



Central Line Associated Bacteremia Prevention

Michelle DeVries, MPH, CIC, Senior
Infection Control Officer, Methodist
Hospitals, Gary, Indiana



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Objectives & About Us

- Objective:
 - The Bacteremia Elimination Team has been assembled to reduce the incidence of healthcare associated primary bloodstream infections throughout the patient care environment of both campuses of Methodist Hospitals. This reduction will be incremental and then sustained at the ultimate goal of zero.
 - **Team Objective/Actions**
 - **Overall:** Bring hospital practices into compliance with recommended priorities of the compendium for process and outcome measures.
 - **Short term:** 15% reduction in house wide bloodstream infection rate against 2010 average by end of first quarter 2011.
 - **Long term:** Achieve and maintain zero bloodstream infections by January 2012.
- About us:
 - Methodist Hospitals chartered a Bacteremia Elimination Team in December 2011 in response to increased bloodstream infections
 - The team is led by Infection Control with the CNO as the administrative sponsor and facilitated by Quality.
 - Updates are reported monthly to Infection Control Committee, Leadership Performance Improvement Committee and QA Board.



Tests & What we Learned

- Combined internal and external audits have helped drive our process improvements

Practice Changes Tested

- Hub hygiene
 - Extremely compliant with doing it, but technique could be improved
 - Staff proposed an enhanced hub hygiene product
 - Two products trialed at the bedside
 - Staff selected the product
 - Implemented housewide



Tests & What we Learned

- Central line dressing changes
 - PICC team had been doing all units except ICU
 - Once ICU was added rates dropped substantially
- The two changes were rolled out simultaneously so cannot definitively say if one had a greater effect than the other



Barriers & How we Resolved

- Ongoing audits
 - Two external audits indicated ongoing need for hub hygiene
 - PICC team has begun ongoing monitoring and feedback on this element as part of our maintenance bundle
- Conflicting priorities
 - PICC team expertise being used to assist with IV restarts
 - Re-education of staff on available resources for assistance



Measures – What & How

- Central line associated bacteremia
 - All ICUs (2 med-surg, 1 neurological, 2 neonatal)
 - Submitted to NHSN (and CMS and ISDH)
 - Surveillance conducted by IC officer (certified)
 - Line days collected by unit staff
 - Validation of electronic measures has been successful
 - Device utilization ratios available from NHSN reports

