Module 2:
Bat Exposures

A Tricky Situation

Maryland
DEPARTMENT OF HEALTH

Module 2 : Bat Exposures

- After completion of this module, learners will have a better understanding of:
  - Bat rabies epidemiology.
  - Bat exposure considerations:
    - Bat bite detection.
    - Patient reliability as a historian.
  - Bat exposure risk assessment and rabies postexposure prophylaxis (PEP) determination.

(CDC, 2024)

Maryland
DEPARTMENT OF HEALTH

Case 1: A Bat in the Bedroom *Presentation*

Chief Complaint:

Possible bat bite or scratch

- A girl, aged 4 years, presents to the ED after a live bat was found in her bedroom in Maryland. The bat was seen fluttering near the bed while the child was asleep.
- After its discovery, the patient's mother opened a window, and the bat flew away. It was unknown how long the bat had been present in the bedroom, and the child had been unattended for 10 hours.
- The child denied having contact with the bat, but the mother is concerned.

Maryland
DEPARTMENT OF HEALTH

Case 1:
A Bat in the Bedroom
Examination

Chief Complaint:
Possible bat bite or scratch

- **Physical Findings:**

  No apparent evidence of a bat-inflicted injury.
- **Patient's Rabies Vaccination History:**

  Not previously vaccinated.

Maryland
DEPARTMENT OF HEALTH

Bat Exposure Considerations

(Froschauer/USFWS, 2023)

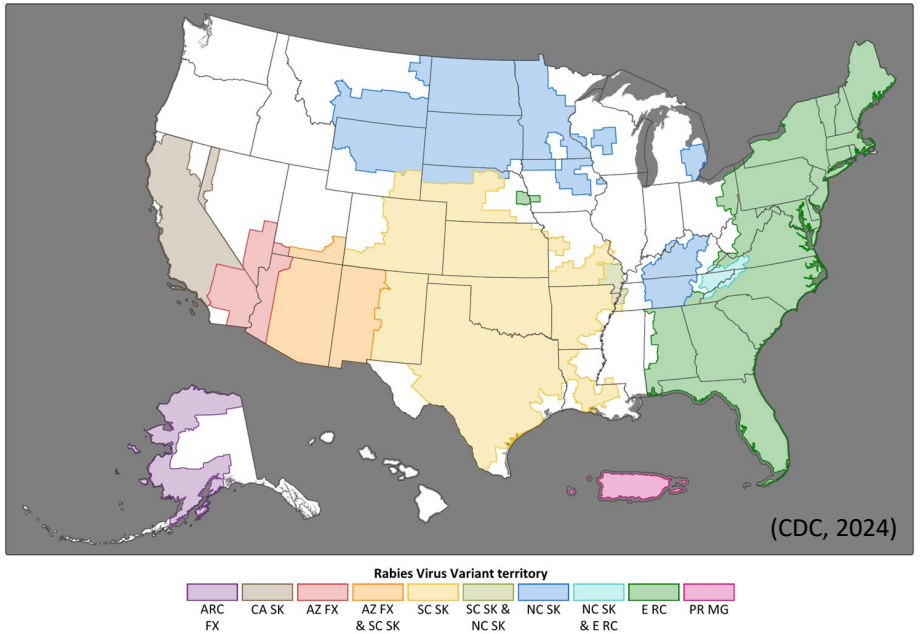
Three important factors should be considered when assessing a patient's risk for rabies virus exposure following a bat encounter:

- The local epidemiology of bat rabies.
- The likelihood of detecting a bite or scratch.
- The patient's reliability as a historian.

Maryland
DEPARTMENT OF HEALTH

The Epidemiology of Bat Rabies in The US

- Bats with rabies have been reported in **every US state** except Hawaii.
- Bats are reservoirs for the rabies virus, meaning their population maintains host-adapted variants of the rabies virus.
- Hard to distinguish healthy bats from ill bats.



Maryland
DEPARTMENT OF HEALTH

Bat Rabies in The US By the Numbers

- Bat exposures are responsible for **7 out of every 10** cases of human rabies acquired in the US.
- Of the 1,376 bats tested by public health officials in 2023, **5.3% tested positive for rabies.**
- In Maryland**, 8% of bats tested for rabies** in 2024 were positive (16 bats).

