

Rabies and Zoonotic Disease Prevention Update

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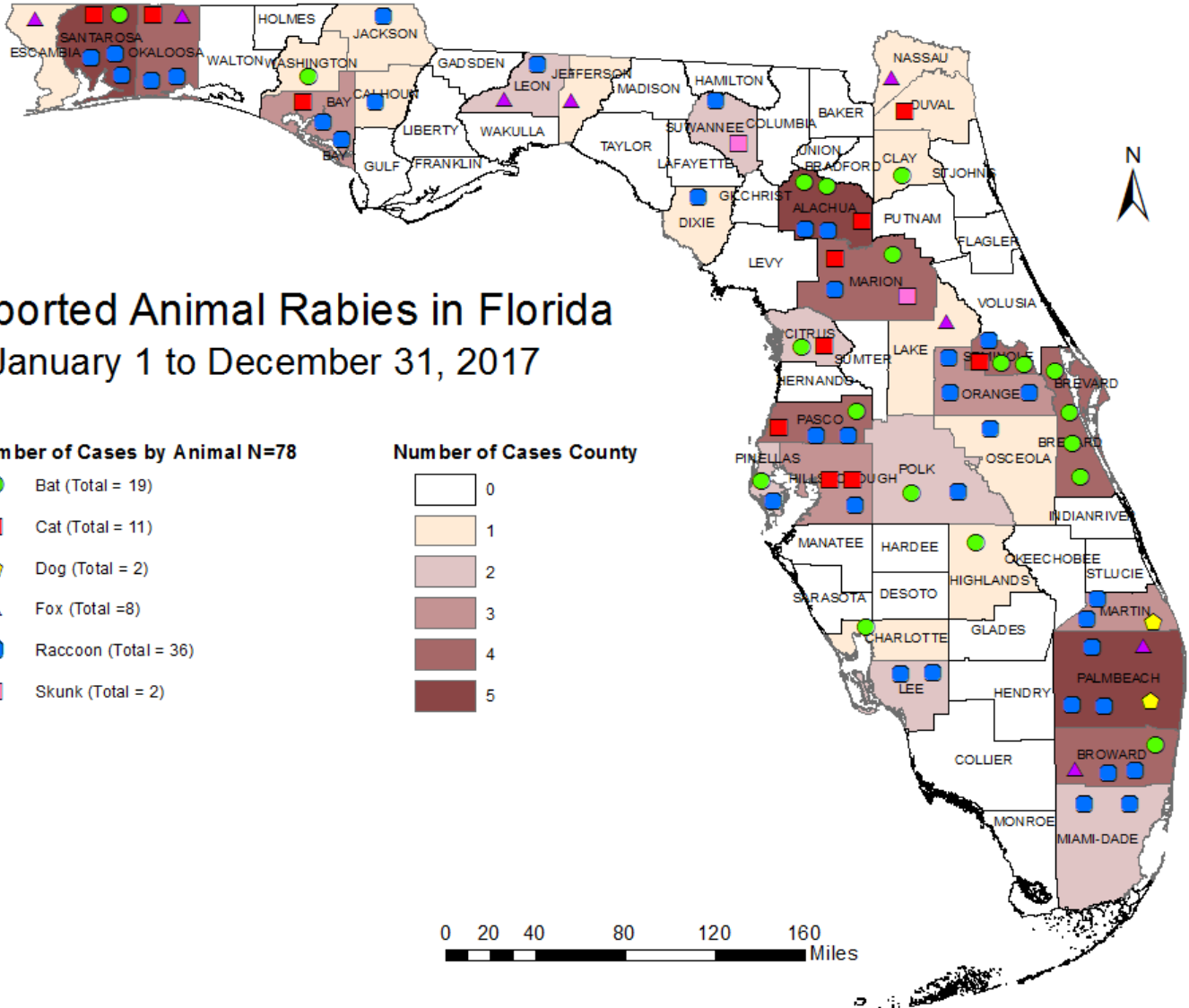
February 16, 2018

Division of Disease Control and Health Protection



Outline

- 2017 Florida animal rabies summary
- Hurricane Irma and animal bites
- Bats and rabies
- Campylobacteriosis and pets
- Questions

