

Old Habits Die Hard: Reining in Antibiotic Use in Older Adults

Morgan Katz, MD MHS

Assistant Professor of Infectious Disease



JOHNS HOPKINS
M E D I C I N E

NATIONAL SUMMARY DATA

Estimated minimum number of illnesses and deaths caused by antibiotic resistance*:

At least  **2,049,442** illnesses,
 **23,000** deaths

*bacteria and fungus included in this report

Estimated minimum number of illnesses and death due to *Clostridium difficile* (*C. difficile*), a unique bacterial infection that, although not significantly resistant to the drugs used to treat it, is directly related to antibiotic use and resistance:

At least  **250,000** illnesses,
 **14,000** deaths

WHERE DO INFECTIONS HAPPEN?

Antibiotic-resistant infections can happen anywhere. Data show that most happen in the general community; however, most deaths related to antibiotic resistance happen in healthcare settings, such as hospitals and nursing homes.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS239559



NATIONAL STRATEGY FOR COMBATING ANTIBIOTIC-RESISTANT BACTERIA

Vision: The United States will work domestically and internationally to prevent, detect, and control illness and death related to infections caused by antibiotic-resistant bacteria by implementing measures to mitigate the emergence and spread of antibiotic resistance and ensuring the continued availability of therapeutics for the treatment of bacterial infections.

