Comparison Study of Using Octenidine Body Wash Versus Soap and Water to Prevent MRSA Acquisitions

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Background

Methicillin-resistant *Staphylococcus aureus* (MRSA) is one of the most common multidrug-resistant organisms in healthcare settings. Infection control measures are important to control the transmission of MRSA. Antimicrobial body washes has been commonly used in healthcare facilities to reduce MRSA burden on the patient's body.

In our hospital, nurses use Octenidine body wash for patient's shower and Octenidine wash mitts for bed bathing. We realised that the current mode of showering and bed bathing was costly for non-MRSA patients and were curious to investigate whether the current MRSA acquisition rate could be maintained with alternative washing solutions.

Objectives

To compare the effectiveness of using Octenidine body wash versus non-antimicrobial body wash and water in preventing MRSA acquisition in patients between April 2017 to July 2017.

Methodology

Participants:

4 general wards were selected for the projects, 2 ward identified as intervention wards and the other 2 as control wards. All patients who admitted to the selected wards are screen for MRSA upon admission. Patient who were screened negative were recruited in the project and those who were screened positive were excluded.

Intervention Wards

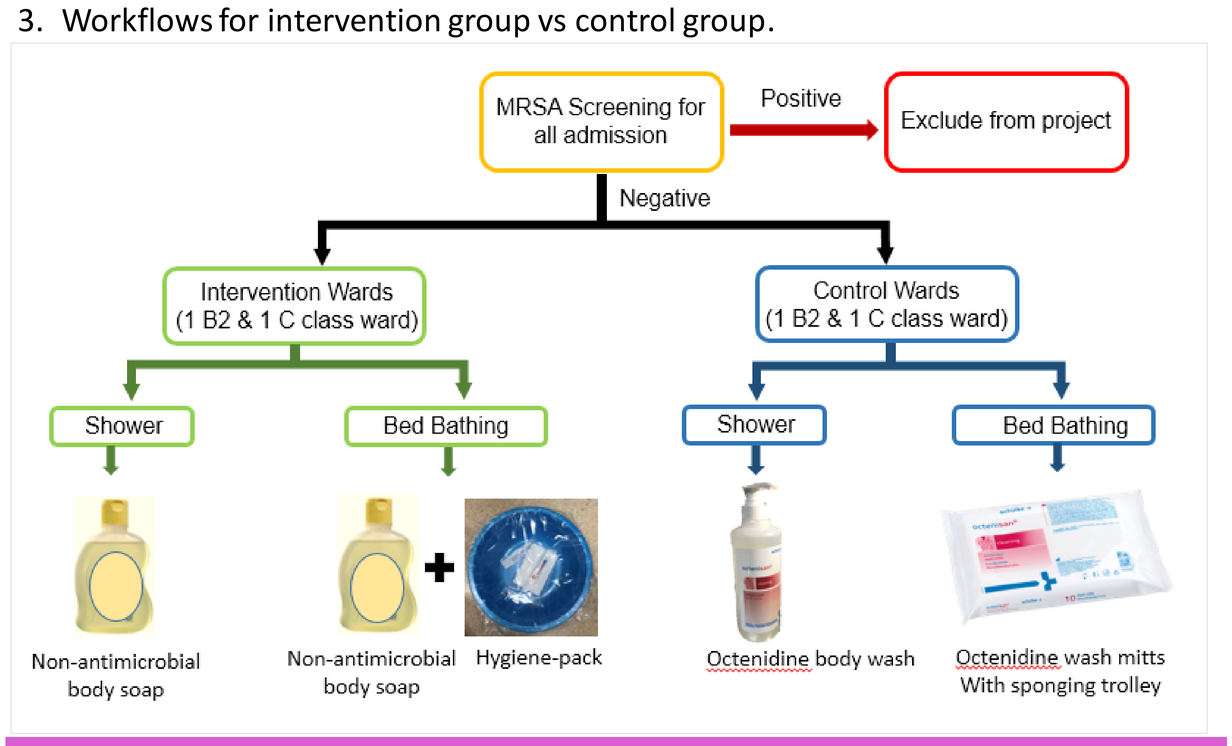
1. Non-antimicrobial body soap were used for showering ambulant patients.
2. Non-antimicrobial soap together with hygiene-pack and wash gloves for bed bathing.

Control Wards

1. Octenidine body wash were used for showering ambulant patients.
2. Octenidine wash mitts and sponging trolley were used for bed bathing.

