



**Southwest Association for
Family & Community Education**

RABIES: Facts and Fears



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RABIES

(Slide 1)

Introduction of self.

INTRODUCTION of TOPIC

(Slide 2)

Uh, oh, Fido's gotten into the whipped cream! Or the shaving cream, or the soap suds, or the toothpaste—the point is white foam dripping from his mouth. Cue people running away and screaming, “Mad dog! Mad dog!”

Has anyone here not heard of rabies? We've all heard stories--some with horror attached (Remember the movie “Old Yeller”?)

Do you know where it comes from and how another animal or human might contract the disease?

Today we are going to look at the ACWW Resolution from 2019, what is rabies, how is rabies transmitted, the path of rabies, signs and symptoms, seeking medical attention, exposure, testing, prevention, and World Rabies Day.

RESOLUTION

ACWW RESOLUTION passed at the 2019 Triennial on the Elimination of Dog Mediated Rabies:

(Slide 3)

“Be it resolved that the Associated Country Women of the World member societies support rabies education globally and support “Zero by 30.”

Some of the world's poorest people are the most at risk of rabies.



(Slide 4)

Post Exposure Prophylaxis (PEP) is a course of vaccines administered urgently after exposure to the virus from a rabid (or presumed to be rabid) animal. PEP stops the onset of clinical symptoms and certain death. However, it comes at a high price, sometimes several times a household's monthly income.

Families living in rural areas of Africa and Asia often face the desperate choice of selling livestock (on which they depend for food) to pay for the cost of treatment or dying (or allowing the family member to die) of the disease.

Currently, PEP costs the global economy 10 times the amount it would cost to eliminate canine rabies at the source (vaccinating the dogs). Overwhelmingly the cost is paid for by the world's poorest people, perpetuating their poverty.

It isn't just those who live in third world countries, where the price for treatment is high. A 2-milliliter vial cost \$662 in the US in 2016. It takes more than one vial for a treatment. A set of 3 pre-exposure shots for prevention is \$900. In the same year, a woman going to the ER after being bitten by a wild animal that had tried to attack her dogs was given an immunoglobulin shot (always the first thing), a rabies shot, and a tetanus shot. The cost for just this was \$26,000! Later she was charged another \$22,000 for 10 vials of the immunoglobulin. Her doctor's office said that follow-up shots needed to be done in the ER as they don't keep them on hand. It costs about \$300 per shot—that's just for the shot itself. Insurance does not always cover any of the treatment.

This initiative of the World Health Organization, World Organization for Animal Health, Food and Agriculture Organization and the Global Alliance for Rabies Control seek to eliminate dog mediated rabies by 2030 through: rabies education programs on bite prevention, expanding dog rabies vaccination coverage to stop transmission, improving access to post exposure prophylaxis and by lobbying governments to provide the funds to achieve this.

(ACTIVITY and HANDOUT) (Slide 5)

True or False Questions. Answers and discussion.

WHAT IS RABIES? (Slide 6)

We don't think much about rabies here in the United States. We get our dogs and cats and farm animals/livestock vaccinated. About 55,000 Americans do get exposed each year—still a lot of people. Most of the deaths in US from rabies comes from bats, 70%. Too bad we can't give them a preventative shot.

(Slide 7)

Rabies affects ONLY mammals. That means warm-blooded with fur, so no snakes, fish, or birds carry rabies. While in the US only 1% of rabid animals reported are dogs, in the world it remains a common cause of humans getting the disease. Small animals such as rats/mice, hares/rabbits, & gerbils/guinea pigs rarely carry rabies. Opossums are also very rarely carriers as they have a low body temperature. (Slide 8)

Rabies cause 59,000 agonizing deaths in the world each year. Shockingly, 40% of those are children! Mainly those living in poor, rural communities in Africa and Asia that are farthest from medical and veterinary services. In addition, millions of dogs (and other animals) suffer and die due to both the disease and the indiscriminate culling prompted by fear of the disease.

All the death and suffering are completely unnecessary as rabies is preventable.

Rabies is recognized as one of 20 Neglected Tropical Diseases by the World Health Organization. It not only causes suffering in humans and animals; the economic impact is also great. Annual economic losses are estimated at about 8.6 billion (!) US dollars.

Rabies is a virus. It is transmitted through direct contact such as a bite, scratch or broken skin. It is not airborne. It is contained in the saliva of the infected mammal. Petting a rabid animal will not give you rabies—you must come in contact with saliva through a bite, scratch, or abrasion/broken skin. Blood, urine and feces are not associated with any risk of contracting the virus.

Rabies virus becomes noninfectious when it dries out and when it is exposed to sunlight.



Once the virus has been introduced to the host, it travels through the muscle to the brain by moving within the nerves. The time between the bite and the appearance of symptoms (incubation) may be weeks to months.

Late in the disease, after the virus has reached the brain and multiplied there to cause inflammation of the brain, it moves to the salivary glands and saliva. This is when animals begin to show symptoms. Nearly anyone can see the signs, but within 3-5 days the virus has caused enough damage that it becomes unmistakable.

SYMPTOMS (Slide 9)

Symptoms of rabies in pets include:

- Difficulty swallowing
- Ataxia (uncoordinated walking)
- Behavioral changes
(Slide 10)
- Lethargy
- Fever
- Vomiting
- Anorexia (lack of appetite)

Rabies is transmitted ONLY when the virus is introduced into a bite wound, open cuts in the skin, or onto mucous membranes such as the mouth or eyes

SYMPTOMS in HUMANS (Slide 11)

The first symptoms of rabies may be very similar to the flu—including general weakness, discomfort, fever, or headache. Other symptoms can include difficulty swallowing, vomiting, or nausea. These symptoms may last for days—it's in the brain and multiplying. Don't ignore these symptoms.