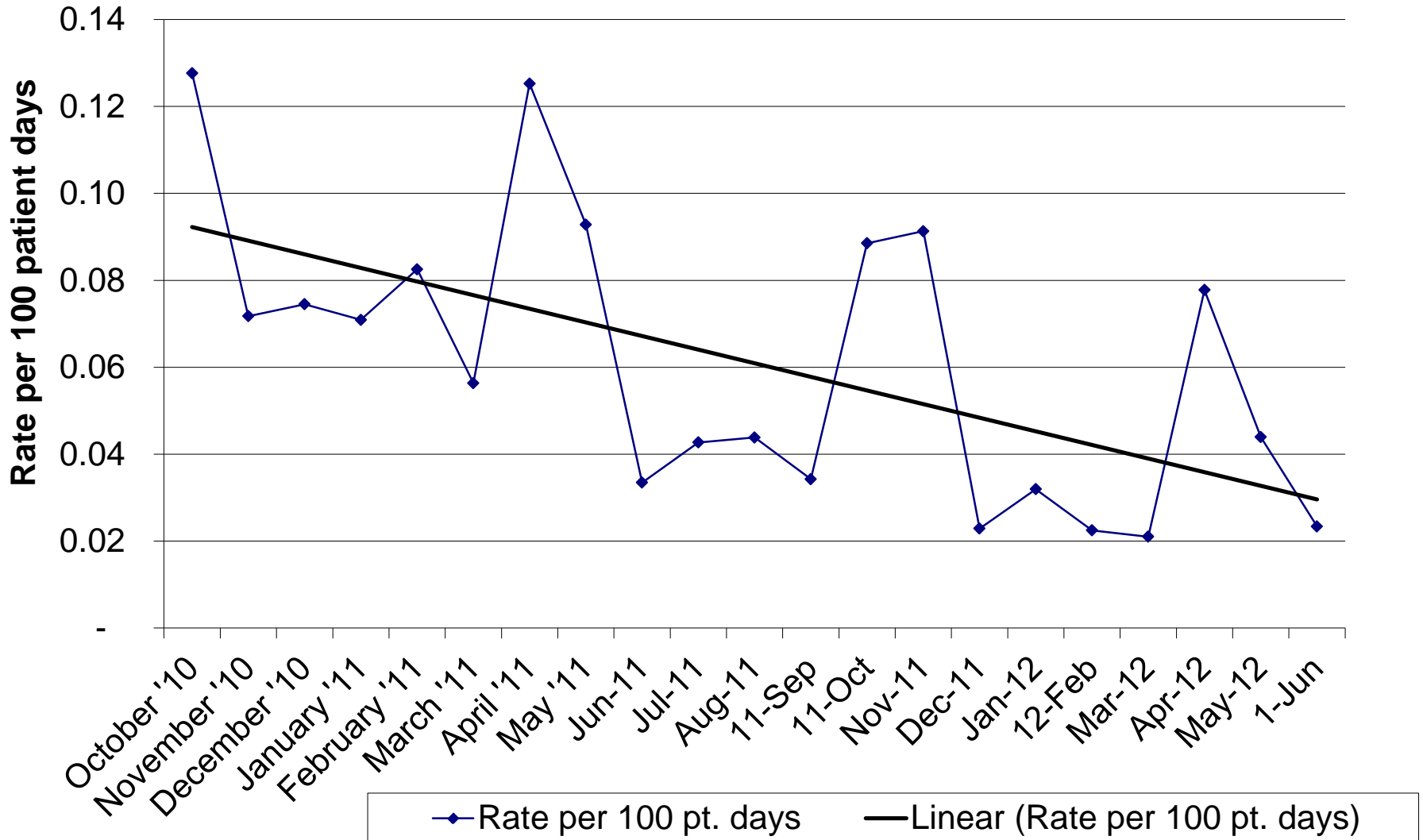


Measures – What & How

- Housewide bacteremia rates
 - All primary bacteremia meeting NHSN definitions
 - Includes all units of the hospital
 - Includes central line as well as peripheral associated infections
 - Patient days is the available denominator
 - Information collated by unit, pathogen and line type



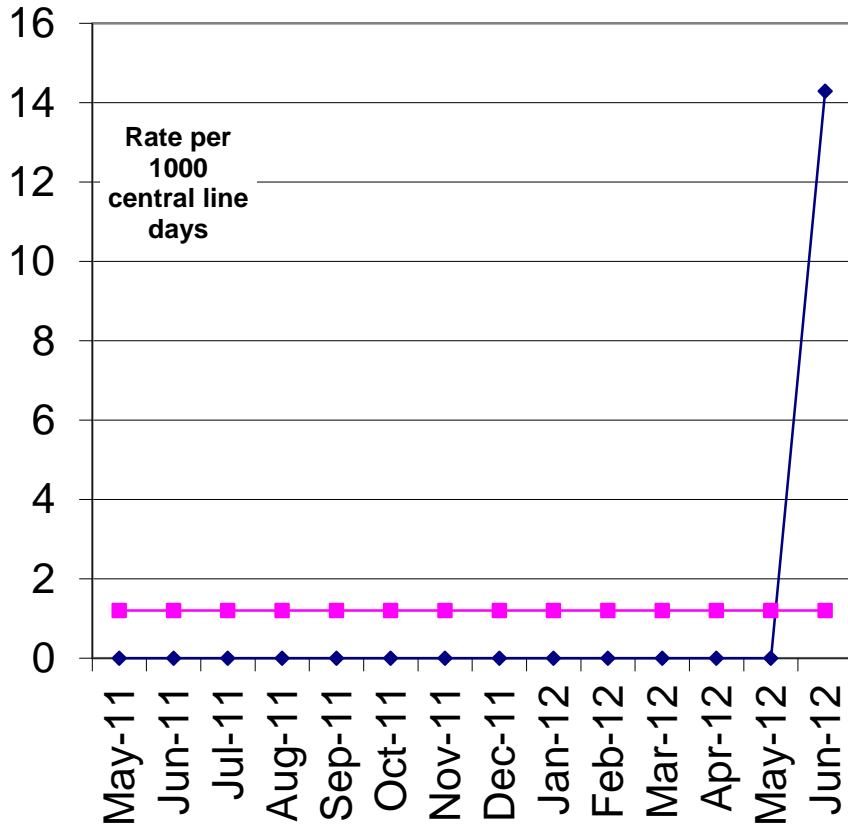
Housewide central line associated bacteremia



