



Unified Quality Improvement  
Symposium

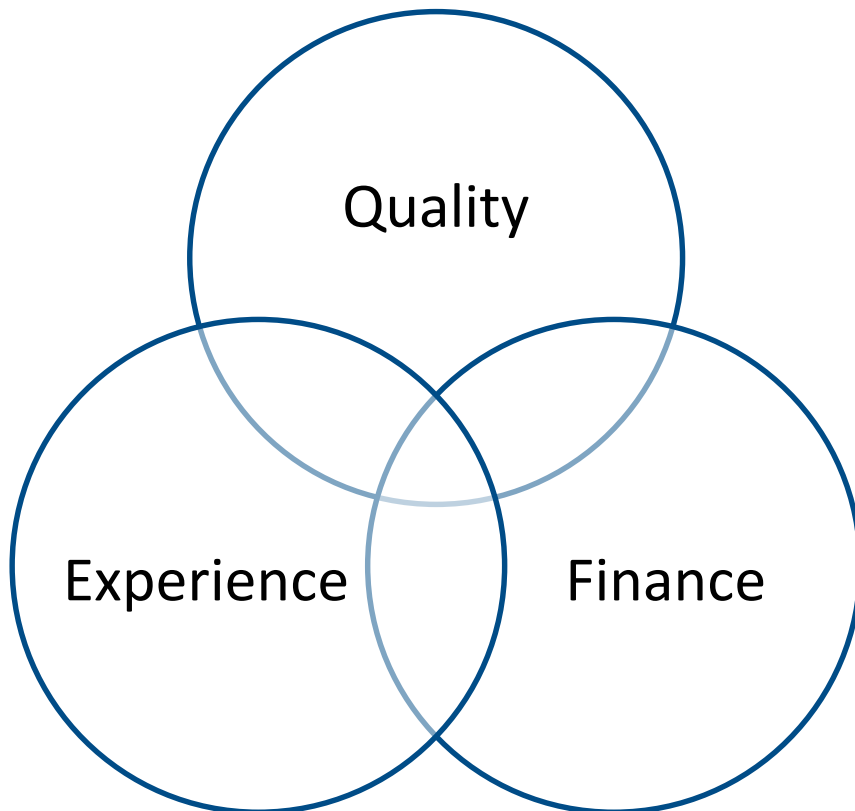
January 31, 2018



# A Collaborative Approach to Reducing Central Line-Associated Blood Stream Infections (CLABSI)

Diana Layne RN, MSN, CPHQ

# Significance



- Estimated 30,100 CLABSIs occur in ICUs and acute wards annually<sup>1</sup>
- Between 84,000 and 204,000 CLABSIs per year resulting in 25,000 preventable deaths accounting for up to \$21 billion in costs annually<sup>2</sup>

<sup>1</sup>CDC National and State Healthcare Progress Report. 2014. Available at: <https://www.cdc.gov/HAI/pdfs/progress-report/hai-progress-report.pdf> Accessed January 15, 2018

<sup>2</sup> Umscheid CA, Mitchell MD, Doshi JA, et al. Estimating the proportion of healthcare-associated infections that are reasonably preventable and the related mortality and costs. *Infect Control Hosp Epidemiol* 2011;32(2):101–14.

# Collaborative Team Members



**Tara Stroud**  
**252-816-3742**

[Tara.Stroud@vidanthealth.com](mailto:Tara.Stroud@vidanthealth.com)

