

Rabies Prevention and Control Program
DOH CHD CAR
(Situational Analysis)
2015

I. Goal

The goal of the program is to eliminate rabies in the Philippines and declare a Rabies-free Philippines by year 2020.

II. Objective

The National Rabies Prevention and Control Program has the following objectives:

1. Reducing the Mortality Rate to <1.5 per million population
2. 90% Post-Exposure Prophylaxis (PEP) Completion Rate
3. 40% Rabies Immunoglobulin (RIG) Coverage
4. 90% of bite victims washed with soap and water

III. Mortality Rate

The mortality rate for human rabies as seen in **figure 1** has been decreasing from 2009 to 2012 but has increased from 2012 to 2014.

The two (2) cases in 2013 however, were not from CAR-one was from Pangasinan (Region I) and the other from Isabela (Region II).

There were 3 cases reported in 2014(**table 1**), 2 of the cases were referred to Baguio General Hospital in December, 2014 who died of rabies since there were signs and symptoms of rabies manifested in these patients when referred. The two patients came from Sta. Maria, Bolinao, Pangasinan and one from Flora, Apayao who consulted at Flora District Hospital 3 months after having bitten by his own dog.

In 2015, 2 deaths from human rabies cases from Binalonan, Pangasinan were referred from Ilocos Training Regional Medical Center(ITRMC), San Fernando City and Urdaneta Emergency Hospital.

Figure 1- Human Rabies Mortality Rate, CAR, 2009-2015(1st-3rd Qtr, 2015)

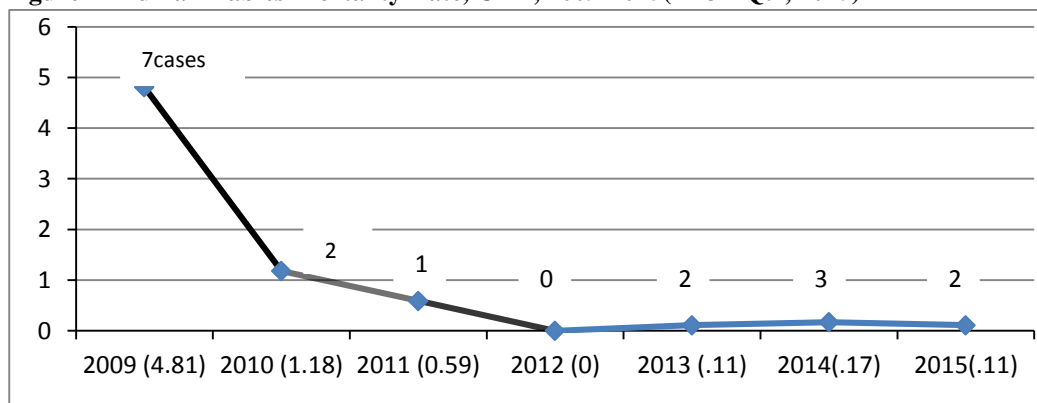


Table 1- Mortality Rate per province

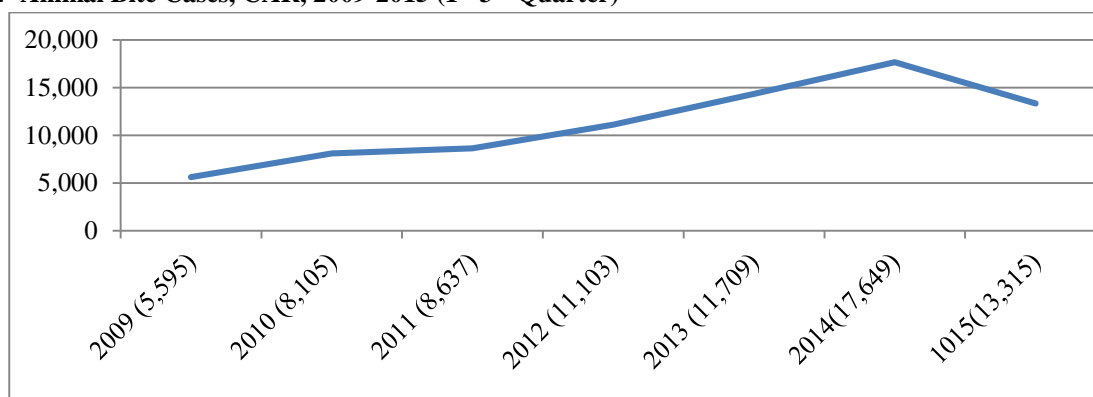
Province/City	Target	2012	2013 Q1	2014	2015 (1-3 Qtr)
Abra	<1.5 per million population	0	0	0	0
Apayao		0	0	1 (Flora, Apayao)	0
Baguio City		0	1 (Pangasinan)	2 (Sta. Maria, Bolinao, Pangasinan)	2 (Binalonan, Pangasinan)
Ifugao		0	0	0	0
Kalinga		0	1 (Isabela)	0	0
Mountain Prov		0	0	0	0
Rate		0	0.11	0.17	0.11

