

Reducing central line associated blood stream infection and catheter associated urinary tract infections with a team of resident and fellow directors for quality improvement

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Background

- Central line associated bloodstream infections (CLABSI) and catheter associated urinary tract infections (CAUTI) are an important cause of morbidity in the hospital, as well as leading to increased cost and length of stay
- Despite being largely preventable, many institutions, including the DMC are challenged with controlling these infections

Objectives

- Forming a team of residents and fellows dedicated to assessing life safety and prompt removal
- Reduce the rates of CAUTI and CLABSI at the Detroit Medical Center with a multi-faceted approach
- Intensive education of nursing staff and physicians regarding appropriate use and maintenance of urinary catheters and central lines

Methods

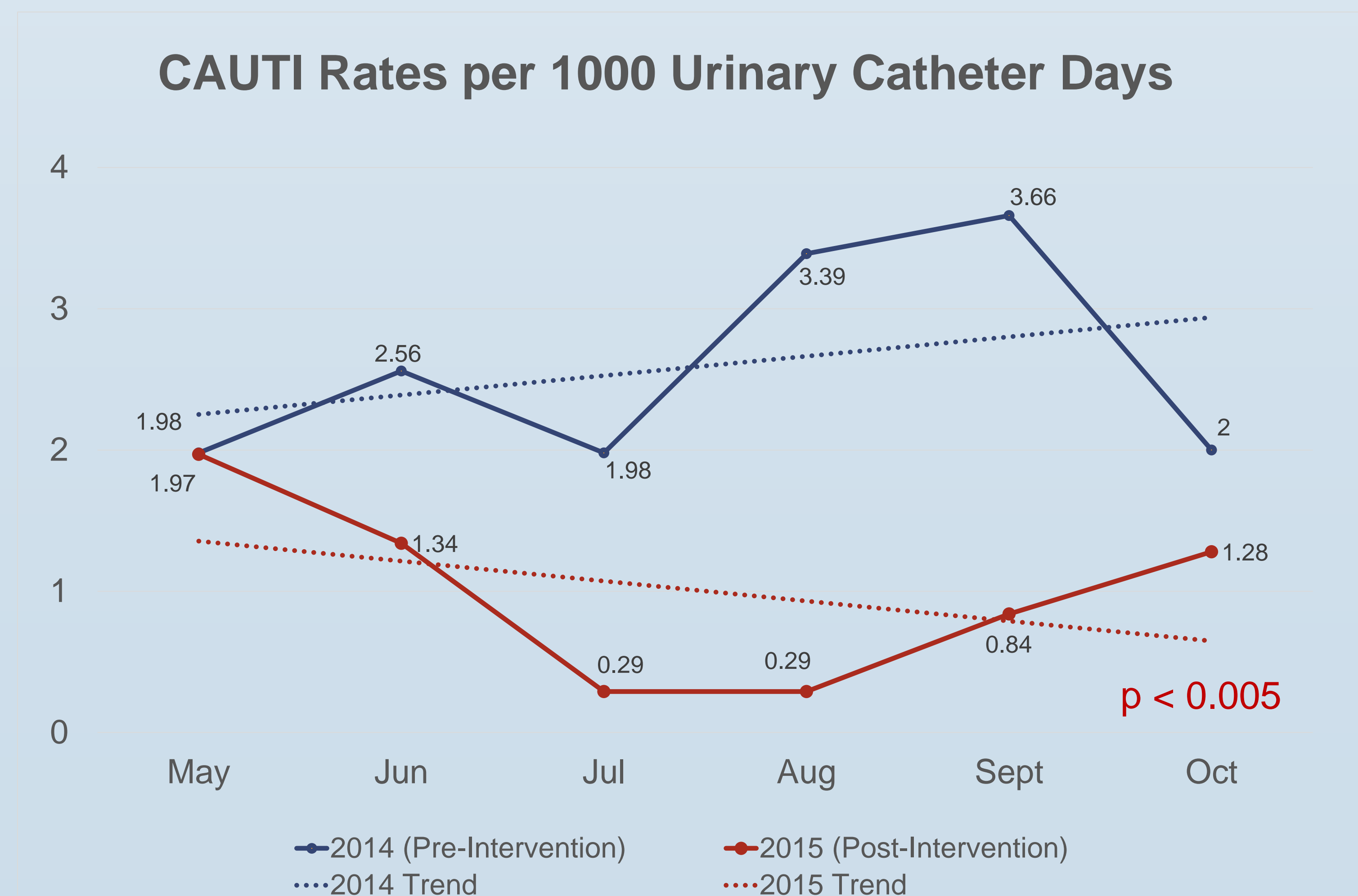
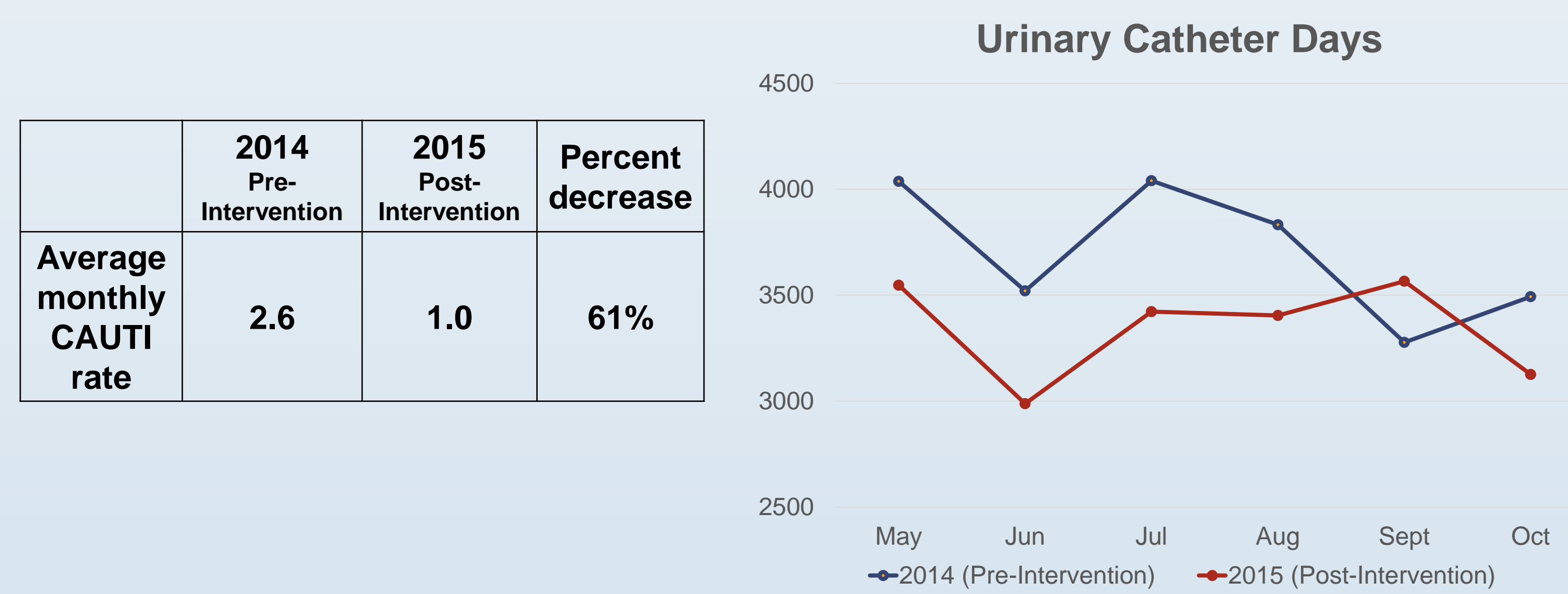
The intervention process included:

- Physicians and nurses attended lecture sessions regarding indications for and appropriate daily care of central lines and indwelling urinary catheters
- Appropriate use criteria for these lines were published and made accessible on all computer workstations, the internet, and a mobile phone widget
- A widget was incorporated into the EMR which tracked every device placed in a patient; additionally, a entry field was added to admission and daily progress notes requiring primary teams to provide daily indication for the devices

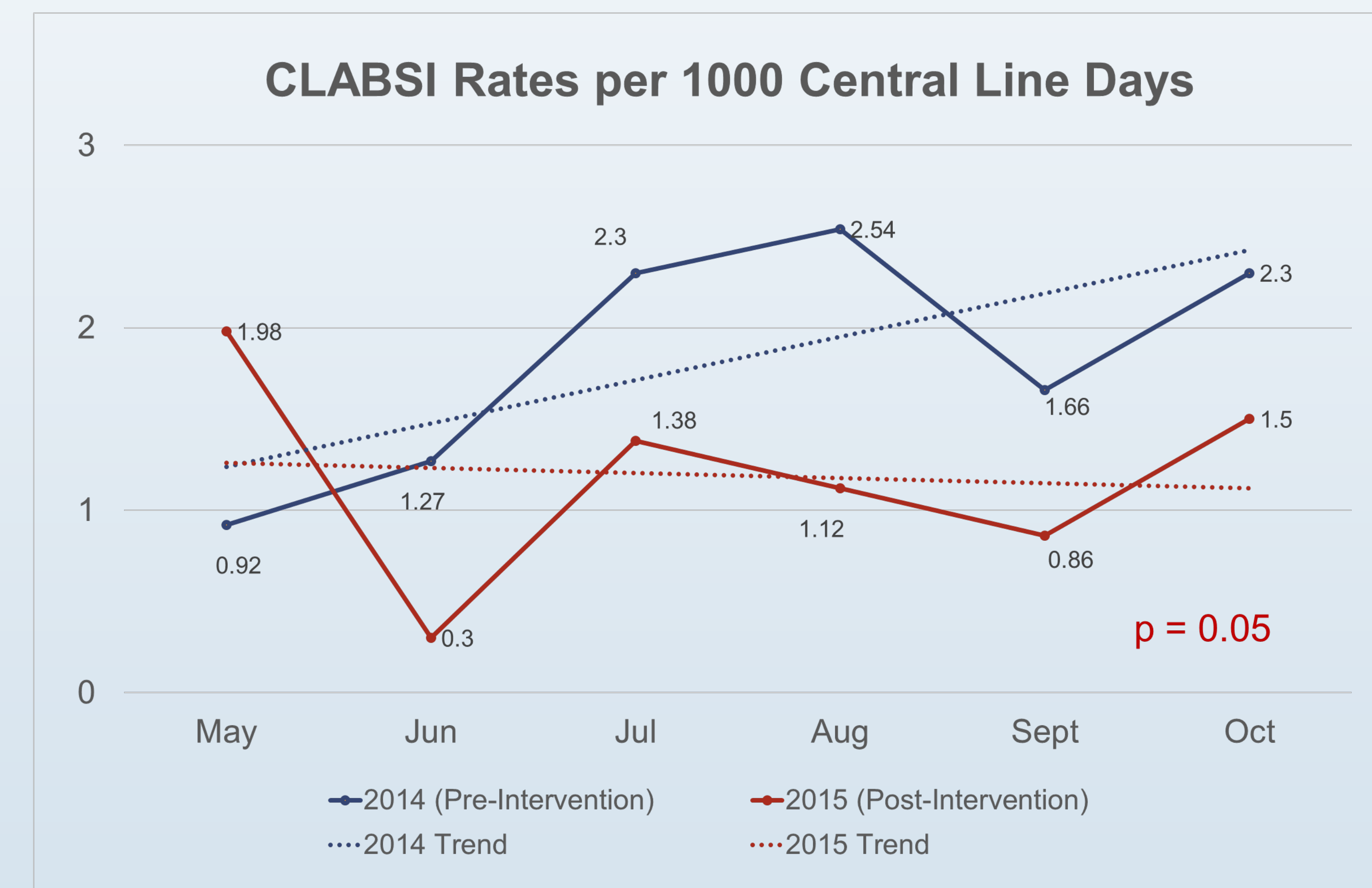
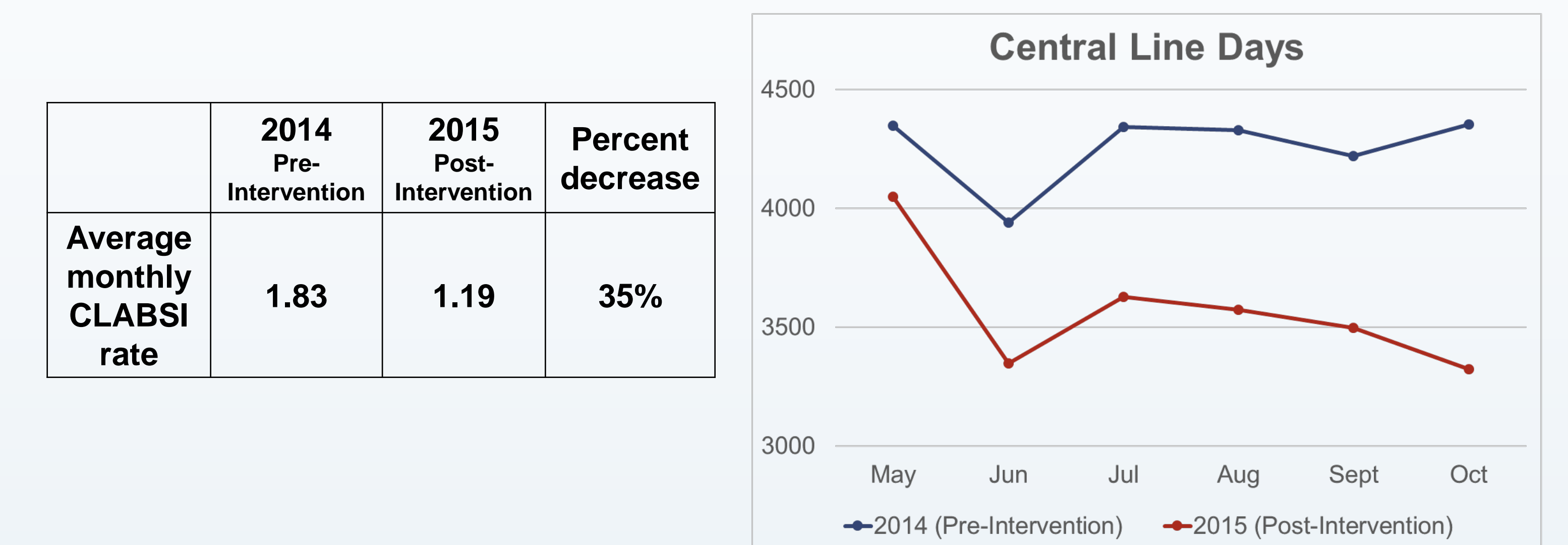
Resident Director Team

- Residents/fellows were assigned different units and floors of each hospital in the system
- Widget was incorporated in the EMR that tracked each device placed in a patient.
- Resident and fellow directors assessed and identified devices daily that did not meet accepted, evidence-based criteria
- The directors regularly communicated with the primary team as well as hospital and nursing administrators to assess for removal in these cases

Results



Results



Conclusions

- After initiation of intervention, there was a decrease in the average monthly CAUTI rates by 61%
- There was a decrease in the average monthly CLABSI rate by 35%
- Both urinary catheter days and central line days were decreased post-intervention
- The implementation of a team of residents and fellows assessing for inappropriate central venous and urinary catheters in combination with education regarding appropriate use and care of these devices can potentially lead to a decrease in the rates of CAUTI and CLABSI infections