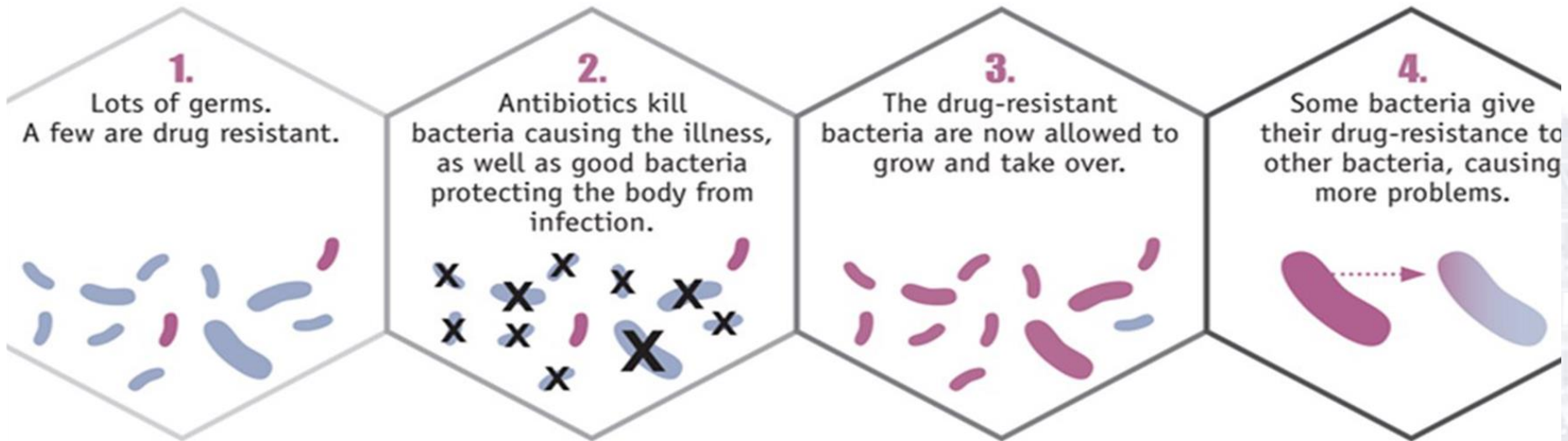
September 2014



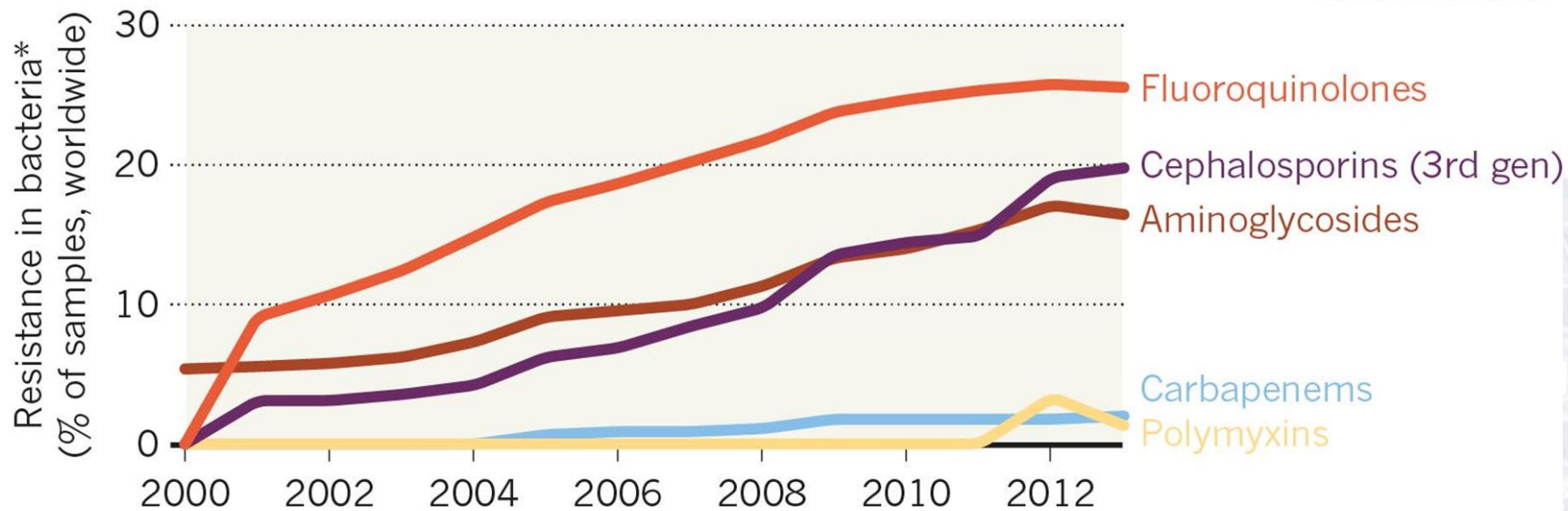
Antibiotics are vastly over-prescribed to older adults



Antibiotic Exposure Leads to Resistance and Alters the Microbiome



We are Rapidly Losing Antibiotic Options

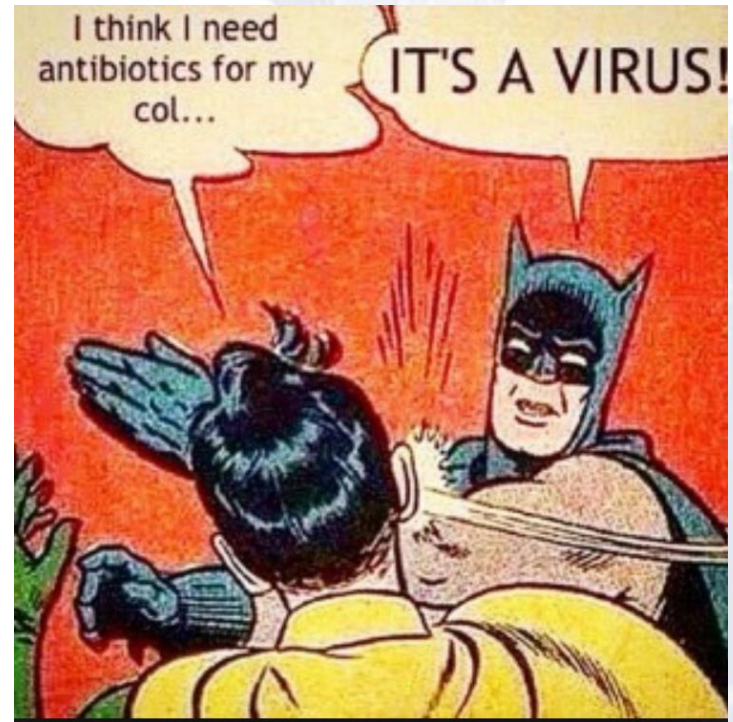


*Enterobacteriae, including *Escherichia coli*, *Klebsellia pneumonia*, *Enterobacter* and *Salmonella*. Source: CDDEP ResistanceMap/IMS MIDAS

What is Antibiotic Stewardship?

Appropriate use of antibiotics

- Right drug
- Right dose
- Right indication
- Right duration





ANTIBIOTIC GUARDIAN

Technical problems and solutions

- Computer shuts down → Call tech support
- Water leaking in a house → Call a plumber

Assign the problem to an expert, and get out of the expert's way

Inappropriate antibiotic prescribing → NOT AN EASY FIX

Inappropriate Antibiotic Prescribing

Staff
Turnover

Vague
clinical
symptoms

Belief that you are
preventing sepsis

Unclear
guidelines

Off-site
prescribers

Fear of
litigation

No time for
education

Family
Pressure

No support
from
executives

Poor
communication

Limited
diagnostic
resources

“The most common cause of failure in leadership is produced by treating adaptive challenges as if they were technical problems.”