IV. Animal Bite Cases

Fig. 2. Although human rabies mortality rate is within the national target, the number of animal bite cases, as seen in Figure 2 has been increasing since 2009 with the number doubling from 2009 to 2012 and 37% increase in 2014. With this, the 22 Animal Bite Treatment Centers in the region (Table 2) have to be maintained to meet the needs of the increasing number of animal bite cases. However, some Animal bite centers did not report for 2014 and 2015 and were considered inactive. These are due to transfer or resignation of some trained staff and limited manpower to be trained. The schedule for the training on Animal Bite management were not regular since RITM and Reg. 2 and Reg. 1 only conduct training for their own participants but we were able to request participants from CAR to be included in their training. These were BGHMC, Kalinga Provincial Hospital, Luna RHU, Abatan Emergency hospital, Paracelis District hospital and Benguet General Hospital.

The supplies being provided to ABTCs to help meet the needs of the animal bite patients are very limited. These are the anti-rabies vaccines (Purified Chick Embryo Cell Rabies Vaccine and Purified Verocell Rabies Vaccine), Equine Rabies Immunoglobulin, Rabies Exposure Registry (RER), Post-exposure prophylaxis (PEP) cards, IEC materials, Animal Bite Management Algorithm, and ABTC signages.

Figure 2- Animal Bite Cases, CAR, 2009-2015 (1st-3rd Quarter)



V. Post-exposure Prophylaxis (PEP) Completion Rate (Cohort report)

The National Objectives for Health 2011-2016 has targeted 90% post-exposure completion rate. As per DOH AOs 2007-0029, 2009-0027 and 2011-002, of the total Rabies exposures, only those under categories II and III require anti-rabies vaccination. However, as seen in figure 3, not all of the patients needing anti-rabies vaccine (ARV) have been vaccinated.

In 2009, there were 4,581 categories II and III patients out of the total 5,592 animal bite patients. Of these, 321 (7.0%) had no anti-rabies vaccination.

In 2010, there were 7,288 categories II and III patients out of the total 8,105 animal bite patients. Of these, 752 (10.3%) had no anti-rabies vaccination.

In 2011, there were 7,641 categories II and III patients out of the total 8,637 animal bite patients. Of these, 969 (12.6%) had no anti-rabies vaccination.

In 2012, out of the 10,765 patients needing anti-rabies vaccine, 815 (8%) had no anti-rabies vaccination. 9,950 (92%) were given the vaccine and out of them, only 6,099 (61.3%) of those who started with the regimen were able to complete the required doses.

As of the of 2013, the animal bite cases increased to 14,344. Out 11,022 registered cases needing anti-rabies vaccine, 3,322 (23%) had no anti-rabies vaccine. 11,022(77%) were given the vaccine and out of them, 8,455 (77%) completed the required doses.

For the year 2014, out of 13,268 registered cases patient needing vaccine, 12,807(96%) received ARV and 10,569(80%) completed the vaccination. Out of 6,135 Cat III, 2222(36%) received the Equine Rabies Immunoglobulin (ERIG). There are 336 (2.5%) who did not receive ARV.

For the 1st-3rd quarter, 2015, out of 12,533 categories II & III registered cases, 12,111(98%) were given ARV, 10,050 (82%) completed Day 0, 3 and 7. Out of 4,099 Cat III bites, 1,833(45%) received ERIG and 246(2%) have not received any ARV.

