

# Antibiotic Resistance: Squashing WPI's Superbugs

## Abstract

Antibiotic resistance is a growing problem on college campuses. A survey of undergraduates at Worcester Polytechnic Institute about their antibiotic use was conducted and an educational brochure was written and distributed to educate students about consequences of antibiotic misuse.

## Introduction

Every year *94,000* people in the US visit a hospital with an invasive bacterial infection....

*19,000* of those die.

Antimicrobial resistance (AMR) is the evolution of bacteria to become resistant to antimicrobial medicine which they were previously controlled by.

The World Health Organization and the Center for Disease Control have deemed AMR a major health threat.

## Methods

1. Identify the specific problem with unsafe antibiotic usage on campus an IRB- approved survey.
2. Collect and statistically analyze data about the undergraduate population's knowledge (or lack there of) about AMR.
3. Address the gaps in understanding by creating and distributing 200 brochures about AMR and proper antibiotic usage.

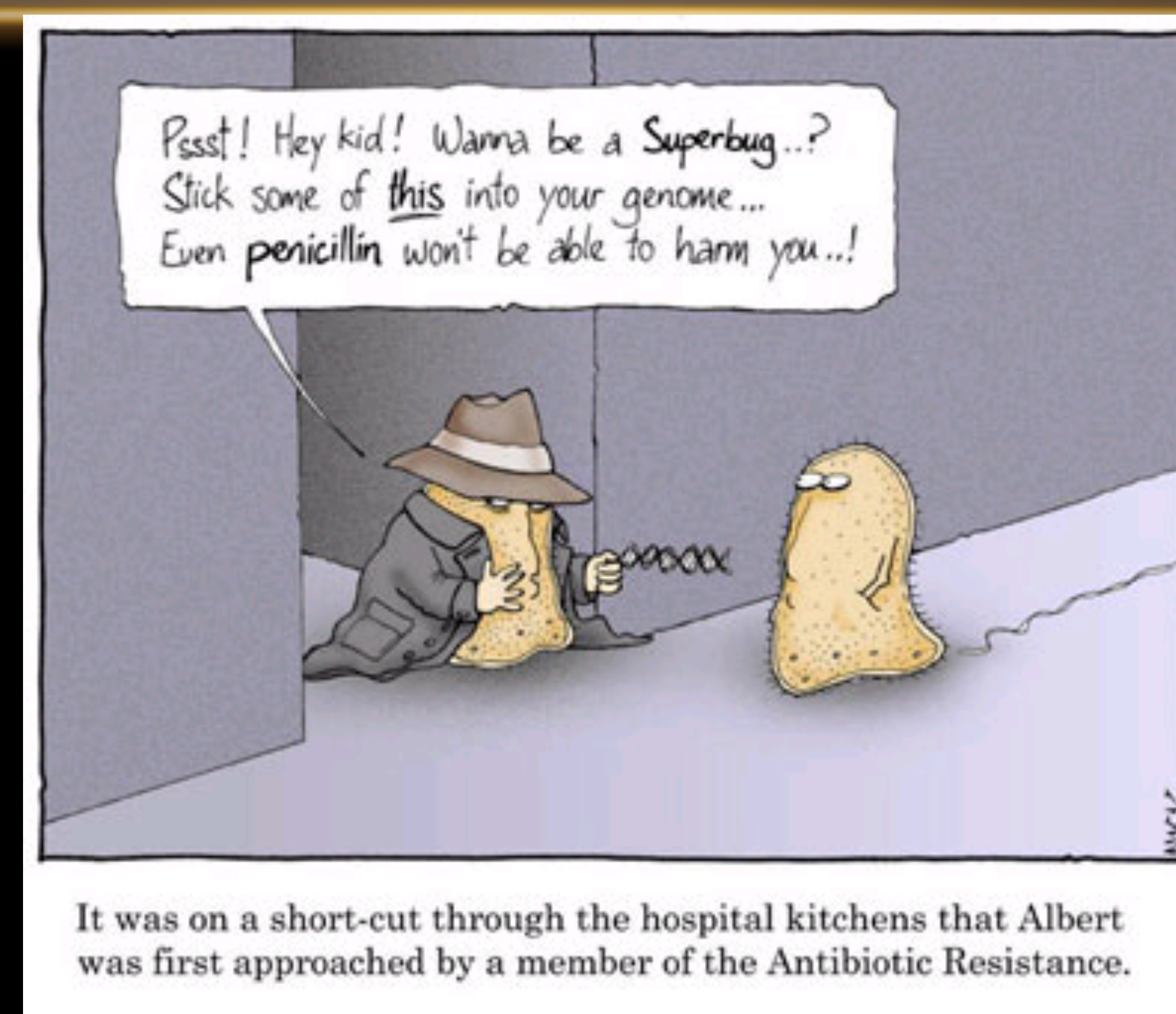
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### Need:

To reduce the progression of antibiotic resistance on the WPI campus

### Approach:

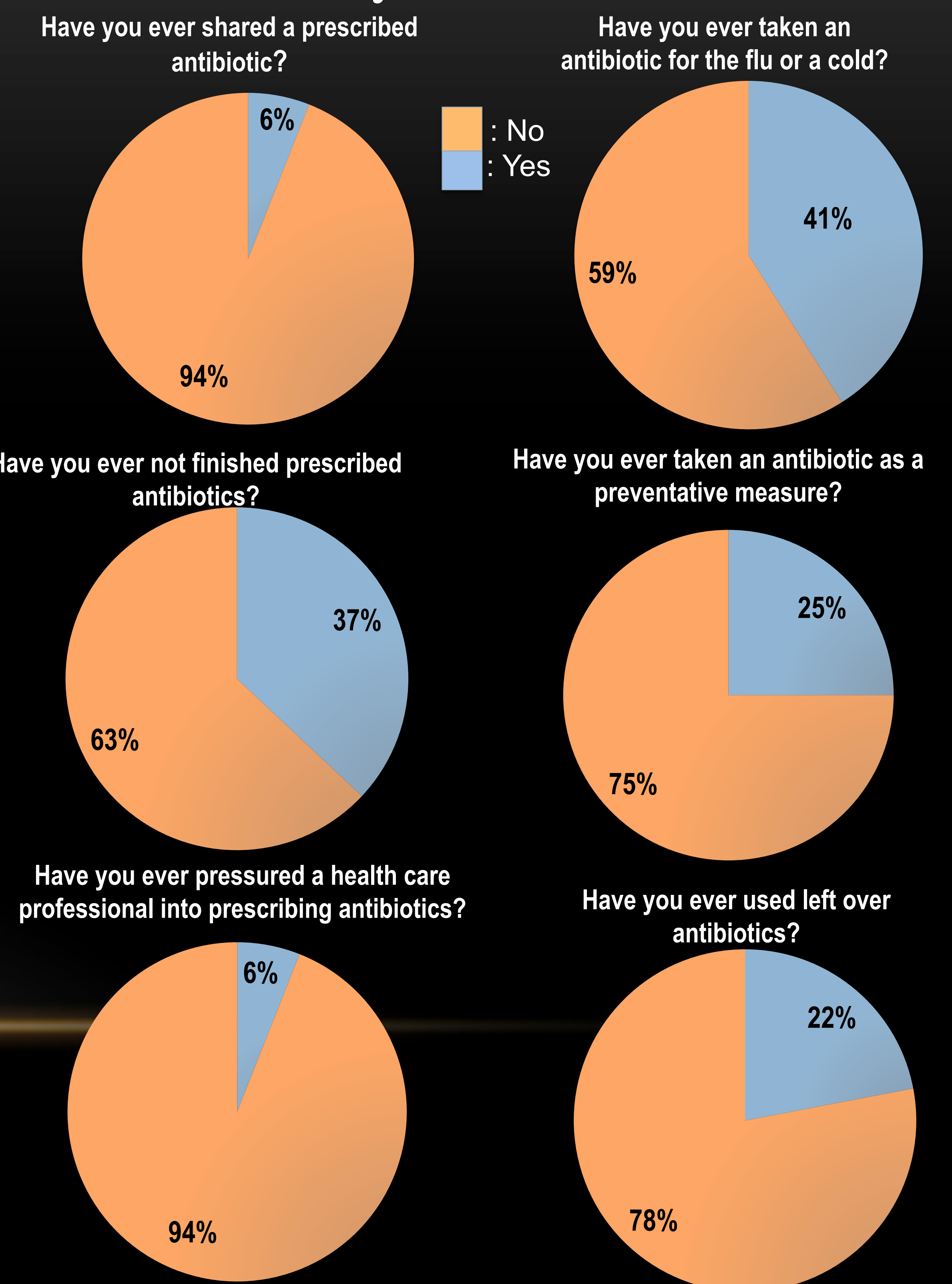
- Conduct a survey to identify the campus' awareness and areas of need
- Write a brochure addressing the problems identified and provide general information about AMR



## References

- CDC - Antibiotic / Antimicrobial Resistance 2011
- Geoff,Scott Antibiotic resistance Medicine, 2009
- Goldsworthy,R.C.; Schwartz,N.C.; Mayhorn,C.B. Beyond abuse and exposure: framing the impact of prescription-medication sharing Am.J.Public Health, 2008
- Mary Ann Liebert, Inc. - Journal of Women's Health 2011
- WHO | Antimicrobial resistance 2011

## Survey Results



## Conclusions & Recommendations

The key negative tendencies by students defined by our results were:

1. Not finishing prescribed antibiotics
2. Using leftover medication.
3. Using antibiotics as a preventative measure

WPI students, perhaps due to our STEM emphasis, are generally better educated on the dangers of sharing antibiotics than the nationwide statistics.

Ideally, we would follow up our brochures with a second survey to quantify the efficacy of our approach.