3M™ Skin and Nasal Antiseptic (Povidone-Iodine Solution 5% w/w [0.5% available iodine] USP) Patient Preoperative Skin Preparation and 3M™ DuraPrep™ Surgical Solution (Iodine Povacrylex [0.7% available iodine] and Isopropyl Alcohol, 74% w/w) Patient Preoperative Skin Preparation Bactericidal Activity Against Methicillin-Resistant Staphylococcus aureus

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**Introduction**

With the emergence of drug-resistant pathogens, additional susceptibility testing is needed for antiseptic skin preps. We hypothesized that mupirocin non-susceptible and vancomycin-intermediate MRSA isolates would be susceptible to 3M Nasal and Skin Antiseptic. We also hypothesized that the same vancomycin-intermediate MRSA isolates would be susceptible to 3M DuraPrep Surgical Solution.

**Methods**

- 20 mupirocin non-susceptible MRSA isolates (Mayo Clinic and NARS)
- 24 vancomycin-intermediate MRSA isolates (Mayo Clinic and NARS)
- ATCC 29213 vancomycin-, methillin-, and mupirocin-susceptible S. aureus isolate
- ATCC 43300 vancomycin-, mupirocin-susceptible S. aureus isolate

**Results**

- 20 mupirocin non-susceptible MRSA isolates tested with 3M Skin and Nasal Antiseptic had a MBC range of 0.06 to 0.25 μg/ml. The MBCs and MBC\textsubscript{90} were both 0.25 μg/ml for available iodine (Table 1).
- 24 vancomycin-intermediate MRSA isolates tested with 3M Skin and Nasal Antiseptic had a MBC range of ≤0.06 to 0.25 μg/ml. The MBCs and MBC\textsubscript{90} were ≤0.06 and 0.25 μg/ml, respectively (Table 2).
- 24 vancomycin-intermediate MRSA isolates tested using 3M DuraPrep Surgical Solution had a MBC range of 1.4 μg/ml. The MBCs and MBC\textsubscript{90} were 2.0 μg/ml (Table 2).

**Conclusions**

- 3M Skin and Nasal Antiseptic is effective in killing mupirocin non-susceptible MRSA.
- 3M DuraPrep Surgical Solution is effective in killing vancomycin-intermediate MRSA.