

Sustainability in Quality Improvement Project to reduce Surgical Site Infection after Cesarean Sections; Redefining Value

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LEARNING OBJECTIVES

1. Describe the burden of the surgical site infections (SSIs) after Cesarean Sections globally, its impact on patient and health care facilities and the need to reduce it.
2. Describe the aim to commence the quality improvement project and the aimed benchmark to reduce surgical site infections after Cesarean Section.
3. Identify and implement the key strategies in the pre-operative, operative, and postoperative period to reduce the risk of SSIs.
4. Describe methods implemented for sustainability.
5. Discussion of the results of the project

INTRODUCTION

- ✓ Surgical site infections (SSIs) represent a significant portion of health care morbidity and expense in most of the countries worldwide.
- ✓ SSIs are reported to complicate around 1.9% of operated patients, whereas SSIs after Cesarean accounts for 7-10% of the cases.
- ✓ SSIs after Cesarean Sections lead to significant increase in morbidity, re-admission, prolonged hospital stays and even mortality in unattended cases.
- ✓ It also causes psychological issues to the mother and her family. Recognition and implementation of evidence-based initiatives with a bundle approach to prevent and reduce SSI after CD may aid in optimizing maternal safety, while reducing cost.
- ✓ Sustainability in a QIP is a pivotal domain of quality in healthcare.
- ✓ It induces the need of implementing changes in a QIP which add value to the results.
- ✓ In a secondary level hospital of Qatar, a quality improvement project was proposed to reduce the SSIs from 8.3% in 2013
- ✓ SSI rates were reduced to 2.39% in 2015 and 1.47% in 2016. However, it was noted that in women with high risk for wound infection, the SSIs rate increased to 10.71% in the last quarter of 2016.
- ✓ To make the project sustainable, in the second quarter of the year 2017, changes were implemented and antibiotic prophylaxis was given to high-risk cases and the results were evaluated.

MATERIAL AND METHODS

The quality improvement project was commenced in 2014 and in the second quarter of the year 2017 changes were implemented for sustainability.

All women operated at our hospital by either elective or emergency Cesarean from third quarter of 2017 to 2020 were included.

Women who were operated in other facilities with SSIs were excluded.

A total of 8372 women were delivered by Cesarean section during the study period. SSIs rate was considered as the key performance indicator and a benchmark to reduce SSIs to one percent was assessed quarterly.

PDSA cycle was implemented.

