

BACKGROUND

The United States Department of Health and Human Services estimates hospital-acquired infections (HAIs) cause tens of thousands of people to die each year, and the economic impact on the healthcare system is in the billions.¹ Infection prevention focuses strongly on preventing cross contamination of bacteria to prevent HAIs, and is a primary concern for hospitals nationwide. Multiple bundles of care have been published for preventing HAIs, and every bundle requires multiple steps for prevention.^{2,3}

One of the most overlooked items in the patient's hospital room may be a source for cross-contamination of bacteria. In 2008, Johnson et al published a manuscript in which they discussed bacterial contamination of patient bath basins.⁴ In 2008, 98% of 92 bath basins tested positive for some type of bacterial flora. The common use of bath basins has not changed since that article, and continues to be commonly used as a "catch all" in hospitals.

Though the intended use is for patient baths, they are inevitably utilized for transportation of food, storage of wound supplies, emesis, and often incontinence clean up. The "multifunctionality" of patient bath basins and ease of access provides multiple opportunities for bacterial cross-contamination.

Point Prevalence: A point prevalence study was conducted on 20 bath basins of patients who were bedbound from 2 separate nursing units (Medical/Surgical & ICU).

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Laboratory Methods [data quoted from ATL Lab Code: 1204-1366 report]:⁵

Patient's Bath Basin: Friend or Foe

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METHODS

Sampling Methods: All bath basins were emptied of contents and cultured using a sterile sponge by one nurse. After labeling the sponge, it was mailed to an outside laboratory.

• "The laboratory qualitatively screened the microbial population of each sponge for Gram-negative bacilli, vancomycin-resistant Enterococcus and methicillin-resistant Staphylococcus aureus.

• The sponges were received in individual sterile bags.

 Upon receipt in the laboratory, approximately 20 mL of trypticase soy broth was introduced into each bag and each sponge was thoroughly manipulated to release organisms.

• The sponge and enrichment fluid were incubated for 48 ± 4 hours at $35^{\circ} \pm 2^{\circ}$ C and struck onto selective/differential agars for the isolation of Gram-negatives, Enterococcus spp., vancomycin-resistant Enterococcus, S. aureus and methicillin-resistant S. aureus.

 Organisms were presumptively confirmed where appropriate by various techniques, including Gram stain, catalase test, latex test, and coagulase test. Methicillin resistance for coagulase-positive, Grampositive cocci was determined by streaking to Oxacillin Resistance Screening Agar. Vancomycin resistance for catalase-negative, Grampositive cocci on m-Enterococcus agar was determined by streaking onto Brain Heart Infusion (BHI) Agar with 6 µg/mL vancomycin."



The patient bath basin may be a reservoir for bacteria, and could be overlooked as a source for bacterial transmission.

 The results of the study were shared with Senior Nursing Management, Nurse Managers, and the Clinical Practice Council.

• As a result of this small study, bath basins were removed from patient rooms for bathing and replaced with disposable bath cloths.

• Educational worksheets were provided on nursing units, which described the bathing process with disposable bath cloths.

• The wound care nursing staff developed a new process for storing wound care supplies, to ensure bath basins were not utilized.

• Once the qualitative results were shared with staff, the entire team was motivated to prevent cross contamination of bacteria due to bath basins.

ACKNOWLEDGMENT

We thank Grace Umejei for her quick response to this study by changing the storage practice for wound care supplies and MedBio Publications for expertise and assistance in developing this poster.

DISCLOSURE

Sage Products Inc. supported the cost of processing the cultures and development of the poster.

REFERENCES

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