

# **Americans' Knowledge Of And Attitudes Toward Antibiotic Resistance**

**A report of findings from  
a national survey and two focus groups**

**Research Conducted On Behalf Of:  
The Pew Health Group**

**By Hart Research Associates And  
Public Opinion Strategies**

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On behalf of The Pew Health Group, Hart Research Associates and Public Opinion Strategies conducted a research study in September and October of 2012 to assess Americans' awareness of and level of concern about bacteria becoming resistant to antibiotics. This research employed both qualitative and quantitative methods.

The quantitative phase involved a nationwide telephone survey conducted from September 10 to 16, 2012, among 1,004 adults (including 300 cell-phone only adults). The margin of error is  $\pm 3.1$  percentage points in the full survey sample and higher among subgroups.

Following the nationwide survey, two focus groups were conducted in Chicago, IL, on October 9, 2012. One focus group comprised "frequent users" of antibiotics (people who had taken antibiotics at least three times in the past two years) while the other group comprised a cross section of adults.

### Key Research Findings

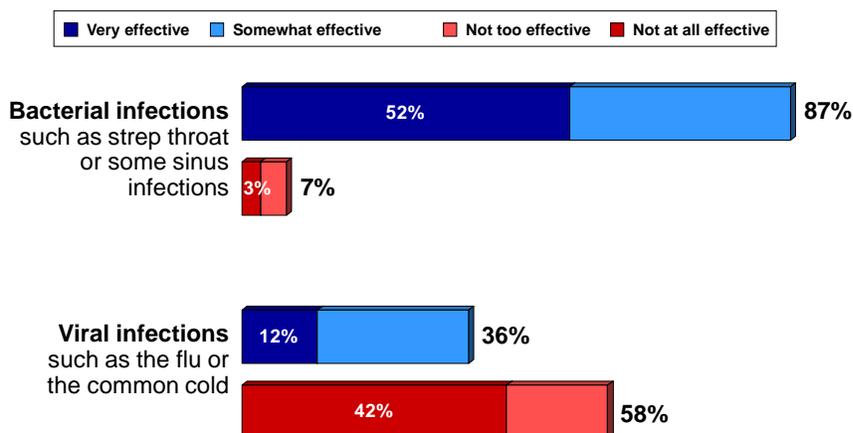
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**Americans have a basic understanding of antibiotics, some of the best practices for taking antibiotics, and the consequences of overusing antibiotics.**

- Nearly nine in 10 (87%) Americans believe that antibiotics are effective for treating bacterial infections, such as strep throat and some sinus infections (see Figure 1).

### Figure 1. Nearly Nine In 10 Believe Antibiotics Are Effective In Treating Bacterial Infections

*How effective are antibiotics for treating these kinds of infections?*



A large majority of Americans understand that it is important to complete the full course of an antibiotic prescription. More than four in five (86%) say that it is better to take the full course of antibiotics than to stop taking the antibiotics when symptoms have disappeared.

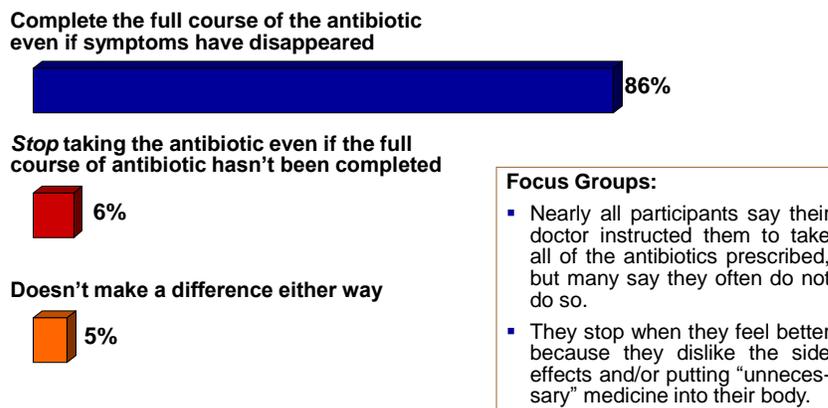
- Most Americans (79%) also understand that when a person takes antibiotics when they are not needed, antibiotics can become *less* effective at treating that person's future illnesses.
- These beliefs are held across the demographic spectrum, regardless of someone's level of educational attainment or personal experience with antibiotics.

### **Americans do not always apply their knowledge of how to take antibiotics properly.**

- In both the survey and in the focus groups, respondents gave the "right" answer in many cases as to how to appropriately use antibiotics (see Figure 2). Yet the focus group discussions made clear that many do not follow these best practices.