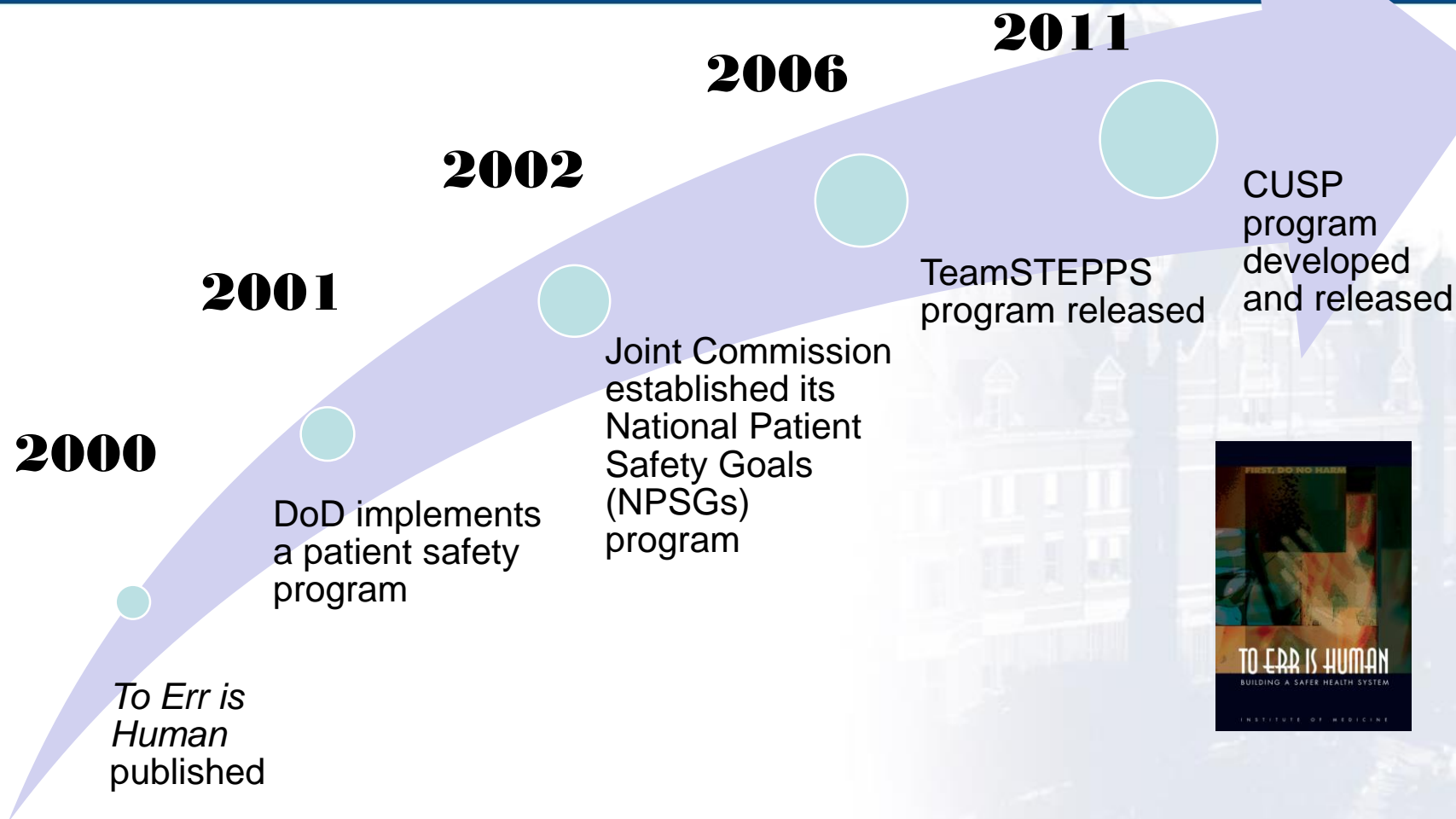
-Ron Heifetz
The Practice of Adaptive Leadership



<http://55andfakingnormal.com/2017/07/17/breaking-reframe-aging/>

Reframe the Landscape.

Patient Safety Becomes a Priority





Hypothesis: Merging patient safety methodology with technical antibiotic stewardship tasks will promote behavior change and enhance antibiotic stewardship methods across the healthcare spectrum.

