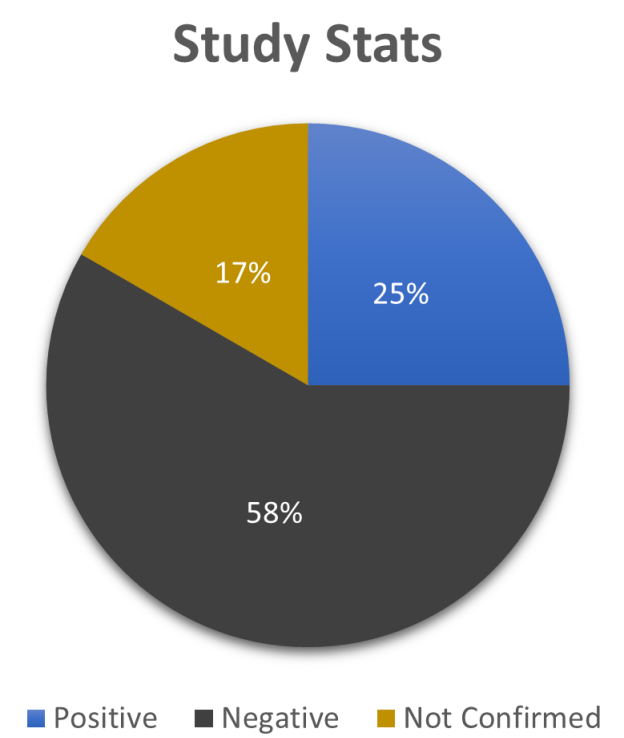


Daily Use of Antibacterial Soap and/or Ethanol-Based Hand Sanitizer Does Not Affect Carriage of *Staphylococcus aureus*

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My Study Statistics



Of the 12 swabs I have tested this semester, three have been confirmed positive, seven have been confirmed negative, and two are not yet confirmed.

Conclusion

The results indicate that the use daily use of antibacterial hand soap and/or hand sanitizer has no influence on a person's carriage of *S. aureus*.

Acknowledgements

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Introduction

The pathogen *Staphylococcus aureus* is a common skin bacteria that is found in about 30% of the population. *S. aureus* is a commensal bacteria, meaning that it normally lives on skin without causing harm. However, it does have the potential to cause certain infections. Since 2016, Concordia research students have been collecting nasal swabs from consenting adults on the Concordia University Saint Paul Campus. So far, 1065 swabs have been collected. 910 of those swabs have been tested. 247 of the tested swabs have been positive resulting in a 27.1% carriage rate. These swabs are then tested using various culture tests to test for *S. aureus*.

