

**Rabies and Bite reporting for Los Angeles County Animal Control staff**

Los Angeles County Department of Public Health  
Veterinary Public Health Program  
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**Disclosures**

There is no commercial support for this presentation

None of the speakers or planners for this presentation have disclosed any financial interests related to the content of the presentation



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**Outline**

- Rabies**
  - What it is
  - Data in Los Angeles County
- Bite reporting**
  - Reporting process
  - What Public Health does with reports
- Quarantine & testing**
  - Quarantine procedures
  - Testing for rabies



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**Zoonotic diseases**

- **What are zoonotic diseases (zoonoses)?**
  - Diseases shared between animals and people
- **Any examples?**
  - 60% of infectious diseases of humans came from animals
  - Rabies, West Nile virus, *Salmonella*, hookworms, roundworms, scabies, flu, Ebola,...




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**What is rabies?**

- **Background**
  - Virus
  - Must be inside a person/animal's cell to survive
  - Present worldwide → ≈ 55 000 dead/year globally
  - Each animal species has own strain (e.g. dog strain, bat strain,...)
- **Species affected**
  - Humans
  - Domestic animals: dogs, cats, livestock, horses, ferrets, etc...
  - Wildlife: bats, skunks, raccoons, opossums, foxes, etc...

**ANY MAMMAL CAN GET RABIES**




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**What are symptoms of rabies?**

- **Animals**
  - At 1<sup>st</sup> can look like **any disease**
  - Progresses to neurologic signs:
    - Lack of coordination, salivation, seizures
    - Abnormal behavior – “dumb” vs “furious” rabies
    - Biting at inanimate objects
- **Humans**
  - Similar to animals
  - Neurologic: difficulty swallowing, seizures, coma, death
- **Once symptoms of rabies occur...**
  - Rapidly progressive
  - 100% fatal in animals and people




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### How is rabies transmitted?

- **Animal bites**
  - Virus is present in saliva
  - Bite = anytime tooth break the skin
  - Must go through the skin to cause disease
- **Human-human transmission**
  - Organ transplant
  - Direct transmission never seen
- **“Exposure” to bat**
  - Bat bites are very small – no marks
  - ANY CONTACT with bats may be an exposure
    - E.g. A bat found inside a home
    - May lead to unnoticed bite
    - More investigation needed

- Could you recognize this as a bat bite?  
- Would a bite like this one wake you up if you were sleeping?

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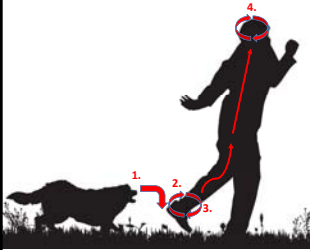
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### What happens to the virus after a bite?



1. Bite from a rabid animal
2. Virus replicating in muscle (days to weeks)
3. Virus enters a nerve & travels to brain (weeks to months)
4. Virus enters brain & symptoms start to appear
5. Virus enters saliva & transmission can occur

**SYMPTOMS OF RABIES MAY START WEEKS TO YEARS AFTER A BITE.**

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### Treatment & prevention

- **Once symptoms start, there is no cure for rabies**
- **BEFORE A BITE – Rabies vaccination**
  - Protects people in case they get bitten by a rabid animal
  - Recommended for people working with animals
- **AFTER A BITE – Post exposure prophylaxis (PEP)**
  - Given right away, **before** symptoms occur
  - Boosts body to fight virus on its own before it enters brain
  - Consists of:
    - Rabies antibodies (RIG) into the bite wound
    - 4-5 vaccine injections at: Day 0, Day 3, Day 7, Day 14
  - Washing wound with soap/water: ↓ numbers of virus in the wound



**PEOPLE EXPOSED TO RABIES MUST BE TREATED IMMEDIATELY**

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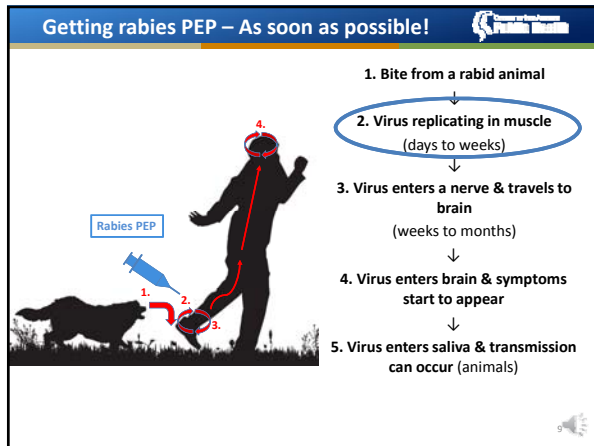
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### History of rabies in Los Angeles County