Figure 3- Categories II and III Cases and Anti-rabies Vaccine Use, CAR, 2009-2015(Cohort)

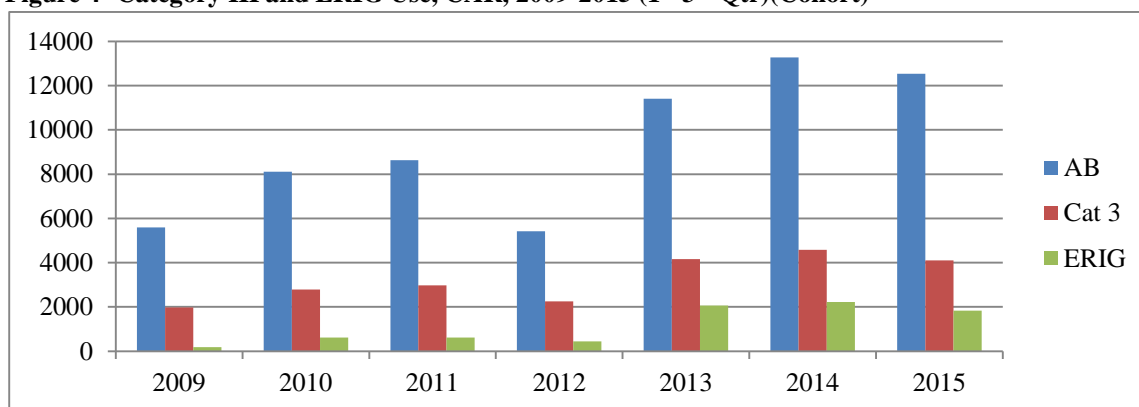


VI. Rabies Immunoglobulin Coverage(Cohort)

Fig 4. According to DOH AO 2009-0027, Rabies Immunoglobulin should be given immediately to Category III rabies exposures. Due to the limited allocation from DOH Central office and budget at regional office, DOH can only allocate one ERIG per category III bites. LGU ABTCs procures ARVs cover animal bite patients needing ARV. In figure 4

not all Category III patients had been given rabies immunoglobulin. In 2009, 90.7% of Category III patients had no Rabies Immunoglobulin vaccination while 77.8%, 79.5%, 81%, 50.41%, 64% had not been given in the years 2010, 2011, 2012, 2013 and 2014 respectively. In 2015 however, there were 4,410 Cat III bites and 1,833(45%) were given ERIG due to the increase in allocation from DOH and also we procured additional ERIG at the regional office. Baguio City had procured ERIG also so that their allocation were given to other provinces with increases cat III bites like Kalinga.

Figure 4- Category III and ERIG Use, CAR, 2009-2015 (1st-3rd Qtr)(Cohort)



VII. Washing of Wounds with soap and water

Wound care is part of rabies exposure management wherein the bite wound should be washed immediately with soap and water preferably for 10 -15 minutes.

Table 2. shows the percentage of bite victims who washed their bite wounds with soap and water per province/city in the region. Awareness on first aid to possible infection is high in those provinces

Table 2- % Bite Victims Who Washed with Soap and Water

Province/City	Target	2012	2013	2014	2015
Abra	90%	Not indicated in old reporting form	88%	90	87
Apayao			85%	69	94
Baguio City			98%	89	98
Benguet			85%	74	88
Ifugao			100%	92	96
Kalinga			98%	96	99
Mountain Prov			96%	91	95
TOTAL			93%	86%	94%

VIII. Animal rabies situation, 2014

As of October, 2015 there has been 2 cases of human rabies death reported in the whole region. The two cases were referred to Baguio General Hospital last January, 2015.

The patients came from Binalonan, Pangasinan. Baguio is catering not only patients from Benguet but also patients coming from region I, Region 2 and also other regions.

Figure 5. For the animal rabies cases 2014 and 2015, all provinces except Benguet decreased.