**Vickie Downing**  
**252-847-9157**

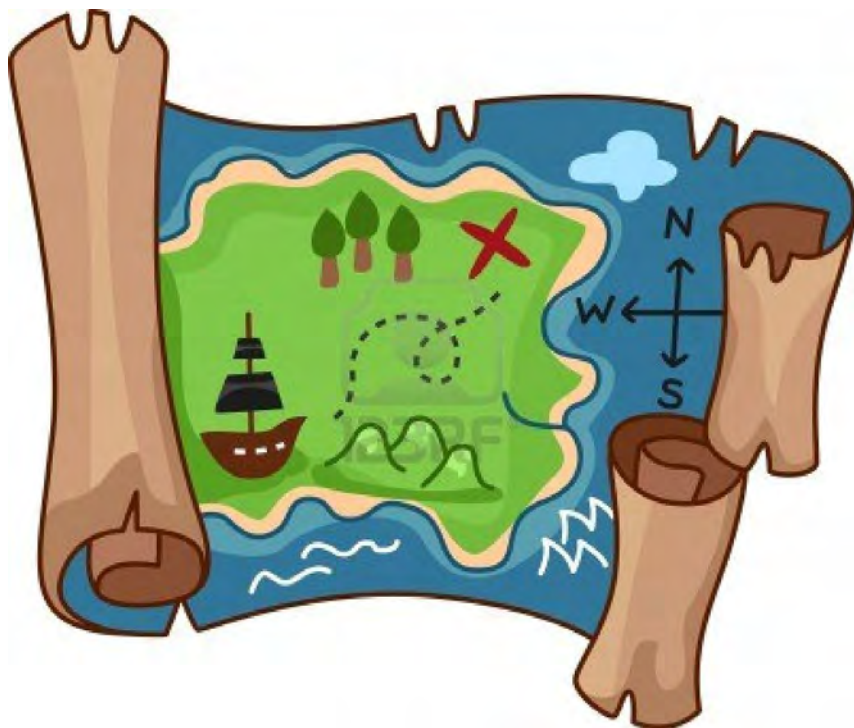
[VDowning@vidanthealth.com](mailto:VDowning@vidanthealth.com)

# Project Aim



Achieve VMC FY' 2017 reduction target of 7% over prior year performance by September 2017

# Roadmap to Success



- Utilize data to drive improvement
- Identify existing gaps
- Develop a strategy to mitigate drift

# Recognizing Improvement

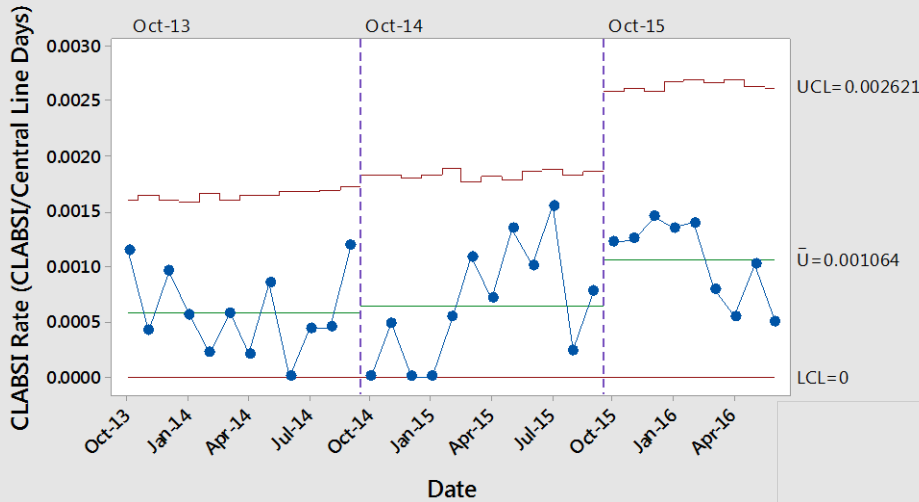
## Improvement occurs when:

- Raw numbers of CLABSI are decreased
- Best practice performance improves
- Improved outcomes on independent third party assessment



# The Starting Line

VMC Central Line Blood Stream Infection Rate  
October 2013-June 2016



Tests are performed with unequal sample sizes.

