

U.S. Federal Policy and Agricultural Antibiotic Use

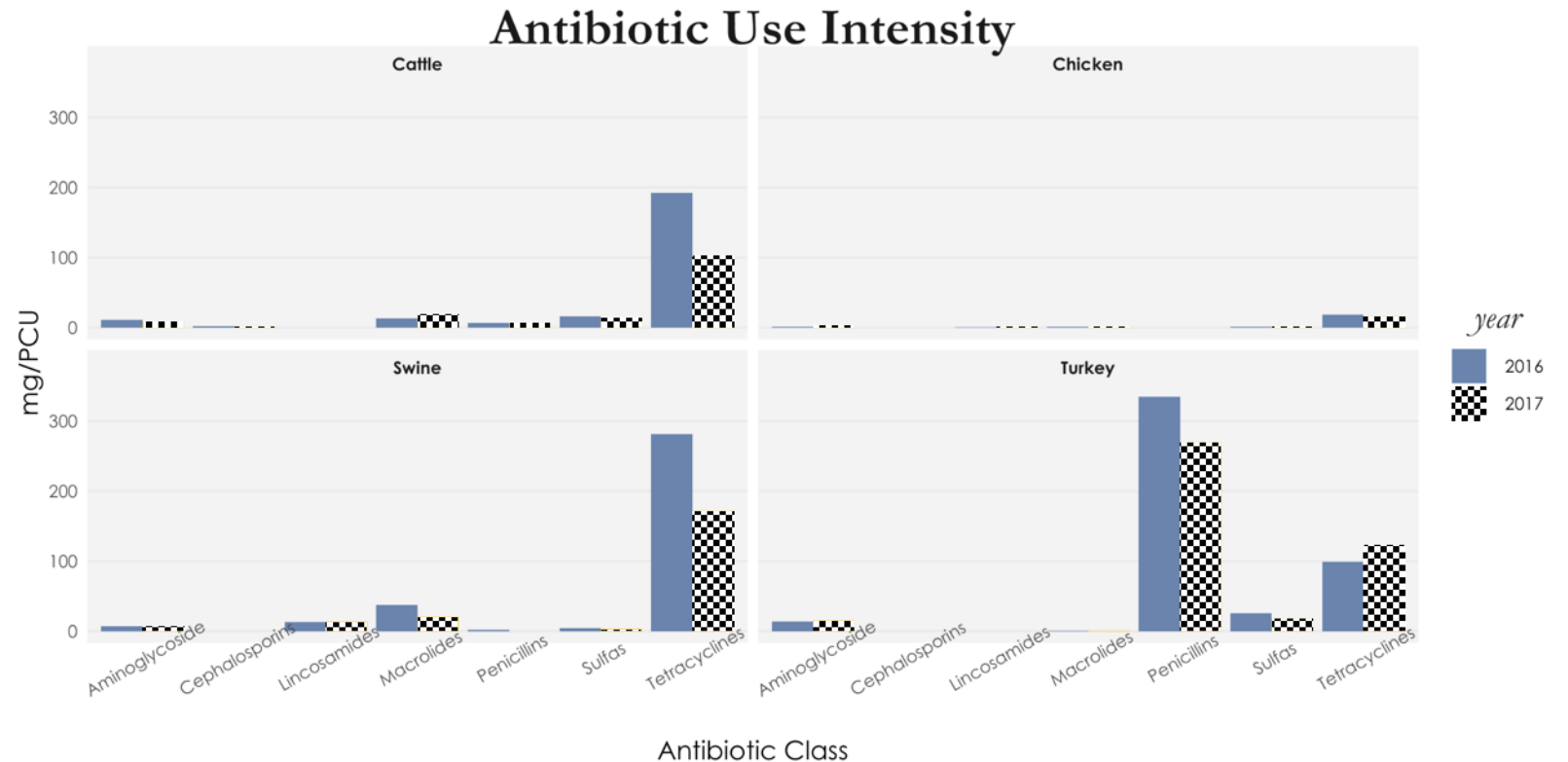


Steve Roach, Food Safety Program Director



Antibiotic use in agriculture

- 2017 – little more than half animal antibiotics MIA
- 2017 – 63% U.S. sales of MIA for food animal use
- Tetracyclines most used
- Turkey most intense use
- Significant drop 2017
- Plants left out