Maryland
DEPARTMENT OF HEALTH

Likelihood of Detecting a Bat Bite

(CDC, 2012)

- Most North American bat species are small, insect-eating mammals characterized by their fine, sharp teeth and claws.
- While some individuals bitten by bats report a stinging or needle-prick sensation, these sensations may go unnoticed, particularly if the person is asleep.

Maryland
DEPARTMENT OF HEALTH

Patient's Reliability as a Historian

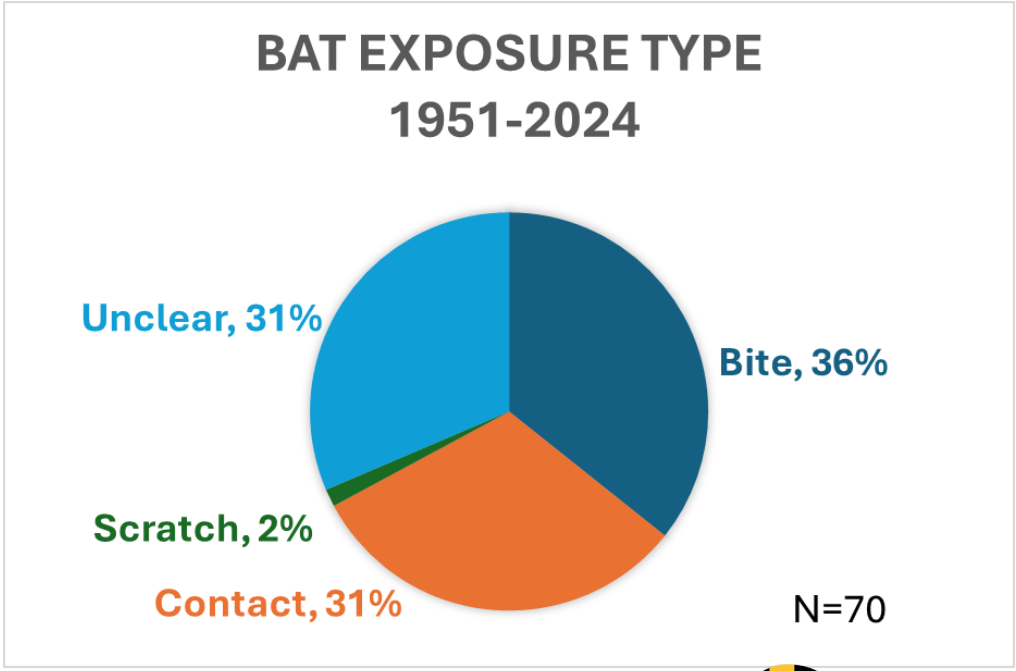
Situations where persons may not be able to report bat contact accurately:

- Young children who are sleeping or unattended.
- Adults who are sleeping, especially if they are deep sleepers.
- Persons using certain prescription medications, or intoxicated.
- Persons unable to communicate due to disability or age.

Maryland
DEPARTMENT OF HEALTH

Do Non-Bite Bat Exposures REALLY Matter?

- Seventy cases of human rabies attributable to bat exposure were documented in the United States from 1951 to 2024.
- Of these cases, only 36% had a known bat bite.

