



NRDC comments ahead of the 21st meeting of the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria (PACCARB), September 12-13, 2022

Re: Strengthening our defenses against an ever-worsening antibiotic resistance pandemic

Nearly three times as many medically important antibiotics worldwide are sold for use in food-producing animals as for treating sick people, according to estimates in *Science*.¹ Yet these antibiotics are routinely overused in food animals as they are in human medicine.

This reality informs the laudable question put before the PACCARB: *What federal policy changes are needed to curb the global spread of resistance, and especially the overuse of antibiotics that is driving it?* It is also behind the recommendations we urge the PACCARB to issue to the FDA:

- a) Establish a national target for a 50% reduction in (medically important) antibiotic sales for use in food-producing animals by 2025, relative to an appropriate baseline; and
- b) Starting with the ADUFA summary report that FDA is due to issue in December 2022, the agency should issue both raw sales data and weight-adjusted sales data at the same time. Dating back to its first 2011 report, the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) project of the European Medicines Agency (EMA) has issued annual sales data for up to 31 European countries on a raw and weight-adjusted basis.

Context. Reducing antibiotic overuse is imperative to protect public health. Reductions are more elusive without systems to closely surveil antibiotic use and identify patterns of overuse. In recent years, the CDC has invested in more robust and regular tracking of human antibiotic use and overuse; however, the FDA lacks equivalent systems to track the use and overuse of these same classes of antibiotics in food animals.

Since 2009, the FDA has reported annual antibiotic sales for use in veterinary settings; these data constitute a sufficient basis for estimating actual antibiotic usage, as well. The World Organization of Animal Health (WOAH) – of which the United States is a member – endorses employment of antibiotic sales data to estimate antibiotic usage in food-producing animals.² For over a decade, the EMA has used a specific method it developed to “weight-adjust” national sales data.³ As a result, it now has annual mg/kg estimates of the rate of antibiotic ‘consumption’ or use by food animal producers in up to 31 European countries.

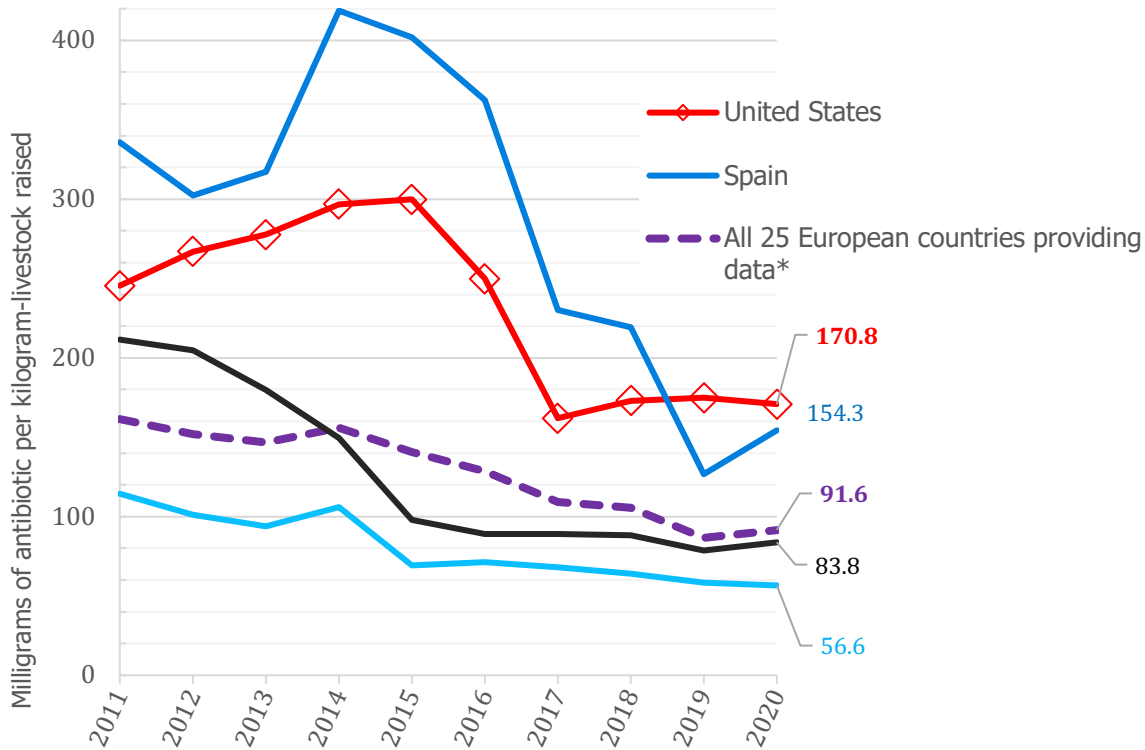
NRDC applied this same method to weight-adjust the FDA’s annual sales data back to 2009. We compared our estimated rates of U.S. antibiotic use to those available for Europe over the same time span, 2011 to 2020. Results are summarized in the figure and table below.

Rates of antibiotic use have fallen further and more consistently among top livestock-producing countries in Europe (Germany, Spain, and France) than they have in the United States. In each of the three countries, a greater-than-50% decline strongly suggests that a 50% reduction target for the United States is reasonable and achievable. Figure 1 also indicates that since the FDA ended legal use of medically important antibiotics for growth promotion at the outset of 2017, *there has been no net improvement in antibiotic stewardship in U.S. food-producing animals*. In fact, the rate of antibiotic use we estimated for 2020 is more than 5% higher than the rate of use for 2017.

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Figure 1: Rates of antibiotic use (weight-adjusted sales) by US and European livestock



producers from 2011 to 2020

Table 1: Decline in the rate of antibiotic use in the US and select European countries, 2011 to 2020

<u>Country</u>	<u>% decline</u>
United States	-30.4%
All 25 European countries	-43.2%
France	-50.5%
Spain	-54.1%
Germany	-60.4%

Sources

¹ Boeckel, T.P.V.; Glennon, E.E.; Chen, D.; Gilbert, M.; Robinson, T.P.; Grenfell, B.T.; Levin, S.A.; Bonhoeffer, S.; Laxminarayan, R. Reducing antimicrobial use in food animals. *Science* 2017, 357, 1350–1352.

² World Organization of Animal Health (formerly known as OIE), “Terrestrial Animal Health Code, Chapter 6.9”, First adopted 2003, last updated in 2018, https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/?id=169&L=1&htmlfile=chapitre_antibio_monitoring.htm.

³ European Medicines Agency, 'Trends in the sales of veterinary antimicrobial agents in nine European countries: 2005-2009', September 15, 2011.