

# Integrated Bite Case Management

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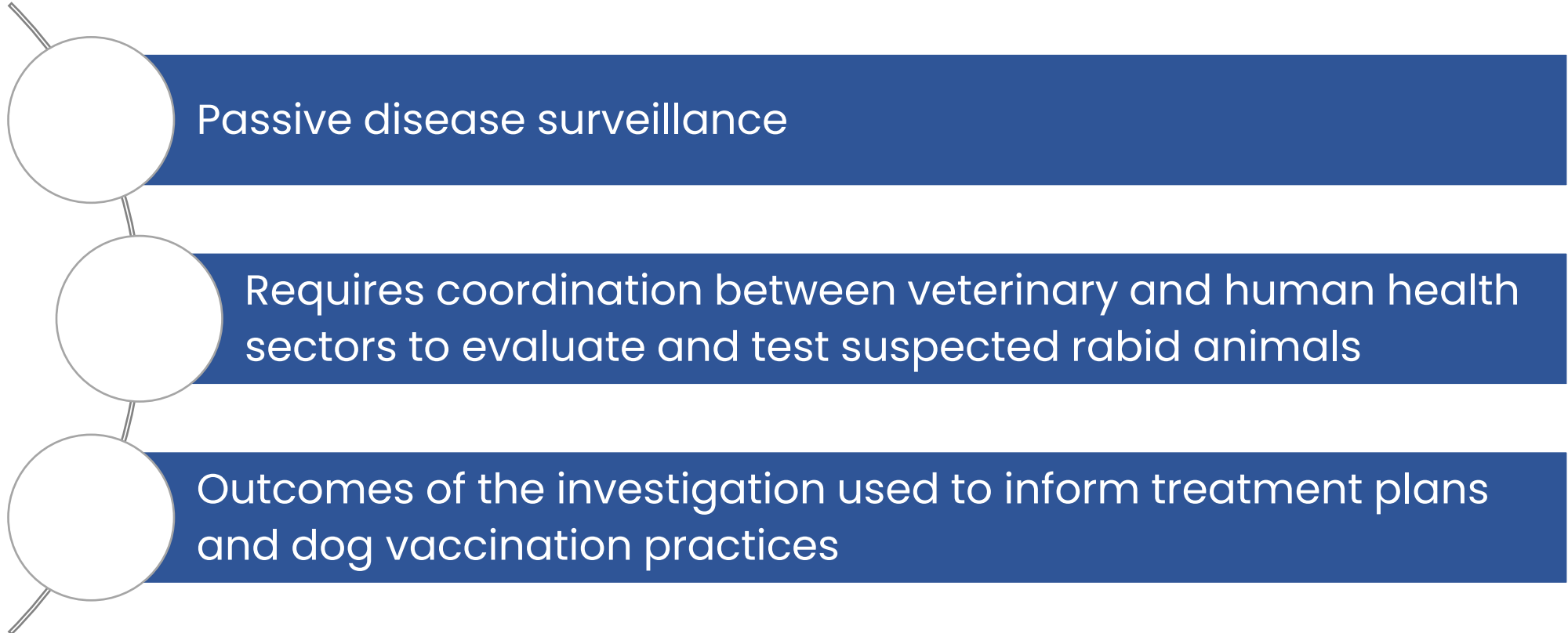


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# Integrated Bite Case Surveillance



