

PUBLIC HEALTH

Antibiotic use across the globe*Proc. Natl Acad. Sci. USA* **115**, E3463–E3470 (2018)

Credit: Gmutlu/E+/Getty

Human antibiotic consumption has contributed to an increase in antibiotic-resistant microbes, which cause deaths worldwide. However, a comprehensive description of the global trends in antibiotic consumption has been lacking.

Eili Klein, of the Center for Disease Dynamics, Economics and Policy and Johns Hopkins University, and colleagues report defined daily doses of antibiotic consumption in 76 countries over the past 16 years (2000–2015). They find that the number of daily doses consumed increased by 65% from 2000 to 2015, and that this increase was primarily due to a rise in consumption in low- and middle-income countries. People from high-income countries, however, did not seem to increase their daily consumption of antibiotics. Instead, though overall sales of antibiotics increased slightly, the defined daily doses per 1,000 inhabitants per day decreased by 4%. However, in countries of all income levels, the use of so-called last-resort drugs (used when all others fail) increased. Klein and colleagues project that, in the absence of dramatic changes, antibiotic consumption in 2030 could be as much as 200% higher than in 2015.

These results emphasize the importance of understanding the factors influencing global antibiotic consumption, as well as understanding that it is necessary to maximize antibiotic effectiveness while minimizing the potential increase in antibiotic-resistant microbes.

Mary Elizabeth Sutherland

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