Online Supplemental Content

Posted in conjunction with the following article published in the October 15, 2015 issue:


Questionnaire used in a study to assess opinions of clinical veterinarians at the North Carolina State University Veterinary Hospital regarding antimicrobial use and antimicrobial-resistant infections and identify educational experiences and information sources that may have influenced those opinions.

This supplemental content has not undergone external peer review.
Factors Associated with the Prescribing Habits of NC State University VHC Veterinarians

Thank you for participating in this important survey, designed to identify factors influencing clinician prescribing habits for antibiotics. Your survey will remain anonymous. If you have any questions or concerns, please contact Dr. Megan Jacob (megan_jacob@ncsu.edu; 919-513-6236).

Date: ______________________________

1) Participant Gender
   - Female
   - Male

2) What is your current position?
   - Faculty Member
   - Clinical Veterinarian
   - Resident
   - Intern

3) Do you currently mentor
   - Residents
     - Yes
     - No
   - Interns
     - Yes
     - No
   - Veterinary Students
     - Yes
     - No

4) What year did you graduate with your veterinary degree? ________________

5) Where was your primary place of veterinary education?
   - ___ North Carolina State University
   - ___ Another College of Veterinary Medicine within the United States
   - ___ College of Veterinary Medicine (equivalent) outside of the United States

6) Do you have a Master’s in Public Health?  Yes   No

7) Where have you obtained public health training (check all that apply)?
   - ___ Veterinary school
   - ___ Continuing Education (CE) credit
8) What was the emphasis on antibiotics in your veterinary school education (non-clinical years)?
   ___ Topic not covered
   ___ Light emphasis
   ___ Covered thoroughly in one course
   ___ Emphasized in multiple courses

9) Who was primarily responsible for your education on antibiotics in your veterinary education?
   ___ Clinical pharmacist
   ___ Clinical microbiologist
   ___ Clinician
   ___ Pharmacologist/clinical pharmacologist
   ___ Toxicologist
   ___ Don’t know what his/her background was

Please answer the following questions as they relate to your current practices:

10) Please describe your predominant patient load
    ___ Small animal
    ___ Equine
    ___ Food Animal
    ___ Mixed
    ___ Exotics

11) Can you prescribe antibiotics at your own discretion (unrestricted)
    Yes  No

12) Which best describes how often you prescribe antibiotics?
13) Do you always weigh your patient before prescribing antibiotics?
   Yes  No

14) Please rank the importance of each of the following when choosing an antibiotic. (1= most important; 5 = less important)

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<th>Factor</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Clinical signs/symptoms</td>
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<td>Antibiotic history</td>
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<td>Client expectations</td>
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<td>Peer/colleague expectations</td>
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<td>Cost of antibiotic</td>
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<td>Cytology result</td>
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<td>Culture &amp; susceptibility result</td>
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<td>Medication size/volume</td>
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<td>Potential adverse reactions</td>
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<td>Availability of antibiotic</td>
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15) Are there any additional factors you consider important when prescribing an antibiotic? Yes  No

If yes, please explain ________________________________

16) There are many ways veterinarians obtain information on antibiotic use and antibiotic resistance. Please rank the importance of the following sources for you (1= most important; 5 = less important).

<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>Pharmaceutical company representatives</td>
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17) Please describe your most commonly used source or antibiotic information:

___________________________________________________________

18) Please rank how concerned the following are about antibiotic resistant infections (1 = very concerned; 5 = less concerned)

You                         1 2 3 4 5
Clients                     1 2 3 4 5
Immediate colleagues       1 2 3 4 5
Veterinary medicine professionals         1 2 3 4 5

19) What best describes your feelings of antibiotic use within the VHC

___ All antibiotics are under-prescribed
___ Some antibiotics are under-prescribed
___ All antibiotics are appropriately prescribed
___ Some antibiotics are over-prescribed
___ All antibiotics are over-prescribed

20) Is there any antibiotic that you don’t feel comfortable prescribing for public health reasons?  Yes  No

If yes, which antibiotic ____________________________
21) Which class of antibiotic from the list below do you feel should be restricted in use in companion animals (non-food animals) because of public health concerns (check all that apply)?

___ 3rd generation cephalosporins
___ Carbapenems (imipenem, meropenem)
___ Glycopeptides (vancomycin)
___ Oxazolidinones (linezolid)
___ Human-labeled fluoroquinolones (ciprofloxacin)
___ Aminoglycosides (amikacin)
___ No restrictions
___ None of the above

22) In your opinion, the percentage of clients that are compliant with prescribed antibiotics is between

___ 0 to 25%
___ 26 to 50%
___ 51 to 75%
___ 76-100%

23) Please select which best describes your childhood (<18 years of age) experience with animals

___ Did not interact with animals
___ Interacted daily with companion animals
___ Interacted daily with equine animals
___ Interacted daily with food animals
___ Interacted daily with a combination of companion, equine or food animals
___ Occasionally interacted with companion animals
___ Occasionally interacted with equine animals
___ Occasionally interacted with food animals
___ Occasionally interacted with a combination of companion, equine
None of these choices describe me.