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## Sanitation in the Residence Hall Bathrooms

John Cotter

*Worcester Polytechnic Institute*

Nate Sauer

*Worcester Polytechnic Institute*

Camneil Daly

*Worcester Polytechnic Institute*

Connor Darling

*Worcester Polytechnic Institute*

Louis Sarro

*Worcester Polytechnic Institute*

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## Abstract

- A common problem on college campuses is the rampant spread of infectious diseases, and illness in the communal residence hall bathrooms.<sup>2</sup>
- Products such as hand sanitizer and anti-bacterial metal finish for bathroom doors, will lower the rate of illness and improve student health.<sup>1</sup>

## Introduction

- Students health suffers nationally at college. The heart of this problem is in residence hall bathrooms.<sup>1</sup>
- The failure to wash one's hands leads to the harboring of illness in high traffic areas such as bathroom doors.<sup>1</sup>
- Bathroom doors require your hands to exit. This allows transfer of bacteria to those who do wash their hands.<sup>2</sup>
- A secondary source of sanitation, such as Purell or Microban, would improve the health of students.<sup>3,4</sup>
- Attendance rates, and therefore grades, suffer from poor student health. <sup>2</sup>

## Need and Approach

- Need-** To address the problems with current sanitary conditions in the residence hall bathrooms that may be contributing to student illness.
- Approach-** Investigate current bathroom cleaning policy, implement a survey to find student need, and research an effective and cost efficient way to improve sanitation.

## Methods

**Survey-**To assess student need, we surveyed 439 people, from every grade, and every residence hall.

**Bacteria Cultures-**We swabbed the doors of each residence hall bathrooms to check for bacteria.

**Interview-** We contacted Tom Moreau to learn about current cleaning policy.

**Research-**Looked into possible solutions.

*1<sup>st</sup> Solution-*Purell<sup>3</sup>

- Kills 99.99% of most common germs.
- Uses 100% naturally renewable, plant-derived ethanol(Green Product).

*2<sup>nd</sup> Solution-* Microban<sup>4</sup>

- After day of application, most bacteria eliminated.
- Better for preservation, not human health.



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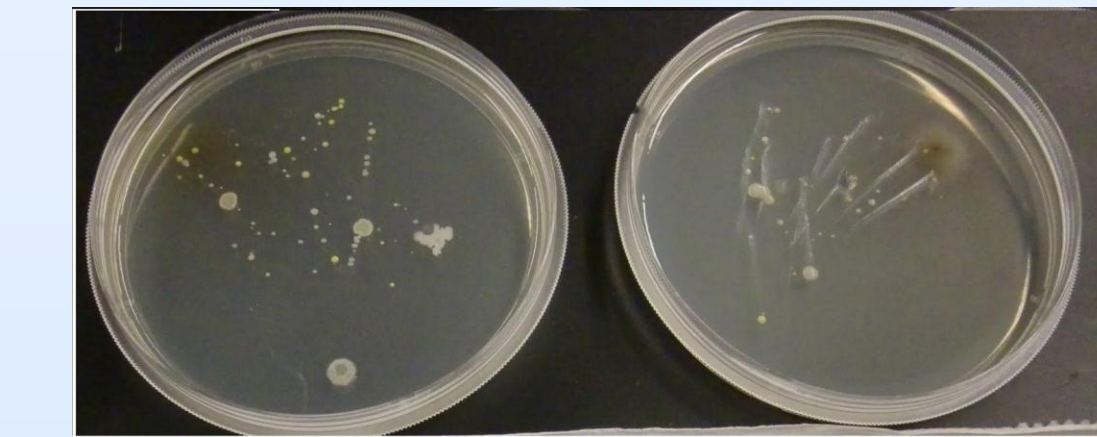