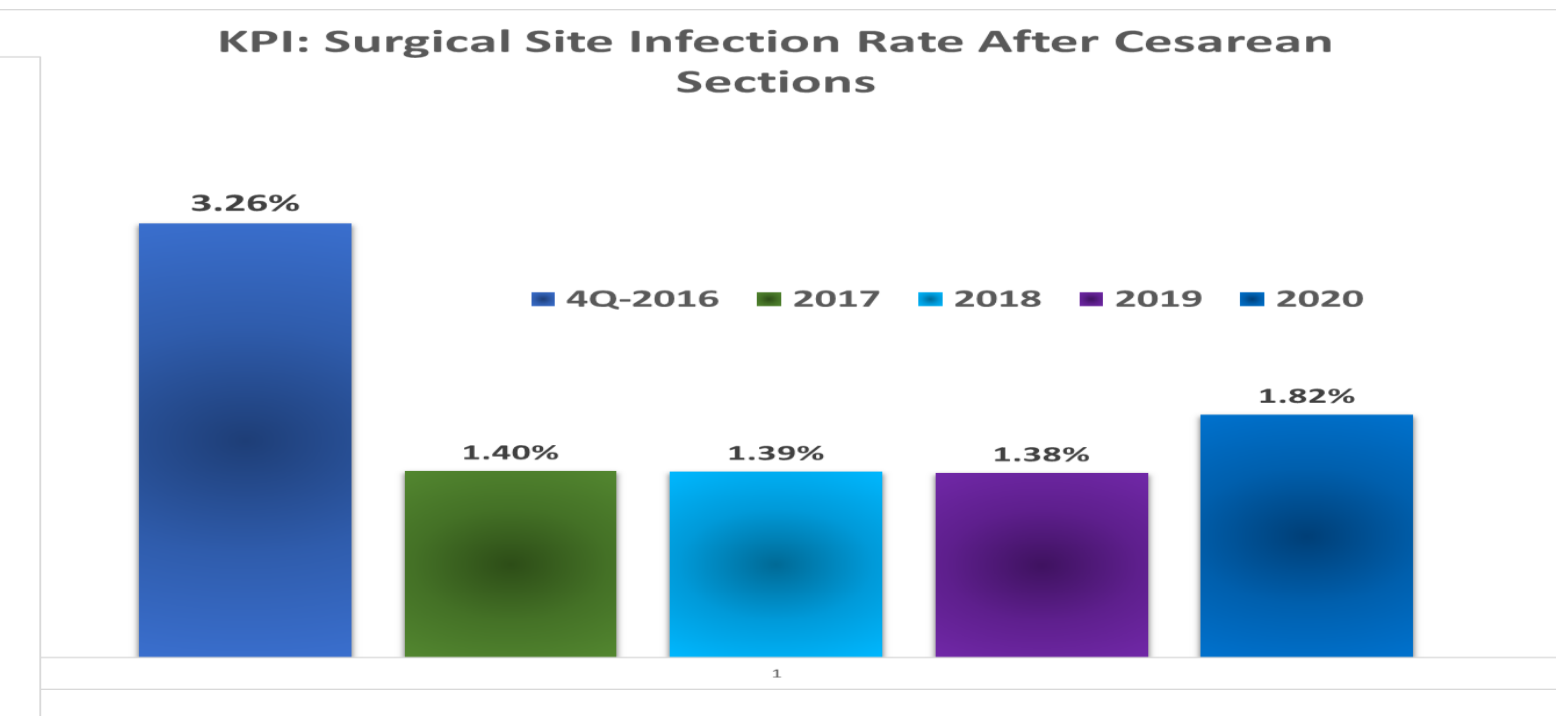
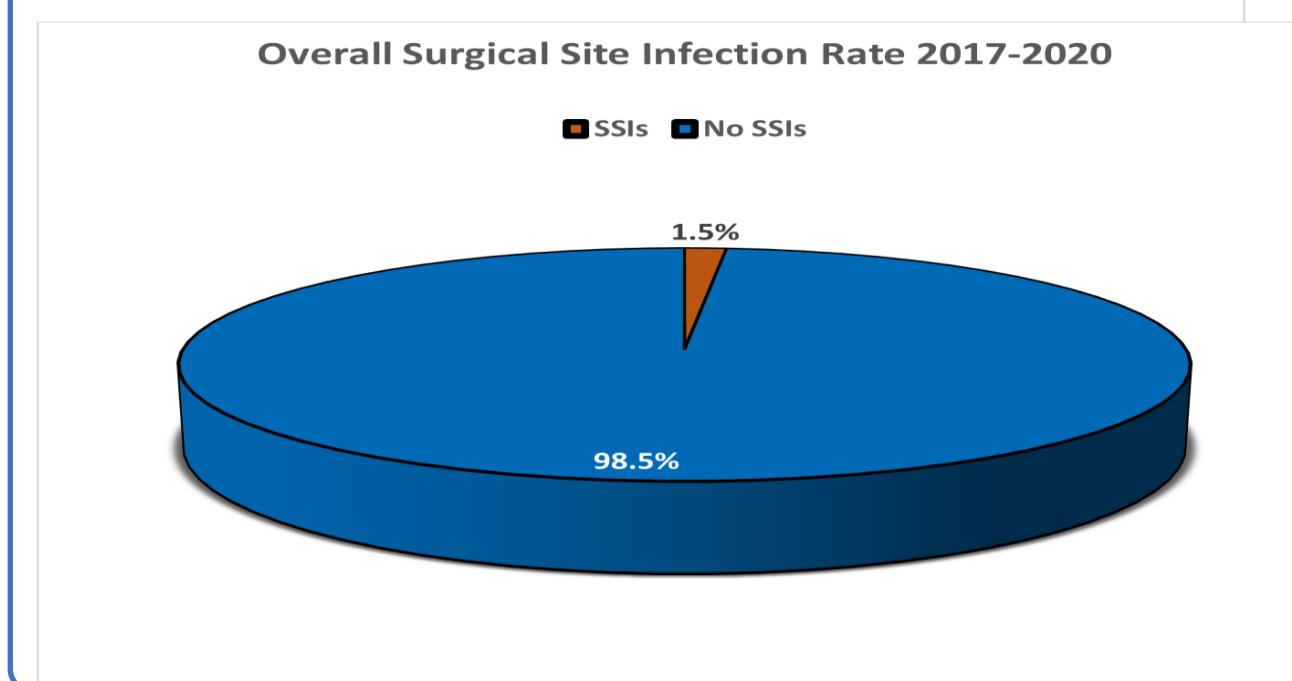
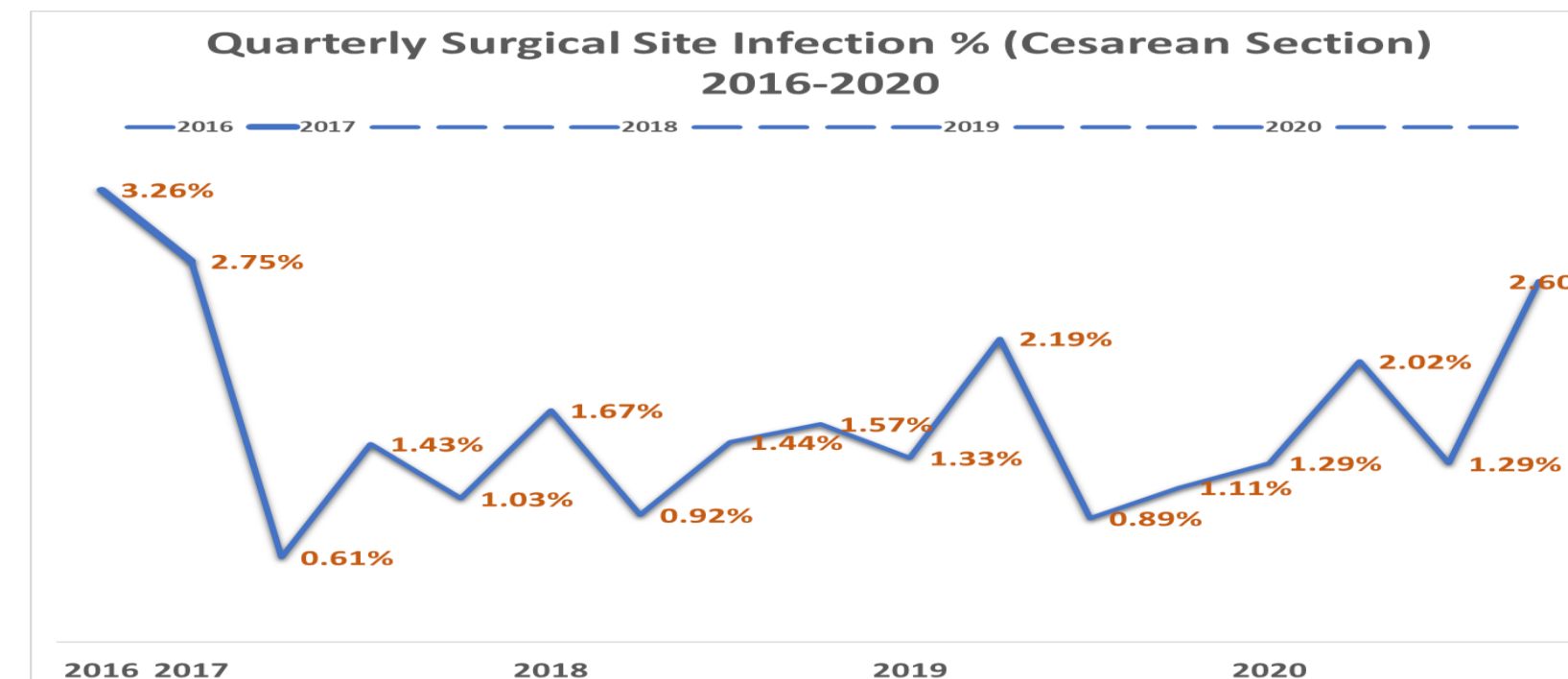
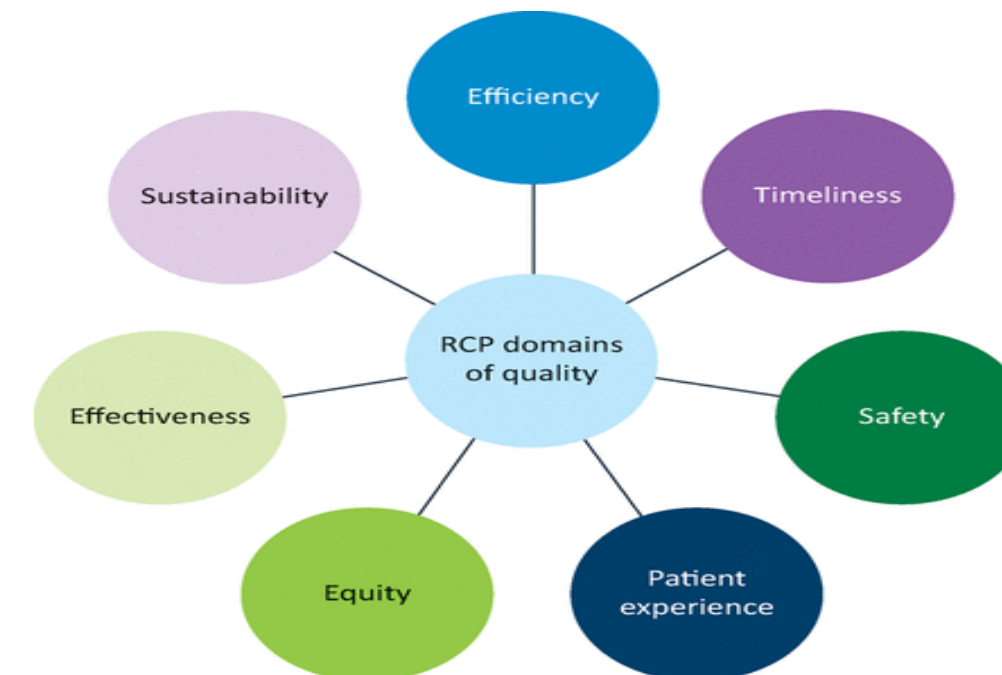
Plan -To reduce SSIs after Cesarean to one percent.

Do- A bundle of interventions was applied in the pre-operative, operative, and postoperative period.

Study: The project evaluation was re-commenced in 2017. The bundle was implemented, and the results were analyzed quarterly. Statistical evaluation was performed with Medcalc online software to analyze improvement in outcomes.

Act: The bundles were implemented for all patients undergoing Cesarean Section. The cases were audited every three months.

RESULTS



RESULTS

- ✓ The overall SSIs rate observed after implementation of changes in QIP was 1.51% (111 cases of SSIs out of 7370 Cesarean Sections). Significant decrease was noted (3.26% vs 1.51%) ($P < 0.001$)
- ✓ The project led to a great impact on quality.
- ✓ It reduced the rates of SSIs significantly.
- ✓ Reduced the duration of hospital stay and the cost of care.
- ✓ It also reduced the re-admissions due to SSIs.
- ✓ It had a great impact on patient satisfaction.

CONCLUSION

This project clearly proves that sustainability improves quality by immediate benefits and also motivates changes that redefine value.



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