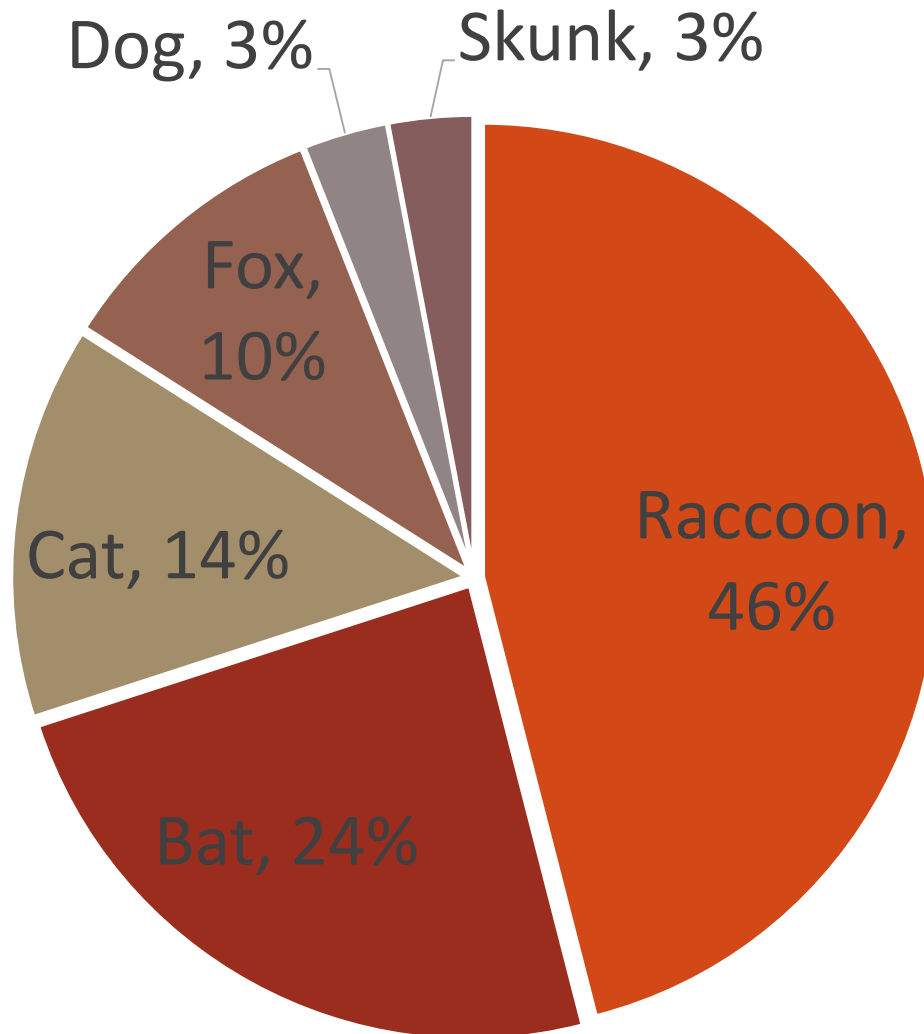


Reported Animal Rabies in Florida January 1 to December 31, 2017

Rabid Animals in Florida by Year

| Year | Number Rabid |
|-------------|---------------------|
| 2013 | 105 |
| 2014 | 92 |
| 2015 | 83 |
| 2016 | 59 |
| 2017 | 78 |

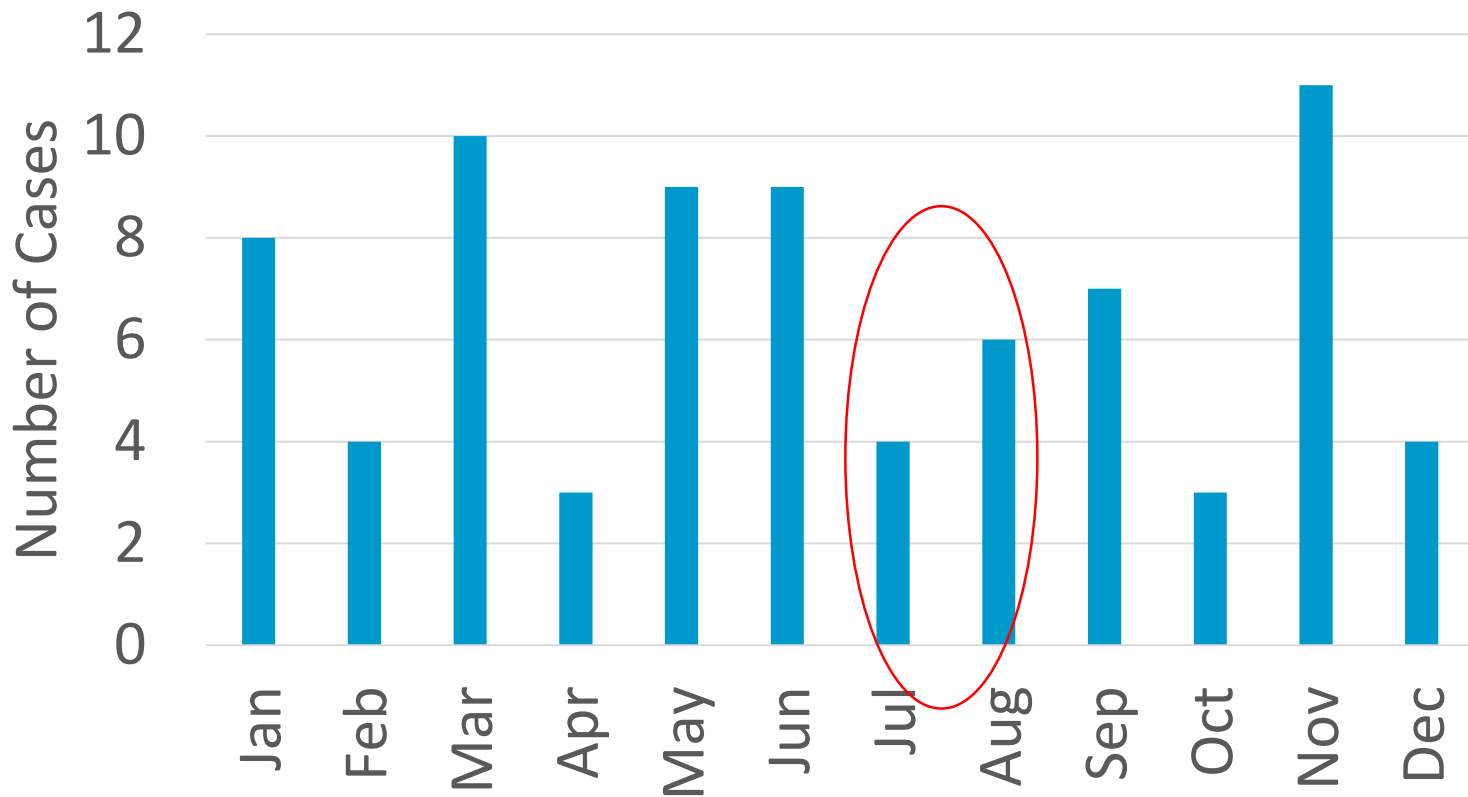
Florida Animal Rabies 2017



n=78

2017 Animal Rabies Activity by Month

Florida 2017 Animal Rabies Cases by Month
January-December*



*Only animals that expose people or domestic animals are tested.



