

Preparing Pharmacists to Safely Care for Veterinary Patients



Who Am I?

- Pharmacist with over 20 years of experience in veterinary pharmacy
- Disclose that I developed and instruct online courses in veterinary pharmacy for students and pharmacists – University of Florida
- Teach pharmacology to veterinary students in the Caribbean using distance education methods (Grand Cayman Island)
- Regulatory affairs/regulatory compliance consultant to veterinary drug distributors
- Pharmacist who has filled many, many veterinary prescriptions over the years
- I am an old Fort Sumner girl. **Bob Addison** filled all my childhood Rx's!!

Learning Objectives - Pharmacists

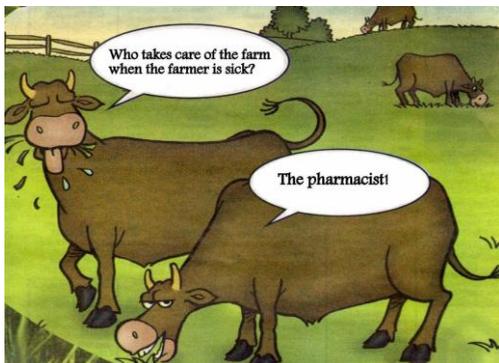
1. Describe the trend of increased animal prescriptions outsourced to community and retail pharmacies by veterinarians.
2. Summarize the outcomes of the recent survey on veterinary prescriptions and retail pharmacies relating to pharmacist filling of veterinary prescriptions.
3. List the educational resources and tools that can be utilized to ensure the safe dispensing of prescription medications for companion animal patients.
4. Communicate effectively with animal owners and veterinarians to: meet state-mandated counseling requirements, ensure patient safety, and solve drug administration problems.

I will share with you some veterinary pharmacy [clinical pearls](#).

Learning Objectives -Technicians

1. Recognize veterinary pharmacy as a specialized area within pharmacy practice.
2. Describe the trend of increased animal prescriptions outsourced to community and retail pharmacies by veterinarians.
3. List a resource that can be utilized to ensure the safe dispensing of prescription medications for companion animal patients.

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Show of hands.....

How many pharmacists would feel confident in their ability to fill a veterinary prescription as well as counsel the owner on side effects, dosing, administration techniques??



What is Veterinary Pharmacy.....?

A collage of images related to veterinary pharmacy. It includes a close-up of an orange cat's face, a dog's head, and several logos: 'NATIONAL ASSOCIATION of Vet-IPPS BOARDS OF PHARMACY', 'Rood & Riddle VETERINARY PHARMACY', 'Animal Pharmacy', 'US Compounding VETERINARY PHARMACY', 'Keep your pets healthy and heartworm-free' with a heart icon, 'Download Catalog' with a dog image, and 'Pharmaceutical Use in Cattle' with a photo of cows in a field.

Why is this topic important?

- Any pharmacist who works in a retail/community pharmacy environment will eventually be presented with an animal prescription.
- Rx's indicated in the medical treatment of pets are not exempt from the definition of "prescription drug" at the state level and thus require the same level of attention, competency and focus on regulatory requirements as human Rx's.
- Veterinary Rx's not exempt from state mandated counseling requirements.

A screenshot of a veterinary prescription form. It includes fields for 'Veterinary Patient', 'Cat/Dog', 'Feline', and 'Equine'. There are sections for 'For', 'Date', and 'Address'. A large 'Rx' symbol is prominent. Below it, there are checkboxes for 'LABEL', 'New', and 'No'. A table for drug details has columns for 'Drug', 'Strength', 'Directions', 'PRN', and 'Non-PRN'. At the bottom, there are fields for 'Di.', 'Substitution Permitted', 'Dispense as Written', and 'DRA No.'.

Describe the trend of increased animal prescriptions outsourced to community and retail pharmacies by veterinarians.

- ▶ The scenario of companion animal medications only being available from the prescribing veterinarians office has changed.
- ▶ Retail pharmacies are offering more veterinary products to pet owners. Large retailers, grocery outlets, mass merchandisers and online pharmacies recognized that owners want competitive pricing on their pet's medication and they want it to be convenient.
- ▶ Veterinarians are increasingly seeking to decrease the amount drug inventory as a cost saving measure.
- ▶ DVMs want to focus on clinical services, not drug provision.

Describe the trend of increased animal prescriptions outsourced to community and retail pharmacies by veterinarians.

- ▶ Veterinarian dispensing incident to practice has been recognized as a declining part of veterinary practice.
- ▶ Advances in logistics, supply chain management and revised sales policies of some veterinary products have fueled this trend.
- ▶ Owners want convenience and price competitiveness.
- ▶ Manufacturers of some topical flea/tick products and generic heartworm preventatives recognize the value of supply chain logistics that exist in human pharmacy wholesale distribution.
- ▶ Retail pharmacy is interested in business models that do not involve 3rd party payers.