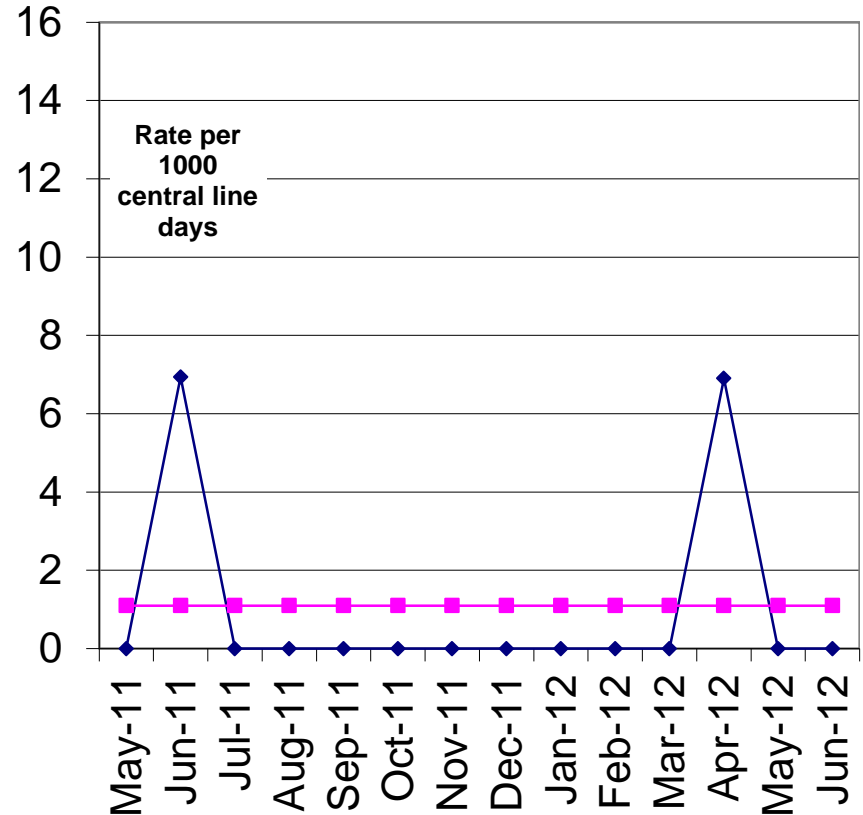


Unit Specific Rates

Southlake Neuro ICU CLABSI rate



Southlake ICU CLABSI rate





Advice for others

- Look beyond the obvious
 - Maintenance is as important as insertion
 - Let your data drive you
 - Peripheral lines are not without risk
 - There is a difference between “doing it” and “doing it right”
 - Always research your product manufacturer recommendations



Wrap Up & Next Steps

- **Next Tests of Change (TOC)**
 - Current audits have only included peripheral lines housewide
 - Upcoming audits will incorporate central line maintenance as well
 - Product education and supply resolution in one of the units
- **Michelle DeVries, MPH, CIC**
 - 219-738-5602
 - mdevries@methodisthospitals.org