OBJECTIVE
Current treatment of acne vulgaris relies heavily on systemic antimicrobial agents. The American Academy of Dermatology recommends their use in treatment of moderate to severe inflammatory lesions for a duration of 3 months. Antibiotics should not be used as a monotherapy or for a duration longer than 3 months, but they frequently are. Side effects to antimicrobial treatment persist after discontinuation. In many patients, acne is a disorder in which symptoms typically recur over years. Consequently, identifying a sustainable treatment regimen is an important component of acne management.

Isotretinoin is extremely efficacious and has long-term benefits after use. It has also been the source of controversy due to its alleged and real connection to severe side effects and teratogenicity. The purpose of this review is to evaluate the use of antibiotics and isotretinoin in the treatment of acne vulgaris.

METHODS
We achieved our objective by performing a literature review. Sources from a variety of medical and scholarly databases were evaluated. We determined the current role of antibiotics in the treatment of acne vulgaris to be inappropriate, and identified isotretinoin as an under-utilized treatment option.

RESULTS & CONCLUSION
After compilation of available research on the topic, we concluded that there is systematic misuse of antibiotics in the treatment of acne vulgaris, and call into question their placement in current guidelines. Furthermore, the cost to society of the disease itself is relatively undervalued and unrecognized. We conclude that isotretinoin should be considered a superior treatment in all cases for the indication of moderate to severe acne vulgaris, following typical treatment options. We also conclude that the current method of managing the teratogenicity of isotretinoin (iPLEDGE and birth control), is flawed and requires revision to address the significant amount of birth defects associated with its use.

Antimicrobial Resistance
Resilience of the Dominant Human Fecal Microbiota upon Short-Course Antibiotic Challenge

Cost on Society

Efficaciousness and Side Effects

Teratogenicity & iPLEDGE

Antibiotics In The Treatment of Acne Vulgaris: A Guideline Review
Ben Gardner, Grant Jerkovich, Jacob Felokowski, Breannah May, Erika Ernst
University of Iowa College of Pharmacy

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