National AHRQ Safety Program for improving antibiotic use

Spans the healthcare spectrum

- 250-500 Acute Care Sites
 - December 2017 - November 2018
- 250-500 Long-Term Care Sites
 - December 2018 – November 2019
- 250-500 Ambulatory Care Sites
 - December 2019 – November 2020





**WE COMMIT TO
ONLY PRESCRIBING
ANTIBIOTICS
WHEN THEY WILL
HELP YOU**

Antibiotic are powerful medicines. They should only be used when bacteria make someone sick.

Taking antibiotics when you don't need them will NOT make you better. You will still feel sick, and the antibiotic may give you a skin rash, diarrhea, or a yeast infection.

How can you help?

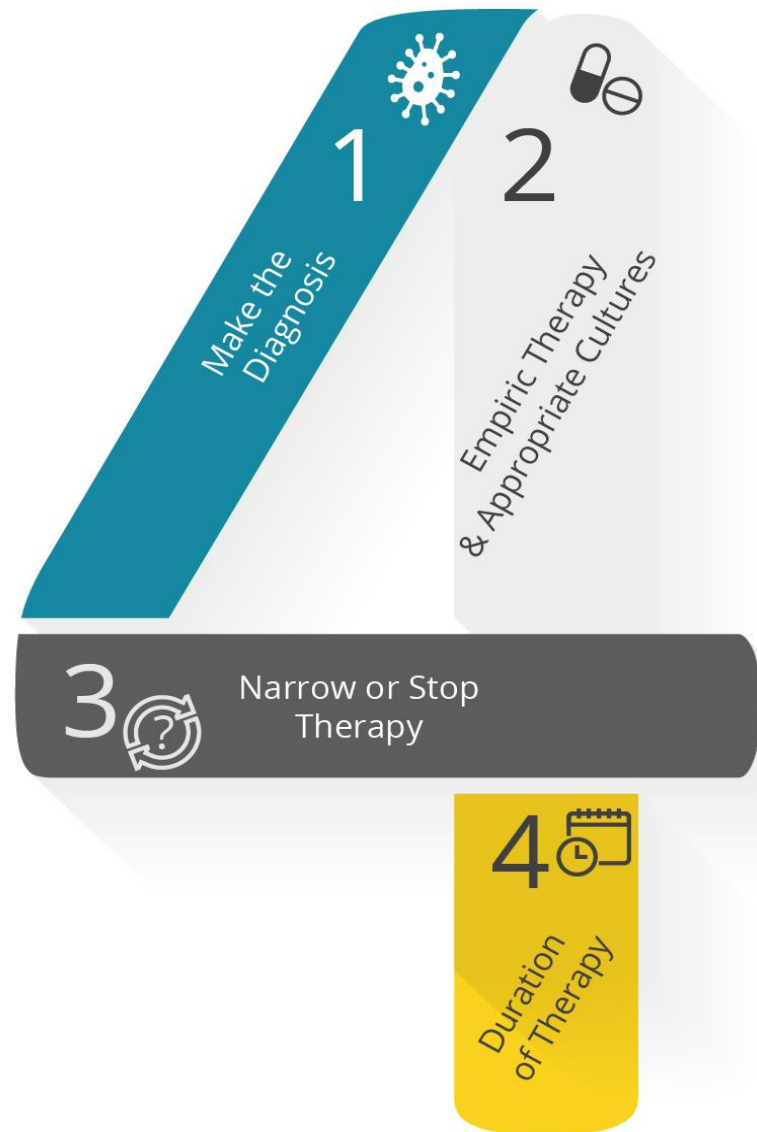
Please tell your healthcare team about the symptoms you or your loved one is experiencing. Let them use their knowledge and experience to decide about tests and medications.

Your health is important to us. As your health care providers, we promise to provide the best possible treatment for your condition. If an antibiotic would do more harm than good, we will explain this and may offer other treatments that are better for you or your loved one.

Sincerely,



May 11, 2018



Expected Outcomes



- Improve safety culture
- Enhance teamwork and communication
- Reduce unnecessary antibiotic use
- Improve antibiotic decision-making
- Reduce *Clostridium difficile* infection rates
- Improve compliance with new government mandates

Thank you

- Sara Cosgrove
- Pranita Tamma
- Robin Jump
- Melissa Miller
- Meghan Walrath
- Mayo Levering
- Kathleen Speck
- TEP expert panel
- Jonathan Zenilman