- **In the past:**
  - Dog rabies rampant in LA Co. in the 1920's
  - Eradicated because of animal control efforts
    - Dog licensing
    - Mandatory rabies vaccination
- **Today, local risk of rabies limited to:**
  - Bats
  - Bites from sick (neurologic animals)
  - Bites from animals abroad

Bats are helpful! They control insect populations

**CURRENTLY, LA CO. HAS NO ESTABLISHED TERRESTRIAL RABIES**

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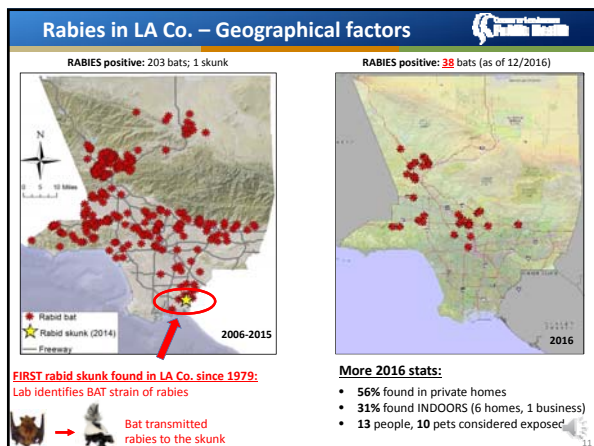
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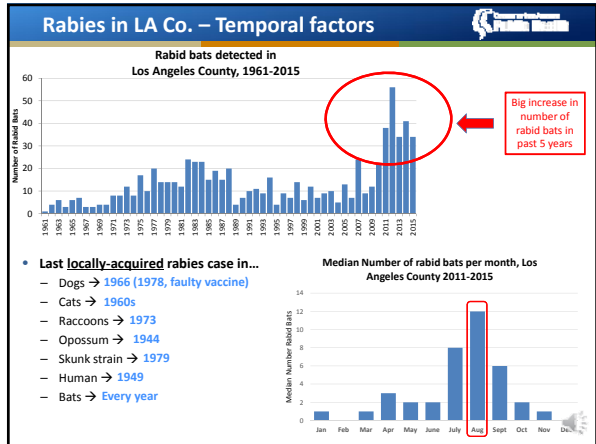
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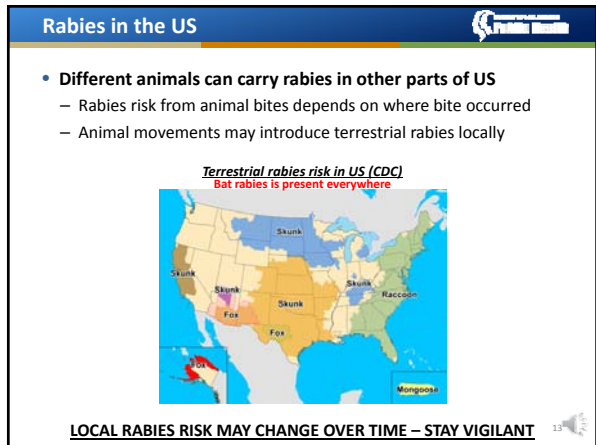
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### Local rabies risk

#### ANIMAL BITES & RABIES RISK

Recommendations for Los Angeles County

Not all animal bites need to be reported to the Los Angeles County Department of Public Health, since from some animals pose greater risk for rabies infection than others.

	<b>HIGH RISK</b> REPORT TO PUBLIC HEALTH IMMEDIATELY BATS, UNIDENTIFIED Report any bite or exposure immediately.
	<b>SICK DOGS, CATS</b> Report bite if animal has abnormal behavior consistent with illness (aggression, limping, neurologic troubles).
	<b>FOREIGN DOGS</b> Report if bite occurred in a country where dog rabies exists.
	<b>SICK WILDLIFE</b> Report bite if animal (opossum, raccoon, skunk) has abnormal behavior consistent with rabies.
	<b>MODERATE RISK</b> There are not urgent cases – Report bite online to LA Public Health. WILDLIFE (healthy, with normal behavior (dog, raccoon, skunk)).
	<b>LOW RISK</b> There are not urgent cases – Report bite online to LA Public Health. LOCAL DOGS, CATS (Healthy, with normal behavior).
	<b>NOT REPORTABLE</b> SQUIRRELS, RABBITS, RODENTS, BIRDS, SNAKES. Bites from these animals are not reportable because they do not spread rabies.