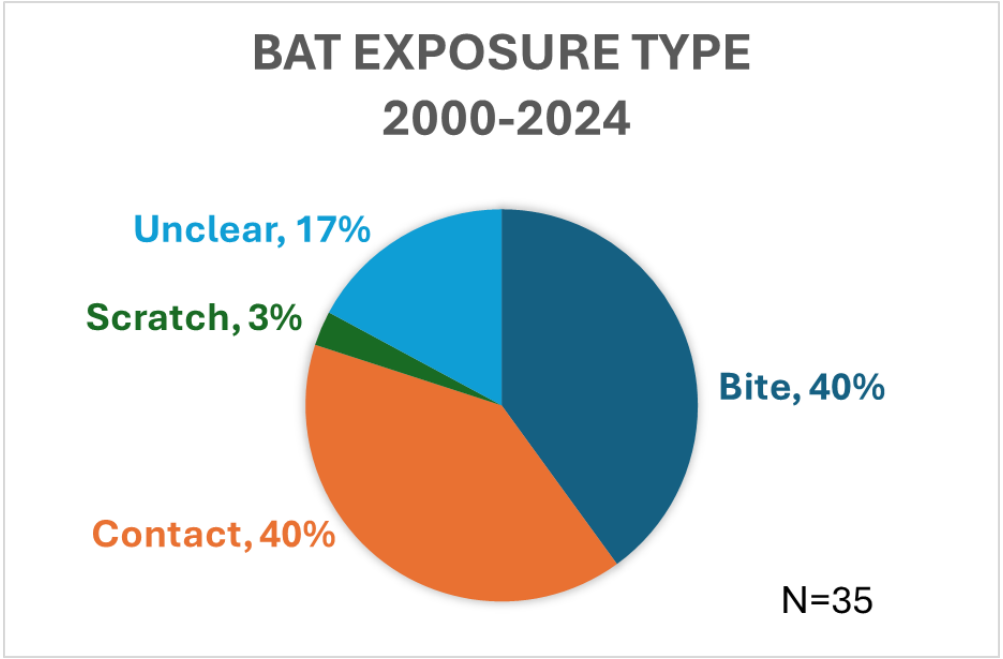


Data Source: CDC, 2025

Maryland
DEPARTMENT OF HEALTH

Known Bat-Bite Exposures in Recent Years

- Thirty-five cases of human rabies attributable to bat exposure were documented in the United States from 2000 to 2024.
- Of these cases, only 40% had a known bat bite. 40% of cases had contact with bats without a known bite.



Data Source: CDC, 2025

Maryland
DEPARTMENT OF HEALTH

Case 1: A Bat in the Bedroom

Risk Assessment and PEP Determination

Risk Assessment:

- Bat is unavailable for testing (was let out the window), therefore the bat should be regarded as a suspected rabid animal since the bat was found in Maryland where bats are known to be hosts of the rabies virus.
- The patient is too young to reliably communicate that they were not bitten or scratched by the bat.
- **PEP Decision:**

Initiate rabies PEP (including RIG) as the patient may have been exposed to the rabies virus and has no prior history of rabies vaccination.

Maryland
DEPARTMENT OF HEALTH

What IF the bat was available for testing?

- Testing is coordinated between the local health department/animal control authority and the state public health laboratory.
- Unless there is known high risk contact (i.e to highly innervated area like the face or head, ***it is generally considered safe to wait until the results of testing are available*** (typically 1-3 days).
- Additional consultation with State/Federal public health officials may be warranted to assist with the decision to initiate Rabies PEP or wait for test results.
- If the animal tests positive, the sample is considered unsatisfactory, or the results are inconclusive, then the person should be evaluated for rabies PEP in their state.
- This applies to bats as well as other potential animal rabies vectors.

Maryland
DEPARTMENT OF HEALTH

Knowledge Check Module 2

MULTIPLE CHOICE

Maryland
DEPARTMENT OF HEALTH

Knowledge Check Question 1

When performing a rabies risk assessment after a bat encounter, which of the following is the least important?

A. The apparent health of the bat

B. The likelihood that a bite occurred

C. The mental awareness of the patient

D. The local epidemiology of bat rabies

Maryland
DEPARTMENT OF HEALTH

Knowledge Check Question 1 Answer

If you answered A, you were correct.

The apparent health of a bat should not be used to ruled out rabies risk.

Maryland
DEPARTMENT OF HEALTH

Knowledge Check Question 2

Bats are known to carry rabies in all parts of the United States EXCEPT:

A. Alaska

B. Georgia

C. Hawaii

D. Arizona and New Mexico

Maryland
DEPARTMENT OF HEALTH

Knowledge Check Question 2 Answer

If you answered C, you were correct.

Bats with rabies have been found in all states except Hawaii.

Maryland
DEPARTMENT OF HEALTH

Module 2 Conclusion

Exit and continue to the next module

Maryland
DEPARTMENT OF HEALTH