## **Figure 2. People Know To Complete The Course, But They Don't Always Do So**

*If someone is prescribed antibiotics, which is better when the symptoms disappear?*



- For instance, nearly all focus group participants said their doctor instructed them to complete courses of antibiotics when prescribed, yet many admitted they failed to do so, often stopping in mid-course when they began to feel better.
- And despite knowing that taking antibiotics when unwarranted can make them less effective in the future, some focus group participants said they get in touch with their doctor and request antibiotics at the first sign of a cough. One mother said that when one of her children gets sick she tries to obtain antibiotics for *all* her children to help ensure the infection does not spread in her household.

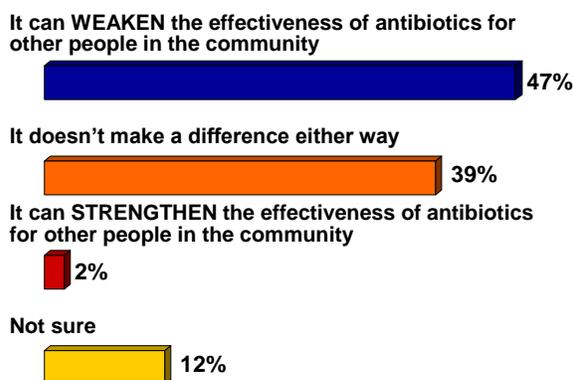
- In these cases focus group participants clearly felt that the benefits of taking antibiotics (feeling better quickly, avoiding the spreading of infection) were greater than the risks (potentially impacting the efficacy of antibiotics in the future).
- And, in fact, several focus group participants felt that taking antibiotics (or not doing so) was not and should not be their own decision. These participants placed great weight on their doctors' decisions—if their doctor or dentist prescribed antibiotics, the participants trusted that the medicines were necessary and warranted.

### **Americans are fuzzier on the limits of antibiotics' efficacy and how an individual who overuses antibiotics can impact the health of others in the community.**

- Most people correctly report that antibiotics are effective in treating bacterial infections. However, while 42% say that antibiotics are not effective at all for treating viral infections, one in three (36%) mistakenly believes that antibiotics are effective for treating viral infections such as the common cold (see Figure 1). Indeed, even focus group participants who volunteered that antibiotics effectively treat bacteria rather than viruses were not completely certain this is the case.
- A plurality (47%) of Americans say that when someone takes antibiotics when they do not need to, it can weaken the effectiveness of antibiotics for other people in the community. But, nearly as many (39%) believe that one individual's use of antibiotics does not make a difference for how antibiotics affect others in the community (see Figure 3).

### **Figure 3. Community Impact Is Unclear**

*When someone takes antibiotics when they do not need to, what impact does this have on the effectiveness of antibiotics for other people in the community?*

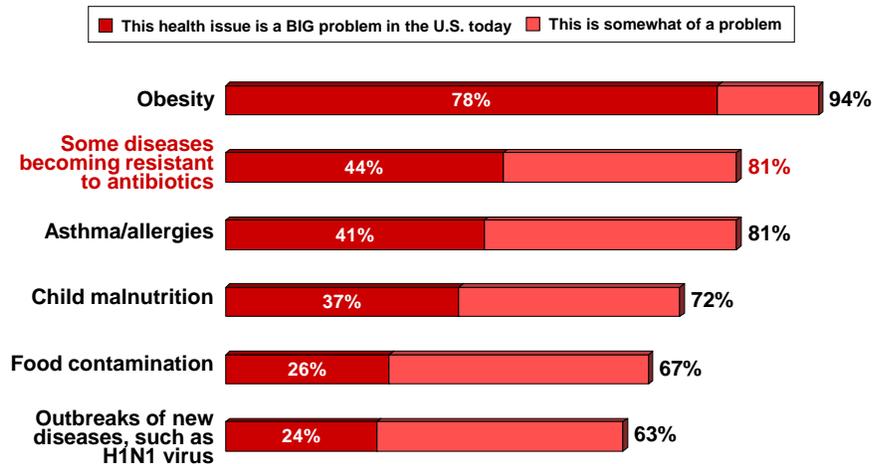


- Moreover, among focus group participants there is a misconception that antibiotic resistance is related to individual people becoming resistant to antibiotics rather than bacteria (which can infect many people) becoming resistant to antibiotics. They think of people's bodies building up a "tolerance" to antibiotics as a result of overuse. In this way, they consider resistance to be more of a personal problem than a community one.