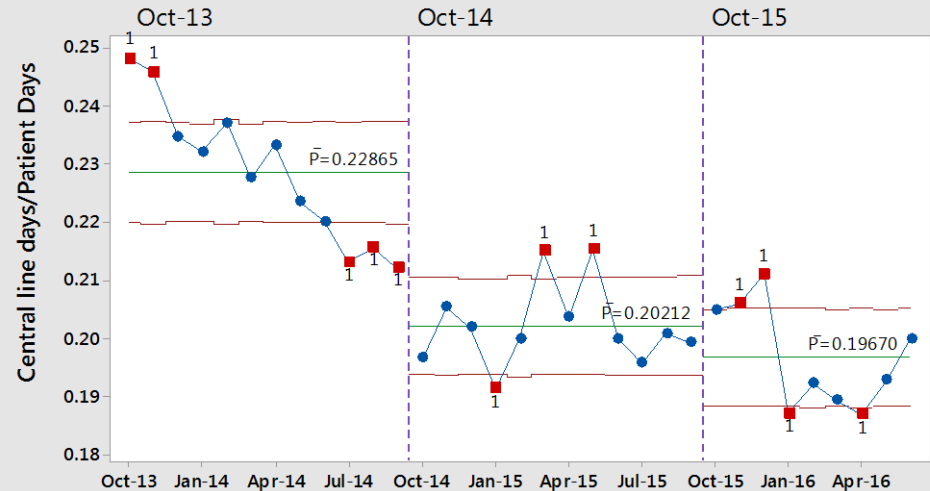
Rate of infection continued to rise



While utilization continued to decrease



VMC Central Line Utilization  
October 2013 - July 2016

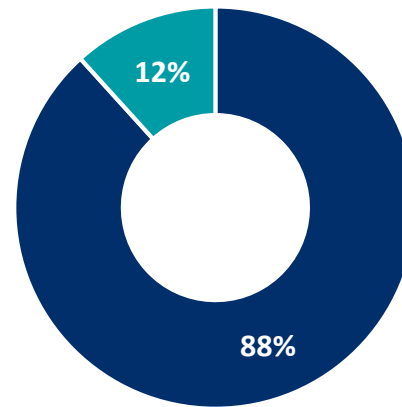


Tests are performed with unequal sample sizes.

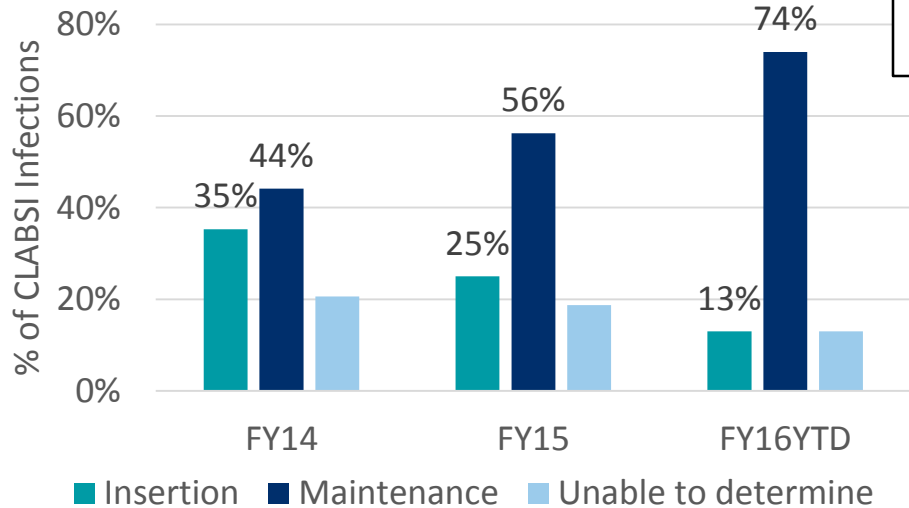
# More to the Story

Best practice bundle compliance FYTD was not highly reliable only a single month was above 95%

### CVL Best Practice Bundle Compliance FY 2016 (n-819)



### Insertion vs Maintenance FY14-FY16YTD



Maintenance related infections are increasing while insertion related are decreasing



