

ICU Chlorhexidine Gluconate (CHG) Daily Bathing:  
The Effect of a Targeted Education Intervention on  
Staff Compliance and Healthcare Acquired  
Infections

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KHA CONVENTION

LEXINGTON KY

# Introduction and Healthcare Significance

One out of 25 hospitalized patients in the United States (US) are affected by a Hospital Acquired Infection (HAI) (US Dept. of HHS, 2017). Healthcare acquired infections cause an annual estimate of nearly 90,000 deaths (Stone, 2014). Practicing good infection prevention and control measures aids in decreasing HAIs.

- Increased morbidity and mortality
- HAIs are a costly burden to healthcare organizations
- HAIs are part of the Center for Medicare and Medicaid services penalty program, thus hospitals have dollars at risk

# Objectives

- To provide a targeted educational intervention for nurses and patient care associates (PCAs) to increase compliance of daily Chlorhexidine Gluconate (CHG) bathing among ICU patients.
- To answer the clinical question: how does a targeted educational intervention for nurses and PCAs affect CHG bathing compliance, and the reduction of Hospital Acquired Infections specifically Catheter Associated Urinary Tract Infections (CAUTIs) and Central Line Associated Blood Stream Infections (CLABSIs)?

# Methods

- Theoretical Framework: Donabedian (Structure, Process, Outcome)
- Design: Plan-Do-Study-Act (PDSA) cycle to formulate and structure the educational intervention
- Intervention and Tools: Targeted educational intervention based on the Agency for Healthcare Research and Quality's (AHRQ) universal ICU decolonization toolkit (AHRQ, 2013)
- Face-to-face training during mandatory staff meetings on February 27th, 2018 during AM, noon, and PM

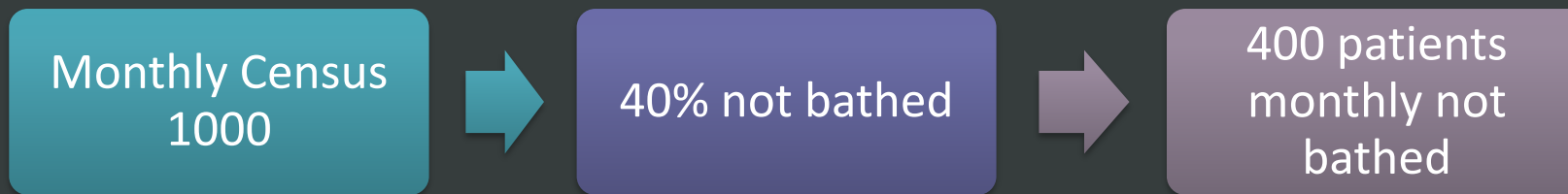
## Results

	<b>Mean</b>	<b>Std. Dev.</b>
<b>Pre-test</b>	<b>87.64</b>	<b>11.08</b>
<b>Post-test</b>	<b>99.55</b>	<b>2.98</b>

