

Enhanced Surveillance Approaches for Dog-mediated Rabies: Implementation of **Integrated Bite Case Management** in Albay Province, Philippines

SPEEDIER Meeting – Glasgow, November 2018
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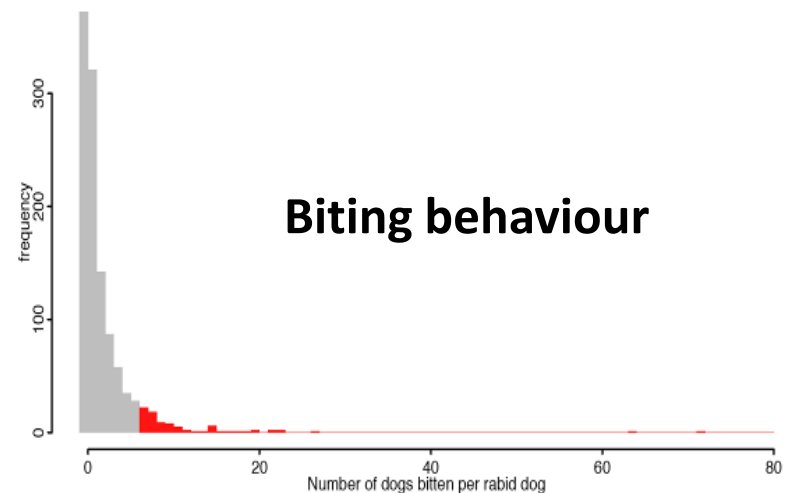
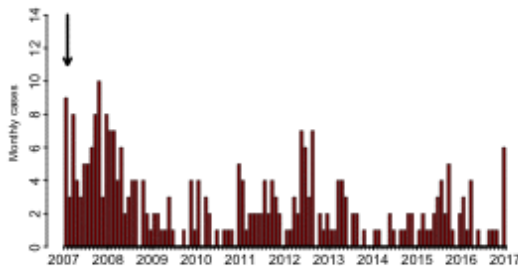


Motivation for enhanced surveillance in Albay



Suggests **1.2 rabid dogs per human rabies victim** and **no dog-to-dog transmission**.

Human deaths
Dog rabies cases

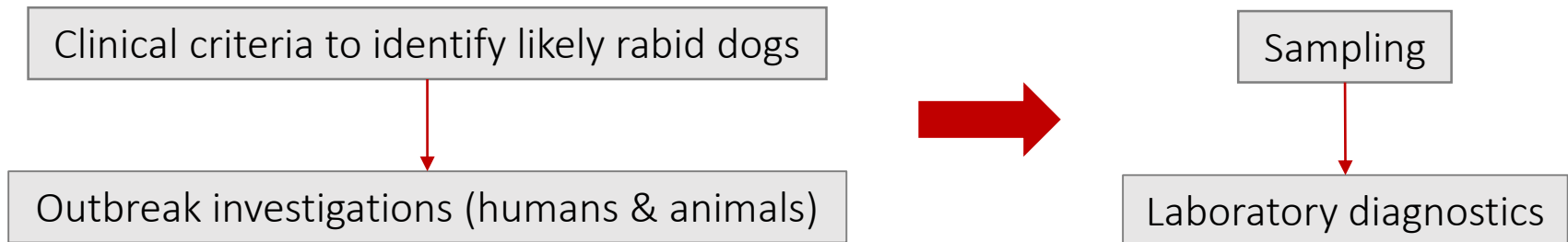


Biting behaviour

Technology development for enhanced rabies surveillance

Mobile phone-based application for data collection

- Tool to facilitate collection of animal bite case data, identification of suspect incidents and inter-sectorial communication
- Supports targeted sampling through follow-up of suspect bite-incidents



Technology development for enhanced rabies surveillance

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Web interface for communicating results and relevant rabies information

- Development of a web-based platform for the project accessible to all project partners
- “Real-time” data visualisation including mapping of suspect bite and rabies case incidents and geographical assessment of risk
- Platform will facilitate timely communications to stakeholders
- Secure repository for surveillance data to monitor progress towards elimination
- Downloadable material: mobile phone application, data, guidelines for field investigations and interventions

BITERS Mobile Application







Day 0: Record patients presenting at ABTCs

Record **patient** background information

- Clinic and Unique Identifiers
- Name and contact details

← **New Patient** SAVE

Patient's Personal Details

Clinic	<u>Clinic dealing with incident</u>
Bite registration number	<u>Enter number</u>
Hospital number	<u>Enter number</u>
Presentation date	<u>Enter date</u>
Name	<u>Name</u>
Contact details	
Province	Abra ▼
City or municipality	Bangued ▼
Barangay	Agtangao ▼
Sitio	<u>Sitio</u>

