Antimicrobial resistance (AMR) among bacteria is a growing threat to public health. Our profession should strive for responsible antimicrobial use, including improved adherence to established guidelines. By better aligning prescribing practices with existing guidelines, we can promote the health of pets and people who care for them by mitigating our contribution of AMR.

**Key takeaway**

The issue

Antimicrobial resistance (AMR) among bacteria is a growing threat to public health. Our profession should strive for responsible antimicrobial use, including improved adherence to established guidelines. By better aligning prescribing practices with existing guidelines, we can promote the health of pets and people who care for them by mitigating our contribution of AMR.

**Awareness among veterinarians can be increased**

- **45%** are concerned about antimicrobial-resistant infections
- **62%** feel that antimicrobials in small animal practice impact AMR
- **88%** are unaware of the 3 existing sets of antimicrobial use guidelines; urinary infections, superficial bacterial folliculitis, and respiratory infections.

**Prescription patterns can be improved**

In 2015, guideline-recommended first-line antimicrobials were not prescribed for:

- **32.9%** of canine non-recurrent urinary infections
- **55.8%** of canine recurrent urinary infections
- **20.4%** of canine infectious respiratory disease episodes
- **78.3%** of canine bronchitis episodes

**What does a rise in AMR mean?**

**Clients**
- Less effective treatments for sick pets
- Increased veterinary bills
- Risk of AMR transmission from their pets

**Veterinarians**
- Decreasing efficacy of available drugs
- Threatens freedom to practice as we choose
- Zoonotic spread of AMR

**Quality Improvement Cycle**

**Plan** — What you aim to achieve and what you will need to do and measure
**Do** — Implement the plan
**Study** — Try to understand all outcomes
**Act** — Make adjustments as needed

**We need to make the invisible visible...**

- **Visible**
  - Immediate patient needs
  - Client expectations

- **Invisible**
  - Public health impacts
  - Antimicrobial resistance and long-term efficacy
  - Cumulative patient outcomes

...AND BALANCE PRIORITIES

**The data**

- **45%** are concerned about antimicrobial-resistant infections
- **62%** feel that antimicrobials in small animal practice impact AMR
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**The implications**

- Clients
  - Less effective treatments for sick pets
  - Increased veterinary bills
  - Risk of AMR transmission from their pets

- Veterinarians
  - Decreasing efficacy of available drugs
  - Threatens freedom to practice as we choose
  - Zoonotic spread of AMR

**The approach**

**Plan** — What you aim to achieve and what you will need to do and measure
**Do** — Implement the plan
**Study** — Try to understand all outcomes
**Act** — Make adjustments as needed

Download the full report at Banfield.com/VETreport

## Aim:
(Every aim/goal will require multiple smaller tests of change)

*Improve concordance with first-line drug recommendations for urinary tract infections by 50% over a six month period*

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### Describe your first (or next) test of change:

<table>
<thead>
<tr>
<th>Description</th>
<th>Responsible</th>
<th>By When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide education at staff meeting on 3/10 to increase awareness of first-line antimicrobial recommendations for UTIs</td>
<td>Dr. Nelson</td>
<td>3/10</td>
</tr>
</tbody>
</table>

---

## Plan:

<table>
<thead>
<tr>
<th>List the tasks needed to set up this test of change</th>
<th>Responsible</th>
<th>By When</th>
<th>Where?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Develop educational plan for staff meeting</td>
<td>Dr. Nelson</td>
<td>3/10</td>
<td>N/A</td>
</tr>
<tr>
<td>2) Check in with doctors about questions/concerns</td>
<td>Dr. Nelson</td>
<td>3/12</td>
<td>N/A</td>
</tr>
<tr>
<td>3) Track UTI diagnoses and antimicrobial Rx</td>
<td>Maria (PM)</td>
<td>3/31</td>
<td>Clipboard in pharmacy</td>
</tr>
</tbody>
</table>

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## Do: Describe what actually happened when you ran the test

- Staff meeting education well-received. Doctors created “cheat sheet” to keep in pharmacy for reminder
- Only concern noted from doctors was related to price of recommended antibiotics vs. others
- Clipboard tracking worked once staff got used to the new process. Reminders at team huddles helped

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## Study: Describe the measured results and how they compare to goal

- Captured 74 diagnoses and antimicrobial prescriptions
- 69% of UTIs received recommended first-line antimicrobial

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## Act: Describe what modifications to the plan will be made for the next cycle

- Communicate results to doctors/techs at next hospital meeting – discuss barriers to using recommended drugs
- Track single vs. recurrent UTIs and use of C&S going forward – measure for additional month and review