

# Important questions about antimicrobial resistance (AMR): “We all have a role to play in preventing antibiotic resistance.”

## Interview

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Medical epidemiologist and  
Director of CDC’s Office of  
Antibiotic Stewardship in the  
US.

### At a glance

- Bacteria and other pathogens have increasingly developed resistance to antimicrobials.
- Dr Lauri Hicks from the CDC has dedicated her career to improving antibiotic use.
- She explains why antimicrobial stewardship is so critical.

Dr Lauri Hicks is a medical epidemiologist and Director of CDC’s Office of Antibiotic Stewardship. She serves as medical director for CDC’s “Be Antibiotics Aware” programme in the U.S.

#### 1. Has the situation changed in recent years?

Hicks: Some new, antibiotic-resistant threats have emerged in recent years, such as a type of antibiotic-resistant yeast called *Candida auris*. We are identifying highly resistant bacteria more often. And we are now seeing them in otherwise healthy people in the community as well. That is worrying.

#### 2. Are any aspects commonly overlooked regarding resistance?

Hicks: Overuse is one factor that has led to antibiotic resistance. In the outpatient setting, the most common problem is prescribing antibiotics for conditions that are caused by viruses. In hospitals, many times antibiotic courses are not adjusted following laboratory findings and improvement. There are many opportunities to reduce our use of antibiotics and to stop when they are no longer needed. We all have a role to play in preventing antibiotic resistance.

### Key aspects of stewardship programmes

Antimicrobial stewardship is a set of strategies, practices and policies that aim to optimise antibiotic use to achieve better clinical outcomes. This rests on the so-called “5 Ds” of antimicrobial prescribing:

- optimal diagnosis,
- drug selection,
- dosage,
- duration, along with
- de-escalation.

In other words, use the right drug in the right amount at the right time, but only when needed, only as long as needed, and reduce when possible.

Stewardship programmes also focus on behaviour change – for example, physicians choose rapid diagnostic tests, so they can quickly target specific pathogens, rather than prescribing broad-spectrum antibiotics. Pharmacists educate staff on the wise use of antimicrobial agents, and provide feedback to prescribers. Nurses monitor patients closely who are on antibiotics. And, through good hygiene practices everyone works to avoid transmission of bacteria and pathogens, and lower the rate of nosocomial infections.