



PennState
College of Nursing

Evaluating A Skin Antisepsis Protocol To Decrease Cesarean Surgical Site Infections In Women With Increased BMIs

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Clinical Significance

- ❖ Over 1.3 million annual cesarean deliveries (Martin et al., 2016)
- ❖ Maternal obesity and CD rates high (CDC, 2016; Ngai et al., 2012)
- ❖ Complications of CDs increase as BMI increases
- ❖ Surgical Site Infections (SSIs) common complication
- ❖ BMI an independent risk factor
- ❖ Skin antisepsis prevents SSIs.
- ❖ Study hospital experienced a significant increase in CD SSI rates



Literature Search

Literature Themes included:

- ❖ SSI relationship to CD
- ❖ Independent risk factors of CD SSI
- ❖ Correlation between elevated BMIs and CD SSIs
- ❖ Skin Antisepsis to prevent CD SSIs
- ❖ Skin Antisepsis Guidelines

Project Methodology

- ❖ Quantitative Quality Improvement Design
- ❖ Retrospective Electronic Health Record Reviews
 - ❖ Pre and Post Protocol Implementation
- ❖ Semirural community hospital in Central Pennsylvania
- ❖ Participants
 - ❖ Inclusion Criteria
 - ❖ Exclusion Criteria



Patient Demographics

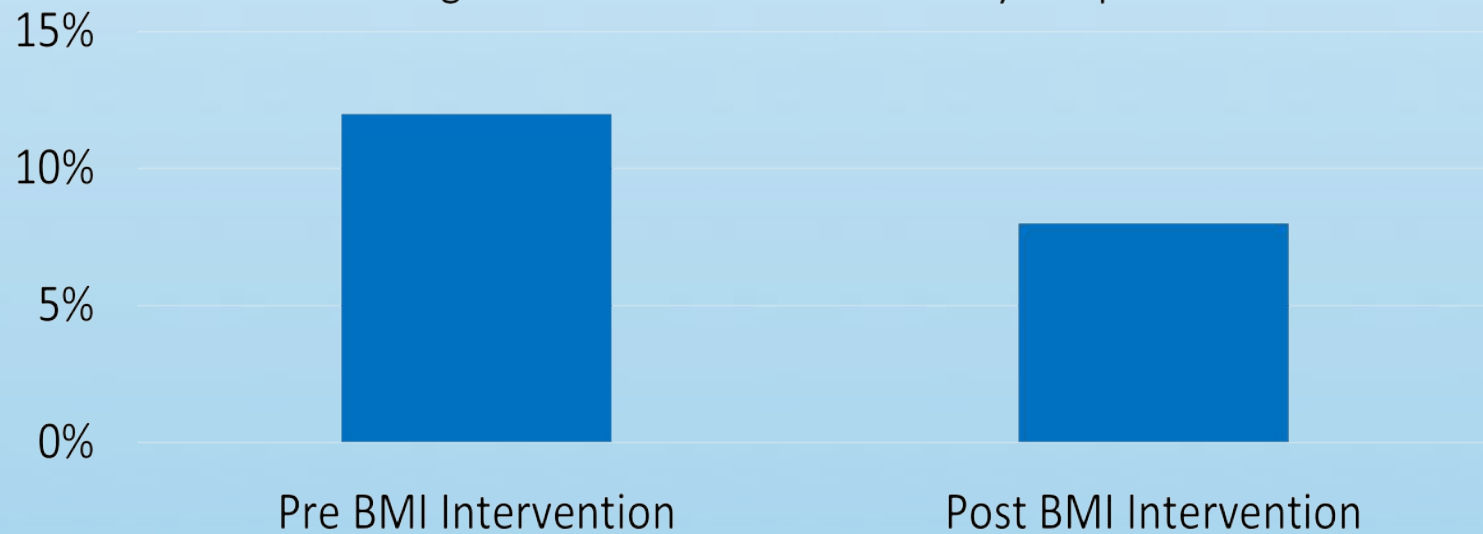
Variable	Historical <i>n</i> = 17	Intervention <i>n</i> = 12
Maternal age (years)	26.8 ± 4.0	28.5 ± 4.0
Infant gestational age (weeks)	39.1 ± 0.7	39.4 ± 0.5
Maternal weight (pounds)	244.8 ± 47.5	249.2 ± 28.5
BMI (body mass index)	43.6 ± 5.4	42.7 ± 5.8
Estimated blood loss (ml)	535.3 ± 39.6	366.7 ± 165.0
Length of surgery (minutes)	67.9 ± 23.4	87.1 ± 12.7

Statistical Significance of SSI Rates

Difference	0.034
<i>z</i> (observed value)	0.000
<i>z</i> (critical value)	1.960
<i>p</i> -value (two-tailed)	1.000
α alpha	0.05

Results

Surgical Site Infections Among Cesarean Delivery Patients with BMIs greater than 35 at Community Hospital



Conclusions and Implications

- ❖ QI project indicated clinical significance
- ❖ Both cohort groups demographically comparable with no independent variables predicting SSI
- ❖ Indicates feasibility and safety of continuing project



References

❖ Distributed by Handout