

Background and Purpose:

- The increased prevalence of antibiotic resistance is a significant concern in the United States and across the world. Since the twentieth century, antibiotics have been used to treat infections and have greatly reduced the number of deaths from curable illnesses. Some of these drugs are still successful; however, there are several bacteria that have adapted to the drugs used to kill them, thus nullifying their effectiveness.
- There are several factors that contribute to antibiotic resistance including:
 - Overuse
 - Inappropriate prescribing
 - Agricultural use
 - Few new antibiotics available for use
 - Patient noncompliance.
- It has been shown that 38% of patients are nonadherent to antibiotic regimens. Noncompliance with antibiotics poses a problem because patients may not reach the optimal therapeutic level required to completely eradicate the targeted organisms. This puts the patient at greater risk for reinfection and for the growth of resistant bacteria. However, there is a significant gap in knowledge about the dangers of improper antibiotic use.
- One of the common mistakes made by patients when taking an antibiotic is failing to complete the entire course. Possible reasons for prematurely stopping an antibiotic include:
 - Adverse drug reactions
 - Complexity of antibiotic regimen
 - Antibiotic cost
 - Forgetfulness
 - Poor health literacy
 - Symptomatic relief
- The purpose of this research project is to determine the most common reasons why patients prematurely terminate their oral antibiotics.



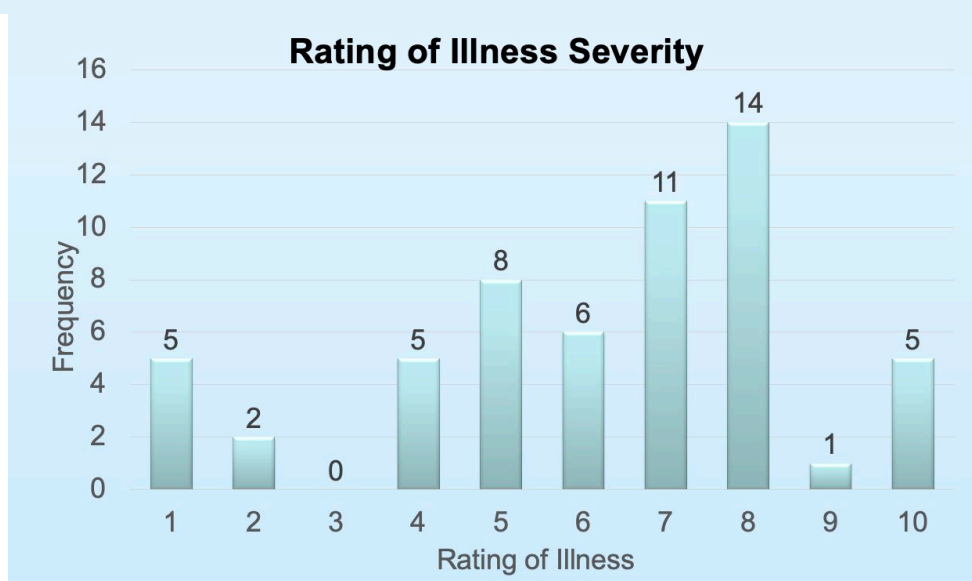
Methods:

- An online survey was created via Survey Monkey and distributed on social media.
- Inclusion criteria included: being at least 18 years old, having taken oral antibiotics within the last three years, and failure to complete the prescribed amount of antibiotics. The survey collected:
 - Age
 - Gender
 - Education
 - Income
 - Type of infection
 - Prescriber
 - If the prescriptions was filled
 - Reasons for not completing the antibiotic
- An analysis was performed to assess trends in the factors affecting antibiotic nonadherence using the Statistical Package for Social Sciences (SPSS) and descriptive statistics.



Reasons for not completing the course of antibiotics.

Reason Provided	Frequency
I felt better	30
I forgot to take my antibiotic	14
The duration of the antibiotic course was too long	13
I wanted to save some antibiotic for future use	12
I did not like the way the antibiotic made me feel	9
I had an allergic reaction to the antibiotic	3
There were too many doses per day	3
I did not think the antibiotic was working	3
I never started the antibiotics after I filled the prescription	2
The pills were too big	1
I did not know I should complete the entire course	0
I did not understand the instructions on how to take the antibiotic	0



Results:

- A total of 614 surveys were completed. After inclusion and exclusion criteria were applied, 9.3% (n=57) participants were included in the analysis. The most common reason that participants were prescribed an antibiotic was for respiratory infections (40.4%). Over half of all participants (54.5%) rated their illness as a 7 or above on a scale of 1 to 10, with 10 being the worst they have ever felt. The most common reason for not completing the course of antibiotics was “I felt better”, with 52.6% of participants citing this as one of their reasons. The second most common reason was “I forgot to take my antibiotic”, with 24.6% of participants citing this as a reason. A total of 94.7% (n=54) participants admitted to receiving instruction on how to properly take their antibiotic.



Discussion:

- Several factors have been cited in the literature contributing to early patient cessation of antibiotic regimens. Based upon our small population size, “feeling better” was the most common factor patients stated as to why they did not complete their course of antibiotics. Symptomatic relief accounted for a third of the reasons why patients stopped their antibiotics. Healthcare professionals appear to be providing instructions for these prescriptions but should perhaps emphasize that symptomatic relief is not a reason to prematurely terminate a course of antibiotics.

References:

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