Reducing Surgical Site Infection Rate after Caesarean Sections

PDSA 1 - PDSA 1 - To mount awareness of the O&G team to simple interventions to reduce the incidence of SSIs. Objective: Aim for sustainable improvement.

Plan: Dr Leibenson to present simple interventions to reduce SSIs to the O&G team.

Do: Presentation to the O&G team. Surgeons stayed for the length of the presentation, listened and asked questions regarding what practice change was feasible. This created interest.

Study: Change of practice commenced: Doctors adhere to chlorhexidine-alcohol antiseptic preparation.

Surgeons are confirming the timely administration of prophylactic antibiotic with the Anaesthetist prior to the skin incision.

Act: Practice is changing: We need to determine measures to sustain and to spread the change.

Results

- Overall infection rate in 2017 was 5.2% and 1.7% in 2018
- For patients with BMI>35 the infection rate was 10% in 2017 and 2.4% in 2018.
- Overall number of SSIs for BMI>35 in TRRH was similar in 2017 (25.7% of patients) and 2018 (23.7% of pts).

PDSA2 - Education sessions to newly commenced Obstetric Registrars and Locum Consultants

Objective: Aim for sustainable improvement.

Plan: Repeated training sessions. The permanent team will educate new and locum doctors about the bundled intervention strategy to reduce SSIs.

Do: Education takes place by the core team to new and locum doctors at the morning handover on day 1 of their term at TRRH.

Study: Improvement of compliance by non-permanent staff to the bundled strategy.

Act: Continue with same, to maintain sustainability.

Apply for Translational Research Grant, in order to spread and share the bundled strategy.

Discussion:

- We have achieved a dramatic reduction in SSI in all patients, and in particularly in morbidly obese patients, who are at much higher risk for significant infection already.

Discussion (cont):

- We have encountered difficulties with implementation of each aspect of the Bundle. Weekly discussions and multiple strategies to overcome obstacles (and PDSAs) took place.
- We can see gradual improvement of compliance over time.

Overall Outcome of Project:

- Our stretch goal was to achieve a 50% reduction in surgical site infection rate for patients after caesarean sections within 12 months.
- As the result of the implementation of the bundled interventions strategy the overall rate of infection dropped from 5.1% in 2017 to 1.7% in 2018, effectively reducing the infection rate by 67% and thereby fulfilling the stretch goal.

$Cost saving:

- Cost savings are estimated between USD 7,003 for superficial and USD 25,721 for deep infections.


Plans to spread and share change:

- We have applied for Translational Research Grant (TRG), which will enable to replicate the bundled strategy for four other maternity units in NSW.
- We are sharing the bundle results with our lucums and registrars on secondment, aiming for them to spread the change as well.
- I am presenting to the Anaesthetic department, to the Medical Staff Council, and others.