Fig 5-Animal Rabies Situation, 2014 & 2015

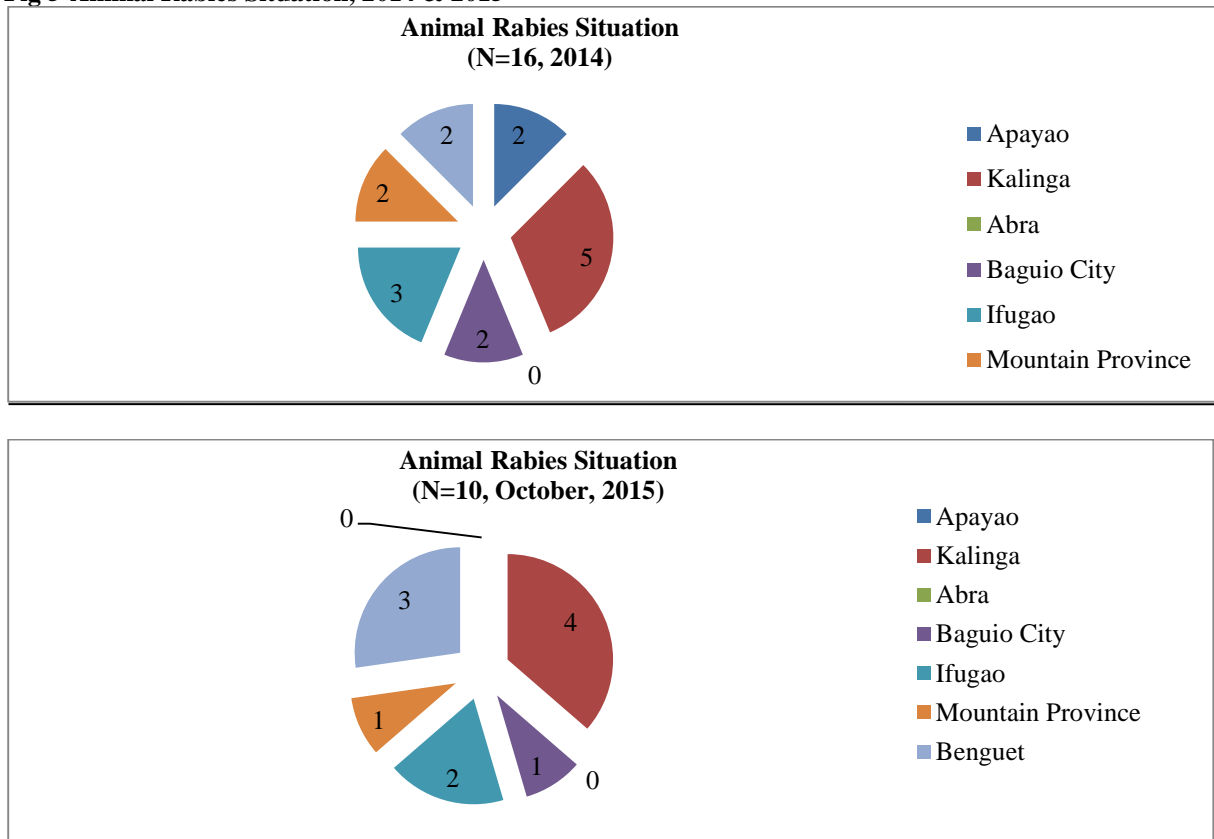


Table 3. Abra remained 0 case in 2015, Apayao has no case, Ifugao decreased by 34%, Kalinga by 20%, Baguio city and Mt. Province decreased by 50% and Benguet increased by 34%. An overall decrease to 37.5% from 2014 to 2015 was noted.

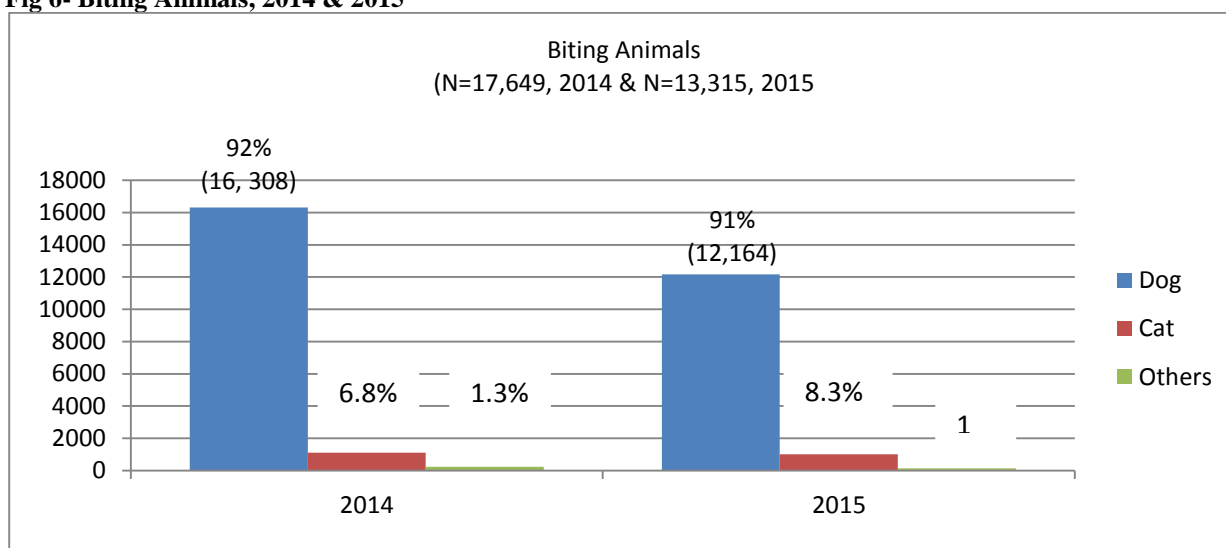
Table 3- Distribution of Animal Rabies Cases, 2014 & October, 2015