Rabid Cats

- 11 rabid cats (2017)
- 3 pets and 8 strays
- All no or unknown vaccination, except for one stray vaccinated immediately before being euthanized
- > 20 exposed people



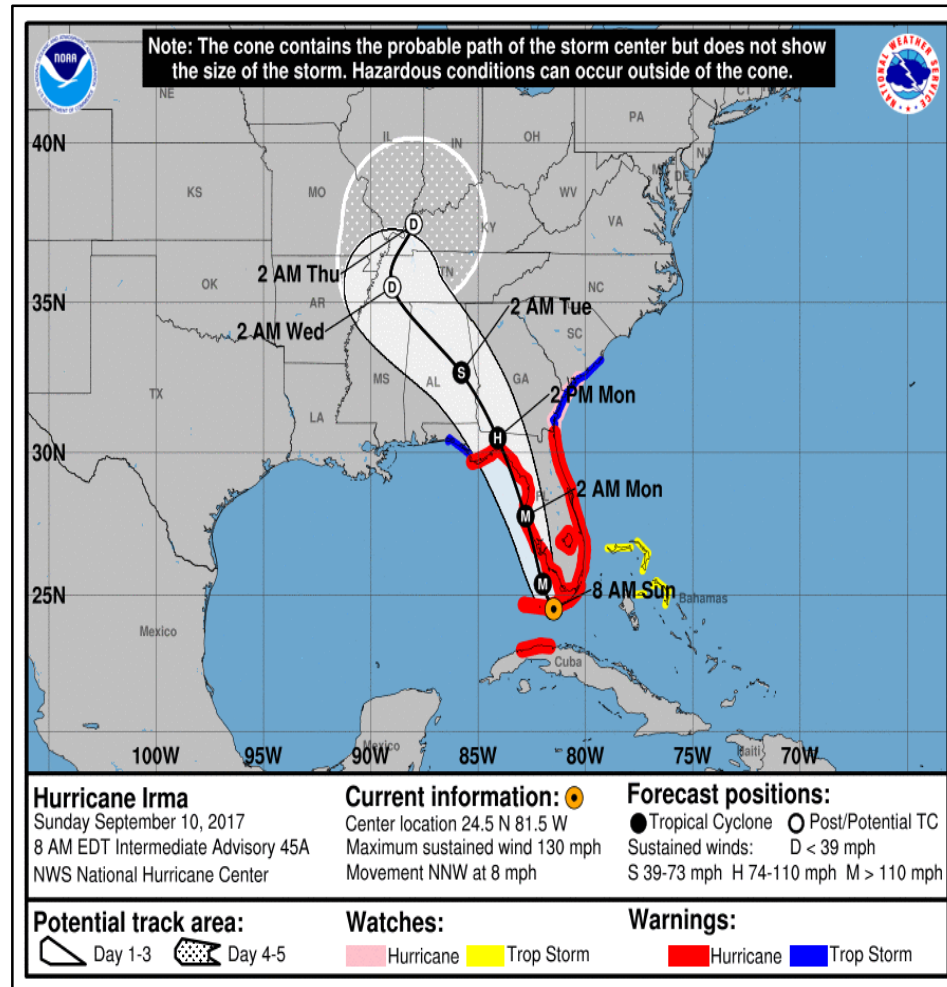
Rabid Dogs

- 2 pet dogs (2017)
- No history of vaccination
- Dog 1 chained outside with healing leg wound when became ill
- Dog 2 treated for face wound about 1 week before bloat and seizures; time line unclear
- 10 exposed people



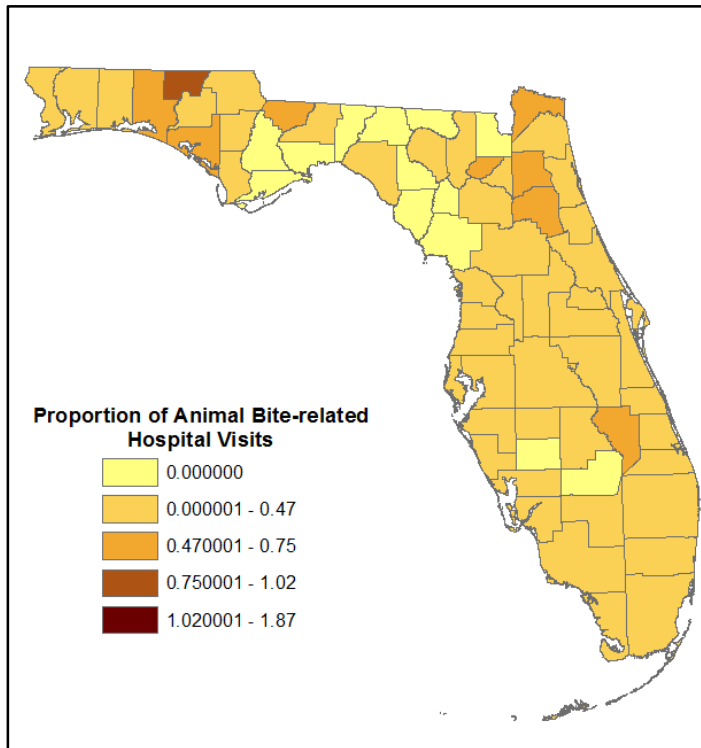
Video courtesy David Walesky,
Palm Beach County Animal Care and Control

Hurricane Irma landfall in Florida September 10, 2017

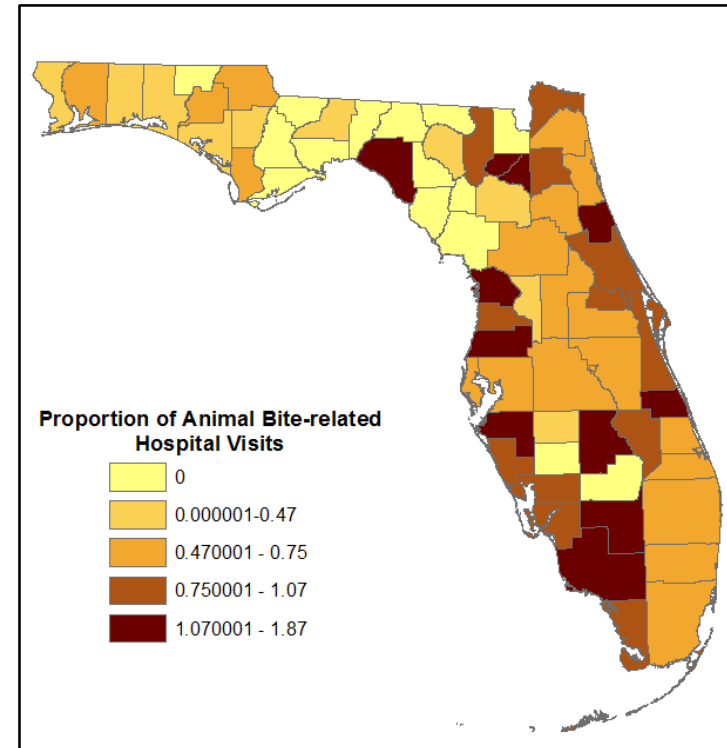


Distribution of Animal Bite/Scratch Florida Emergency Room Reports September 1-30, 2017 vs. 2011-2016

