

We are facing a global pandemic of antibiotic resistance, warn experts

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Vital components of modern medicine such as major surgery, organ transplantation, and cancer chemotherapy will be threatened if antibiotic resistance is not tackled urgently, warn experts on bmj.com today.

A concerted global response is needed to address rising rates of bacterial resistance caused by the use and abuse of antibiotics or "we will return to the pre-antibiotic era", write Professor Otto Cars and colleagues in an editorial.

All antibiotic use "uses up" some of the effectiveness of that antibiotic, diminishing the ability to use it in the future, write the authors, and antibiotics can no longer be considered as a renewable source.

They point out that existing antibiotics are losing their effect at an alarming pace, while the development of new antibiotics is declining. More than a dozen new classes of antibiotics were developed between 1930 and 1970, but only two new classes have been developed since then.

According to the European Centre for Disease Prevention and Control, the most important disease threat in Europe is from micro-organisms that have become resistant to antibiotics. As far back as 2000, the World Health Organisation was calling for a massive effort to address the problem of antimicrobial resistance to prevent the "health catastrophe of tomorrow".

So why has so little been done to address the problem of resistance, ask the authors?

Antibiotics are over prescribed, still illegally sold over the counter in some EU countries, and self medication with leftover medicines is commonplace.

There are alarming reports about serious consequences of antibiotic resistance from all around the world. However, there is still a dearth of data on the magnitude and burden of antibiotic resistance, or its economic impact on individuals, health care, and society. This, they suggest, may explain why there has been little response to this public health threat from politicians, public health workers, and consumers.

In addition, there are significant scientific challenges but few incentives to developing new antibiotics, state the authors.

The authors believe that priority must be given to the most urgently needed antibiotics and incentives given for developing antibacterials with new mechanisms of action. In addition, "the use of new antibiotics must be safeguarded by regulations and practices that ensure rational use, to avoid repeating the mistakes we have made by overusing the old ones", they say.

They point out that reducing consumer demand could be the strongest force to driving change—individuals must be educated to understand that their choice to use an antibiotic will affect the possibility of effectively treating bacterial infections in other people.

But, they claim, the ultimate responsibility for coordination and resources rests with national governments, WHO and other international stakeholders.

Not only is there an urgent need for up-to-date information on the level of antibiotic resistance, but also for evidence of effective interventions for the prevention and control of antibiotic resistance at national and local levels, while more focus is needed on infectious diseases, they conclude.

Source: British Medical Journal

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