Province	2014	2015
ABRA	0	0
APAYAO	2 (Sta. Marcela & Flora)	0
BAGUIO CITY	2 (Quezon Hill, Pinsao Proper)	1 (Loakan Proper)
BENGUET	2 (Taloy Sur, Tuba & Upper Wangal, LTBI)	3 (Pob, Tuba, Tadiangan & Wangal, La Trinidad)
IFUGAO	3 (Cudog, Lagawe & Pob. East, Lamut)	2 (Poblacion, Kiangan & Galonogon, Aginaldo)

KALINGA	5 (Bulanao, Bulanao Norte, Tabuk City)	4 (Casigayan and Bulanao, Tabuk City)
MT. PROV	2 (Poblacion, Paracelis)	1 (Bangnen, Bauko, Mt. Prov)
TOTAL	16	10

Biting animals are mostly dogs (91-92%) followed by cats (6.8 & 8.3%) and others at 1.3-1% respectively(Fig 6).

Fig 6- Biting Animals, 2014 & 2015



IX. DOH Allocation of Vaccine per province(TCV)

For 2014, the allocation for TCV in 2015 increased by 42% and ERIG allocation has decreased to 7%.

Table 4- Tissue Culture vaccine allocation per province, 2014

Province	Purified Verocell Culture Vaccine	Purified Chick Ebryo Vaccine	ERIG
Abra	218	216	128
Apayao	53	402	88
Baguio City	549	588	219
Benguet	173	392	191
Ifugao	722	107	127
Kalinga	60	714	157
Mountain Province	376	199	133
Total	1902	2419	986

Table 5- Tissue Culture vaccine allocation per province, 2015

Province	Purified Verocell Culture Vaccine	Purified Chick Ebroyo Vaccine	ERIG	HRIG
Abra	970	0	65	0
Apayao	1001	148	150	60
Baguio City	307	1,043	106	100
Benguet	265	0	106	30
Ifugao	779	0	73	16
Kalinga	10	1,310	320	
Mountain Province	1,530	0	130	25
Total	4, 865	2,501	820	231

Table 6 & Table 7-The percentage share procured by DOH region Car as compared to DOH Allocation is only 18% but increased to 48% in 2015. Only PVRV at 3,160 vials and PCECV at 1,988 were allocated by DOH Central Office for 2015. No allocation for ERIG was provided by DOH Central office for 2015.

Table 6– DOH budget Allocation vs Regional Procurement,2014

Budget Allocation	PVRV	Amount	PCECV	Amount	ERIG	Amount	Percentage
DOH CO	6,379	2,328,335	2,642	16, 528,660	2,396	2,228,280	82%
Regional Procurement	2,319	927,600	1,297	518,800	461	461,000	18%
Total	8,698	3,255,935	3,939	17,047,460	2,857	2,689,280	
Grand Total				22, 992,675			

Table 7- DOH Budget Allocation vs Regional Procurement, 2015

Budget Allocation	PVRV	Amount	PCECV	Amount	ERIG	Amount	Percentage
DOH CO	3,160	1,264,000	1,988	3,081,400	100	105,000	52%
Regional Procurement	209	83,600	140	217,000	93	97,650	48%
Total	3,369	1,347,600	2,128	3, 298,400	193	202,650	
Grand Total				4, 848, 650			

Strength:

1. Availability of trained personnel at ABTCs to initiate vaccination management
2. Availability of Anti rabies vaccines for patients on Post Exposure prophylaxis(PEP)
3. Support from DOH Central Office

Weaknesses:

1. Limited resources to cover all needs at ABTC's
2. Limited monitoring activities
3. Delayed reporting system from provinces

Opportunities:

1. Strengthen monitoring activities
2. Presence of support groups to strengthen advocacy ex. Student organization, Rhodeo Club
3. Allocation of vaccines to ABTC'S
4. World Rabies Day Celebration activities, meetings, seminars attended

Threats:

1. Increasing cases of animal bites cases(Kalinga, Baguio City and Abra)
2. Increasing animal bite cases from outside Baguio City(ex. Coming from Pangasinan and La Union)