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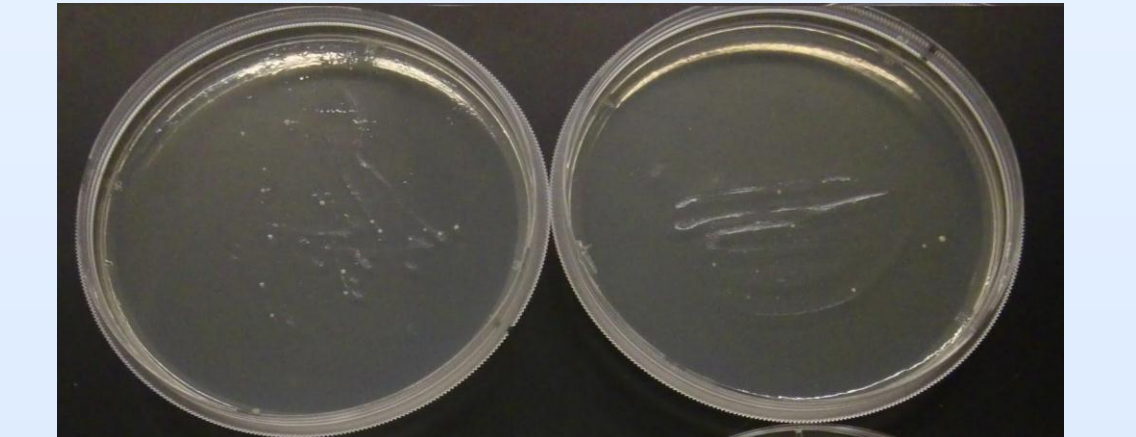
## Bacteria Cultures