# Rabies control can be approached in two different ways

1

**Reactionary**



~ \$ 108.07 per person

Post-Exposure Prophylaxis  
to do in perpetuity

**Preventive**

2

per dog ~ \$ 2.18

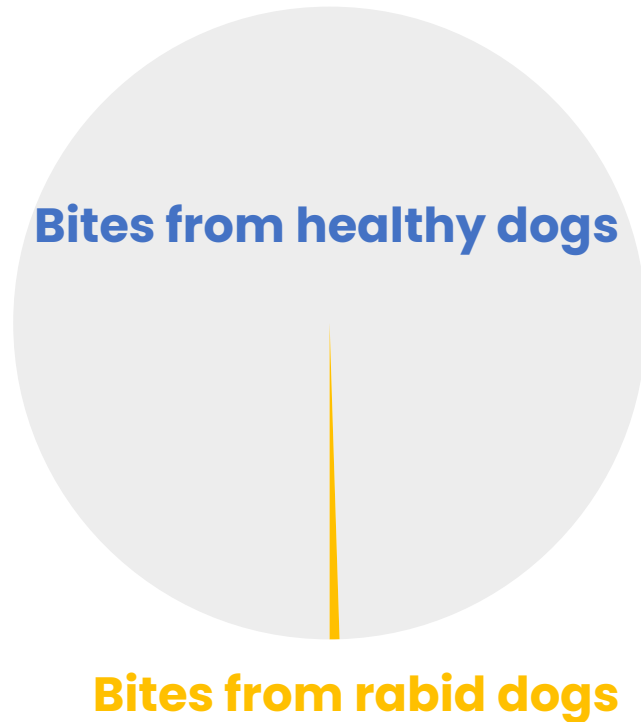


Dog vaccination  
for the permanent elimination  
of dog and dog-mediated rabies

Average costs, in USD, in rabies endemic countries

**But there are two issues to consider:**

# Issue 1: There are many more dog bites than dogs with rabies



Bites from dogs are **extremely common**

	Haiti	Philippines
People who report being bitten by a dog in a year	3.5%	5%

Rabies in biting dogs is **not common**