# Initial Assessments 98 Assessments

All Line Assessment  
98 total observations

- 10 elements to prevent infection

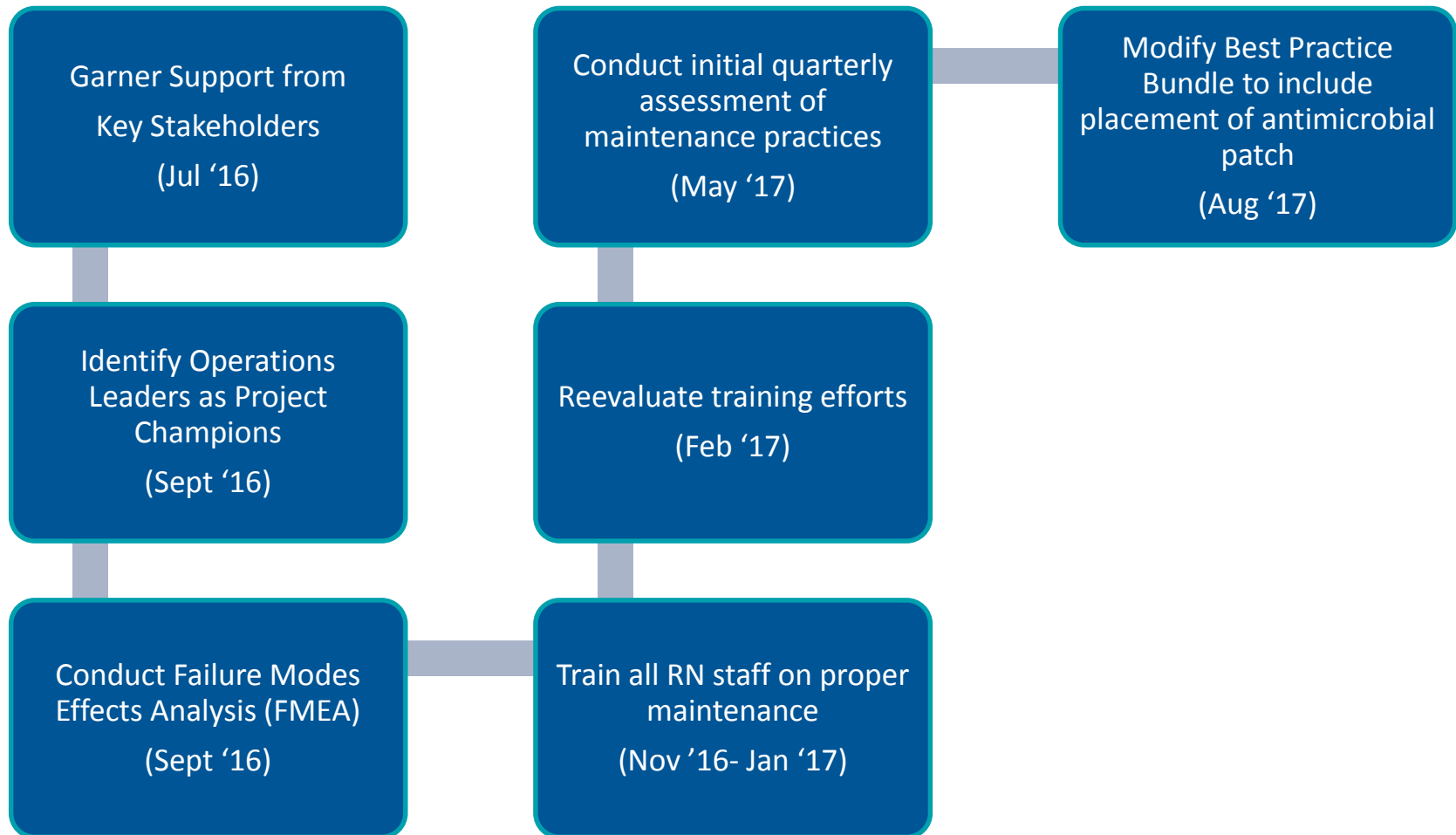
- Dressing observation (6)
- **CHG presence (3)**
- Focused on catheter securement (1)

