NATIONAL DENGUE PREVENTION & CONTROL PROGRAM

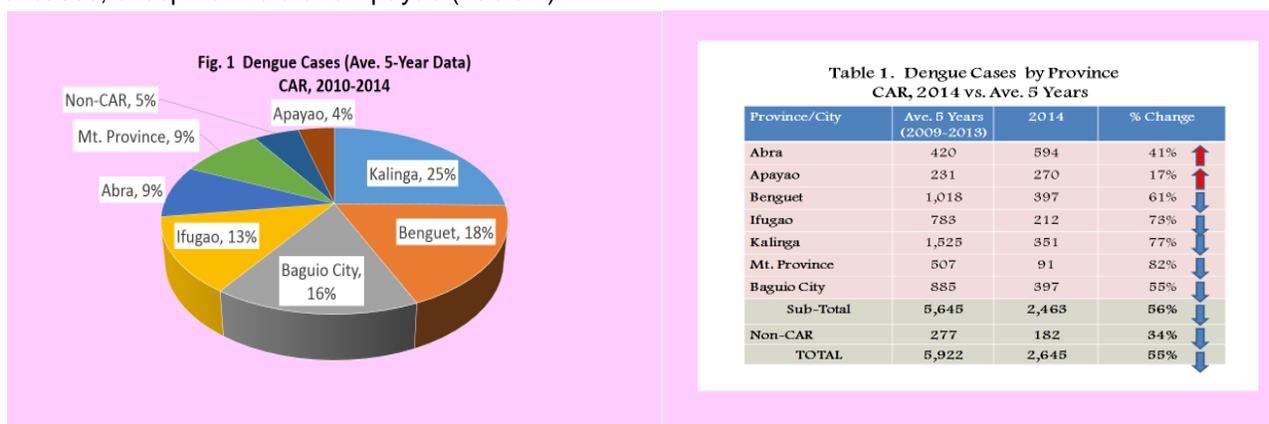**Introduction :**

Dengue is a public health problem in the Philippines. It is one of the main causes of hospitalization among children. As of October 2015, the Department of Health reported a total of 108,263 dengue cases nationwide; this was a 32% higher compared to last year. Ages of cases ranged from 1 month to 99 years, however most of the affected age group were children below 15 years old. Most of the cases were from Central Luzon (16.3%), CaLaBaRZon (16%) and NCR (12.1%). The Philippines is one of the four (4) countries in the Western Pacific which reported the highest dengue incidence in recent years (WHO). Despite various vector control measures being implemented, dengue cases still continue to spread in urban as well as in rural areas. This is due to rapid urbanization and population growth, inadequate water supply and poor management of domestic water containers, poor sanitary and living conditions, and other factors that can contribute to the favorable multiplication of the virus and the mosquito vectors such as climate change.

The DOH has envisioned a dengue risk-free Philippines. The overall goal is to improve the quality of health of Filipinos by adopting an integrated dengue control approach in the prevention and control of dengue infection resulting to the reduction of morbidity and mortality from dengue infection by preventing the transmission of the virus from the mosquito vector to humans.

Dengue Situation in CAR :

Dengue is also a main public health concern in the Cordillera. Over the past 5 years, Kalinga, Benguet and Baguio City contributed most of the of cases (Fig. 1), although cases in 2014 cases decreased by 56% in CAR (Table 1) compared to the average 5 year-data (2009-2013). A total of 52 dengue deaths were reported in 5 years with an average case fatality rate of 0.30%. In 2014, most of the provinces decreased in the number of cases, except for Abra and Apayao (Table 1).

Fig. 1 Dengue Cases (Ave. 5-Year Data) CAR, 2010-2014

Table 1. Dengue Cases by Province CAR, 2014 vs. Ave. 5 Years

Province/City	Ave. 5 Years (2009-2013)	2014	% Change
Abra	420	594	41%
Apayao	231	270	17%
Benguet	1,018	397	61%
Ifugao	783	212	73%
Kalinga	1,525	351	77%
Mt. Province	507	91	82%
Baguio City	885	397	55%
Sub-Total	5,645	2,463	56%
Non-CAR	277	182	34%
TOTAL	5,922	2,645	55%

The program thrust is geared toward the attainment on the following objectives:
1. To reduce dengue incidence by 6% annually and 15% reduction compared to average 5-year data.