	Haiti	Philippines
Biting dogs with confirmed rabies	1%	1%

**Providing PEP to all bite victims means spending too much money on a temporary solution**

## Issue 2: Current spending on rabies underinvests in dog vaccination

**Reactionary**

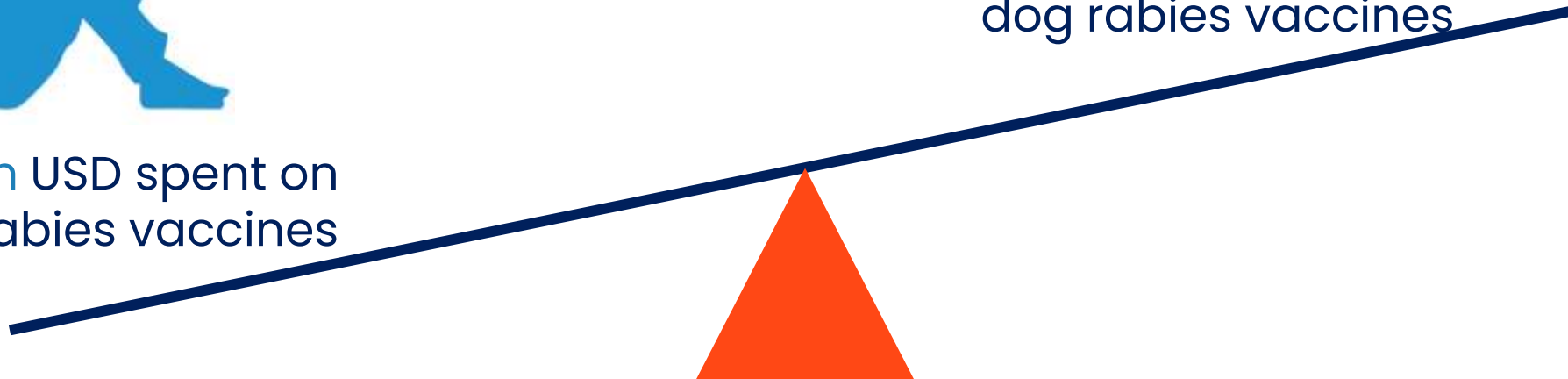


\$1.7 billion USD spent on human rabies vaccines

**Preventive**



\$0.065 billion USD spent on dog rabies vaccines



# A solution: Integrated Bite Case Management (IBCM)

IBCM is an advanced surveillance method that connects



Veterinary professionals



Human health professionals

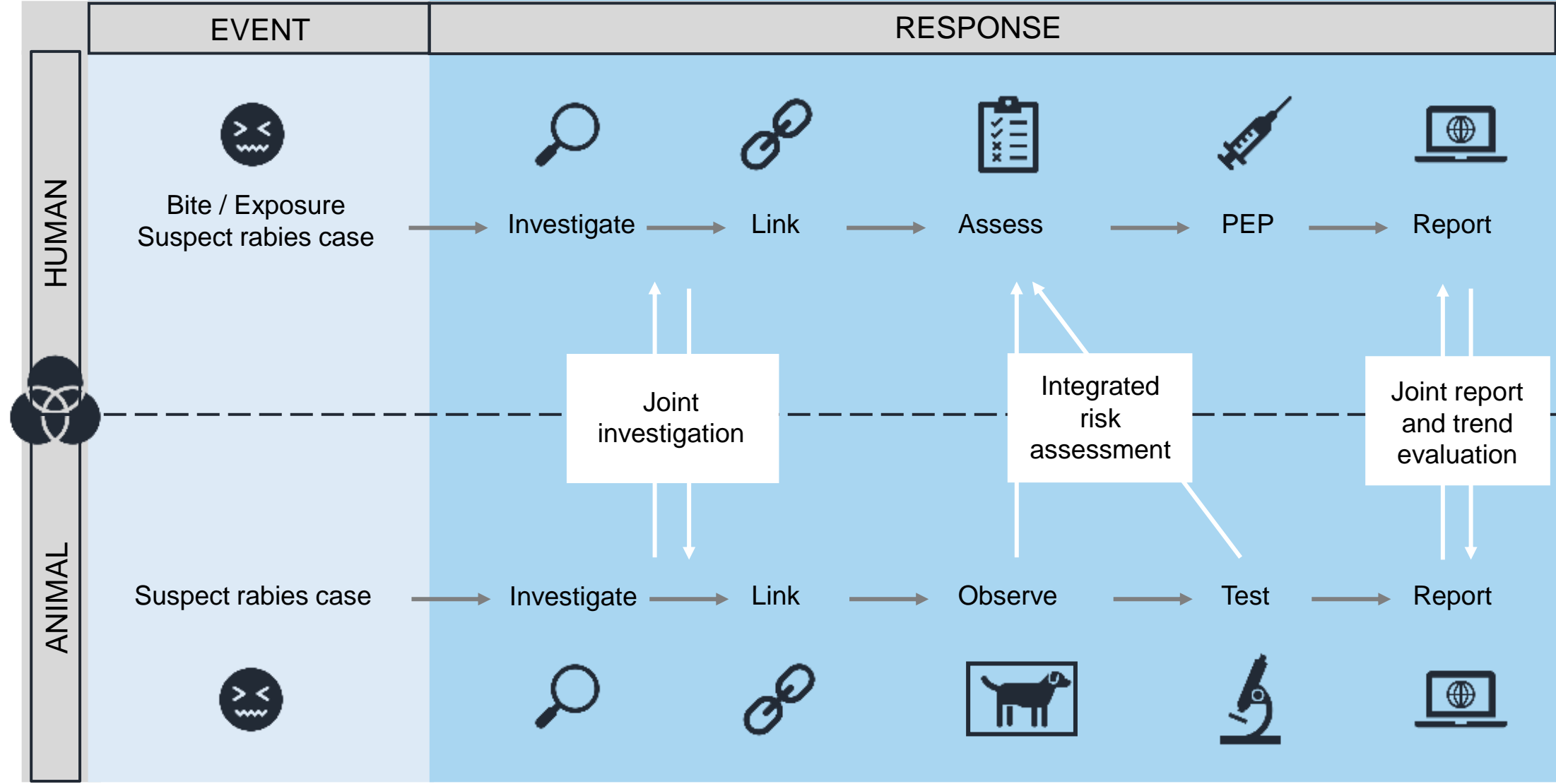


Communities

and consists of:

- Investigations of bite cases and suspected rabid animals
- Safe animal capture and animal assessment
- Animal observation for 10 days
  - Healthy: quarantine
  - Signs of disease: euthanize and test for rabies
- Sharing of information across sectors for appropriate risk assessments to inform PEP decisions and joint reporting

# Integrated bite case management shows One Health in action



# **IBCM needs qualified investigators...**

## **Case investigation actions**

- Identify all persons potentially exposed through community investigations
- Capture and confine potentially rabid animals
- Ensure proper quarantine
- Perform euthanasia of suspect rabid animals
- Coordinate, collect and transport suspect rabies samples
- Prepare standardized animal rabies report form for each investigation conducted

## **Community outreach and One Health approach**

- Disseminate awareness materials to healthcare professionals and communities



## **...and supervisors**

### **Post-bite animal rabies investigations**

- Contact healthcare facilities to make sure they share reports of animal bites
- Communicate with animal health workers to ensure that rabies suspect animals are reported
- Follow up on reports by investigating rabies suspect animals and communities
- Coordinate the activities of IBCM investigators
- Ensure that humane euthanasia procedures are followed

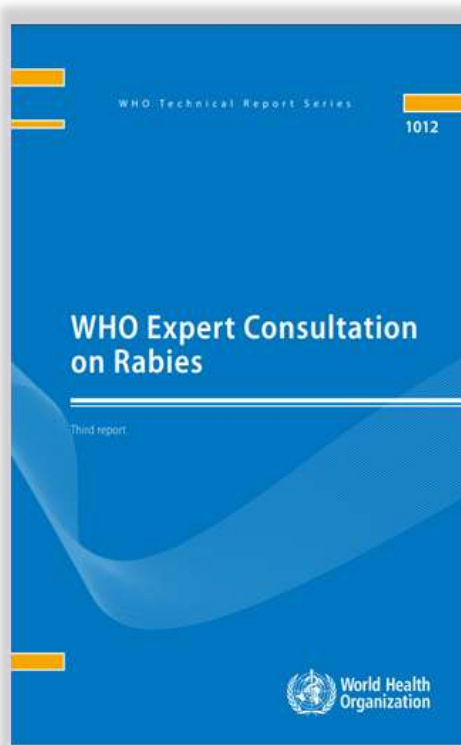
### **Laboratory testing and surveillance**

- Receive lab results and communicate them to healthcare providers and communities
- Maintain a database of bite reports for surveillance purposes

### **Community outreach**

- Implement community awareness programmes
- Disseminate awareness materials to healthcare professionals and communities