Day 0: Record patients presenting at ABTCs

Patient background information

- Clinic and Unique Identifiers
- Name and contact details

History of exposure

- Date and location of Incident
- Type of animal and bite

Details of treatment

- Location and classification of injury
- Date of PEP

Details of incident

- Number and type of wound
- How treated before attending clinic


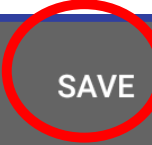
Details of animal

- Species + description of animal

Animal health information

- Known history of exposure?
- Current status of dog

Details of the owner

 Edit Patient Details 

☐ Disappeared

☐ Unknown

☐ Other Specify

Details of the Owner

Animal's owner is ☒ The patient

☐ Other known person

☐ Unknown

☐ Community owned

☐ NA, stray animal

Incident Followup

That concludes the information required. This incident will require follow-up on the following date:

26 Mar 2018



←

Incidents Stored Locally

SORT

Patient: **Alec Brown**

Owner: **null**

Incident **12 Mar 2018**

Date:

Followed up: ☐

Lab sample: ☐



← Incidents Stored Locally SORT

Patient: **Alec Brown**

Owner: **null**

Incident Date: **12 Mar 2018**

Followed up: ☐

Lab sample: ☐

Select an option

Edit incident

Follow up

Laboratory sample

Re-opens incident file so that record can be edited if there any errors or if there is additional information

Opens up follow up investigation tab



Day 14: Follow up of patients

Is follow up required?

← Follow Up SAVE

Patient's name: Alec Brown

Animal owner's name: null

Presentation date: 12 Mar 2018

☐ Follow up is not required

Known number of other bites in the same week:

People Animals

During the 14 day observation period:

☐ The animal was quarantined

☐ The animal showed symptoms of sickness

☐ The animal showed changed/abnormal behaviour

☐ The animal died

If still alive, animal's status on patient's day 14 of PEP:

☐ Healthy



Day 14: Follow up of patients

Is follow up required? - NO

← Follow Up SAVE

Patient's name:	Alec Brown
Animal owner's name:	null
Presentation date:	12 Mar 2018

☒ Follow up is not required



Day 14: Follow up of patients

Is follow up required? - YES

Bites and dog condition

- Any other bites in same week?
- Symptoms of animal during observation period

Dog behaviour

- Any changes in dog behaviour?

Has the animal died?

- Date and cause of death
- Post mortem status

←

Follow Up

SAVE

☒

The animal died

Date of death

26 Mar 2018

Cause of death

☐ Euthanised

☐ Accident

☐ Illness

☒ Found dead

☐ Other

Specify

Post mortem status

☒ Buried

☐ Burnt

☐ Thrown

☐ Consumed

☐ Eaten by animals

☐ UnKnown

☐ Other

Specify

Analysis



← Incidents Stored Locally SORT

Patient: **Alec Brown**

Owner: **null**

Incident Date: **12 Mar 2018**

Followed up: ☐

Lab sample: ☐

Select an option

Edit incident

Follow up

Laboratory sample

Fill in results from
laboratory samples (if
required)



Laboratory samples

Is a laboratory sample required?



Laboratory samples

Is a laboratory sample required? - NO



Laboratory Sample

SAVE

Patient's name: Alec Brown

Animal owner's name: null

Presentation date: 12 Mar 2018



A laboratory sample is not required



Laboratory samples

Is a laboratory sample required? - YES

Sample Information

- ID number
- Submission Date
- Result Date

Test Result and Animal Classification

- Positive/Negative/Unfit Sample
- Classification of animal

← Laboratory Sample

SAVE

Animal owner's name: null

Presentation date: 12 Mar 2018

☐ A laboratory sample is not required

Sample ID number

1

Sample submission date

26 Mar 2018

Sample result date

30 Mar 2018

Test result

☒ Positive

☐ Negative

☐ Unfit

Animal classification

☒ Confirmed rabid

☐ Highly suspect rabid

☐ Healthy



BITERS

ADD


REVIEW

UPLOAD



Uploading of data

Once follow ups have been completed, data can be uploaded.

 **Upload Data**

Enter your user name and password to upload all data on the phone to the BITERS server

Username:

Password

UPLOAD


☐ Delete uploaded files from the device



Uploading of data

Once follow ups have been completed, data can be uploaded.

Each BITER has a unique user name and password to upload data.

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Note tick box – at time of upload data are deleted from the phone.

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Uploading of data

Once follow ups have been completed, data can be uploaded.

Each BITERS staff has a unique user name and password to upload data.

Note tick box – at time of upload data are deleted from the phone.

When upload is complete, the app informs us how many files have been uploaded.