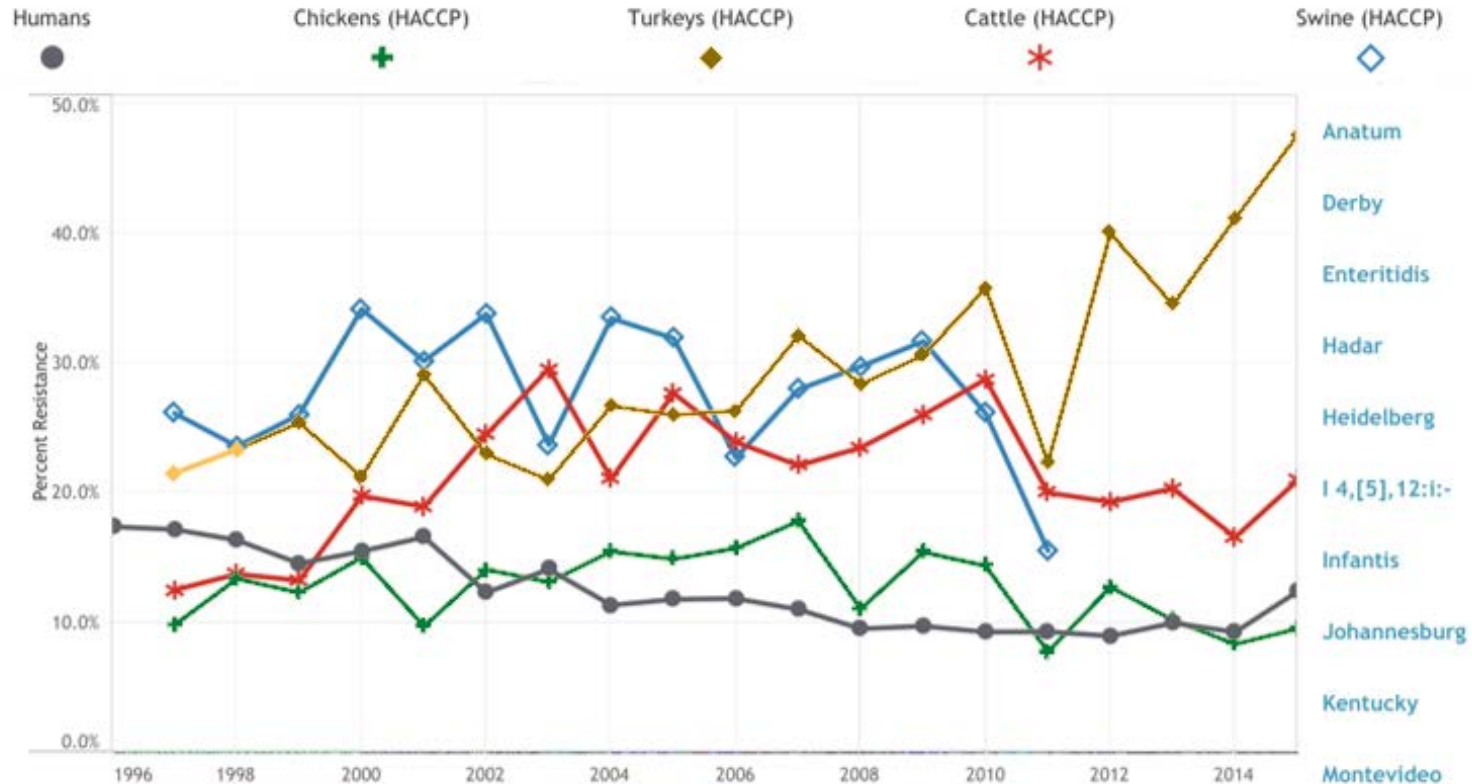


(FACT and NRDC)

Antibiotic use intensity calculated by FACT and NRDC using method developed by European Medicines Agency under the ESVAC program. Data on sales from FDA and data on animal populations and weight from USDA. For example of method applied to 2016 data see <https://www.nrdc.org/sites/default/files/antibiotic-consumption-us-pork-beef-and-turkey-industries-appendix.pdf>

Antibiotic Resistance

- NARMS data available up to 2015
- Some reductions in MDR *Salmonella*
- Resistance to last resort drugs in low numbers in food animals
 - Polymyxins (mcr-1)
 - CREs
 - Linezolid
 - Vancomycin



(Food and Drug Administration (FDA). NARMS Now)