Program Objective;

1. Reduce Mortality Rate from Rabies cases to <1.5 per million population
Status: 1 death from BGHMC, patient from Pangasinan
- CAR is still within the target
2. Post-exposure prophylaxis completion rate at 90% target
CAR is at 84%(1st-3rd qtr, 2015)
3. Maintain and improve immunoglobulin coverage at 40% target
CAR is at 45%(1st-3rd qtr, 2015)
4. % who washed with water at 90% target
CAR is at 94%

Strategies:

1. Maintain allocation and provision of logistic support(Anti- Rabies vaccine) to ABTC'S for PEP(priority at Baguio city, Kalinga and Abra due to increasing animal bite cases)
2. Monitoring and evaluation of ABTC's
3. Attendance to seminars/ meetings for updates
4. Support World Rabies day celebration

PLAN FOR 2016

Given a budget of 11, 029,400.00 NEP and GOP combined, around 10, 624,300(96%) will be used for procurement of ARV and ERIG (**Table 8**). The total number of animal bites in 2014 who needed ARV was 16,692. A complete vaccination will need 3 doses on Day 0, Day 7 and Day 14. PVRV has 5 doses per vial and PCECV has 10 doses per vial. The 16,692 animal bites needing ARV, will need approximately 50, 076 doses for complete vaccination. Basing on the combined PVRV and PCECV at 6,174 and 2,099 vials have a total of 51,860 doses minus the estimated 10,372(20%) allowable wastage. The number of target clients who will be provided with ARV are estimated at 12,265(73%) of the total animal bites (16,692) in 2014, The basis of allocation per province will be on the percentage of animal bites reported in 2014. The remaining 4 percent will be used in meetings, World Rabies day and Rabies Awareness month advocacy, news adds and support to mass dog vaccination,

Table 8- Budget allocation per Province, 2016

Province	2014 Animal Bites	Purified Chick Embryo Vaccine		Purified Verocell Rabies Vaccine		Number of Target Clients to be covered for Post Exposure Prophylaxis (minus 20% allowable wastage)
		# of vials	Amount	# of vials	Amount	
ABRA	1,255			1050	419,832.00	1,400
APAYAO	1,191			1173	469,224.00	
BAGUIO CITY	6,728	1511	2,342,484.00			4,029

BENGUET	1,835			1358	543,312.00	1,810
IFUGAO	1,401			1111	444,528.00	1,482
KALINGA	2,639	588	910,966.00			1,568
MT. PROV.	1,643			1482	592,704.00	1,976
TOTAL	16,692	2099	3,253,450.00	6174	2,469,600.00	12,265

Table 9- For ERIG coverage is again computed on the percentage share of Category animal bites per province. A 50 kg person will need an average of 3 vials of RIG for Category III Bites. Memorandum 2014-0303 by the office of the Secretary states that DOH will allocate only one vial of RIG for every category III bites. The table shows an allocation of 1 vial for every Category III bites for 2016 is estimated to be about 76%.

Table 9- Rabies Immunoglobulin Coverage

Province	CAT III Animal Bites	RIG			Number of Target Clients to be covered for every Category III bites (ave. 3 vials)
		% from Total CAT III	# of vials	Amount	
ABRA	883	14	656	688,800	218
APAYAO	321	5	234	245,700	78
BAGUIO CITY	2,392	39	1827	1,918,350	609
BENGUET	965	16	750	787,500	250
IFUGAO	241	4	187	196,350	62
KALINGA	544	9	422	443,100	141
MT. PROV.	789	13	609	639,450	203
TOTAL	6,135	100%	4,685	4,919,250.00	1,561

Table 9- Advocacy activities and Support to Mass Dog Vaccination

Activity	Items	Budget	Remarks
1.Meetings with ABTCs	Board & Lodging	72,000	60 paxs
2.Support to Rabies Awareness Month(March)	Meals and snacks	100,000	
3. Procurement of needles and syringes	supplies	100,000	>support to mass dog vaccination
4.News add	Add print	12,000	>Rabies Day Celebration
5. Monitoring and Supervision	TEVs	10,000	>1 per quarter

Prepared by:

Noted by:

ROY FIACHING
Med. Tech. IV

MA. LUISA L. PARAN, MD, MHA
MO V/CHIEF, Local Health Support Division

Approved by:

AMELITA M. PANGILINAN, MD MPH, CESO IV
Director III
Officer – in - Charge