

Antimicrobial resistance: Are we losing the fight?

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ABSTRACT

Summary: It has been estimated that there were an estimated 4.95 million (3.62–6.57) deaths associated with bacterial AMR in 2019, including 1.27 million (95% UI 0.911–1.71) deaths attributable to bacterial AMR. World bank in a report in 2017 postulated that if the antimicrobial resistance rates continue to increase the GDP fall due to resistance will be similar to what happened in 2008-2009 financial crisis. Resistance happens because of pressure to antibiotic usage. Between 2000 and 2015, antibiotic consumption, expressed in defined daily doses (DDD), increased 65% (21.1–34.8 billion DDDs), and the antibiotic consumption rate increased 39% (11.3–15.7 DDDs per 1,000 inhabitants per day). Of particular concern was the rapid increase in the use of last-resort antibiotics, such as glycylicyclines, oxazolidinones, carbapenems, and polymyxins. Drivers of AMR include over/suboptimal use in humans, animals and crops, sewage contamination of food pathways, environmental contamination of pharmaceutical products, sub standards drugs, poor vaccination rates, healthcare transmission and absence or suboptimal diagnostics.