

# Daily chlorhexidine bathing to reduce bacteraemia in critically ill children: a multicentre, cluster-randomised, crossover trial

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Published LANCET, online Jan. 28, 2013

## **Objective:**

A multicenter, randomized trial to assess whether daily bathing with chlorhexidine gluconate (CHG) compared with standard bathing practices would reduce bacteraemia in critically ill children.

## **METHODS:**

The authors performed a randomized unmasked (non-blinded) multisite two-arm crossover clinical trial in 5 hospitals and 10 pediatric intensive care units. Patients were randomly assigned a daily bathing protocol for patients older than 2 months. Five units employed SAGE® 2% CHG cloths for antiseptic patient bathing and the other 5 units employed NON-antiseptic SAGE® Comfort Bath for six months. The patient cleansing methods were crossed over (switched) for another six months with a washout period (washout = the units took a break from the protocols for two weeks). The study was not blinded meaning the staff knew the identity of the Control (Comfort Bath) and Treatment options (2% CHG Cloths).

- After screening 6,482 patients 4,947 patients were enrolled in the study with the Intent To Treat (ITT group). However 875 additional exclusions occurred due to lack of consent or other reasons. 4,072 patients remained in the study and received either the treatment or control Per Protocol (PP group). Thus, the study results are only based on the Per Protocol groups.

## **KEY RESULTS:**

1. "Critically ill children receiving daily CHG bathing (cloths) had a ***lower incidence of bacteraemia*** compared with those receiving a standard bathing routine (soap & water or Comfort Bath™)."
  - **36% Reduction in Bacteraemia (BSI) [p=0.044]**
2. "Furthermore, the treatment was ***well tolerated***."
  - Less than 1% of patients discontinued use due to sensitivity.

## **HOW TO POSITION WITH PRODUCT :**

- The authors recommend the use of the 2% CHG Cloths for all patients in the ICU as an effective means of source control to reduce MDRO transmission and BSI. This is in contrast to screening and providing specific infection prevention protocols to colonized or infected patients.
- The 2% CHG Cloth provided statistically significant clinical results (outcomes) for bacteraemia reduction in infants 2 months of age and older.
- This protocol was well tolerated on infants over 2 months of age including cardiac patients.
- The cloths are easy to use and require less time than soap & water bathing.
- These results demonstrate that daily antiseptic cleansing in 2% CHG Cloth is well established in the published literature, counting now with large randomized controlled trials (trials even larger than many expensive pharmaceutical drugs currently used in hospitals).

## **QUESTIONS TO ENGAGE STUDY:**

- Do you have a quality initiative group in place to prevent patients' pathogens acquisitions, and control of important infections in the pediatric ICU environment? Who belongs to this group? How could we share these clinical data with them?
- What literature supports the clinical-effectiveness of your current program for reducing transmission of pathogens and source control centered in patient cleansing? What microorganisms are your main concerns in the pediatric population?
- Describe the protocols or set of instructions that your facility is using now for patient bathing in the ICU? What are thoughts about the medical literature showing that basins and water harbor pathogens?
- What evidence-based BSI prevention protocols do you rely on for your high risk patients? Could we discuss the references that support this protocol?