Clinical Pearls

- ▶ Acetaminophen is toxic to cats. OTC, NSAIDs such as naproxen and ibuprofen are not indicated for use in dogs or cats due to a very narrow therapeutic window.
- ▶ The sig abbreviation "SID" means once-a-day in veterinary medicine. It can be misread by pharmacists as five times a day resulting in overdoses.
- ▶ Chocolate is toxic to dogs specifically theobromine



Summarize the outcomes of a recent survey on veterinary prescriptions and retail pharmacies.

- ▶ 2012 Survey conducted by the Oregon Veterinary Medical Association titled, "Veterinary Prescriptions and Retail Pharmacy Survey" documents that medication misadventures in retail pharmacies do occur with veterinary prescriptions
- ▶ "It is important that retail pharmacists understand that cats and dogs are not little people".
- ▶ Survey recognized that some pharmacists will call the DVM for clarification or verification.
- ▶ What did the survey reveal.....????



Summarize the outcomes of a recent survey on veterinary prescriptions and retail pharmacies.

- ▶ Pharmacists changing the dosage of an anti-seizure medication without authorization.
- ▶ Pharmacist substituting a compounded product for a prescribed commercially available product without authorization.
- ▶ Pharmacist recommending a topical flea/tick product for a cat that was only indicated for use on dogs.

Summarize the outcomes of a recent survey on veterinary prescriptions and retail pharmacies.

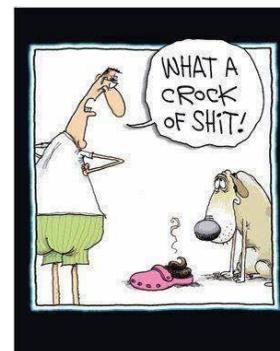
- ▶ Pharmacist inadvertently causing fear for animal owners based upon inaccurate prescription drug counseling on side effects that occur in people instead of animal patients.
- ▶ Pharmacists changing the dosages of medications for thyroid disease without authorization.
- ▶ Pharmacists substituting one insulin product for another and/or changing a patient's insulin without authorization.

Clinical Pearls

- ▶ The dose of levothyroxine for hypothyroidism in dogs is 4-5 times that of humans and will always be dosed twice a day (BID).
- ▶ Diazepam can be used to treat seizure disorders in dogs and cats.
- ▶ Alprazolam can be used to treat anxiety or noise phobias such as thunder storms and firework noise.
- ▶ Human ciprofloxacin can be used in large breed dogs needing extended therapy because it can be less expensive than veterinary enrofloxacin (a prodrug to ciprofloxacin).

October 2012, Federal Trade Commission Pet Medication Workshop relating to pharmacist filling of veterinary prescriptions

- ▶ The focus of the workshop was to examine competition and consumer protection issues in the pet medication industry.
- ▶ The workshop reflected current trends in outsourcing of veterinary prescriptions as a result of consumer's interest in less expensive pet medications and increased access to pet medications outside the veterinary practice.
- ▶ Concern by some within the animal health industry that pharmacists are not qualified to fill veterinary prescriptions.
- ▶ Whoa....read that last bullet point again....



October 2012, Federal Trade Commission Pet Medication Workshop relating to pharmacist filling of veterinary prescriptions

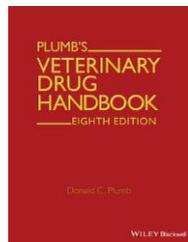
- ▶ The good news is that there are outlets that offer veterinary pharmacy focused education for any interested pharmacist or student pharmacist
- ▶ Opportunities for pharmacists to develop collaborative relationships with veterinarians for the betterment of animal health.
- ▶ NABP developed a resolution to best support both pharmacists and veterinarians to ensure the safe and appropriate community pharmacy dispensing of drugs for companion animals.

NABP Veterinary Pharmacy Education (Resolution 110-5-14)

- ▶ **WHEREAS**, pharmacists are recognized as the experts in pharmacology and appropriate drug therapy; and
- ▶ **WHEREAS**, evolving pharmacist practice includes providing medication therapy for both human and veterinary patients; and
- ▶ **WHEREAS**, a substantial opportunity exists for increasing veterinary pharmacist care and education in pharmacy practice;
- ▶ **THEREFORE BE IT RESOLVED** that NABP encourage the development and availability of veterinary pharmacology education at colleges and schools of pharmacy in collaboration with schools of veterinary medicine.
- ▶ **BE IT FURTHER RESOLVED** that pharmacists dispensing medications for veterinary patients possess the competence and have access to resources necessary to appropriately dispense and provide care.