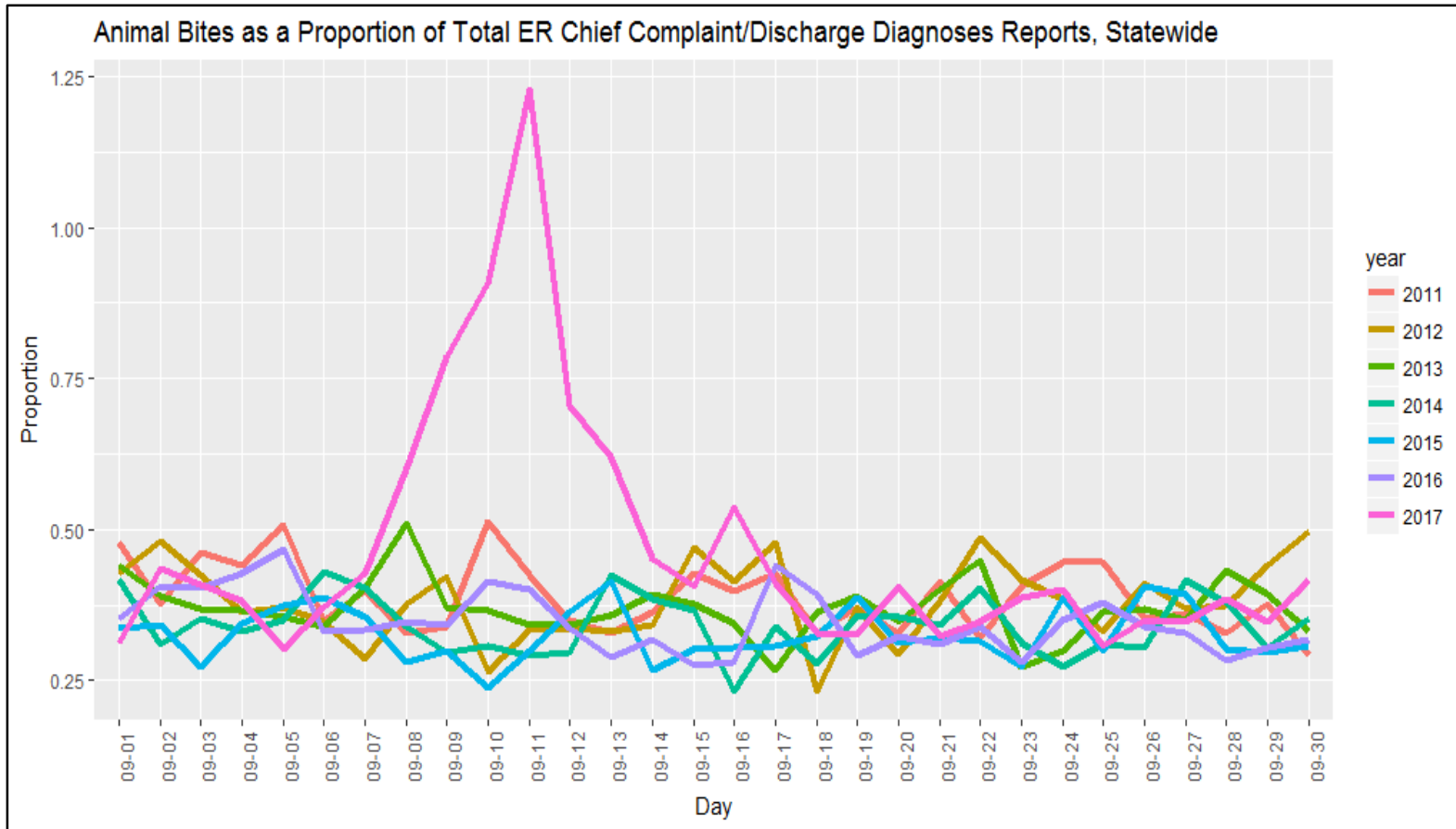
Geographic distribution of bite/scratch reports – September 2011-2016



Geographic distribution of bite/scratch reports – September 2017



ED visits related to animal bites and scratches increased 13.8% in 2017 compared to previous years



Description of Visits between 9/8-9/16/2017

Of those reporting to the ER with animal bites or scratches:

- 53.7% were women
- 79.5% were between 18 and 75 years old
 - 28.5% between 35-55 years old
- Injuries to the hand were most common (22.9%).
- Dog (61%) and cat (21.2%) bites and scratches occurred most frequently.
- 93.3% of injuries were the result of bites

Florida Department of Agriculture Bronson Laboratory (Kissimmee)

- Now available for fee based testing for non-exposure suspect animal rabies cases
- Assuming role Kansas State University (KSU) Rabies Laboratory was performing
- Same process as KSU; county health department should be consulted to confirm no human or domestic animal exposures
- Owner is responsible for costs and submits through their own veterinarian
- Testing for animals involved with human and domestic animal exposure should be conducted at Department of Health laboratories (Jacksonville and Tampa)

Management of Animal That Was Bitten

Dog, cat, ferret or livestock currently vaccinated against rabies

- Revaccinate immediately
- 45 day owner observation



Management of Animal That Was Bitten

Dog or cat overdue for rabies vaccination

- Proof of previous rabies vaccination
 - Revaccinate immediately (ideally within 96 hours)
 - Generally 45 day owner observation unless delay in vaccination, severe attack, etc.