**REPORTING ANIMAL BITES TO PUBLIC HEALTH**  
 Phone: (877) 742-2245 (toll free) or (213) 989-7100  
 Monday-Friday 7:30 am-5 pm  
 Online: Fill out and submit reporting form at [www.puhealth.lacounty.gov/ra/submit-form](http://www.puhealth.lacounty.gov/ra/submit-form)  
 \* Always report details about the biting animal, including current location if known.  
 \* If the biting animal is available, contact information of LA Public Health will help determine if the rabies needs treatment.

**Rabbits & rodents (rats, squirrels, mice, etc) can get rabies but they don't transmit it to people**

Los Angeles County Department of Public Health  
[www.puhealth.lacounty.gov](http://www.puhealth.lacounty.gov)

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**What YOU need to know** 

- Any mammal can get rabies
- Animals/people with clinical rabies will not get better
- Symptoms of rabies may start weeks to years after a bite
- People exposed to rabies must be treated immediately
- Currently, LA County has no established terrestrial rabies
- Local rabies risk may change over time – Stay vigilant!
- Bat rabies is present in LA County & occurs every year

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**PART 2:**  
**Bite reporting**



[vet@ph.lacounty.gov](mailto:vet@ph.lacounty.gov) 16 

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**Bite reporting** 

- **Why we do it**
  - Goal: prevent rabies in people and pets
  - California Law
- **Who does it**
  - Law says: everyone with knowledge of a bite
- **How it must be done**
  - Must be legible, complete
  - Animal owner info included (if not stray)
  - Bats must have contact information of person who found it
  - Report to Vet Public Health as soon as possible



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### Bite reporting – 3 ways to do it

- Fax copy of report
  - Fax number: 213-481-2375
- Email copy of report
  - [vet@ph.lacounty.gov](mailto:vet@ph.lacounty.gov)
- Fill out online report
  - <http://publichealth.lacounty.gov/vet/>




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### Reportable vs. Non-reportable

REPORTABLE	NOT REPORTABLE
<ul style="list-style-type: none"> <li>• Bites to humans, from:                             <ul style="list-style-type: none"> <li>– Dogs</li> <li>– Cats</li> <li>– Wildlife</li> <li>– Horse</li> <li>– Any mammal... (except if listed in next column)</li> </ul> </li> <li>• Bites to pets from:                             <ul style="list-style-type: none"> <li>– Wildlife</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Bites to humans, from:                             <ul style="list-style-type: none"> <li>– Rodents (mice, rats, squirrels,...)</li> <li>– Rabbits</li> <li>– Non-mammals: birds, snakes, etc</li> </ul> </li> <li>• Bites between domestic animals:                             <ul style="list-style-type: none"> <li>– Dogs vs dog</li> <li>– Cat vs cat</li> <li>– Dog vs cat</li> </ul> </li> <li>• Scratches** from animals</li> </ul>

\*A bite is ANYTIME teeth break the skin      \*\*scratch is from paw ONLY

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### What VPH does with bite reports

- VPH follows up with EVERY animal bite received
  - Animal Sanitation Inspectors contact each animal owner
  - If necessary, vets contact bite victim about rabies PEP
- Biting dogs/cats must be quarantined
  - Usually → At home
  - Sometimes → Shelter, vet clinic
- Incomplete/illegible bite reports:
  - Increase risk of rabies in bite victims




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**Let's fill out a bite report together**

- Scenario 1:** A child riding a bike was bitten by the neighbor's dog. The neighbor's gate was left open and the dog ran out to bite the victim and then ran right back to his yard.