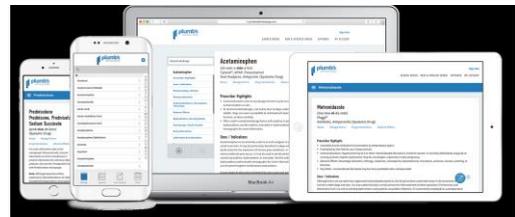
Clinical Pearls

- ▶ Several of the human label SSRI's and TCA's can be used for behavior modification in dogs and cats (separation anxiety, inappropriate urination).
- ▶ Sildenafil (Viagra®) can be used to treat pulmonary hypertension in canines and felines.
- ▶ The Veterinary Drug Handbook, written by a pharmacist, and is considered one of the most useful references in veterinary pharmacy. Verify indications, dosages, contraindications and a wonderful tool for patient counseling.



"The Virus"

Online Subscription to the VDH



Case Study

The owner of an 8 year old Yorkie Terrier has the animals seizure medications filled at your pharmacy. The dog is current receiving phenobarbital and potassium bromide. The owner reports that the dog's seizure activity is not well controlled and the attending veterinarian has discussed adding Keppra® (levetiracetam) for improved medical management of the seizures. The owner is asking you how Keppra works in dogs, possible side effects and if it will interact with the other two seizure medications. What is your thought process?

Educational resources that can be utilized to ensure the safe dispensing of prescription medications for animal patients

- ▶ Education is the key to empowering pharmacists to fill veterinary prescriptions in a safe, competent and confident manner.
- ▶ Faculty should encourage students to develop a knowledge base and skill set that will allow them to safely fill veterinary prescriptions.
- ▶ Outsourcing a veterinary pharmacy course is an option that is currently available to all schools of pharmacy. Distance education methods make this an sustainable opportunity for any interested student.
- ▶ Supportive to the NABP Veterinary Pharmacy Education resolution.

Educational resources that can be utilized to ensure the safe dispensing of prescription medications for animal patients

- ▶ Veterinary Pharmacy – PHA 6935. Online class for any interested pharmacy student in North America. Offers 2 hours of elective, transferable academic credit via Univ. of Florida SoP.
- ▶ Veterinary Therapeutics for Practicing Pharmacists. CE course offering 30 hours of ACPE approved credit. Univ. of Florida
- ▶ Veterinary pharmacy focused course taught by a pharmacist with clinical experience.
- ▶ APPE in veterinary pharmacy with an experienced veterinary pharmacist preceptor. Didactic preparation prior to the APPE is ideal.

Clinical Pearls

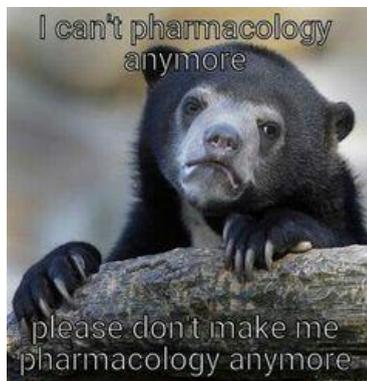
- ▶ NPH and detemir can be used to treat DM in dogs. Glargine is used to treat diabetes in cats. Insulins are *not* interchangeable/substitutable for use in dogs and cats.
- ▶ Gabapentin and tramadol are frequently being used in conjunction with veterinary label non-steroidal drugs such as carprofen for pain management.
- ▶ The liquid formulation of gabapentin should never be dispensed to dogs because it contains xylitol as a sweetener and is toxic to canines. Watch OTC vitamins, sugar free candy and peanut butter as well.

Clinical Pearls

- ▶ Piroxicam can be used for anti-tumor activity in animals with cancer.
- ▶ Veterinarians are not eligible for National Provider Identifier (NPI) numbers.
- ▶ The American Society for the Prevention of Cruelty to Animals (ASPCA) sponsors the Animal Poison Control Center (APCC). (888) 426-4435.
- ▶ Cats with chronic kidney failure frequently receive LRS SQ for treatment in the home environment.
- ▶ ASA use in dogs for ~7 days, guaranteed a GI bleed.
- ▶ OTC Kaopectate and Pepto-Bismol contain bismuth subsalicylate – an ASA derivative
- ▶ Metamucil granules sprinkled on pet food can help to tighten loose stools.

Case Study

You receive a phone call from a patient who reports that her 2 year old Labrador retriever consumed an entire bottle of over-the-counter vitamins that were recently purchased at the pharmacy. You retrieve an identical bottle of vitamins from the shelf and see that xylitol is listed as one of the ingredients. The owner is concerned about the potential negative effects of the OTC medication consumption and is asking you what they should do.



Questions? Let me know if I can do anything to assist...

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