Overuse of Antibiotics for URIs: Who is to Blame?
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INTRODUCTION
Antibiotic resistance is on the rise in the United States, however, many medical providers continue to prescribe antibiotics for upper respiratory tract infections (URIs) despite the fact that bacteria account for only 25% of URIs (Longo et al., 2012). Even in cases where bacteria are the cause, URIs are commonly self-limiting diseases and rarely progress to serious complications (NICE, 2008).

RESEARCH QUESTIONS
(Q1) Is there a difference in knowledge of antibiotic use for URIs between patients and providers?
(Q2) Is there a correlation between patient and provider ‘perception/behavior’ regarding antibiotic use for URIs?
(Q3) Is there a correlation between knowledge and ‘perception/behavior’ of antibiotic use for URIs?

HYPOTHESES
(H1) There is a difference in knowledge of antibiotic use for URIs between patients and providers.
(H2) There is a correlation between patient and provider ‘perception/behavior’ regarding antibiotic use for URIs.
(H3) There is a correlation between knowledge and ‘perception/behavior’ of antibiotic use for URIs.

RESULTS
There was a difference in knowledge of antibiotic use between patients (k=3.5/5.0) and providers (k=4.4/5.0) with a p-value of <0.001. There were also differences in ‘perception/behavior’ regarding antibiotic use (20/26 items) with p-values of <0.05. With respect to patients, there was a positive correlation between their knowledge and ‘perception/behavior’ (19/26 items) with p-values of <0.05. On the other hand, with respect to providers, there were only 3/26 items correlating between knowledge and ‘perception/behavior’ of antibiotic use.

CONCLUSION
There is in fact a difference in knowledge of antibiotic use for URIs between patients and providers. There is also a difference between patient and providers perception and behavior regarding antibiotic use for URIs. With respect to patients, there is a correlation between knowledge and perception and behavior of antibiotic use, while on the other hand, with respect to providers, there is no correlation between knowledge, and perception and behavior of antibiotic use. Proper patient education should focus on improving knowledge regarding antibiotics and their indications, while proper provider education should focus on eliminating misconception regarding patients’ expectations.

LITERATURE REVIEW
“Each year in the United States, at least 2 million people become infected with bacteria that are resistant to antibiotics and at least 23,000 people die each year as a direct result of these infections.”
CDC, 2016

“….antibiotic resistance is no longer a prediction for the future; it is happening right now… putting at risk the ability to treat common infections in the community and hospital.”
WHO, 2014

“Respiratory tract infections are the most common reasons for prescribing antibacterial agents in developed countries, representing about 75% of all prescriptions in community practice.”
Turnidge, 2001

“Globally, antibiotic resistance is being recognized as a major healthcare issue… A major concern is the inappropriate use of antibiotics for non-bacterial infections and for self-limiting clinical conditions.”
Kotwani & Holloway, 2014

FUTURE STUDIES
Wider regional distribution
Increased patient/provider diversity
Limit to private practice providers
Focus on patients’ request for any prescriptions, not only antibiotics