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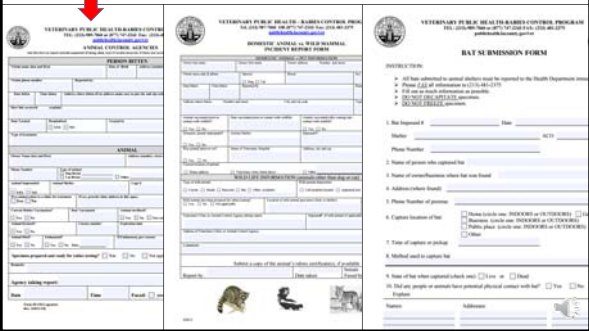
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**Let's fill out a bite report together**

- Step 1:** Choose a form




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**Let's fill out a bite report together**

- Step 2:** Victim information

PERSON BITTEN			
Victim name (last and first)		Date of Birth	Address (number, street, city and zip)
Victim phone number	Reported by:		Reporter phone number
Date bitten	Time bitten	Address where bitten (if no address make sure to put city and zip code)	Body location bitten
How bite occurred (explain)			
Date Treated	Hospitalized <input type="checkbox"/> YES <input type="checkbox"/> NO	Treated by	Phone number
Type of treatment			
ANIMAL			

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**Let's fill out a bite report together**

- Step 3: Animal information**

ANIMAL			
Owner Name (last and first)		Address (number, street city and zip)	
Phone Number	Type of animal <input type="checkbox"/> Dog Breed _____ <input type="checkbox"/> Cat Breed _____	Description of animal (sex, color)	
Animal Impounded?	Animal Shelter	Age #	Impound #
<input type="checkbox"/> YES <input type="checkbox"/> NO Was animal taken to a clinic for treatment? If yes, provide clinic address in this space.			
Current Rabies Vaccination?		Date Vaccinated	Animal sterilized?
<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not certified	
Animal licensed?	License number	Expiration date	City or county licensed in
<input type="checkbox"/> Yes <input type="checkbox"/> No			
Animal tagged?	Ear tagged?	If Ear tagged, give reason.	
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No Date _____		
Specimen prepared and ready for rabies testing? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable			
Remarks:			
Agency taking report:			
Date	Time	Faxed: <input type="checkbox"/> yes <input type="checkbox"/> No	Initials

Form 10-15801 agencies 2015

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**Let's fill out a bite report together**

- Scenario 2:** A man wakes up in the morning and finds a bat inside his bedroom. The bat is hanging on the bedroom door and hisses at him when he gets close. The man has 2 indoor-only cats that usually sleep on his bed. This morning the cats don't look very interested in the bat and there is no evidence of bite mark on them.




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**Let's fill out a bite report together**

- Step 1: Choose a form**




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### Let's fill out a bite report together

**BAT SUBMISSION FORM**

**INSTRUCTION:**

- All bats submitted to animal facilities must be reported to the Health Department immediately.
- Phone: 242-461-2379
- Fill out as much information as possible.
- DO NOT DISCARD specimens.
- DO NOT FREEZE specimens.

1. Bat Reported # \_\_\_\_\_ Date \_\_\_\_\_

Species \_\_\_\_\_ ACPO \_\_\_\_\_

Please Number \_\_\_\_\_

2. Number of people who captured bat \_\_\_\_\_

3. Name of animal/business where bat was found \_\_\_\_\_

4. Address (where found) \_\_\_\_\_

5. Phone Number of premises \_\_\_\_\_

6. Capture location of bat:  Home (include one INDOORS or OUTDOORS)  Garage  Business (include one INDOORS or OUTDOORS)  Public place (include one INDOORS or OUTDOORS)  Other \_\_\_\_\_

7. Type of capture or pickup \_\_\_\_\_

8. Method used to capture bat \_\_\_\_\_

9. Name of bat when captured (check one)  Live or  Dead \_\_\_\_\_

13. Did any people or animals have potential physical contact with bat?  Yes  No

If yes, explain: \_\_\_\_\_

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_

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### How are these reports?

**FIBERON BITTEN**

Where did the bite occur? → [Red arrow pointing to 'Where did the bite occur?']

How did the bite occur? → [Red arrow pointing to 'How did the bite occur?']

Who is the owner? → [Red arrow pointing to 'Who is the owner?']

What animal species? → [Red arrow pointing to 'What animal species?']

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### How are these bat reports?

**BAT SUBMISSION FORM**

This bat was POSITIVE. Who do we contact? → [Red arrow pointing to 'This bat was POSITIVE. Who do we contact?']