# ... and WHO's considerations and recommendations for PEP

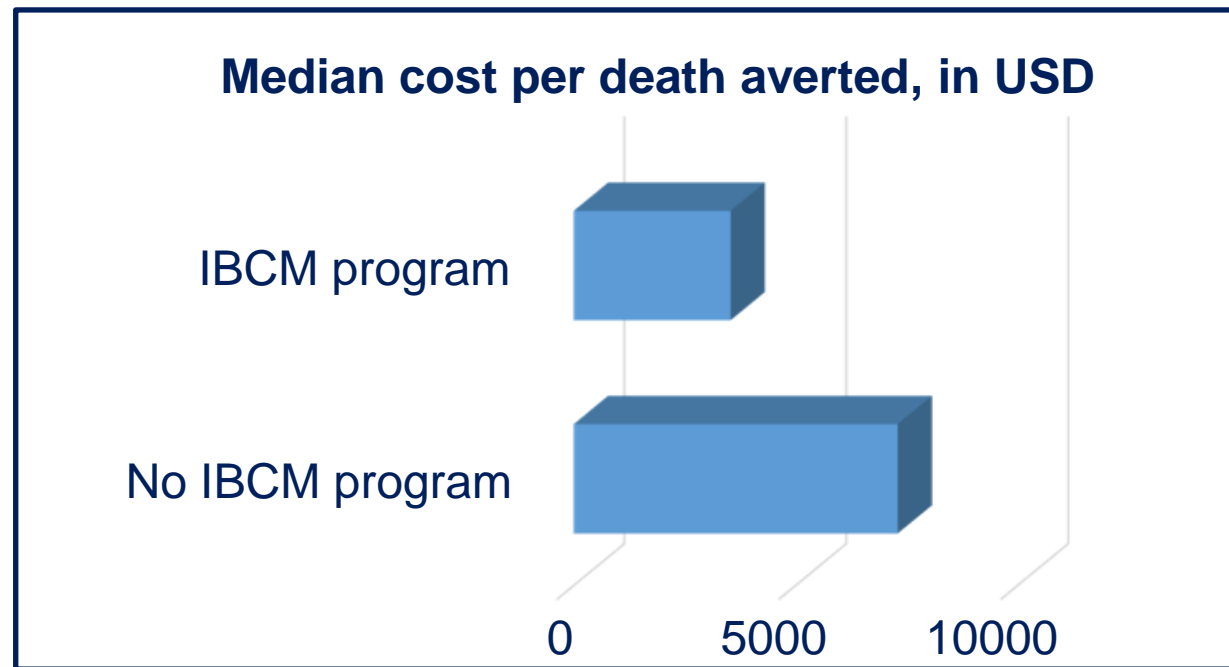


## Human vaccine providers need to consider:

- Time since exposure
- Exposure risk
- Animal health status, including test results
- Number of other animals or people attacked without provocation
- Availability for assessment and quarantine
- Animal vaccination status
- Risk that the animal was exposed to rabies within the last 12 months

# Investment in IBCM is cost-effective and maximizes resources

**\$0.05 per person** = IBCM programme + PEP  
**51%** reduction in the cost per human death averted



*“IBCM offers a solution for countries transitioning from reactive to preventive strategies (i.e., comprehensive dog vaccination)”*

# IBCM programmes bring many benefits

Increasing rabies case investigations

Increasing detection of suspect rabid animals

Increasing detection of individuals exposed to rabies

Increasing community participation

Removing suspect animals → reduction of ongoing transmissions and further exposures

Improving compliance for high-risk bites → reduction of human deaths

Using vaccines in a prioritized and targeted way, especially when supply is limited

Providing a prime example for implementing One Health



# IBCM Implementation in Cambodia

IBCM implemented  
by Ministry of  
Health in Kandal  
Province

2017-2018

IBCM  
implemented  
by an NGO in  
Phnom Penh

2019

2020-Present



2023-Present

IBCM implemented  
by MoH and MAFF in  
Battambang  
province



# IBMC Progresses

## Key stakeholders and partners

- GDAH/MAFF works with Provincial Vets at the Provincial Department of Agriculture, Forestry and Fisheries in collaboration with CDC/MOH at Provincial Department of Health
- Development partners including GIZ, Mission Rabies, WVS and IPC for sample collection and test

## Core activities

- Train the trainers from the national to the provincial level
- Provision of transportation and IT/phone equipment
- Establishment of a system to follow up bite incidents after presentation at the IPC PEP Center to enable swift initiation of field investigations, removal of any threat of a potentially rabid animal from the community and diagnostic sampling for testing in Phnom Penh
- Accompanying training and awareness raising

## Results

- More than 3,429 cases investigated, 129 suspected and 36 positives found in 2023
- Impact: First cross-sectoral (human and animal health) and government-led Integrated Bite Case Management system as successful blueprint for further rollout







## IBCM in action – Example of a programme in Goa, India





# Thanks

**Resource:** <https://openwho.org/courses/NTDs-Rabies-and-one-health/items/6rlozjnZioYkFRWVcX6XBR>

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