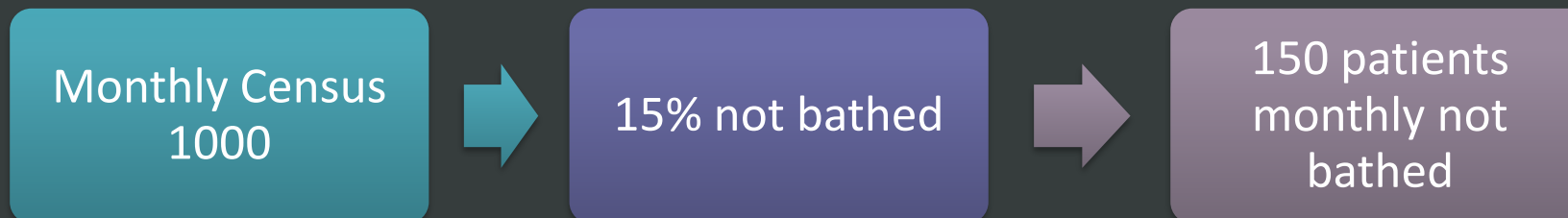
# Results

## CHG Compliance Data Findings

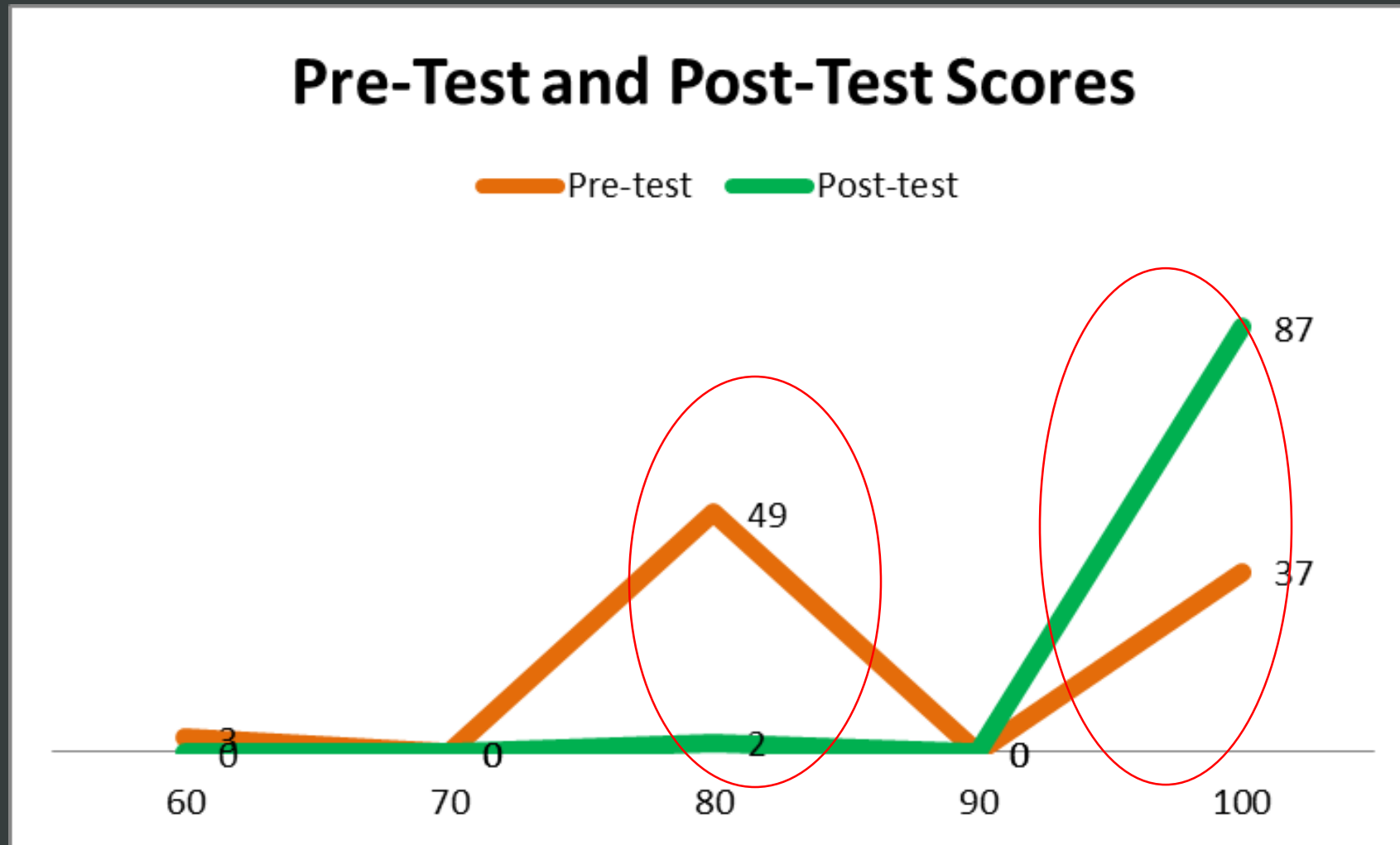
### **Pre-intervention (1/1/18 -1/13/18) compliance 58%**