Was this bat alive? Dead? Was there any exposure to pets/people? Do we need rush testing? → [Red arrow pointing to 'Was this bat alive? Dead? Was there any exposure to pets/people? Do we need rush testing?']

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### How reporting bites helps the public

- Protects people from rabies**
  - Low rabies risk from local dogs/cats **does not mean no risk**
    - Bats can give rabies to local dogs & cats (see skunk from 2014)
  - High rabies risk from bats
  - Rabies is deadly once symptoms start
  - We have a short window to administer life-saving treatment
- Understand bites in LA Co.**
  - Data on who, when, where & how people get bitten
  - Find ways to reduce the numbers of bites




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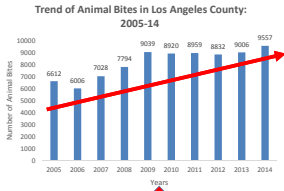
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### Local bite data – Number of reports

**Trend of Animal Bites in Los Angeles County: 2005-14**



**Table 2 Who Reported Animal Bites in Los Angeles County, 2009**

Reporting Source	%
Hospital/Medical	46%
Animal Control	45%
Vet Clinic/Hospital	3%
Private Party	2%
School	1%
Other	3%

**VPH receives and follows up on over 9,000 bites each year ... And it's going up!**

**Animal Control contributes to almost half of the bite reports received**

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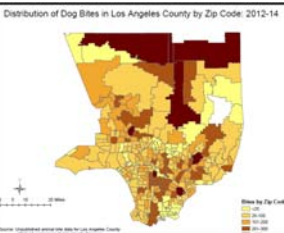
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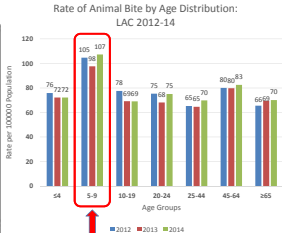
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### Local bite data - Distribution

**Distribution of Dog Bites in Los Angeles County by Zip Code: 2012-14**



**Rate of Animal Bite by Age Distribution: LAC 2012-14**



**Children ages 5-9 are the most common age group bitten by pets**

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**PART 3:**  
Bite quarantines & rabies testing



[vet@ph.lacounty.gov](mailto:vet@ph.lacounty.gov)



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**Bite quarantines** 

- **Why are quarantines done?**
  - 2 scenarios

1. Animal bites to humans	2. Pets bitten by wildlife
Ensure the biting animal <u>did not shed</u> rabies (in saliva) at the time of the bite	Monitor the pet victim of the bite <u>for signs of rabies</u> down the line



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**Where can quarantines be done?** 

- **Can bite quarantines be done...**
  - ...at the pet's home? **YES**
  - ...at the shelter? **YES**
  - ...at a vet clinic? **YES**
- **Is it ok to transfer a quarantine...**
  - ...from the pet's home to a shelter? **YES**
  - ...from a shelter to a vet clinic? **YES – with VPH approval**
  - ...from a shelter to a pet's home? **NO**
- **Transferring a quarantine**
  - Bite quarantines CANNOT be transferred from a place of higher security to lower security

Shelter (higher security)

Home (lower security)






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**Quiz: When does a quarantine start**

- **When does a bite quarantine start?**
  - When you receive a quarantine notice from VPH **NO**
  - Immediately after the bite **YES**
  - On the next business day **NO**

**Bite quarantine start date**

Quarantines start **IMMEDIATELY** after a bite

Receiving and processing bite reports may take time

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**Quiz: How long are quarantines?**

- **Bite quarantines last:**
  - 10 days? **YES**
  - 30 days? **YES**
  - 180 days? **YES**

*Aha! Trick question!*  
*All answers are right!*
- **Note – Quarantine lengths are expressed as FULL days**
  - E.g. If a dog bite occurred on 10/08/2015 at 11am → quarantine lasts until 10/19/2015

10/08/2015 does not count as full quarantine day

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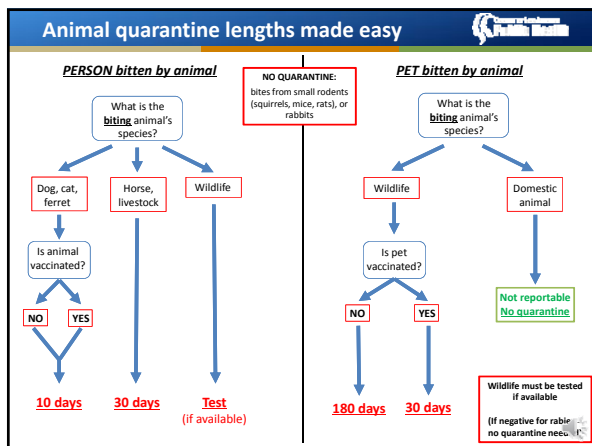
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**What does VPH do with quarantines**