Indicators	CAR Status		Percent Change
	Ave. 5 Years	2014	
Dengue Incidence (National Target: 20/100,000 Population)			
➢ Abra	173.9	242.5	39% Increase
➢ Apayao	178.9	199.3	11% Increase
➢ Benguet	254.7	97.8	62% Decrease
➢ Ifugao	398.9	106.4	73% Decrease
➢ Kalinga	670.7	147.0	78% Decrease
➢ Mt. Province	311.5	57.6	82% Decrease
➢ Baguio City	270.8	112.7	58% Decrease
CAR	**318.4**	**133.3**	58% Decrease
➢ Non-CAR			
TOTAL	**335.0**	**143.8**	57% Decrease

The overall incidence in 2014 was 143.8/100,000 population. It was a 6-fold higher compared to the national target but it was lower by 57% compared to the average 5-year regional incidence.
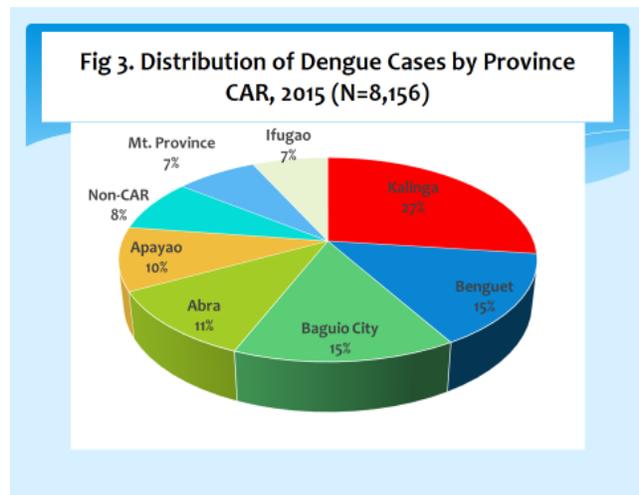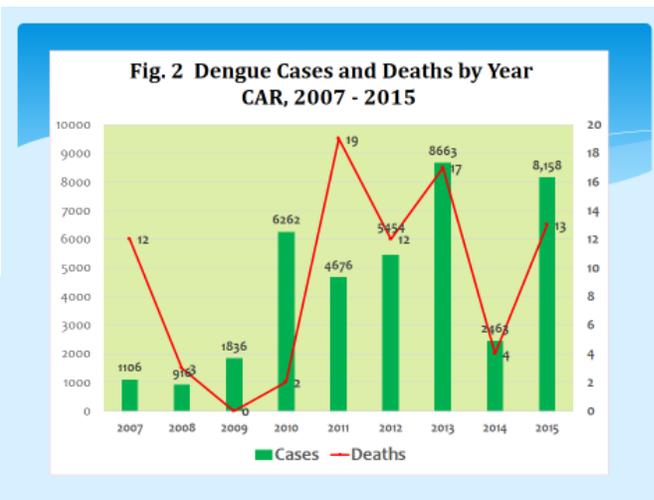
2. To reduce dengue case fatality rate (CFR) by 10% annually.

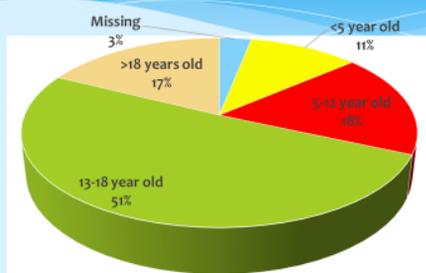| Indicators	CAR Status		Percent Change
	Ave. 5 Years	2014	
Case Fatality Rate (National Target: <0.9%)			
➢ Abra	0.65%	0.17%	74% Decrease
➢ Apayao	0.40%	0.00%	100% Decrease
➢ Benguet	0.56%	0.25%	55% Decrease
➢ Ifugao	0.37%	0.00%	100% Decrease
➢ Kalinga	0.17%	0.28%	65% Increase
➢ Mt. Province	0.37%	0.00%	100% Decrease
➢ Baguio City	0.16%	0.25%	56% Increase
CAR	**0.30%**	**0.17%**	43% Decrease
➢ Non-CAR	0.40%	0.00%	100% Decrease
TOTAL	**0.30%**	**0.16%**	47% Decrease

The national CFR target for 2016 is <0.9%. CAR has achieved this target in 2014 by attaining a CFR of 0.16%, an 89% lower compared to the national target. It was also a 20% lower compared to 2013 and 47% lower compared to the average 5-year data.