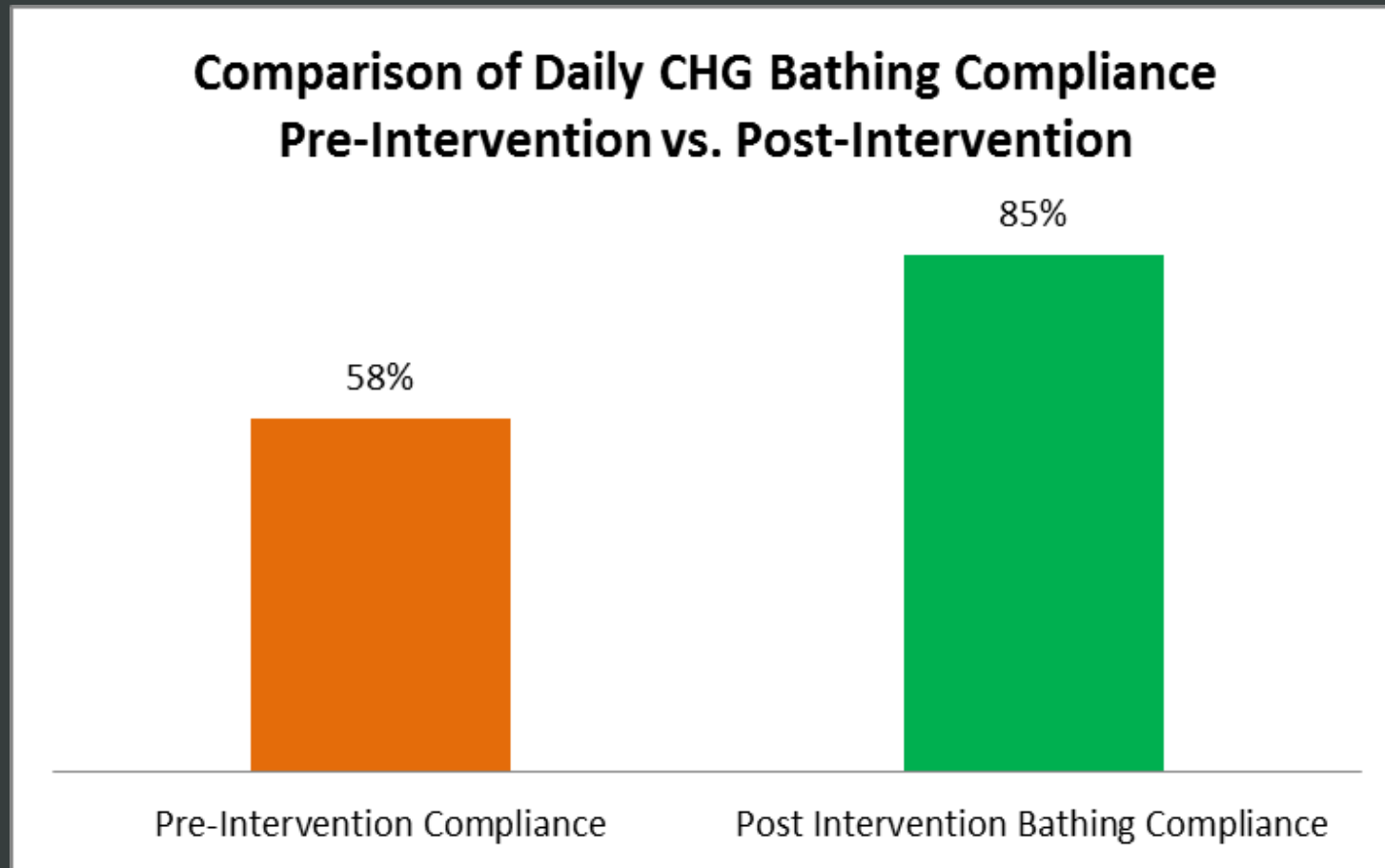
### **Post-intervention (2/28/18-3/12/18) compliance 85%**



# Data Analysis



# Data Analysis





# Discussion

- 75% of the employees completed the face -to-face training and assessment (89 out of 120)
- 73% scored 100 percent or greater on post-test
- According to the paired T-test the pre-and post-test average scores were higher than pre-test scores:  $t=9.39$ , P-value;  $P=0.00$
- Percent difference between pre-and post- intervention compliance data 46.6%
- According to Chi-square test more patients were bathed due to increase in CHG compliance  $X=68.96$ ,  $P<.000$

# Limitations

- Small sample size ( $N < 100$ )
- Intervention and improvement period too short (less than 30 days)
- Unable to determine HAI impact due to timeframe

# Recommendations

- Offer face-to-face training in other units of the hospital
- Audit compliance regularly for accountability
- Discuss the importance of CHG bathing during multi-disciplinary rounds daily
- CHG baths upon admission

# Conclusions

- Compliance increased post intervention 46.6%
- The results of this improvement project suggest that a knowledge deficit may influence CHG bathing compliance

# References

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