

Reducing Antibiotic Overuse: A \$63 Billion Opportunity



Targeting the \$63 billion spent annually because of antibiotic overuse requires building on proven practices and implementing policy actions that target the root causes of the problem.²

Antibiotic overuse represents a significant source of wasteful health care spending. The causes of antibiotic overuse are complex and systemic, resulting from overprescribing, patient preferences and the non-therapeutic antibiotic treatment of animals.

Reducing antibiotic overuse requires building on a coordinated set of proven practices in the field coupled with policy actions in both the public and private sectors.

THE PROBLEM

Scope of Antibiotic Overuse

- The overuse of antibiotics contributes to the emergence of antibiotic-resistant infections (ARIs) that are costly and difficult to treat.^{3,4}
- Drug-resistant “superbug” infections, such as MRSA and C-difficile, are a significant cause of mortality. In 2005, more than 95,000 people in the U.S. developed severe MRSA infections, which led to 9,000 deaths.^{5,6}

Costs of Antibiotic Overuse

- In the U.S., ARIs are responsible for \$20 billion in excess health care costs, \$35 billion in societal costs and \$8 million in additional hospital days.⁷
- Reducing ARIs by just 20 percent would save \$3.2 to \$5.2 billion in health care costs each year and eliminate up to \$11.3 million in additional in-hospital days for patients with ARIs.

Reasons for Antibiotic Overuse

- Overtreatment: Determining if an infection is viral or bacterial is expensive and time-consuming and concerns over malpractice lead many physicians to over-prescribe antibiotics.^{8,9}
- Patients’ Preferences: Patients may pressure providers to prescribe antibiotics for conditions for which they are inappropriate, such as the common cold or sore throat, or inappropriately save antibiotics for later use, both of which can lead to increased antibiotic resistance.^{10,11}
- Non-therapeutic Antibiotic Treatment of Animals: Approximately 70 percent of antibiotics used in the U.S. are used in the non-therapeutic treatment of cattle, swine, and poultry, and although the FDA issued voluntary guidelines in 2010 urging farmers not to use antibiotics for livestock growth, the guidelines are not yet mandatory.^{12,13}
- Lack of Evidence-Based Research: Evidence-based research on appropriate and inappropriate antibiotic use is often lacking.¹⁴

SOLUTIONS

Increase Use of Appropriate Vaccinations

- **Proven Practice:** Researchers have found that greater use of flu shots was accompanied by a reduction in prescriptions for antibiotics.¹⁵

Expand Use of Hospital Guidelines

- **Proven Practice:** Researchers in Canada found guidelines focused on curbing the overuse of antibiotics can lower the number of prescriptions written for them.¹⁶

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Implementing regulatory reform, promoting the use of outcomes-based reimbursements and reducing antibiotic use in critical patients can all help to decrease antibiotic overuse.

These interventions require a renewed emphasis on the education of patients and providers and increased medical leadership on the issue.

Reduce Antibiotic Use in Critical Patients

- **Proven Practice:** Measuring levels of the chemical procalcitonin (PCT) is an effective way to monitor the presence of an infection and guide the duration of antibiotic treatment.¹⁷

Improve Patient Education and Medical Leadership

- **Proven Practice:** The CDC's *Get Smart, Know When Antibiotics Work* program, a comprehensive public health effort directed at health care practitioners, parents and the public, has led to a 20 percent decrease in prescribing for upper respiratory infections and a 13 percent decrease in prescribing overall for all office visits among children and adults.¹⁸
- **Policy Action:** Garner the support of hospital executives and physician champions to lead and educate staff and patients about the appropriate and inappropriate use of antibiotics, and encourage the establishment of formulary restrictions on certain broad spectrum antibiotics.

Reform Payment for Providers

- **Policy Action:** Encourage evidence-based practices by linking payment reimbursements to adherence to evidence-based guidelines to reduce the use of antibiotic classes that promote MRSA colonization.

Implement Regulatory Reform

- **Policy Action:** Ask the FDA to issue mandatory regulations regarding the non-therapeutic use of antibiotics to encourage livestock growth, similar to regulations established in Europe.¹⁹
- **Policy Action:** Encourage the FDA to re-review approvals for animal feed uses of antibiotics important to human medicine.²⁰

► Learn more about ways to Bend the Curve in health care costs at: www.nehi.net/bendthecurve

THE PROBLEM

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SOLUTIONS

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