Comparison Indicators

1. MRSA acquisition and MRSA bacteraemia rate.
2. Cost.
3. Workflows for intervention group vs control group.

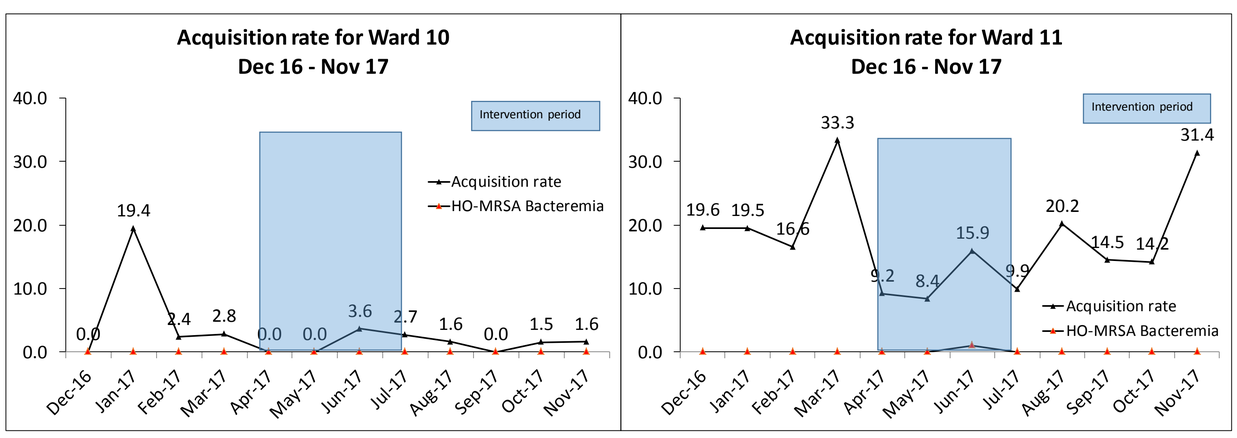


Results

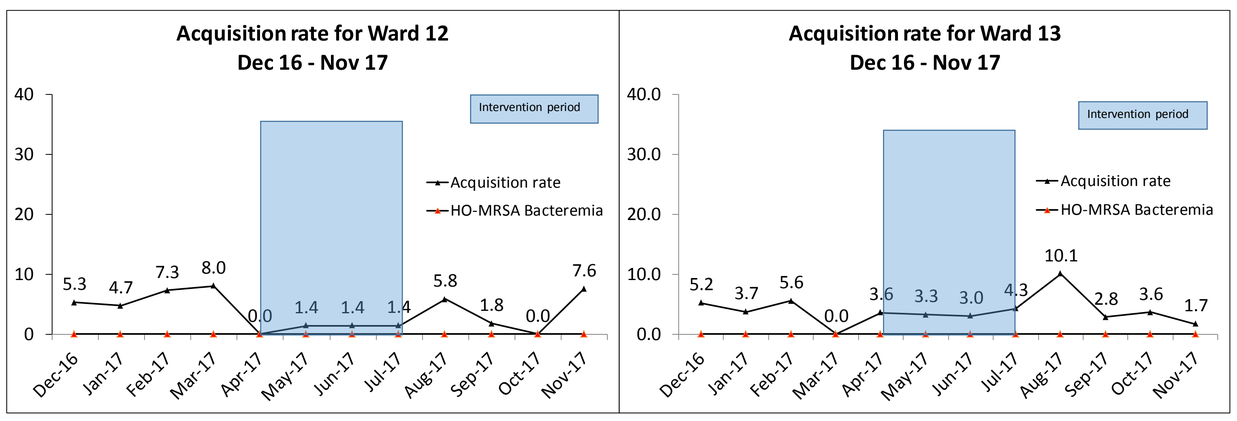
1. MRSA acquisition rate

No significant differences in MRSA acquisition and MRSA bacteraemia rate in both intervention wards. Additionally, MRSA acquisition per 1000 patient days was reduced from 6.6 to 1.1 in one of the intervention ward (Ward 12).

Control ward



Intervention ward



2. Cost analysis

a. Non-antimicrobial body soap vs Octenidine body wash

Estimated soap usage per month:

- 12000ml of Non-antimicrobial body soap
- 12000ml of Octenidine body wash

Cost saved per month when using normal body soap = SGD 68.88 (-58%)

Total cost saved during project period = **SGD 275.52**

b. Non-antimicrobial soap + hygiene pack + wash gloves vs Octenidine wash mitts

Estimated usage per month:

- 2400ml of Non-antimicrobial soap per month
- 860 pieces of wash gloves
- 30 sets of hygiene pack
- 860 pieces of Octenisan wash mitts