- **Home quarantines**
  - VPH inspectors contact biting animal owner
  - Implement quarantine through phone/mail (low risk)
- **Shelter quarantines**
  - Quarantines may be done at shelter if:
    - Bite occurred at shelter
    - Animal was confiscated by Animal Control
  - VPH visually inspects quarantines at shelter 2x/week

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**Shelter quarantines - Communications**

<b>When quarantine STARTS</b>	<b>When quarantine ENDS</b>
1. Check animal status: <b>OK</b> By: VPH and/or shelter staff 	1. Check animal status: <b>OK</b> By: VPH and/or shelter staff 
2. Get Quarantine Notice By: VPH 	2. Get Quarantine Release Notice By: VPH 
3. Put up Red Sign on animal's kennel By: VPH and/or shelter staff 	3. Remove Red Sign from animal's kennel & add sticker By: VPH and/or shelter staff 

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**Quarantines – What YOU need to do**

- **If any of the following occurs:**
  - Animal under quarantine is **sick**
  - Animal under quarantine is  **euthanized/dies**
  - Animal under quarantine is **impounded**

**Contact VPH as soon as possible**  
213-989-7060

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**Testing animals for rabies**

- **What needs to be tested for rabies:**
  - Law: **any** animal under quarantine that is  **euthanized/dies**
  - **Wildlife that bit** a person/pet
  - **Bats** found:
    - In people's homes
    - Dead/dying on the ground
    - With potential contact to pets & people
    - With abnormal behavior (e.g. out during the day, on the ground,...)

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**Paperwork with specimen**

- **Tracking down the person bitten by animal is key to protecting them against rabies**
- **Information needed for follow-up:**
  - Name & contact of people exposed to animal
  - Address where animal was found
  - Any exposure to people/pets
- **From best to worst:**
  - **Ideal** → Copy of the reporting form attached to specimen
  - **Not OK** → No or illegible paperwork with specimen, wrong impound form

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**Untestable animals**

- **Animals may be untestable if:**
  - Not refrigerated
  - Decomposed
  - Lost
  - Not captured

**If a rabies specimen cannot be tested – we have to assume it was POSITIVE**

↓

**Anyone potentially bitten by it will need PEP**

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### Preparing a specimen for rabies

- STEP 1** Dogs/cats/wildlife must be decapitated (full bats ok)
- STEP 2** Specimen must be placed in absorbent paper and double-bagged
  - No blood should be visible through the bag
- STEP 3** Place appropriate paperwork with specimen
- STEP 4** Place specimen in VPH fridge (**not** in freezer)
  - Do not** place in other fridges (e.g. where food/vaccines are stored)
  - Check fridge temperature
- STEP 5** Call/fax/email VPH for pick up
  - If you notice a specimen in the fridge for a few days, give us a heads up
  - Phone: 213-989-7060, Fax: 213-481-2375
  - Email: [vet@ph.lacounty.gov](mailto:vet@ph.lacounty.gov)

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### What do you think of this specimen?

Blood showing!

Not double-bagged!

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### What do you think of this specimen?

Not double-bagged!

No absorbent paper!

No paperwork/submission/impond form!

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**What do you think of this specimen?**



- ✓ Specimen wrapped in absorbent paper
- ✓ Specimen double-bagged
- ✓ Reporting form is attached

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**We want your input**

- **What can we do to improve VPH's collaboration with animal shelters?**
  - What is working?
  - What is not working?
  - Tips for better communication/workflow?

***Let us know! Talk to:***

- VPH Inspectors
- Gaël Lamielle, Professional Collaboration Veterinarian

213-989-7060; [vet@ph.lacounty.gov](mailto:vet@ph.lacounty.gov)

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**Questions?**

- Interested in learning more? We can come back and talk about many subjects!
  - Animal diseases around you (parvo, distemper, etc)!
  - West Nile virus in birds!
  - Animal importations!
  - And much more...

Feel free to contact us with any question!



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