Management of Animal That Was Bitten

Dog or cat overdue for rabies vaccination

- No proof of previous vaccination
 - Handle as unvaccinated
- OR
- Titer before and after rabies vaccination (owner's expense) with specific timeline for sample collection
- If adequate titer determined by state DOH, generally 45 day owner observation if prompt booster, not a severe attack, etc.
- If titer inadequate, manage as for unvaccinated

Management of Animal That Was Bitten

Dog or cat not vaccinated against rabies

- Euthanize
- OR
- Vaccinate and 4-month (120 day) quarantine

Management of Animal that was Bitten

Unvaccinated ferrets or livestock

- Euthanize
- OR
- Vaccinate
- 6 month (180 day) quarantine

Other animals

- Euthanize

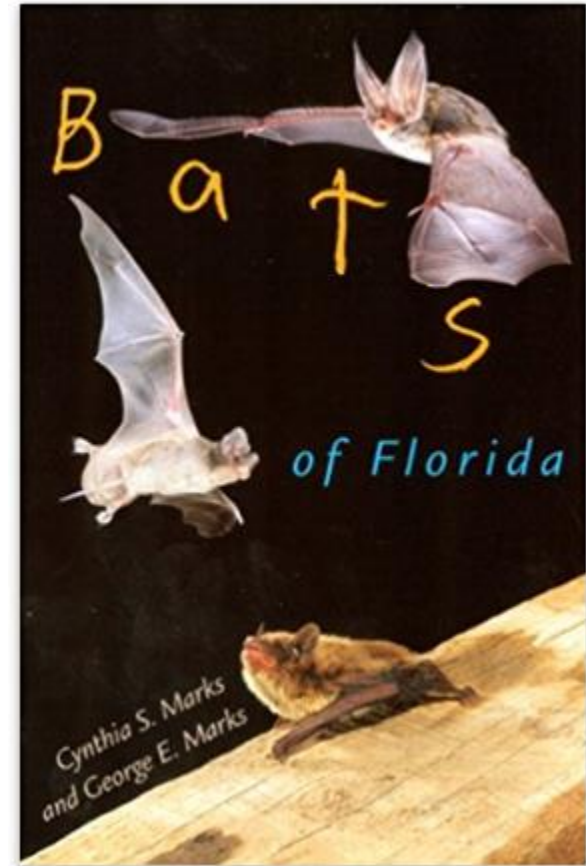


Bats and Rabies



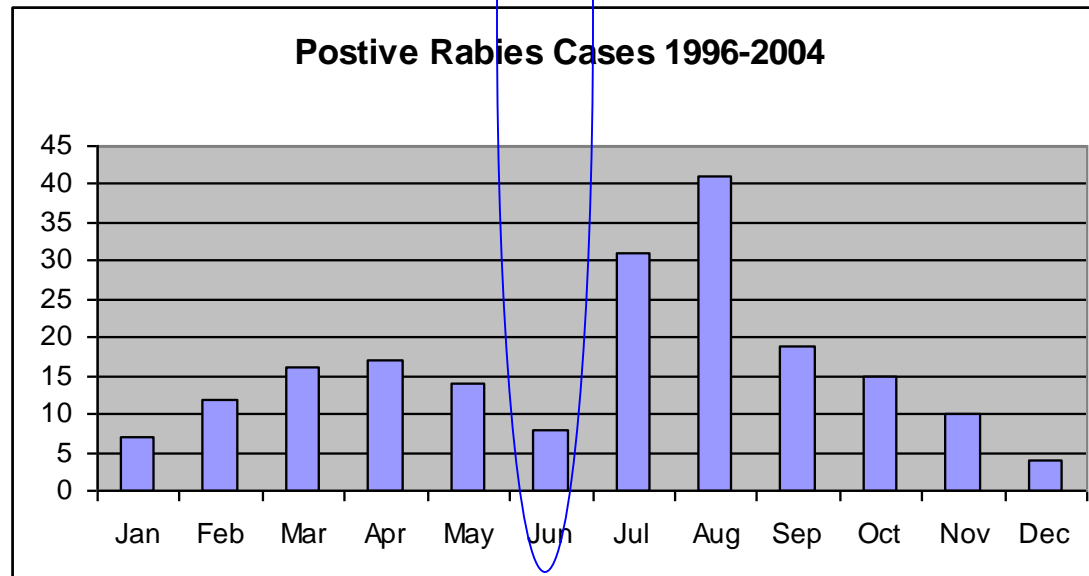
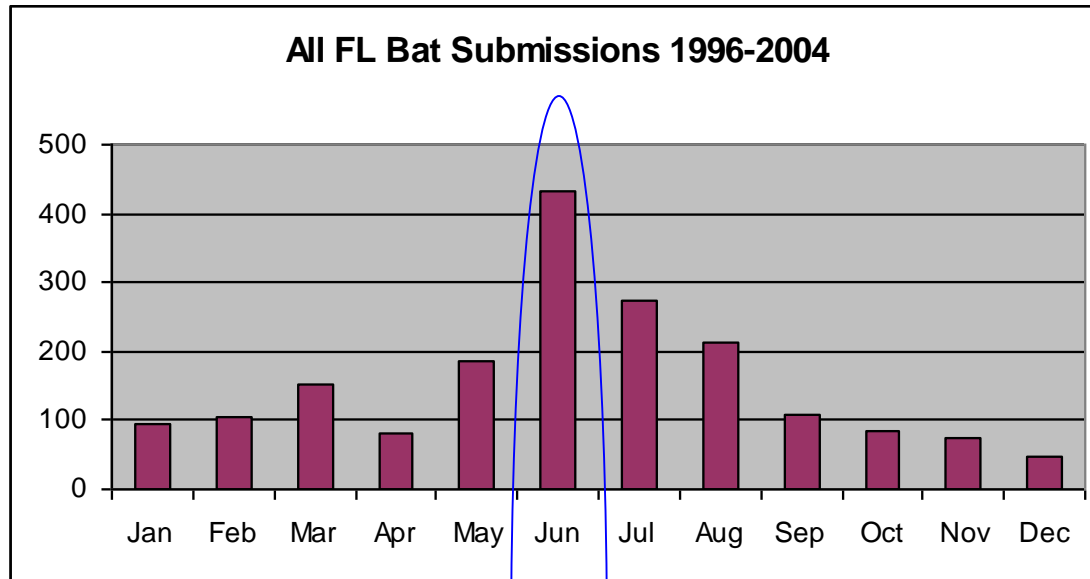
Bats

- Part of the natural ecosystem
- Eat large quantities of insects including important pests of agricultural crops
- Naturally avoid direct contact with people and pets



www.edis.ifas.ufl.edu/topic_biological_control_of_insects
www.floridabats.org/

Florida Bat Rabies Testing by Month 1996-2004



Human Rabies (2017 And 2018)