(Slide 12)



There may also be discomfort or itching at the bite/scratch site, progressing within days to acute symptoms of cerebral dysfunction, anxiety, confusion, and agitation.

(Slide 13)

As the disease progresses, the person may experience delirium, abnormal behavior, hallucinations, hydrophobia (fear of water), & insomnia.

(Slide 14)

There are many strains of rabies - but 2 variations in how the disease presents itself. One is encephalitic, also called the “furious” form. This is the most common. The symptoms for this are aggression, excessive salivation and agitation.

The other form, which is less common, is paralytic or also called “dumb” rabies. The symptoms for this include lethargy, muscle weakness, and progressive paralysis.

Both forms are deadly if not treated.

Once clinical signs of rabies appear, the disease is nearly always fatal, and treatment is typically only supportive. Survival rates are only less than 0.1%.

DIAGNOSING and TREATMENT

In animals, rabies is diagnosed using the direct fluorescent antibody (DFA) test. It looks for antigens in brain tissue. It can only be done when the animal is dead. If you need to kill the animal, do not cause damage to the brain—that’s where the rabies is residing and multiplying.

In humans several tests are required. It helps if animal can be tested first. It only takes a few hours for results. This saves the person from receiving tests, shots, etc.

Laboratory identification of positive rabies cases may aid in defining current epidemiologic patterns of disease and provide information to help stop the rabies’ progress.



When do you seek medical attention? If you have been in contact with any wildlife or unfamiliar animals, and especially if you've been bitten or scratched, you should seek immediate medical attention. Wash your wound/s with soap and water, then seek attention.

(Slide 15)

In the US, PEP (Postexposure Prophylaxis) consists of a regimen of one dose of immune globulin and four doses of rabies vaccine over a 14-day period. Rabies immune globulin and the first dose of the vaccine should be given as soon as possible after exposure. The shots are nearly painless and can be given in your arm—they are not given in the stomach.

The important thing to remember is to clean the wound and seek treatment immediately.

PREVENTION (Slide 16)

The very best prevention is to get your pets and/or livestock vaccinated. When your pets are outdoors, attempt to keep them confined so as to lower risk of contact with a wild animal.

The cost of getting our pets vaccinated to prevent spread of rabies is much cheaper than getting treatment—whether it be our pet/livestock or ourselves receiving the treatment. The cost for just the rabies vaccination is about \$20 for a dog. This doesn't include the vet visit.

Report and avoid strays and wild animals that appear friendly. Finally, keep bats out of your house. Bats, whose bites do not hurt and often go unnoticed, are one of the most common carriers of rabies.

Have a plan. Just like anything else, you need to have a plan. Where is the nearest hospital? Can the animal be brought in for testing? (Remember that it must be dead.) If travelling to a remote area where medical care is difficult or time consuming to get to, check with your doctor about getting a rabies vaccine.

(Slide 17)



WORLD RABIES DAY

September 28 is World Rabies Day, a Global health observance that started in 2007 to raise awareness about rabies and bring together partners to enhance prevention and control efforts worldwide. World Rabies Day is observed in many countries, including the United States.

(Slide 18)

The theme for 2021 is: “RABIES: FACTS, NOT FEAR”

FACTS: Rabies is preventable. It is treatable. Education about prevention and treatment is important. Rabies is 99% fatal YET 100% preventable.

FEAR: The word has 3 meanings in this year’s theme. Firstly, it relates to the general fear caused by rabies, fear that people experience when encountering rabid animals and fear that people live in communities plagued by rabies.

The second relates directly to the symptom of fear that people may experience when infected with rabies. (It affects the brain...) Don't forget the old "if I ignore it, I won't get it" attitude.

Lastly, fear relates to the fear caused by (have you heard this term before?), "fake news" or myths about rabies. It makes people afraid of vaccination, making them afraid of vaccinating their animals or that there is no known cure. The current covid pandemic is a classic example of a lot of misinformation—stories of this being a hoax, people going mad after being vaccinated, the government is implanting tracking devices, etc. Rabies vaccines have similar stories in many countries.

CONCLUSION

Part of being a member of FCE is to support ACWW and the resolutions that are passed during Triennial Conferences. You can find all the resolutions listed on their website. In addition, they have a list of Sustainable Goals that National FCE is involved in bringing to members.

Rabies is only carried by mammals. Birds, reptiles, fish—no. It is transmitted through a bite or scratch, or saliva that comes in contact with a preexisting scratch or wound.

Without treatment, rabies is 99.99% fatal and very painful. Treatment begins with soap and water, but followed very quickly by medical treatment. Treatment is a

series of shots, not in the stomach (arm). It can take up to two weeks for treatment and up to a year to recover if treatment is delayed and early symptoms develop.

We cannot always prevent being bitten or scratched by an animal, but we can do our part by seeing that pets/livestock in our communities are vaccinated. We should be prepared—for the possibility of coming into physical contact with a wild animal (especially as we continue to encroach on their territory). Be prepared for the costs—maybe check with your health insurance company, so you'll know whether or not you'd be covered.



Education within our families and communities will help get the word out that vaccinating is the best, and cheapest, way to prevent rabies.

There are two things to take away from this workshop. The first is that rabies in humans and domestic animals is totally preventable. The second is that all our pets and farm animals should be vaccinated.

(Slide 19)



RESOURCES:

Mayo Clinic Website

CDC Website (Centers for Disease Control)

Facty Health Website, article by Jennifer Trimbee, RN

Global Alliance for Rabies Control Website

ACWW