**Antibiotic resistance is on the public's radar in only a limited way, and many Americans do not see it as a major health issue or believe that it will affect them personally.**

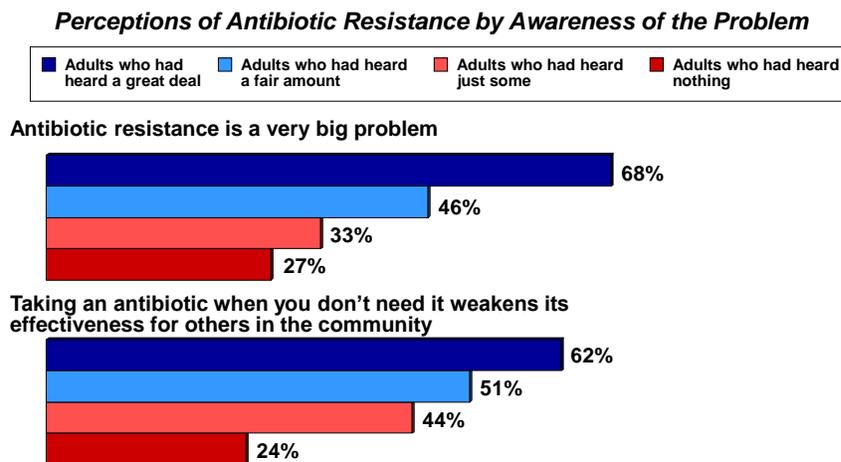
- Just one in four Americans (25%) have heard a great deal about antibiotic resistance, and another 33% have heard a fair amount. Forty-one percent (41%) have heard just some or nothing about this issue.
- Antibiotic resistance is viewed as being at least somewhat of a problem by more people (81%) than child malnutrition (72%), food contamination (67%), or outbreaks of new diseases such as H1N1 (63%) (see Figure 4). (Obesity tops all other health issues on the list with fully 94% saying it is at least somewhat of a problem, including 78% who say it is a big problem.) Still, fewer than half say antibiotic resistance is a "big problem."

**Figure 4. When Directly Asked In The Survey, Adults Recognize Antibiotic Resistance As A Problem**



- Those who have heard more about antibiotic resistance are more likely to see it as a big problem. Sixty-eight percent (68%) of people who have heard “a great deal” about antibiotic resistance say that it is a big problem, while just 27% of those who have heard nothing at all say the same (see Figure 5). Skeptics in the focus groups suggested that it would take an authoritative voice such as the CDC to convince them that antibiotic resistance is a major health issue.

### Figure 5. The Greater The Knowledge, The Greater The Perceived Problem

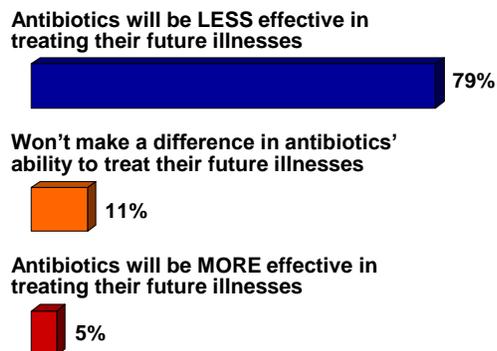


- Americans are divided on whether antibiotic resistance will impact them in some way. Fifty-two percent (52%) of people believe that it is likely that antibiotic resistance will affect them personally (i.e., they or someone they know will contract an illness that is resistant to antibiotics). However, this includes just 15% who believe this is “very” likely to happen; moreover, 42% see such a scenario as unlikely (see Figure 6). People who have heard “a great deal” about antibiotic resistance, however, are more than twice as likely (66%) to believe that they will be personally affected than those who have heard “nothing at all” about antibiotic resistance (31%). Frequent users of antibiotics are also more likely to believe antibiotic resistance could affect them personally than are people who have not taken antibiotics in the past two years.

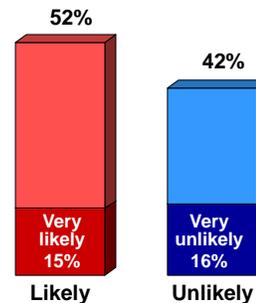
## Figure 6. People Know Resistance Happens

*But They Don't Think It's Very Likely To Happen To Them*

*When someone takes antibiotics when they do not need to, which of these is more likely to happen?*



*How likely is it that an illness resistant to antibiotics will affect you or your family?*



- In fact, personal experience (or lack thereof) is key on this issue. Even after discussing the issue for nearly two hours, many of the focus group participants were apt to consider the resistance problem to be a lower-tier one—it did not rise to the importance of issues such as cancer, obesity, or heart disease. The reason for this, as some admitted, is that the issue had not touched them or their family. Unless or until they had personally encountered a bacterium that is resistant to antibiotics, they were unlikely to feel that this issue is all that pressing.