

Fighting the Resistance: Superbugs and Antibiotic Resistant Bacteria

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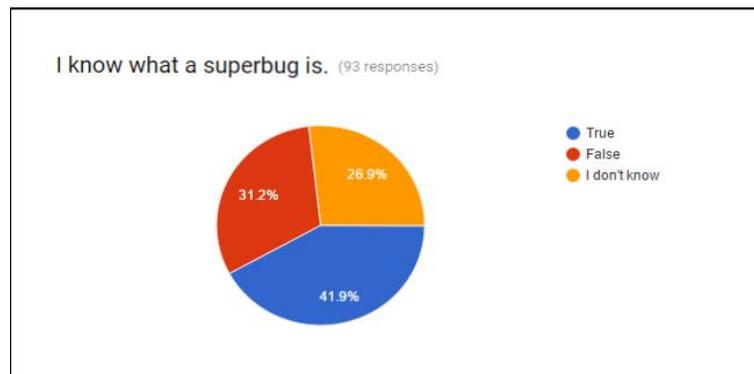


Disease is one of the most prevalent fears amongst people. On average, 91 percent of the world's deaths each year are caused by disease. Some of these diseases are caused by bacteria called superbugs. Superbugs are not like normal bacteria; they are resistant to antibiotics, or traditional medicine used to fight off and kill bad bacteria.

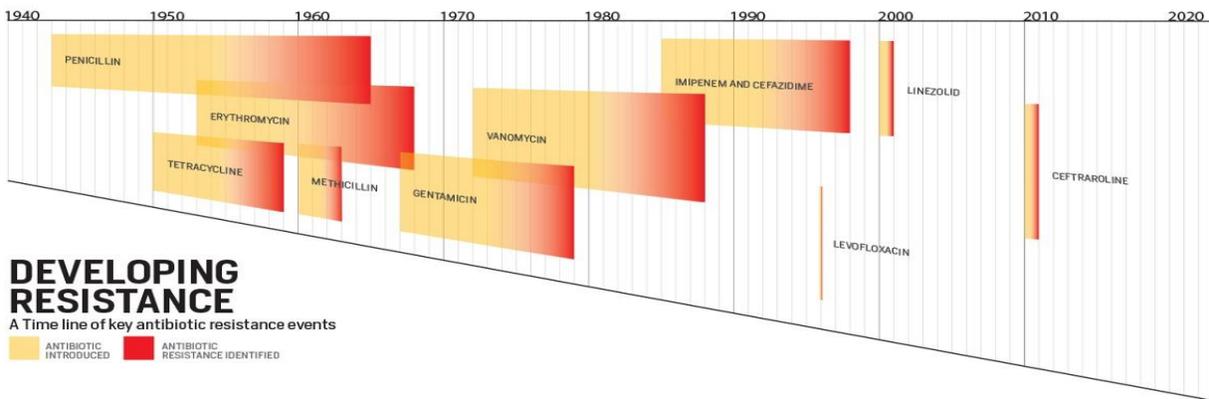
The presence of superbugs in our society

In 2013, the U.S. Centers for Disease Control and Prevention estimated that at least two million people each year in the United States contract a disease caused by superbugs. At least 23,000 of these cases cause death and nearly 722,000 people become infected while in the

hospital. MRSA (methicillin-resistant staphylococcus aureus), a well-known infection caused by these superbugs, claims 19,000 lives each year in the United States alone. In comparison, HIV (human immunodeficiency virus) and AIDS (acquired immune deficiency syndrome), extremely well-known sexually transmitted diseases, claim about 13,000 lives in the U.S. each year, which is significantly less than that of deaths MRSA. Despite their public health risk, superbugs are still relatively unheard of compared to other diseases. Antibiotics are the most commonly prescribed drugs in society; however, they are commonly misused and overused. The overuse of these drugs can promote the growth of superbugs over time if patients use antibiotics when they are not needed. There is a lot of concern on the spread of superbugs due to a lack of information and prevention of these life-threatening bacteria in society. We want to change this.



This image shows when different antibiotics were introduced (orange) and when a bacteria became resistant to that antibiotic (red).

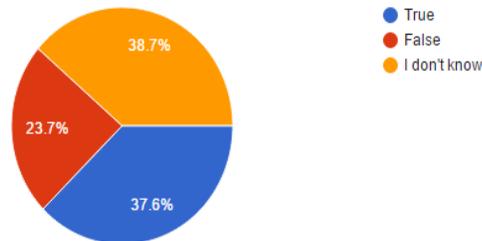


The study

Through the DRIVE² program at the Medical College of Wisconsin, we created a research project focused on what people know about superbugs and what proper antibiotic use looks like. We asked students at a science-focused school and students at an arts-focused school to answer a series of true or false questions about superbugs and antibiotics. In order to keep responses as accurate as possible, there was also an option to say “I don’t know” if the student did not understand what the question was asking. The results indicate that most people do not know what superbugs are or how to properly use antibiotic medication. Out of 93 responses, 41.9 percent of people said they understood the term “superbug”. As a superbug is a bacteria not a

virus, it is concerning that 76.3 percent of people either thought it was a virus or did not know.

A superbug is a virus. (93 responses)



Why this is important

If we are able to find out what people know and do not know about superbugs, we can better focus our education efforts on the topic. Our hope is that this study can be conducted in hospitals to find out the patients' level of knowledge on antibiotics. This information will most likely vary from that in a high school setting and could provide an illustration for the need for education in order to prevent more superbugs from occurring.