- Adult female resident of Highlands County
 - Bit by a sick bat; did not seek medical care
 - 2 months later fever, neck and arm pain
 - Hospitalized a few days later, passed away approximately 2 weeks after first symptoms
- Child from Central Florida
 - Bit by a sick bat; no medical care
 - Approximately 2-3 weeks later, numbness at exposure site with tremors
 - Hospitalized and passed away approximately 2 weeks later

Bat in the Bedroom

- Bat bites can be difficult to see
- Rabies infections can occur through minor skin abrasions
- Direct mouth or claw contact to skin
- Young child, developmental disabilities, sleeping person, intoxicated/incapacitated



CDC

Bat Contact



www.wikihow.com/Catch-a-Bat-in-Your-House



Bats and Pets

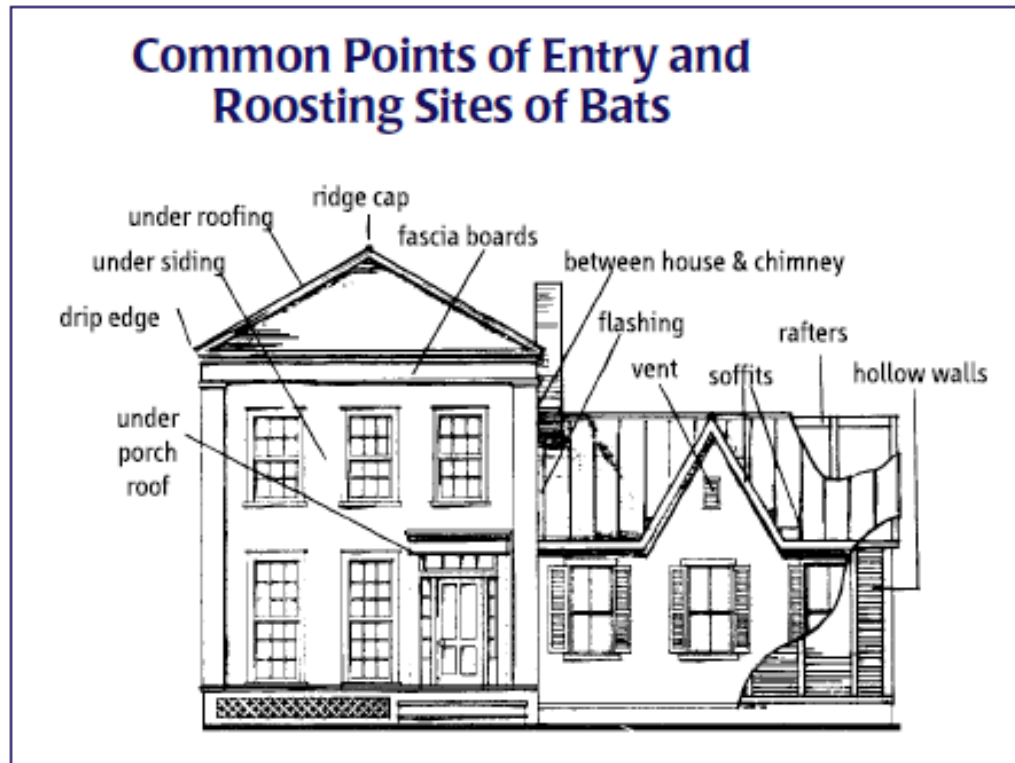


Bat Investigations

- Generally assume bat entered home recently and was found close to the entry point
- Could anyone have touched the bat?
- Try to identify likely time and point of entry; there may be future entries or a colony in the building
- Entry time generally sometime between dusk to dawn
- Common entry points: open window or door (unscreened), vent without external screen cover, pet carried in, attic, roof, wall



Common Bat Roosting Sites



www.health.ny.gov/diseases/communicable/zoonoses/rabies/docs/bigbatbook.pdf

Staining from Bats



TriStateWildlife.com



Bat Investigations-2

- Known contact or bat seen in a room where someone was sleeping? Live or dead bat?
- Previous bats found in home?
- Bats living in same ventilation space as people? Being able to smell the bats does not necessarily mean this is the case.
- Bats in walls or attics/roofs usually not in the same air space.
- Histoplasmosis can be present in bat feces.

Bat Guano



What should you do?

A wildlife rehabilitator calls to report that there are a number of bats suffering from cold temperatures that were found outside the local high school.



Bat Exclusion

- Illegal in FL between April 16-August 14 (68A-9.010, *F.A.C.*, Taking Nuisance Wildlife)
- Improperly conducted exclusion can potentially increase risk of bat-to-human contact
- No prohibition to sealing entry points into interior (human living space) of building
- Emergency exclusion exemption questions contact FWC (bats able to access indoor living or work space)

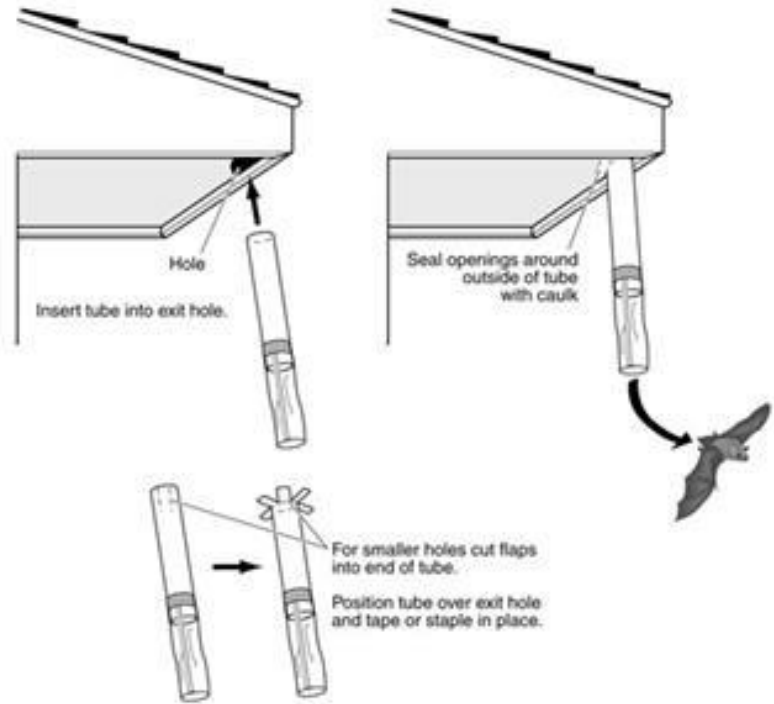
FWC bat information: www.myfwc.com/bats/