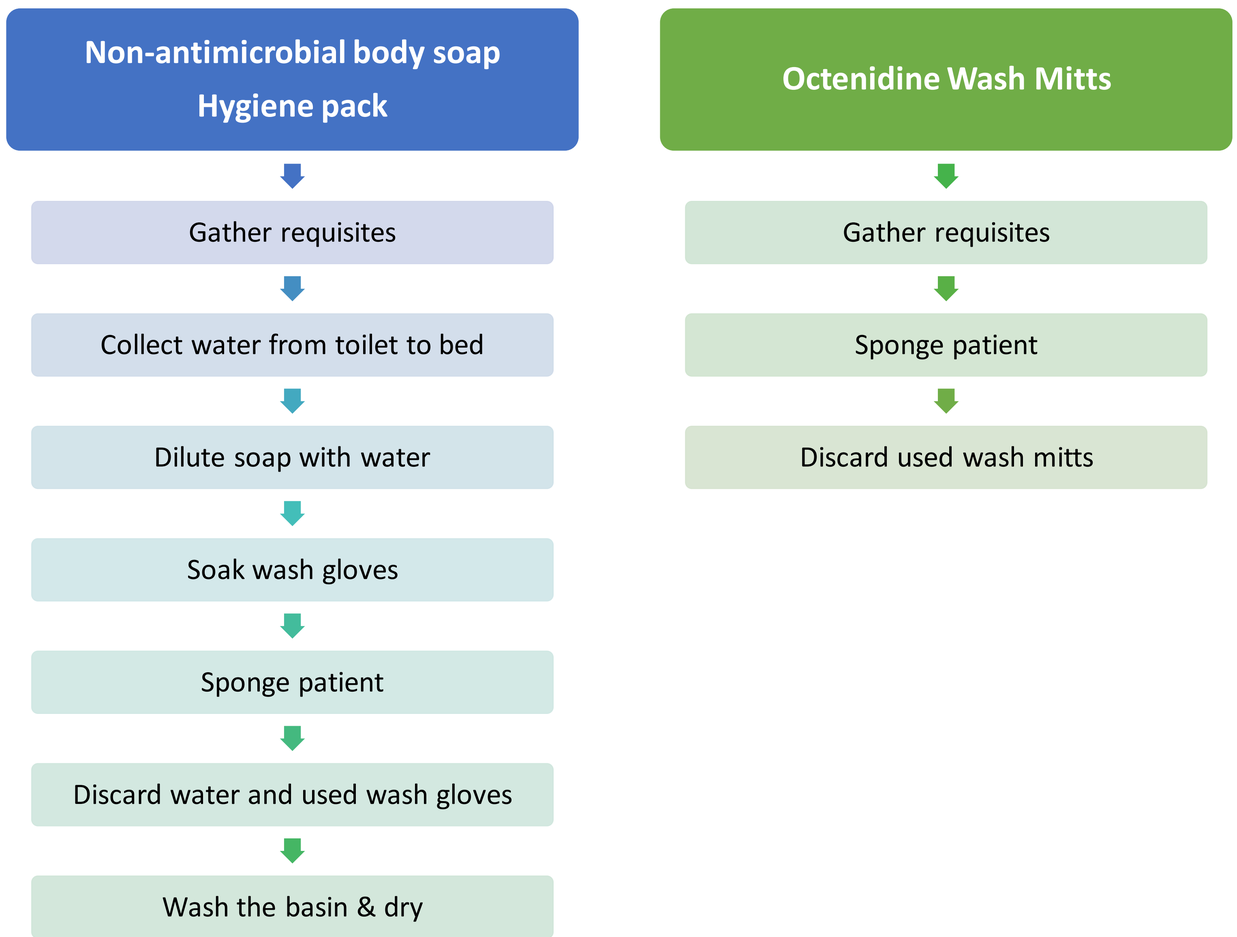
Cost saved per month when using non-antimicrobial body soap + hygiene pack + wash gloves = SGD 653.48 (-76%)

Total cost saved during project period = **SGD 2613.92**

3. Feedback on workflows

	Octenisan Wash Mitts	Non-antimicrobial body soap + Hygiene pack + Wash gloves
Positive Feedback	• Ready for use. • Disposable.	• Individual hygiene pack to each patient is good to reduce cross contamination.
Negative Feedback	• Costly	• Time consuming, more steps in preparation/clearing. • Spillage of water during preparation or disposal. • Space restriction when using it and storing it. • Patient requested to rinse even though non-rinse soap were used.

Comparison of Bed Bathing Workflow



Conclusion

There was no significant differences between the use of Octenidine body wash and non-antimicrobial body wash in preventing MRSA clinical infection acquisition. Non-antimicrobial body soap is cheaper than Octenidine body wash. After receiving staff feedbacks, the streamlined workflow is to segregate body soap for showering patient and body wipe for bed bathing in our new hospital.