Left Side: Doors before cleaning

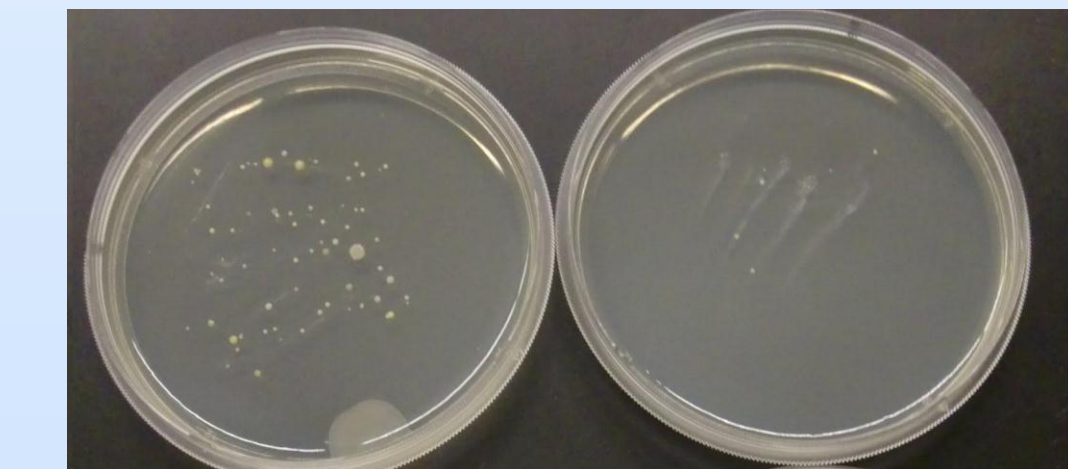
Right Side: Door after cleaning



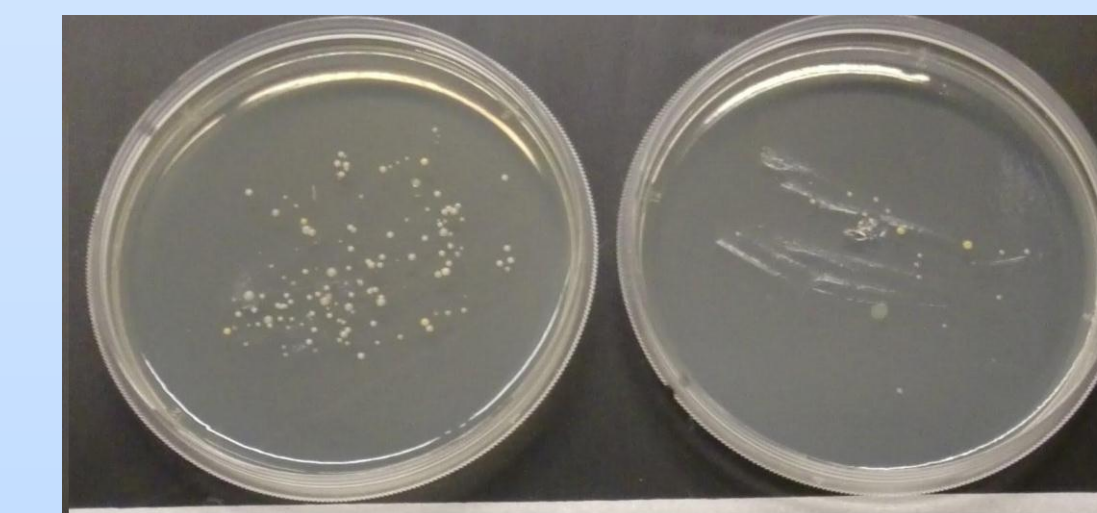
Daniels Hall



Institute Hall



Morgan Hall



Sanford Riley Hall



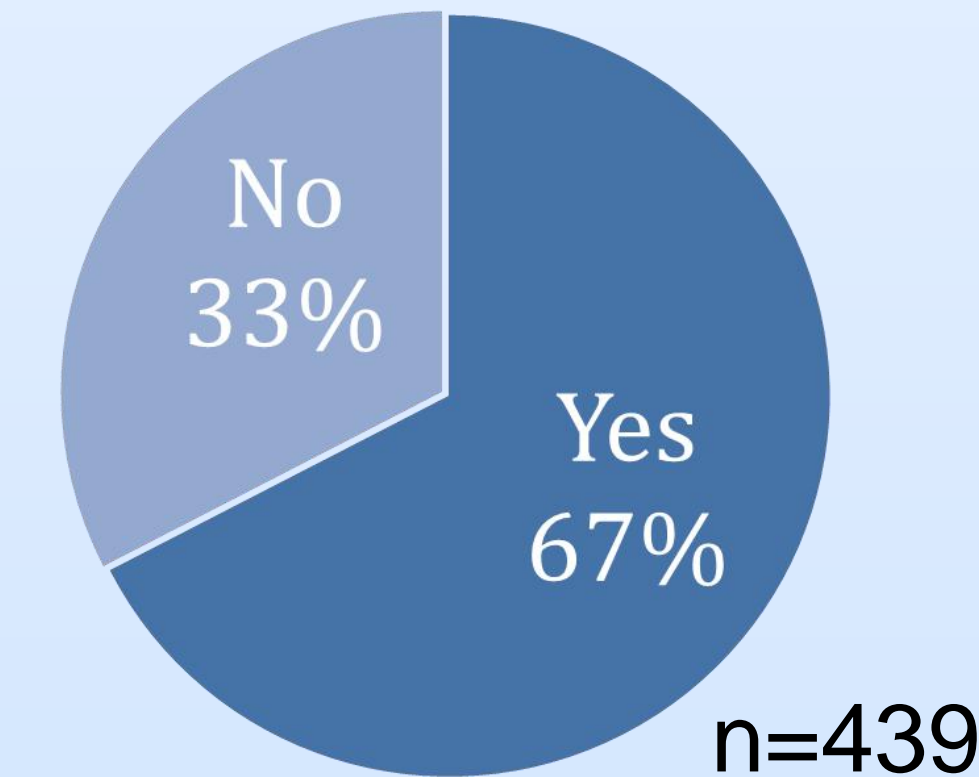
Stoddard Complex

## Results

**Survey Results-**

- 20% of students report that they **DON'T ALWAYS** wash their hands.
- 76% of the bathrooms require you to touch the handle as you exit.
- 52% of students report that the feel they have gotten sicker while living in residence halls.

Get hand sanitizer?



## Cost Results

Purell	Microban
Total Cost: \$18,580 per year	Total Cost: \$3.99 per gallon
Additional \$3.21 to tuition	Covers all important surfaces
Bi-weekly refills	One-time application

## Conclusions/Recommendations

- There is currently no problem in the school's sanitation methods.
- The problem lies in the lack of student hand-washing.
- As a solution, we recommend the use of Purell.
  - More effective than Microban.
  - High return on investment.
- Future action.
  - Availability in more than just residence halls.

## Acknowledgments

- Thank you Professor Rulfs for providing us with the materials to culture bacteria.
- Thank you to Tom Moreau for partaking in an interview informing us on current sanitation policy in residence hall bathrooms.

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