Effective Bat Exclusion



www.batconservation.org/



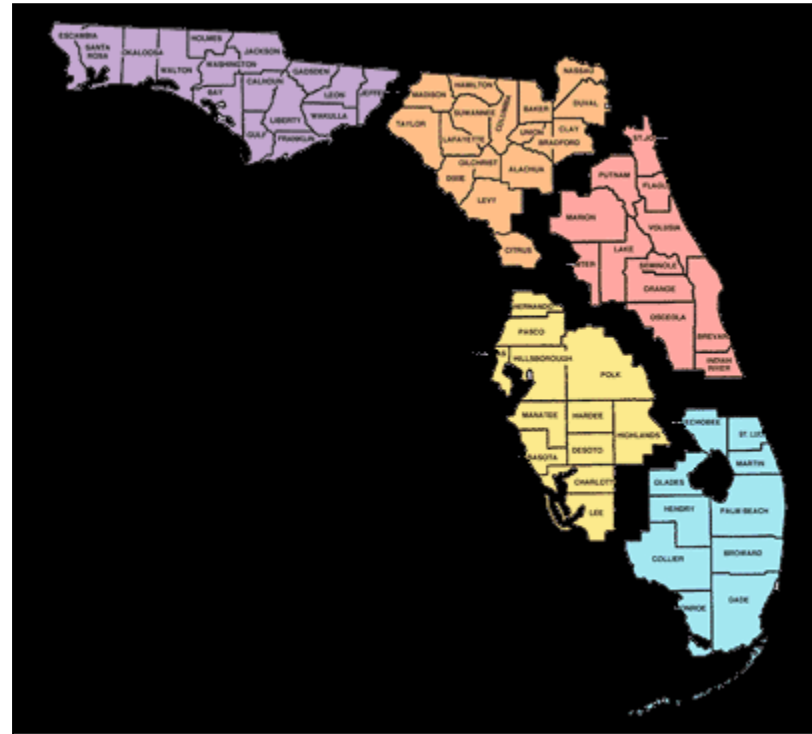
www.flybynightinc.org

FWC bat information: www.myfwc.com/bats/



FWC Resources

- Can advise on experienced bat exclusion companies; especially important for large, old buildings
- Bat behavior and biology
- Exclusion exemptions
- Bat exclusion video (IFAS)



FWC Regional Offices: www.myfwc.com/contact/fwc-staff/regional-offices/
FWC bats in buildings information: www.myfwc.com/bats
Bat exclusion video: www.youtube.com/watch?v=Wl7PqQz1kRU



NEVER TOUCH A BAT

BATS CAN HAVE RABIES



Photo credit: Lee Mackenzie



You can't tell by looking!

- Bats are shy animals that avoid human contact
- Any bat can have rabies, a deadly disease
- You could get rabies from a bat bite
- If you get bitten by a bat, wash the wound with soap and see a doctor

Keep bats out of your home:

- Ask your parents to bat proof your home
- If you find a bat in your home, call the health department

If you can touch a bat, don't!

- We need bats so don't hurt them
- A bat that lets you touch it may be sick
- If you see a bat, *do not touch it*
- Call an adult for help



www.rabiesalliance.org



Resources:

- FL DOH Rabies: http://www.floridahealth.gov/diseases-and-conditions/rabies/#heading_3
- CDC Bats: <http://www.cdc.gov/rabies/bats/index.html>
- Rabies Alliance Bat Poster:
<http://rabiesalliance.org/resources/never-touch-a-bat-poster>
- Florida Fish and Wildlife Conservation Commission (FWC):
<http://myfwc.com/wildlifehabitats/profiles/mammals/land/bats/>
- UF IFAS:
<http://okaloosa.ifas.ufl.edu/newsletters/2015/04/08/what-can-you-do-about-a-colony-of-bats-in-a-building/>
http://edis.ifas.ufl.edu/topic_bats
- Florida Bat Conservancy: <http://www.floridabats.org/>
- Bat Conservation International: <http://www.batcon.org/>
- NIOSH Histoplasmosis: <http://www.cdc.gov/niosh/docs/2005-109/>

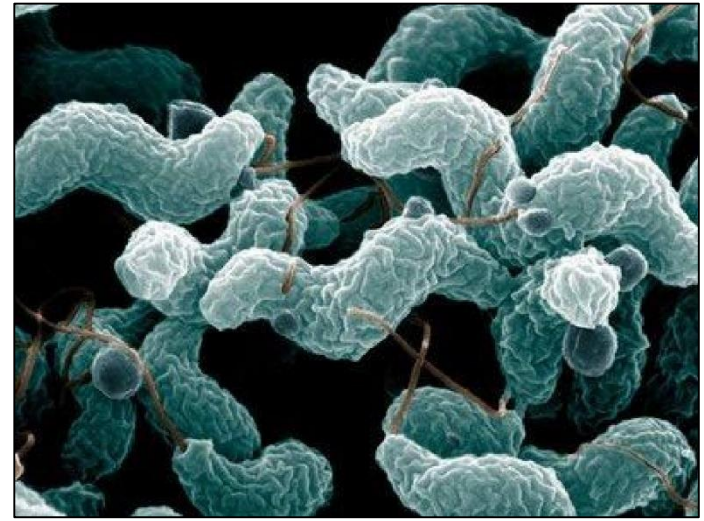


Campylobacter and Pets



Campylobacter spp.