Staged Assessment  
39 total observations

- 4 critical skills

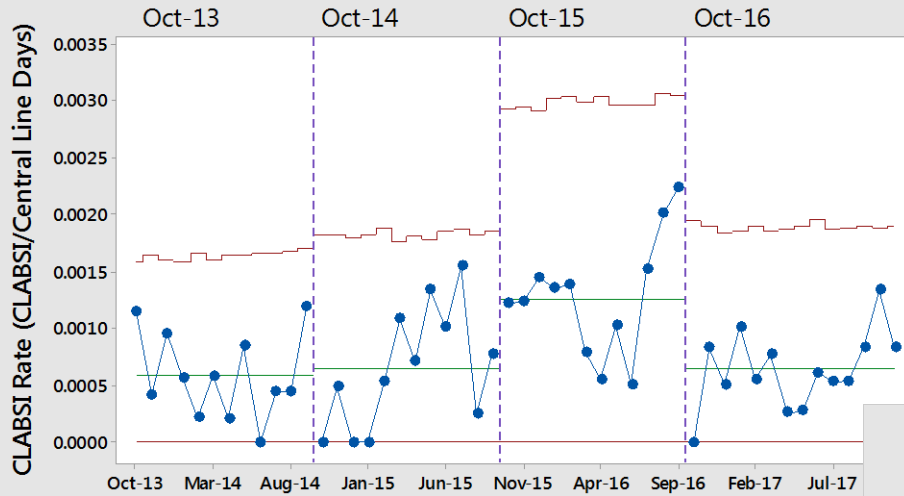
- **Dressing change**
- **Blood draw**
- Flush/medication administration
- Hub maintenance

# The Progression



# The Finish Line

VMC Central Line Blood Stream Infection Rate  
October 2013 - November 2017



Tests are performed with unequal sample sizes.

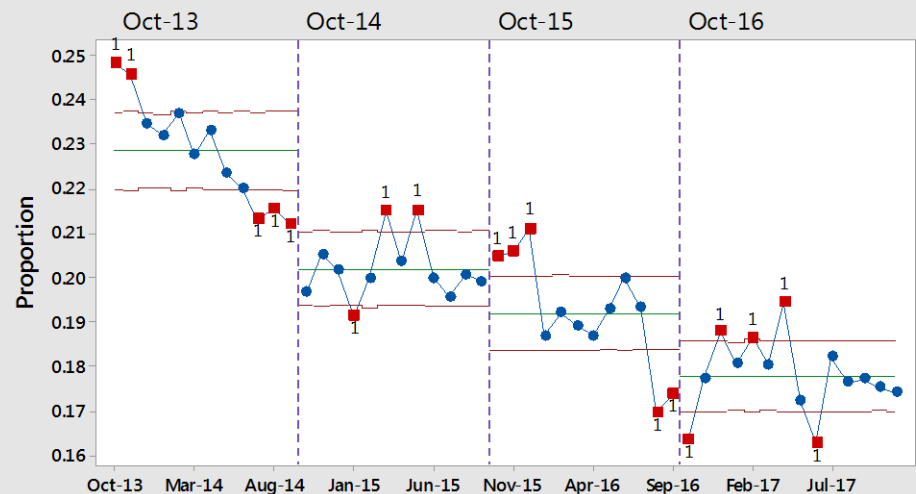
Rate of infection  
decreased



While utilization  
continued to decrease



VMC Central Line Utilization  
October 2013 - November 2017



Tests are performed with unequal sample sizes.

# Follow up Assessment 118 Assessments

**All Line Assessment**  
118 total observations

- 10 elements to prevent infection

- Dressing observation (6)
- **CHG presence (3)**
- Focused on catheter securement (1)

**Staged Assessment**  
39 total observations

- 4 critical skills

- Dressing change
- Blood draw
- Flush/medication administration
- **Hub maintenance**