Policy Guidance

- 2015 Review of AMR
- 2017 Policy Roadmap
- 2018 WHO Guidelines

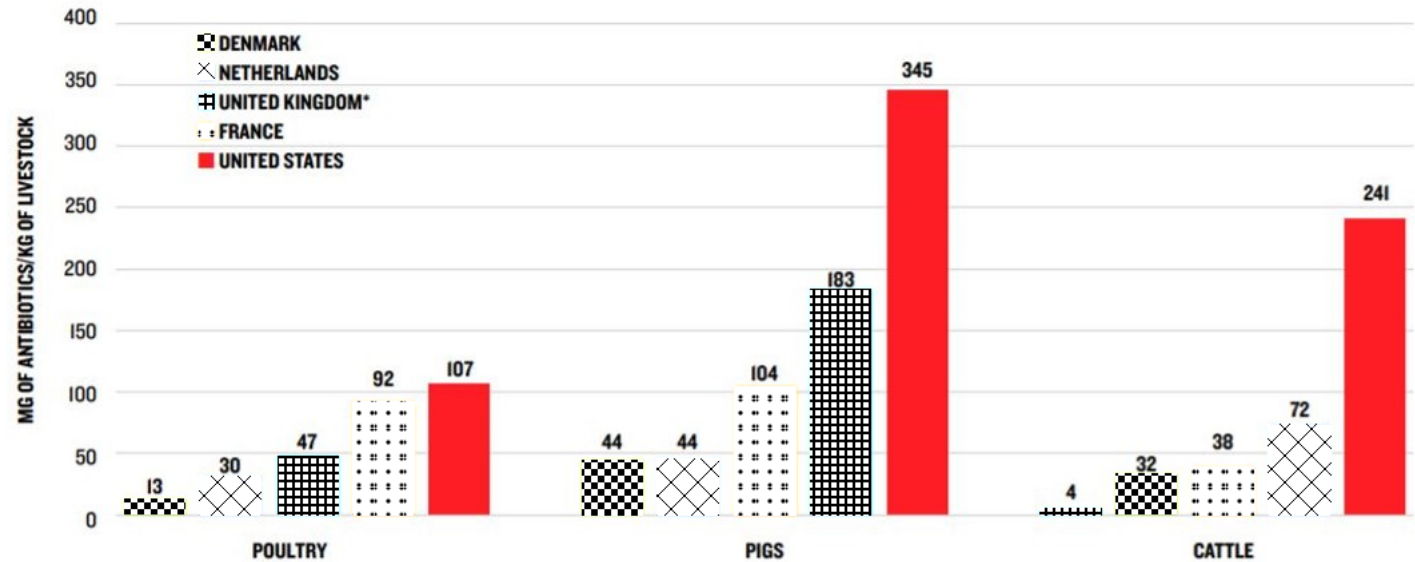
- Consistent Recommendations
 - Targeted reductions in use
 - Stop routine use
 - Address priority drugs
 - Improve surveillance of use and resistance



Set targets for use reductions

- Reductions are possible
- Exact target is not a scientific question
- Can look at what other countries have done
- US 2017 numbers still high
 - Cattle 152 mg/PCU
 - Swine 220 mg/PCU
 - Turkey 427 mg/PCU
 - Chicken 29 mg/PCU
- Sector specific targets
- Drug specific targets

FIGURE 4: INTENSITY OF ANTIBIOTIC CONSUMPTION IN POULTRY, PIG, AND CATTLE PRODUCTION IN THE U.S., FRANCE, UNITED KINGDOM, NETHERLANDS, AND DENMARK IN 2016



*Consumption intensity for UK pig production in Figure 4 is for 2016, although more recent figures are available for 2017, as noted in the text.

(FACT and NRDC)

New NAP goal: Eliminate routine use

- Prevent disease through management not antibiotics
- FDA define treatment, prevention, and control
- Eliminate MIA use in animals that are not sick, injured, or undergoing surgery
- Set duration limits under 21 days
- Eliminate routine use in companion animals