- Bacteria commonly found in gastrointestinal tract of humans and many animals including poultry, livestock, dogs, cats, ferrets, and others
- Certain species of *Campylobacter* associated with illness in people and sometimes pets: *Campylobacter jejuni* and *C. coli*
- One of the most common causes of diarrhea in people in the U.S.
- Raw poultry, meat, and dairy products important sources for human exposure



Human Campylobacteriosis

- Illness within 1-10 days of exposure
- Symptoms may include diarrhea often with blood, fever, nausea, abdominal pain, vomiting, headache, muscle pain, and temporary irritable bowel syndrome
- Less commonly reactive arthritis, heart and other organ involvement; rare Guillain–Barré syndrome
- Those with weakened immune system, children <5 years, adults ≥ 65 years, and pregnant women at greater risk for more severe illness



Canine, Feline and Ferret Campylobacteriosis (due to *C. jejuni* or *C. coli*)

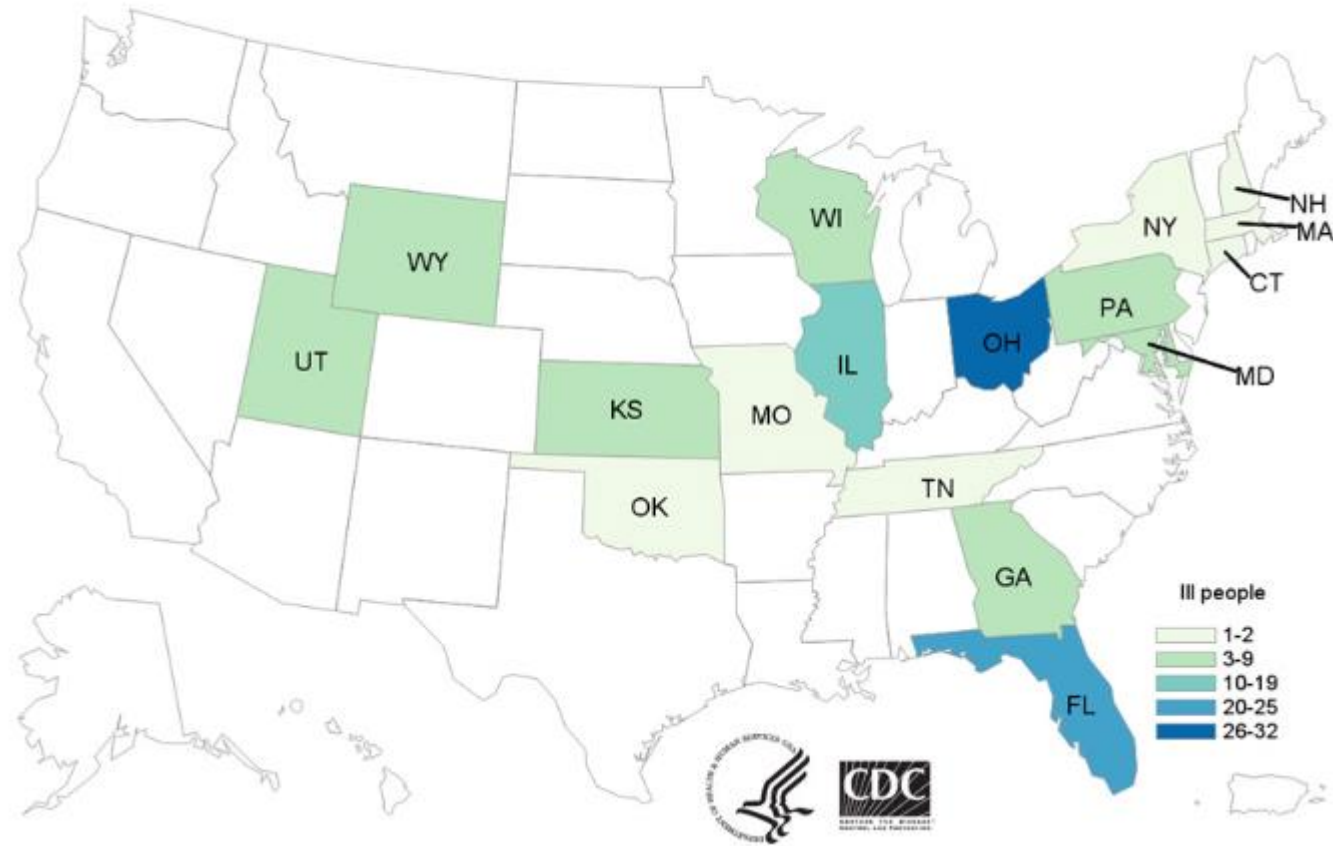
- Many asymptomatic animals
- Illness most often in young animals: diarrhea sometimes with blood, bile-staining or mucous, not eating well, vomiting, sometimes fever
- Pets kept in high density/intensity living conditions more likely to be carriers
- Contact with feces or material contaminated with feces can result in exposure to people and other animals
- Wash hands after handling pets or material in contact with pets!



doggies.com

Multidrug-Resistant *Campylobacter* Outbreak Associated with Pet Store Puppies

People with *Campylobacter* infection linked to pet store puppies, by state of residence, as of January 18, 2018 (n=113)



Antibiotic Resistant *Campylobacter*

- 38 human and 10 puppy *Campylobacter* isolates with genetic evidence of antimicrobial resistance
 - 12 isolates tested by standard anti-microbial sensitivity methods resistant to azithromycin, ciprofloxacin, clindamycin, erythromycin, nalidixic acid, telithromycin, and tetracycline; 10/12 also resistant to gentamicin, and 2/12 resistant to florfenicol
- Raw milk contamination with fluoroquinolone-resistant *Campylobacter* from a Colorado dairy:
www.cdc.gov/mmwr/volumes/67/wr/mm6705a2.htm?s_cid=mm6705a2_w
- More difficult to treat than non-resistant strains

Prevention

- Regularly wash hands after handling animals or materials in contact with animals
- Post signs reminding staff to wash hands and maintain multiple hand sanitizer stations in convenient locations
- In addition, wash hands after using the restroom, changing children's diapers, and before eating or drinking
- Keep food, drink, and eating utensils away from animals or where they live; wash utensils in a different location that animals or their dishes, bedding, etc. are washed



Prevention, continued

- Regularly clean animal environment; many common disinfectants can inactivate *Campylobacter*
- Separate animals with diarrhea or other signs of illness from healthy animals
- Veterinary consultation is always recommended if an animal is sick or before treating an animal with antibiotics
- Sick staff should consult with their health care provider and report any potential occupational illnesses to their supervisor
- Provide training and maintain a written infection control plan that staff (and volunteers know where to find):
modifiable template at:
<http://nasphv.org/documentsCompendiaVet.html>

Questions?

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