# Obstacles to Change

Analysis  
Paralysis

What if

Group Think

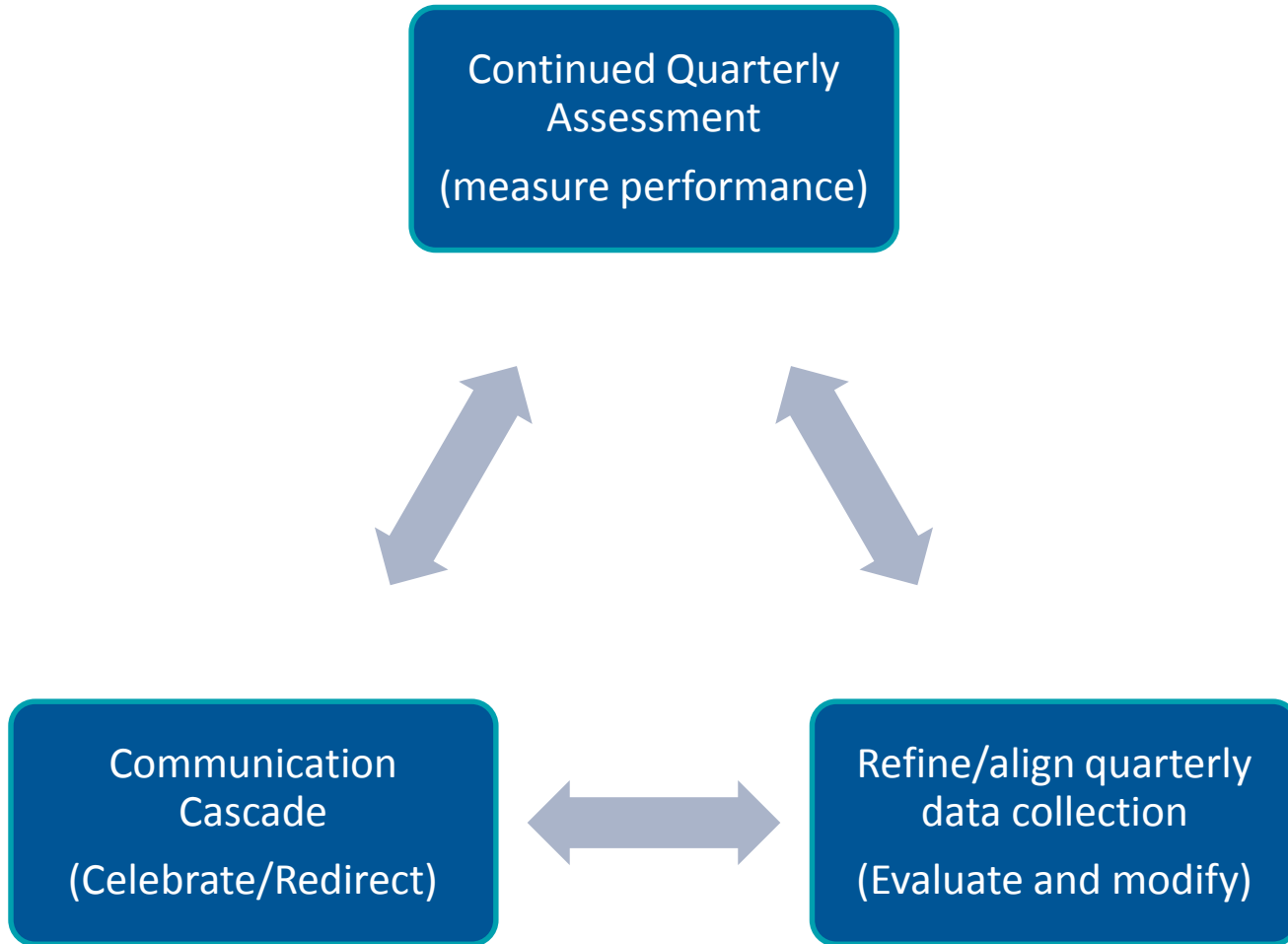
That is just  
how we do it

# Lessons Learned Through QI Efforts



Just remember the mistakes you made yesterday are helping you make the right decisions today that you will be proud of tomorrow- *Mark Amend*

# Preventing Drift





**Diana Layne, RN, MSN, CPHQ**  
**252-847-2512**  
**[dlayne@vidanthealth.com](mailto:dlayne@vidanthealth.com)**