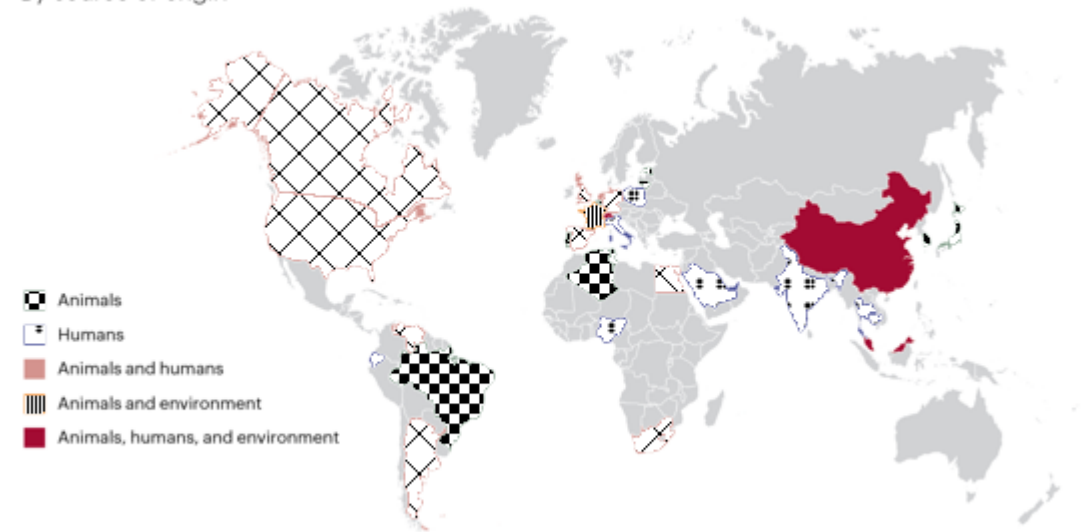


(Baseline Farm, Ann Arbor)

New NAP Goal: Address most important antibiotics

- Develop management for WHO reserve class drugs (WHO Essential Medicines 2018)
- Prohibit use of OTC polymyxins for humans and all use in animals
- Update FDA's ranking of drugs considered medically important for human medicine (GFI#152 Appendix A)
- Restrict use of most important drugs to disease treatment
- Additional guidance for fluoroquinolones and cephalosporins

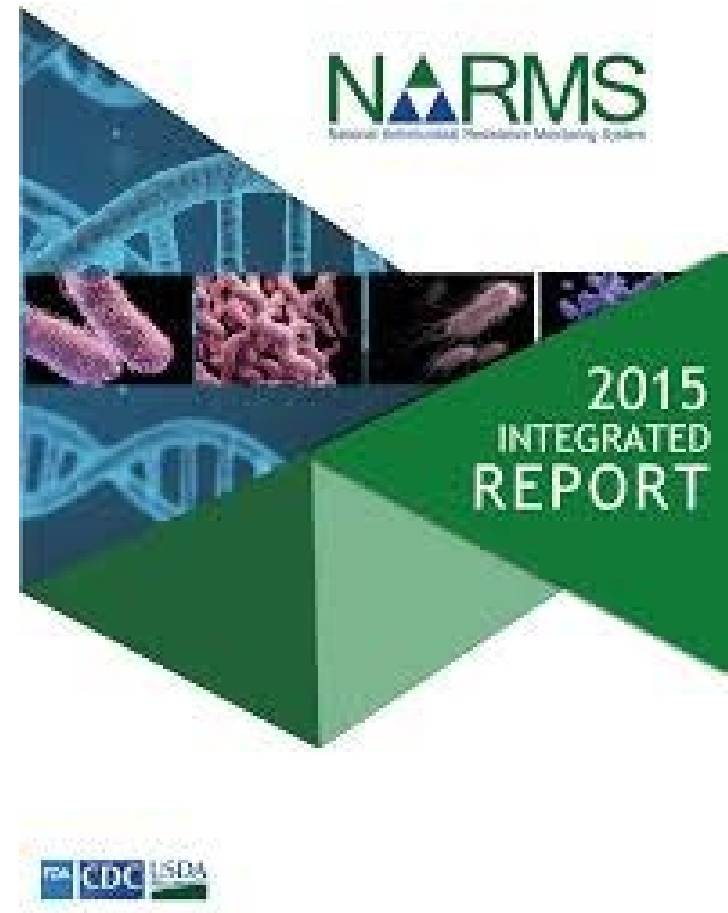
Countries reporting mcr-1
By source of origin



Sources: The Center for Disease Dynamics, Economics & Policy; A.T. Kearney analysis

New NAP Goal: Improve surveillance and reporting

- Need system to collect antibiotic use data on annual basis
- Annual reporting of antibiotic sales
 - Adjust for animal biomass
 - Include plant/crop use
- Annual reporting of NARMS data within one year of data collection
- CDC should update estimates of resistant infections and death at least every three years.



New NAP Goal: Research and promote changes in management not additives

- Current NAP is biased towards identifying new technologies over preventing disease
- Research should focus on how to promote management that relies on less antibiotics
- Almost 50% reduction in sales between 2015 and 2017 – what worked?
- Consumers demanding meat from animals raised with responsible antibiotic use



BRD: Back to Basics

John Maday
October 24, 2017 10:10 PM



Thank you



Photos courtesy of Five Sprouts Family Farm, Willow Way Farm, and Shannon Brook Farm.