

# Putting an end to deadly antibiotic resistance caused by over-prescription

July 26 2018, by Kevin Byrum

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Newly published study shows that strategies to curb inappropriate antibiotic prescribing which lead to deadly antibiotic resistant superbugs that kill an estimated 23,000 people each year are not only successful but also cost effective. This LA BioMed collaboration led by the USC Schaeffer Center for Health Policy is a boon for this public health crisis. In the study, Behavioral Economics Interventions to Improve Outpatient Antibiotic Prescribing for Acute Respiratory Infections (ARIs): a Cost-Effectiveness Analysis, LA BioMed researchers recommend a number of cost-effective behavioral strategies to curb unnecessary antibiotic prescriptions.

The study states "In the USA, it is estimated that more than 50 percent of outpatient-prescribed antibiotics are inappropriate, predominantly among patients seeking treatment for [acute respiratory infections](#)", which are most often caused by viruses, such as those causing cold and flu. The CDC has stated that to slow the spread of antibiotic-resistant infections the number of inappropriate and unnecessary antibiotic prescriptions in humans and animals must be reduced.

"Many researchers at LA BioMed work towards finding smart and effective methods to prevent the spread of deadly superbugs", stated Dr. David Meyer, president and CEO of LA BioMed, "Healthcare needs more studies such as these, targeted to identify successful initiatives that are both cost-saving and life-saving."

LA BioMed's study shows that certain simple measures in the doctor's

office can cost-effectively improve antibiotic prescribing, thus minimizing unnecessary therapy and adverse events in patients, including antibiotic resistance. Globally, over 2 million people are infected by antibiotic resistant bacteria, known better as superbugs. LA BioMed actively supports aimed at curbing the proliferation of these superbugs through health economics initiatives.

LA BioMed researchers evaluated the cost-effectiveness of three interventions which aim to decrease the number of unnecessary antibiotic prescriptions; all of which were previously shown to be reduced over an 18-month period. The following three key interventions were used:

- 1) "Suggested Alternatives", which utilizes computerized clinical decision support to suggest non-antibiotic treatment choices in lieu of antibiotics.
- 2) "Accountable Justification", which mandates free-text justification into the patient's electronic health record when antibiotics are prescribed.
- 3) "Peer Comparison", which sends a periodic email to prescribers about his/her rate of inappropriate antibiotic prescribing relative to colleagues.

This LA BioMed work provides important data for organizations and healthcare payers currently designing real time approaches to help prescribers avoid writing unnecessary prescriptions for [antibiotics](#) going forward, a possibility that could have a significant impact on patient safety and the rate of antibiotic resistant infections.

**More information:** Cynthia L. Gong et al. Behavioral Economics Interventions to Improve Outpatient Antibiotic Prescribing for Acute Respiratory Infections: a Cost-Effectiveness Analysis, *Journal of*

*General Internal Medicine* (2018). [DOI: 10.1007/s11606-018-4467-x](https://doi.org/10.1007/s11606-018-4467-x)

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