Materials and Methods

Cultures are first grown on Tryptic soy agar and then tested on MSA

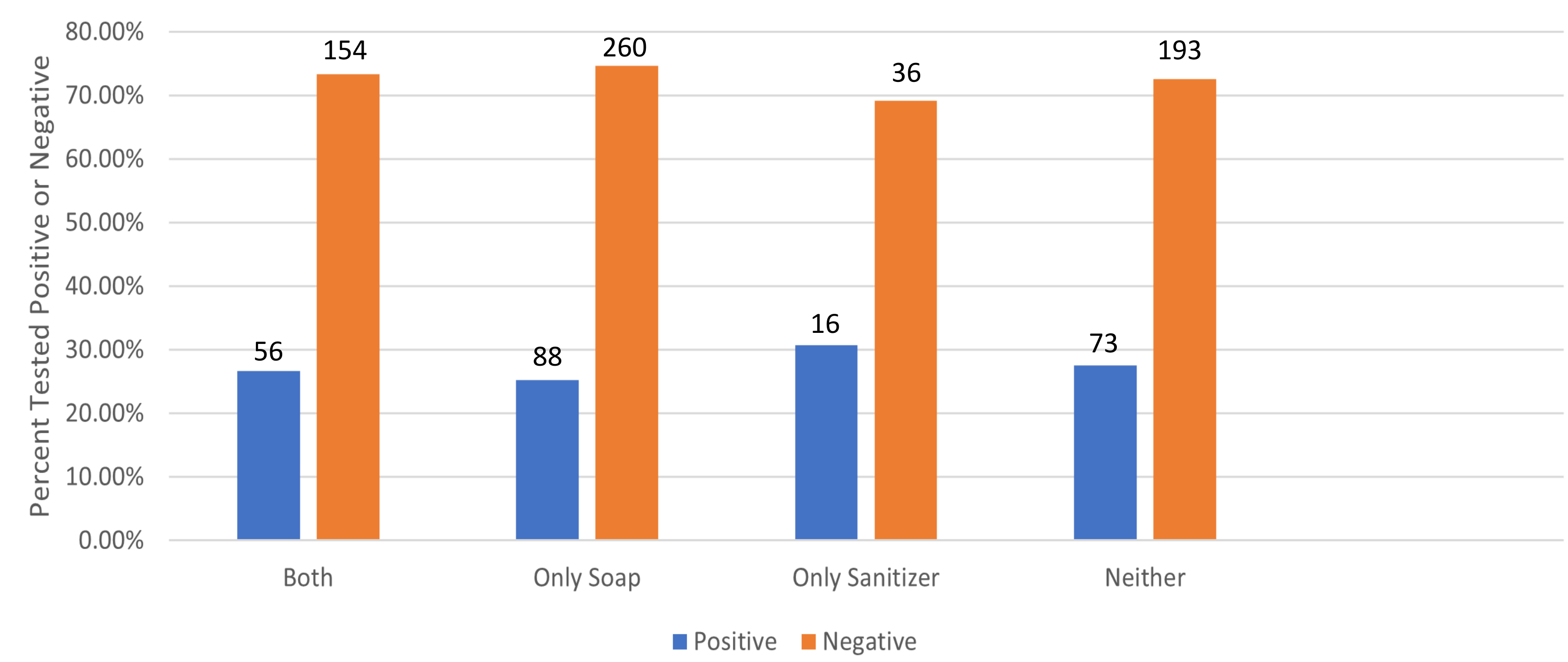
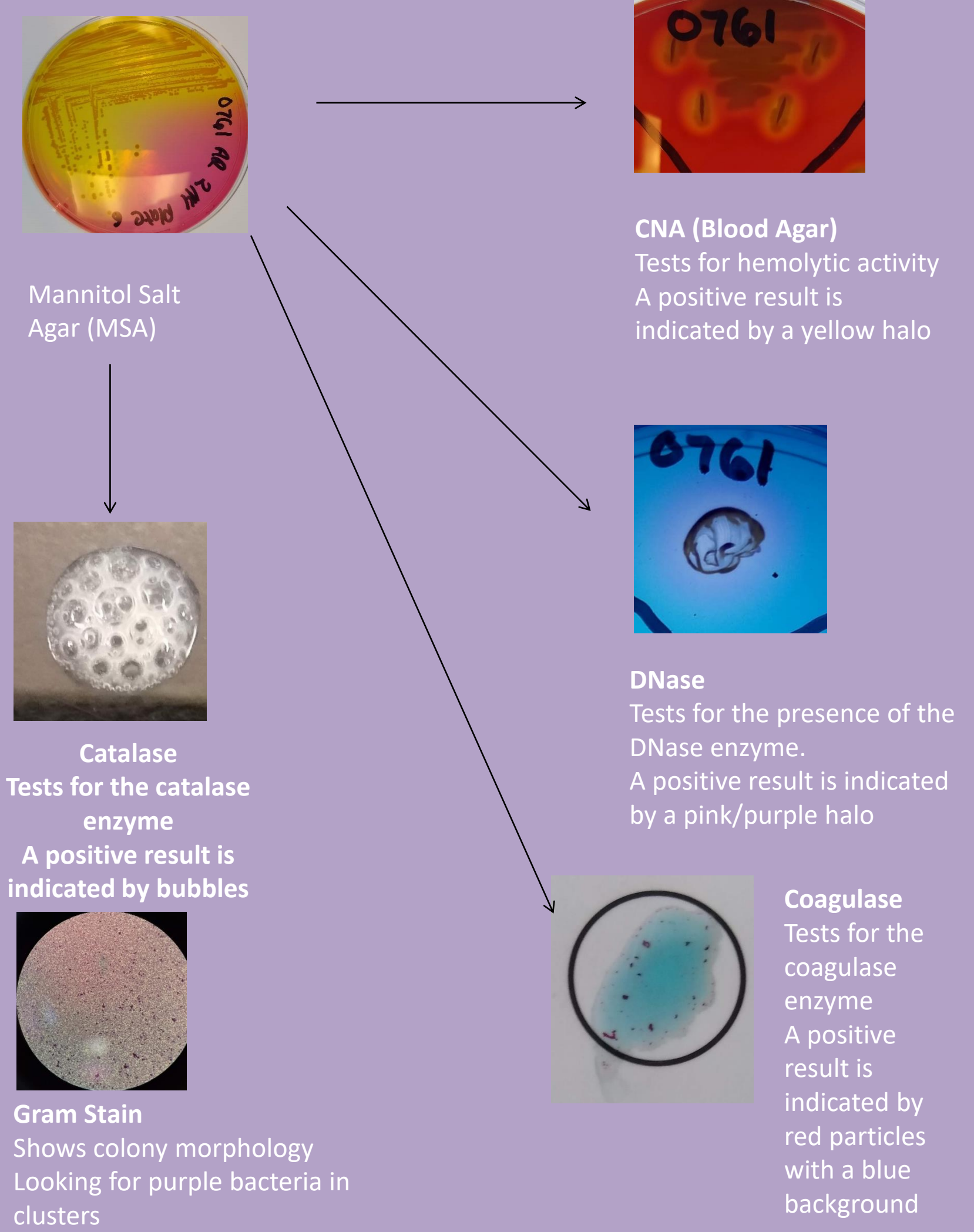


Figure 1 Percent of Participants That Tested Positive or Negative for Carriage of *S. aureus* That Use Antibacterial Hand Soap, Ethanol Based Sanitizer, Both, Neither, or No Answer(above): So far, 880 swabs have been confirmed as positive or negative. Of the confirmed negative swabs, 36 use only ethanol-based hand sanitizer daily, 260 use only antibacterial hand soap, 193 use neither, and 154 use both ethanol-based sanitizer and antibacterial hand soap. Of the confirmed positive swabs, 88 use antibacterial hand soap, 16 use only ethanol-based hand sanitizer, 73 use neither, and 56 use both ethanol-based hand sanitizer and antibacterial hand soap.

Results

In the group that used both, 26.67% tested positive and 73.33% tested negative. In the group that only uses antibacterial soap, 25.29% tested positive and 74.71% tested negative. In the group that only uses hand sanitizer, 30.77% tested positive and 69.23% tested negative. In the group that uses neither, 27.56% tested positive and 72.56% tested negative.

Discussion

There is no significant difference in carriage rates across any of the four groups. This result indicates that the daily use of antibacterial soap and ethanol-based hand sanitizer does not influence a person's carriage of *S. aureus*.