

# Routine Cleansing of Patients with Chlorhexidine Gluconate 2% wipes for containment of MDROs in a Medical ICU



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## 1. INTRODUCTION

- Up to 2009, a 28 bed ICU suffered from several outbreaks of Methicillin resistant *Staphylococcus aureus* (MRSA), Quinolone resistant *Enterobacter aerogenes* (QREA) and Meropenem resistant *Pseudomonas aeruginosa* (MRPA) infections.
- In 2007 and 2008, patients daily cleansing consisted of different regimes
- Surveillance cultures (urine, bronchial aspirate) were performed routinely 3x/week and cohorting of MDRO-infected and colonized patients was implemented during outbreaks
- All patients with expected ICU stay > 48 hrs were screened for MRSA upon admission in the ICU.

## 3. METHODS

- In 2007 every ICU patient got a daily cleansing with liquid soap. All MRSA patients got a daily cleansing with povidone iodine 7.5% soap during the MRSA decontamination period.
- In 2008 every ICU patient including MRSA patients got a daily cleansing with povidone iodine 7.5% soap.
- From January 1 till December 31, 2009, all patients were cleansed daily with Chlorhexidine Gluconate 2% wipes. (6 wipes/patient) according to the procedure of the firm. All healthcare workers were informed, instructed and received feedback from the ICU head nurses and the infection control nurses. No changes in other preventive measures were implemented. MDROs status was screened as before.

## 2. OBJECTIVES

**Reduction of Multidrug Resistant Organisms (MDROs) incidence by modified daily cleansing procedure.**

## 4. RESULTS

In 2009 no more MRSA, QREA and MRP outbreaks occurred on the ICU.

The incidence of MDRO colonisation decreased significantly ( $P < 0.05$ ).

In 2009 5.349 packs of antiseptic body cleansing washcloths were used on the ICU. Patients who were dirty were washed with water and soap.

Other indicators e.g. compliance with hand hygiene, use of antibiotics, consumption of hydro-alcoholic hand solution, ... did not change significantly.

**MDRO INCIDENCE/1000 admissions and daily cleansing procedure on ICU in AZ SINT-JAN HOSPITAL**

		2007	2008	2009
Incidence/1000 admissions on ICU	MRSA	9.97	15.19	0.95
	QREA	8.16	19.94	4.75
	MRPA	9.07	14.25	5.70
Daily cleansing procedure on ICU	All ICU patients	LS	PID	CHG
	MRSA patients	PI	PID	CHG

### Legend

- Number of patients colonized or infected
- LS: daily cleansing with liquid soap
- PI: daily cleansing with povidone iodine 7.5% soap during the MRSA decontamination period
- PID: daily cleansing with povidone iodine 7.5% soap
- CHG: CHG 2% 6 wipes/patient daily

## 5. DISCUSSION AND CONCLUSION

- Since other variables like compliance with hand hygiene, use of broad-spectrum antimicrobial agents, average of length of stay, bed occupation and staff to patient ratio did not differ significantly in 2009 compared to 2008, our data suggest that daily cleansing with CHG 2% wipes is an effective intervention for outbreak containment.
- Further investigation is warranted in order to demonstrate the causal relationship between daily cleansing with CHG 2% wipes and reduction in MDRO incidence.