



The Use in Maryland of Medically Important Antimicrobial Drugs in Cattle, Swine, and Poultry

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**Prepared By:
Christine Wilson, ADT/ABX Program**

SUMMARY

Senate Bill 471 requires that each year the Maryland Department of Agriculture collect data from publicly available sources and report to the legislature on the use in Maryland of medically important antimicrobial drugs (MIADs) in cattle, swine and poultry.

Maryland specific data was obtained after requirements under SB471. To obtain Maryland MIAD use data, the department compiled data submitted from Maryland veterinarians and farmers using a data management system developed in 2019. The report developed from this data provides the information required by SB471: (i) the total number of animals raised on farm operations covered by SB471 (beef cattle and swine farms with herds over 200 head, dairy farms with herds over 300 head, and poultry farms with over 60,000 birds), categorized by species and production class; (ii) the specific antimicrobial active ingredients and classes of antimicrobial active ingredients used; (iii) the total weight of antimicrobial active ingredients used; (iv) indications for which veterinarians prescribed MIADs; and (v) patterns of use for MIADs, including duration and seasonal variation.

As a disclaimer, the data that is presented in this report was provided from third party sources submitted to the Maryland Department of Agriculture. It is not the product of a controlled research project, and data is not verified through Department audits. Also, as the final submission date by law is February 1, 2023, any data that is received after the due date may not be included in this report but will be included in next year's report.

Protecting Confidential Information

If there were 2 or fewer operations reporting in a county, summary data is provided on a regional or statewide basis, in a manner consistent with SB471 requirements.

Key observations from the State data are provided are below:

Table 1. Antibiotic Use by Species Reported

| Species | Reported Treated Animals | Total ABX Per Species in KG | Percentage of ABX per Species |
|---------|--------------------------|-----------------------------|-------------------------------|
| Cattle | 3,850 | 2,114 | 0.0002236 |
| Poultry | 17,167,006 | 9,775 | 0.9970 |
| Swine | 47,911 | 6,878 | 0.0028 |

| | | | |
|--------------------|-------------------|---------------|-------------|
| Grand Total | 17,218,767 | 18,768 | 100% |
|--------------------|-------------------|---------------|-------------|

Table 2. Total Reported Antibiotic Prescribed

| Prescribed Drug | Reported Animals Treated | ABX Total (kg) | Percentage Of Total |
|--------------------|--------------------------|----------------|---------------------|
| Cattle | 1,620 | 14 | 0.0000880% |
| Poultry | 7,278,100 | 437 | 79.97% |
| Swine | 20,600 | 844 | 20.03% |
| Grand Total | 7,300,320 | 1,295 | 100.00% |

Summary data of antibiotic use by production operation, active ingredient, number of animals treated and for what disease indicator is provided below in Table 3, and total numbers of animals on farms meeting the SB471 criteria are shown in Tables 4 & 5.

Table 3. Indication Report by Species/Active Ingredient Prescribed

| Prescribed Drug | Total Animals Treated | Total Weight of Animals | Total ABX (kg) |
|---|-----------------------|-------------------------|----------------|
| Cattle | | | |
| treatment of bacterial enteritis caused by Escherichia coli and bacterial pneumonia | 1,220 | 440,500 | 11 |
| control and treatment of bacterial enteritis caused by Escherichia coli and Salmonella spp. And bacterial pneumonia | 400 | 320,000 | 3 |
| Poultry | | | |
| For treatment of gangrenous dermatitis in chickens. | 1,096,700 | 5,483,500 | 73 |

| | | | |
|---|------------------|-------------------|--------------|
| For treatment of necrotic enteritis caused by Clostridium perfringens. | 498,500 | 2,492,500 | 19 |
| Lincomycin Hydrochloride Soluble Powder is indicated for the control of necrotic enteritis caused by Clostridium perfringens susceptible to lincomycin. | 2,492,500 | 12,462,500 | 85 |
| Treatment for the control of gangrenous dermatitis caused by Clostridium spp. | 1,994,000 | 9,970,000 | 120 |
| Treatment of gangrenous dermatitis caused by Clostridium spp. | 1,196,400 | 5,982,000 | 140 |
| Swine | | | |
| treatment of bacterial enteritis caused by Escherichia coli and bacterial pneumonia | 8,000 | 160,000 | 56 |
| control and treatment of bacterial enteritis caused by Escherichia coli and Salmonella spp. And bacterial pneumonia | 2,100 | 367,500 | 0 |
| control of porcine proliferative enteropathy assoc with Lawsonia intracellularis | 10,500 | 787,500 | 788 |
| Grand Total | 7,300,320 | 38,466,000 | 1,295 |

Table 4. Reported Animals Raised on Farms

| Counties | Total Dairy - Cattle | Total Beef - Cattle | Total Swine | Total Per County |
|------------------|----------------------|---------------------|-------------|------------------|
| Baltimore | 926 | 360 | 514 | 1,800 |
| Caroline | 1,350 | 2,800 | | 4,150 |
| Carroll | 2,793 | 206 | 310 | 3,309 |
| Cecil | 3,191 | 595 | 1,900 | 5,686 |

| | | | | |
|------------------------|--------|--------|--------|---------|
| Charles | | 229 | | 229 |
| Frederick | 8,968 | 2,350 | 4,850 | 16,168 |
| Garrett | 1,058 | 580 | | 1,638 |
| Harford | 2,485 | 1,163 | | 3,648 |
| Howard | 807 | | | 807 |
| Kent | 6,462 | | 3,055 | 9,517 |
| Montgomery | | 522 | | 522 |
| Prince George's | 225 | | | 225 |
| Queen Anne's | 2,085 | 297 | 2,550 | 4,932 |
| Talbot | 349 | | | 349 |
| Washington | 13,547 | 39,999 | 4,095 | 57,641 |
| Grand Total | 44,246 | 49,101 | 17,274 | 110,621 |

Table 5. Poultry Raised on Farms

| Counties | Sum of Total Broiler /Roasters (in 1,000s) | Sum of Total Pullets (in 1,000s) | Sum of Total Layers (in 1,000s) | Sum of Total Turkeys (in 1,000s) |
|--|--|----------------------------------|---------------------------------|----------------------------------|
| Caroline | 54,064 | | | |
| Carroll | | | | |
| Cecil | 1,216 | | | |
| Dorchester | 36,752 | | | |
| Howard | | | | |
| Frederick | | | | |
| Kent | 4,255 | | | |
| Queen Anne's | 27,092 | | | |
| Somerset | 48,754 | 1,330 | | |
| Talbot | 4,932 | | | |
| Washington | | | | |
| Wicomico | 38,577 | | | |
| Worcester | 73,918 | | | 202 |
| Other Counties (When 2 Per county is reported, county is redacted for confidentiality, only totals will bereported.) | 968 | 2,693 | 4,267 | |
| Grand Total | 290,528 | 4,023 | 4,267 | 202 |