In 2015, a total of 8,158 dengue cases were reported as of MW 42 (Fig 2). This was a 299% higher compared to same period of 2014. Bulk of cases were from Kalinga, Benguet and Baguio City (Fig 3). All provinces had increased in the number of cases (Table 2) and outbreaks were reported in Mt. Province (Tadian & Paracelis), Abra (Luba, San Isidro, Villaciosa), and Apayao (Flora, Luna and Sta. Marcela). Age ranged from 3 months to 91 years old (median = 17 years).   Most (51%) of the affected age group were children 13-18 years old (Fig. 4).

The overall number of cases in the region has reached the Alert Threshold from MW 23-35 and went beyond the Epidemic threshold for MW 36-39 (Fig. 5). There were 13 reported deaths coming from Abra, Luba), Apayao (Luna), Baguio City (Asin & Kias) and non-CAR (from Rosario & Cervantes). The case fatality rate was 0.16%.

Fig. 2 Dengue Cases and Deaths by Year CAR, 2007 - 2015

Fig 3. Distribution of Dengue Cases by Province CAR, 2015 (N=8,156)

Fig 4. Distribution of Cases by Age Group CAR, 2015

Fig. 5. Dengue Suspect Cases by Morbidity Week, CAR MW 1 to 42, 2015 (5 years data)
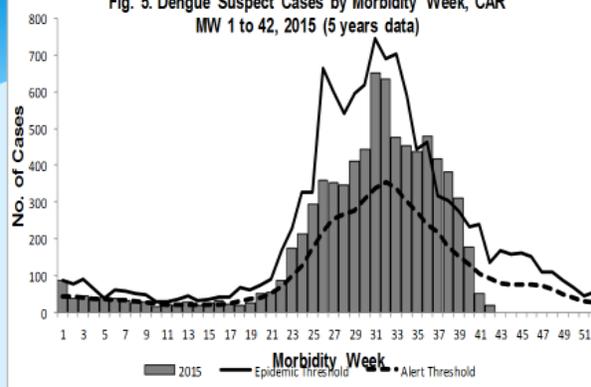
GAPS AND PRIORITY ACTIVITIES :

Despite various efforts being implemented for dengue prevention and control in the region, disease trend is still increasing especially in 2015. Outbreaks were reported in some municipalities and clustering of cases was also noted in various barangays. Disease surveillance systems in the municipalities and provinces are in place but there is no analysis of data at the local level, thus outbreaks are not detected early and no prompt actions are being done. Local officials are not fully involved in the implementation of the *Aksyon Barangay Kontra Dengue* or the 4 o'clock Habit of mosquito source reduction due to inadequate advocacy campaigns. Local ordinances are not fully enforced and some LGUs have no existing ordinances to compel everyone to participate in anti-dengue activities. Since weekly search and elimination of mosquito breeding sites has not been sustained, there are abundant mosquito breeding sites or containers such as open drums, pails, plastic containers & other useless containers that led to the abundance of mosquito vectors, the *Aedes aegypti* and *Aedes albopictus,* that transmit dengue. No regular vector surveillance activities being conducted by local health workers, thus high risk areas not determined and no appropriate actions being done by local officials. Vector control response during periods of outbreak is inappropriate since the vector control officers are not well-trained. There were also no program reviews done at the regional and provincial levels.

With these issues and concerns, there are priority activities to address the gaps. These include intensified health promotion/advocacy campaigns through tri-media campaigns and continuous and intensified disease surveillance through Epidemiology and Surveillance Units with immediate feedback to Barangay Officials for appropriate action. The Department of Health should provide resources for vector control, diagnosis and management of cases, including IEC materials to augment needs of LGUs prioritizing high risk areas. Conduct of onsite monitoring visits should be strengthened to assist/mentor LGU partners. Some MHOs need to be trained on Clinical Dengue Management and designate vector control officers should also be trained on the use of equipment for vector control. A program review need should be conducted provide program updates and to discuss and address issues and concerns on program implementation.

PRIORITY AREAS

Province	Municipalities with high dengue incidence/upsurge	Municipalities with dengue deaths
ABRA	Bangued, Luba, Tayum & San Isidro	Boliney & Luba
APAYAO	Sta. Marcela, Flora, Pudtol & Luna	Luna
BENGUET	La Trinidad, Itogon and Tuba	
IFUGAO	Aguinaldo, Alfonso Lista & Lamut	Tabuk City
KALINGA	Tabuk City, Rizal & Pinukpuk	
MT. PROVINCE	Paracelis, Bontoc & Tadian	Bontoc
BAGUIO CITY	Irisan, Camp 7 and Kias	Asin & Kias

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