US Swine Industry
Antibiotic Stewardship Introduction

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With special thanks to Dr. Chris Rademacher, Iowa State University
Feed and Water still comprises 95% of total antibiotic usage.
Medical Importance, Route of Administration, and Drug Class (2009 - 2016)
Summary from 2016 report

• Domestic sales and distribution of antimicrobials approved for use in food-producing animals **decreased by 10%** from 2015 through 2016.
  – 1 year prior to any mandated changes regarding VFD and prescriptions.
  – Medically important antibiotics decreased by 14%
  – Expect larger decreases in 2017
Veterinarian VFD Survey (n=41 vets)

How did growth promotion uses change (%)?

- Eliminated all uses of antibiotics for growth promotion: 53.8%
- Eliminated some uses of antibiotics for growth promotion: 15.4%
- Moved to non-medically important growth promotants: 22.5%
- Other*: 7.1%
Veterinarian VFD Survey (n=41 vets)

Changes to deal with fewer antibiotics

- Modified biosecurity: 18.2%
- Increased vaccinations: 30.3%
- Increased non-antibiotic feed additives: 21.2%
- Modified nutrition: 14.1%
- Modified housing: 6.1%
- Modified animal purchase strategies: 5.1%
- Modified population density: 3.0%
- Other*: 2.0%
- Other changes to deal with fewer antibiotics: 14.1%
Average number head per VFD

- **Swine**: 7165
- **Bovine**: 1152
- **Ovine**: 699
- **Poultry**: 4,512,954
- **Aquaculture**: 320,362
- **Bees**: 20,166,756

Slides courtesy of Global Vet Link
“Prevention” is Under Fire!!

- Several states are in the process of passing laws against "routine use of antibiotics for prevention".
  - California
  - Maryland
  - Oregon (under consideration)

- Would need veterinary justification and only in special, documentable circumstances.
Judicious Use of Antibiotics

• So what does “Judicious Use of Antibiotics” mean?
  – Antibiotics should be used for prevention, control or treatment only when there is an appropriate clinical diagnosis or herd history to justify their use.
  – Limit antibiotic use for prevention, control or treatment to ill or at-risk animals, treating the fewest animals indicated.
  – Support development of a scientific knowledge that provides the basis for judicious therapeutic antimicrobials use.

So where are there some opportunities for us to be more “judicious”??
NPB Policy on Antibiotics

On behalf of America’s pig farmers, the National Pork Board has created the following values that reflect farmers’ commitment to using antibiotics responsibly on the farm. We affirm that:

• Using antibiotics responsibly in animals and humans is essential to protect the health and wellbeing of both.

• Preventing disease, rather than treating disease, by using disease-prevention strategies, that may include antibiotics, is essential for animal health and well-being and can prevent unnecessary illness, suffering and mortality.

• Protecting the efficacy of antibiotics is important today because it can help ensure the overall health and well-being of future generations of people and animals.

• Reducing the need to use medically important antibiotics by using best management practices is a worthy objective.
We agree to implement the following guidelines to demonstrate our values. They include:

- Advocating objective, scientifically rigorous studies and risk assessments to make informed decisions regarding on-farm use of antibiotics in food-animal production.

- Supporting veterinarian oversight and best practices as the basis of antimicrobial use decision-making on the farm.
  - Continual evaluation of treatment programs, appropriate diagnostics and timely interventions are important components of veterinary best practices.

- Promoting stakeholder education to continually enhance on-farm knowledge to improve antibiotic best practices.
  - Antibiotic stewardship guidance for veterinarians and pork producers includes Pork Quality Assurance® Plus,
NPB Policy on Antibiotics (cont.)

• American Association of Swine Veterinarians’ Basic Guidelines of Judicious Therapeutic Use of Antimicrobials in Pork Production and continuing education for veterinarians.

• Demonstrating compliance with all regulatory requirements to underscore antibiotic stewardship, e.g., treatment records as described in PQA Plus®.

• Encouraging transparency and providing assurances regarding farmers’ commitment to raising healthy animals to help ensure a safe food supply.
Introducing USCARE:
A Handy Way to Remember What’s Important

✓ UNDERSTAND the new feed (veterinary feed directive) and water (prescription) rules.

✓ STRENGTHEN your veterinary-client-patient relationship (VCPR).

✓ COMMUNICATE with your feed mill.

✓ ASSESS your herd health and welfare strategies.

✓ RENEW your commitment to responsible antibiotic use.

✓ ENSURE your record-keeping compliance.
PQA Plus Provides Antibiotic Guidance

Here’s a look at the Five Principles:

• **Principle 1:** Take appropriate steps to decrease the need for the application of antibiotics.

• **Principle 2:** Assess the advantages and disadvantages of all antibiotic use.

• **Principle 3:** Use antibiotics only when they will provide measurable benefits.

• **Principle 4:** Fully implement management practices for responsible use of animal-health products into daily operations.

• **Principle 5:** Maintain a working veterinary-client-patient relationship.
PQA Plus Provides Antibiotic Guidance

The PQA Plus program uses 10 Good Production Practices (GPPs).

- When implemented, GPPs will help ensure pork is free from chemical and physical hazards; that the pigs are raised in a caring, humane manner; that our natural resources are protected by pork producers; and that caretakers have a safe place to work.
- These 10 practices are based on Hazard Analysis and Critical Control Point principles (HACCP).
- HACCP principles are the standard for controlling hazards in foods produced and processed in the United States and many foreign countries.
Six Guidelines to Responsible Antibiotic Use

• Guideline 1: Use professional veterinary input as the basis for all antibiotic decision-making.
• Guideline 2: Antibiotics should be used for prevention, control or treatment only when there is an appropriate clinical diagnosis or herd history to justify their use.
• Guideline 3: Limit antibiotic use for prevention, control or treatment to ill or at-risk animals, treating the fewest animals indicated.
Six Guidelines to Responsible Antibiotic Use

• Guideline 4: Antibiotics that are important in treating infections in human or veterinary medicine should be used in animals only after careful review and reasonable justification.

• Guideline 5: Mixing together injectable or water medications, including antibiotics, by producers is illegal.

• Guideline 6: Minimize environmental exposure through proper handling and disposal of all animal health products, including antibiotics.