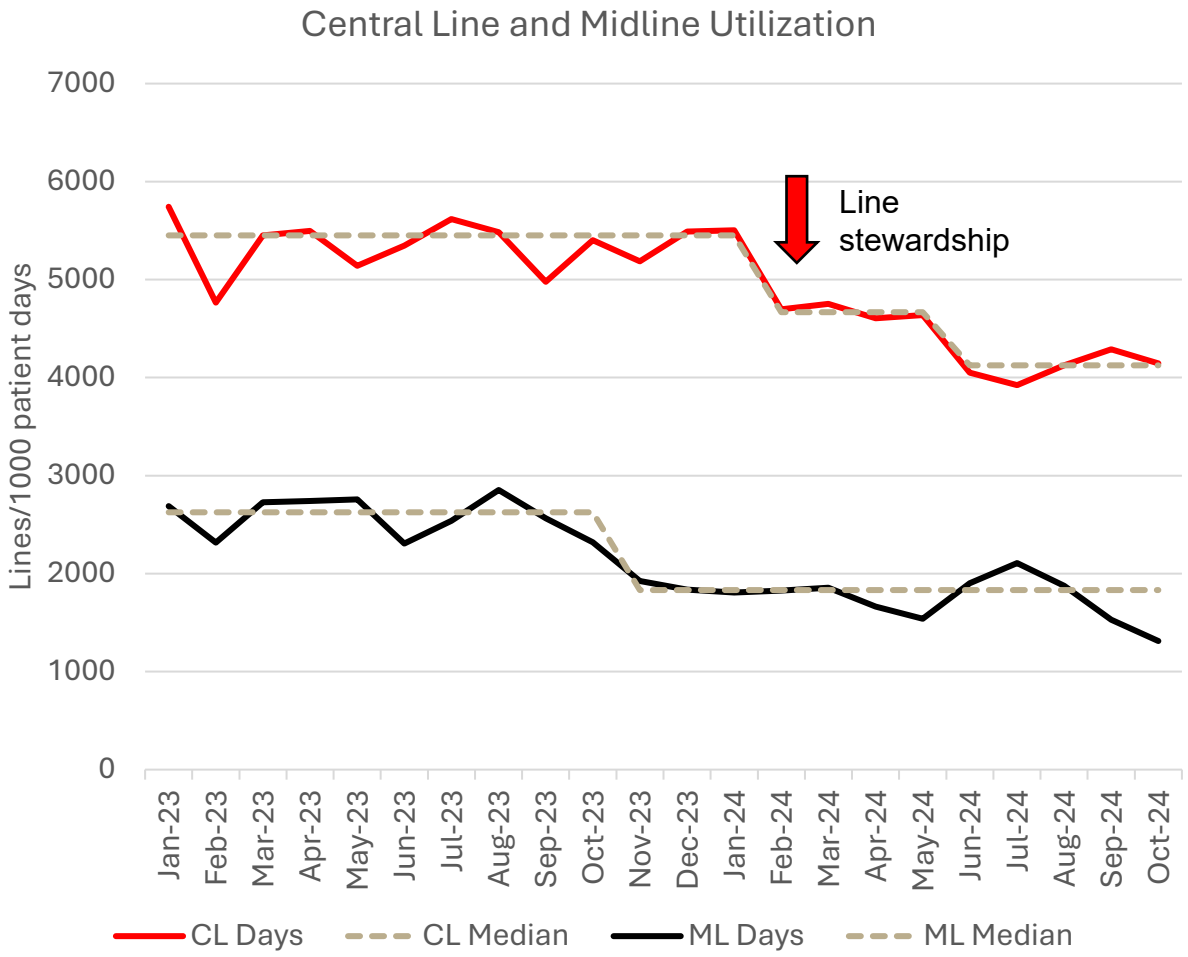
Vascular Access Stewardship

What is the indication for the line?	Is there concern for ongoing infection?	Does the patient have CKD3 or above?	Does the patient have upper extremity DVT or limb alert?	Is the line for parenteral nutrition?	Is the line for long-term antibiotics? How many more days of treatment and when is the confirmed discharge date?
-Is central access required? If not, midline or PIV is likely to be recommended -Blood draws or patient preference are not appropriate indications -Is this an ICU patient needing ECMO limiting access points?	-If yes, long-term line like PICC not recommended and could result in removal and loss of that site for future use -Does the patient have an elevated WBC? If so, why? -Does the patient have blood cultures incubating or positive? If so, line might be deferred	-If yes, and the line is not an emergency, nephrology input is required as PICC placement can cause damage precluding the patient from future AV fistula	-If yes, PICC might not be possible, or available sites could be limited and vascular/IR input needed	-If yes, nutrition team approval is required (if no note, they must verbally agree) -Can the patient tolerate more diluted PN that can be delivered peripherally?	-Central access not required if 4 weeks or less of therapy (midline can be used) -Vancomycin does not require a PICC -Central lines will only be placed within 24-48h of confirmed discharge

Line Utilization

CVC and PICC with Dwell Time >7 days





NewYork Presbyterian Internal Data

Outcomes

- **Line utilization**
  - CVC utilization (CVC days/patient days) decreased by 29% at CUMC and 20% at WCMC from January to December 2024.
  - Long-dwell temporary central venous catheters (peripherally inserted central catheters and non-tunneled CVC present for more than 7 days) decreased by 50% at CUMC and 12% at WCMC during this period.
  - Next steps: hardwire processes into the EHR
- **Catheter maintenance**
  - Bundle adherence ranged from 91.2-99.7% at CUMC and 84.7-99.7% at WCMC.
  - CHG treatment adherence was >90% for both hospitals.
  - Next steps: adoption and spread of novel Swan-Ganz catheter dressings
- **CLABSI Outcomes**
  - Between the first and last quarters of 2024, CLABSI SIR improved from 1.29 to 0.75 at CUMC and 1.38 to 0.82 at WCMC.

Challenges

- Labor / organized to non-organized
- College to other college
- Ego "how we do it here"
- "Our patients are different"
- Differentiating between true risk and perceived risk
- Impending hospital-onset bacteremia measure will require expansion of efforts
- Pediatric population

Lessons Learned

- NYP was able to use the CLABSI crisis as a burning platform for positive change and re-engagement.
- Sharing and spreading successful tests of change between hospitals while including flexibility in implementation strategy proved both effective and agile.
- Sharing stories about the patients behind the metric provided intrinsic motivation for clinicians.
- Nimble data analytics empowered team members to execute rapid tests of change.
- Process measure data, validation of practice, and qualitative feedback from direct care team members and patients were instrumental in identifying root causes, gaps, and opportunities.
- Leadership participation was critical for engagement and adoption of new practices. Executive sponsors made the work a priority by providing resources and setting standards for practice.
- Quality and infection prevention teams supported practice change through thoughtful stewardship, validation and coaching.
- Local champions socialized changes and best practices effectively with peers.
- Despite our gains, hard work remains; zero harm means zero!

Key Takeaways

- Rapid organizational learning and agile improvement is possible across complex quaternary care hospitals to reduce hospital acquired infections.
- A tiered multi-facility strategy integrates numerous disciplines and levels of leadership.
- Flexible and innovative data analytics can overcome barriers to care delivery and support shared quality and safety goals.
- Incorporating the narratives of patients and the voices of practitioners are strong change management tools, effectively leveraging intrinsic and extrinsic motivation for engagement and change management.

Questions?

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