 **Upload Data**

Enter your user name and password to upload all data on the phone to the BITERS server

Username:

Password:

Uploaded 1 of 1 files

Successful uploads: 1
Failures: 0

☐ Delete uploaded files from the device

Screening cases

Coordination, communication, data collection & information sharing.



Behaviour

- Unprovoked aggression
- Excessive salivation and biting
- Running without reason/paralysis



Vaccination Status

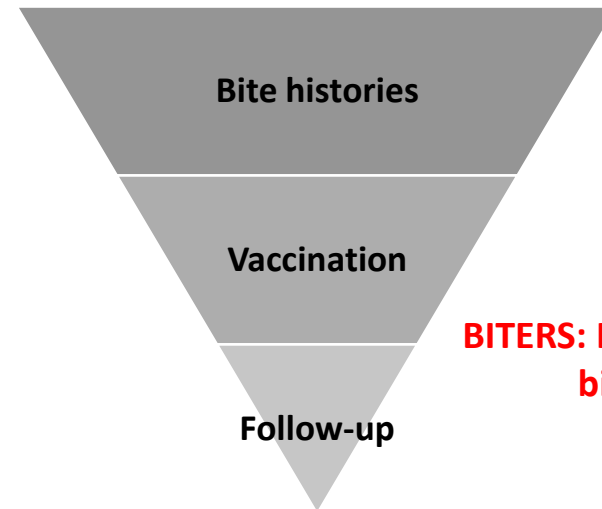
- Recently vaccinated
- Not vaccinated
- Unknown



Outcomes

- Alive
- Died/Killed
- Disappeared

ALL BITE CASES



BITERS: Investigating dog-bite injuries

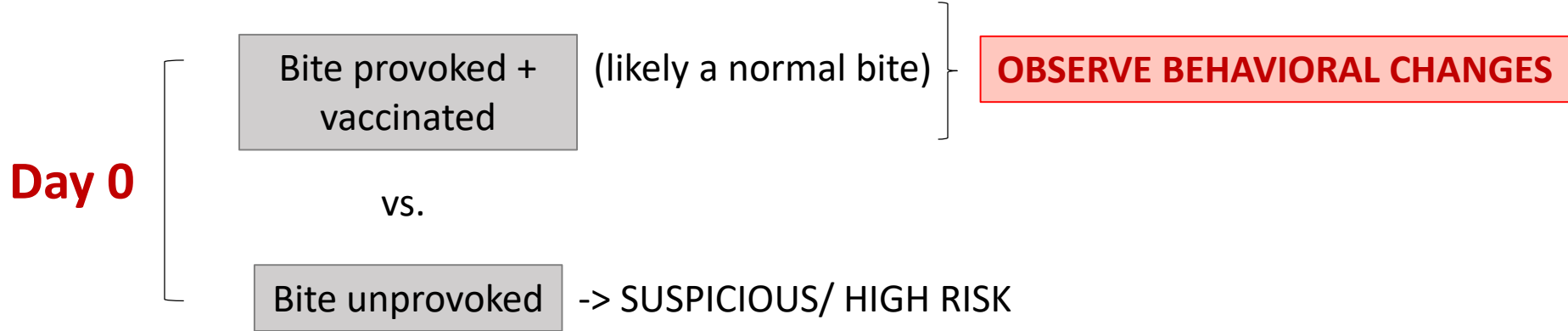
RABIES PROBABLE CASES

Sampling

VET SERVICES/LGUs: Field investigations & sample collection

Laboratory diagnostics

Actions to take



SUSPICIOUS: Unimmunized dogs showing no or unclear symptoms -> **quarantine and phone follow-up in 14 days**

Day 0 and 14

HIGH RISK: unimmunized dogs exposed to or a puppy of a rabid individual, disappeared/killed/died or symptomatic -> **immediately contact the LGU officer and prompt outbreak investigation and sample collection where relevant/available**

Animal field follow-up: if a high risk animal bit other individuals (animal or human) prompt field investigations

Human field follow-up: if patient died, contact public health and veterinary authorities to immediately conduct further field investigations

Implementation

Progress being made

- 6-fold increase in **detection of positive cases** (as well as increase in the number of investigated cases)
- Increase in **quarantine**
- Significant engagement from ABTCs
- Increased engagement of LGUs, with assistance through the training provided by the PVO

Challenges

- Ethical approval
- Training BITERS team; protocol follow-through
- Building relationship with LGUs
- Sample collection
- Premature killing of dogs still a problem
- **Vaccine shortage**

BITERS team & supporters

Erwin Malate
Eva Angelica Silo
Jason Espineda



Emelinda L. Lopez, Maria Glofezita Opulencia-Lagayan, Toni Rose Barroga, Noverlee P. Calub



Rona P. Bernales, Florencio F. Adonay



Michael Tildesley, EPSRC GCRF, Impact Fund