

Vaccines have a crucial role in tackling antimicrobial resistance

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Antimicrobial resistance is a leading cause of death and disability worldwide. In 2019, it caused over 1 million deaths globally and was linked to almost 5 million.

Discovering new antimicrobials to replace those that no longer work is essential, but it isn't the only way to tackle antimicrobial resistance.

How vaccines can tackle antimicrobial resistance

Vaccines can help prevent the spread of infections in the first place. Fewer infections mean less antimicrobials are used—therefore reducing the risk of antimicrobial resistance and drug-resistant infections.

There's already promising evidence that vaccines can have both direct and indirect effects on drug-resistant infections. For example, [research](#) shows that H. influenzae b. and S. pneumoniae vaccines dramatically reduce the burden of these diseases and the incidences of resistant strains.

Vaccines also have a unique advantage because resistance to vaccines is incredibly rare. The same routine vaccines we give to [young children](#) for diphtheria and whooping cough are still being used 70 years on. As a result, we can roll out vaccines to as many people as possible without the risk of resistance developing. In fact, vaccines work better the more people get them.

Using vaccines to tackle antimicrobial resistance is not a new idea

In 2019, Gavi, the Vaccine Alliance, supported Pakistan to introduce typhoid vaccines into its routine immunization following years of drug-resistant typhoid outbreaks. A [modeling study](#) estimated that the intervention could potentially avert up to 75% of antimicrobial-resistant typhoid cases in the country.

Similarly, [studies](#) estimate that the introduction of new tuberculosis

vaccines could substantially reduce the future burden of drug-resistant tuberculosis.

And in Gavi's latest Vaccine Investment Strategy, impact on antimicrobial resistance is used as an evaluation criteria for selecting new vaccines into their portfolio.

However, while recent years have seen a significant increase in initiatives to tackle antimicrobial resistance and increase our understanding of the role vaccines can play—it hasn't been enough.

Antimicrobial resistance is one of the greatest health challenges of the 21st century.

Despite [research](#) showing that vaccines could play a significant role in combating many of the pathogens whose resistance to antimicrobials poses the greatest threat to human health, vaccines are rarely part of the antimicrobial resistance discussion.

It is vital that we continue to strengthen and utilize the evidence base on the impact of vaccines on the development of [antimicrobial resistance](#), especially in low- and middle-income settings.

We cannot neglect the crucial role of vaccines in combating this threat.

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