



Epidemiology Bureau
Public Health Surveillance Division

April, 2019

Leptospirosis

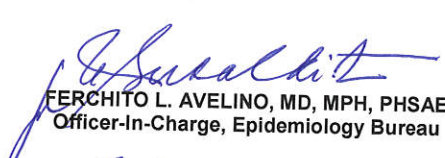
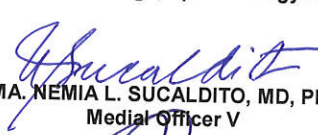

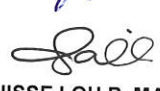


Leptospirosis is a group of zoonotic bacterial diseases with variable manifestations. Disease transmission may be through: contact of skin, especially if abraded, or of mucous membranes with moist soil, vegetation contaminated with urine with infected animals or contaminated water as swimming, wading in flood waters, accidental immersion or occupational abrasion; direct contact with urine or tissues of infected animals.

Table 1. Leptospirosis Cases in the Philippines, 2019* vs 2018

Region	2019		2018		Percent Change in Cases
	Cases	Deaths	Cases	Deaths	
Philippines	406	47	939	86	↓ 57

PIDSR Case Definition for Leptospirosis

Suspected Case	<p>A person who developed acute febrile illness with headache, myalgia and prostration associated with any of the following possibly after exposure to infected animals or an environment contaminated with animal urine</p> <ul style="list-style-type: none"> • Conjunctival suffocation • Meningeal irritation • Anuria or Oliguria and/ or proteinuria • Jaundice • Hemorrhages (from intestines or lungs) • Cardiac arrhythmia or failure • Skin rash
Probable Case	<p>A suspected case in an ongoing epidemic or an environment contaminated with animal urine (e.g. wading in water floods, rice fields, drainage)</p>
Confirmed Case	<p>A suspected case that is laboratory confirmed.</p>

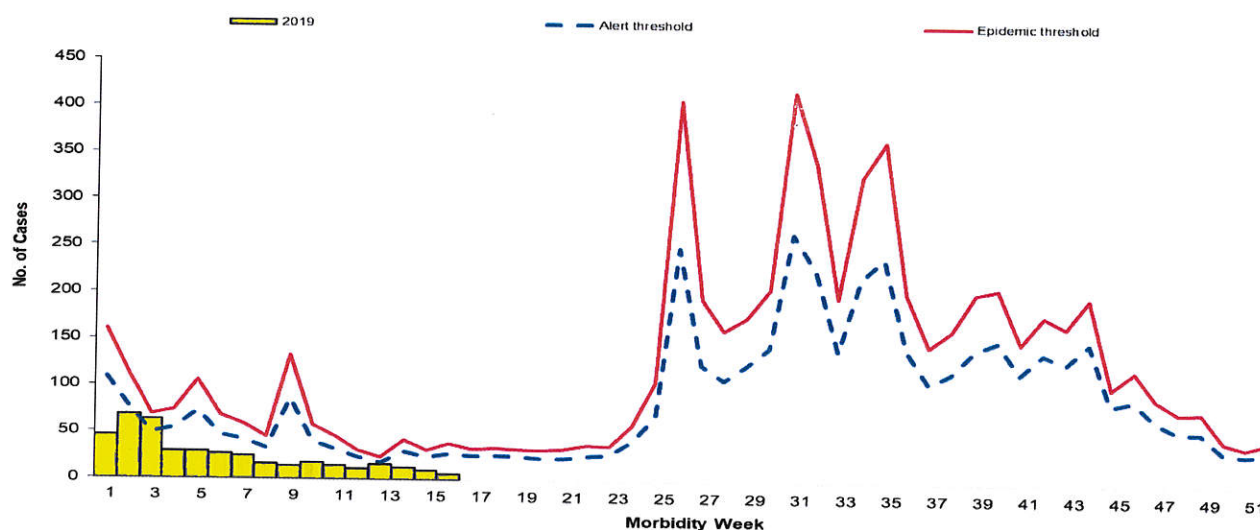
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I. Trend in the Philippines

A total of **406** leptospirosis cases were reported nationwide from January 1 to April 27, 2019 [Figure 1]. This is **57%** lower compared to the same time period last year (**939**) [Table 2].

Figure 1. Reported Leptospirosis Cases by Morbidity Week (N=406)
Philippines, January 1 to April 27, 2019 Alert and Epidemic Threshold



II. Geographic Distribution of Cases

Most of the cases were from the following regions: **NCR** (88 or 22%), **REGION V** (77 or 19%), **REGION VI** (56 or 14%), **REGION II** (31 or 8%) and **REGION III** (28 or 7%) [Table 2].

Table 2. Reported Leptospirosis Cases by Region, Philippines, April 2019* (N=406) vs. April 2018**

Region	2019		2018		Percent Change in Cases
	Cases	Deaths	Cases	Deaths	
Philippines	406	47	939	86	↓ 57
I	13	4	39	7	↓ 67
II	31	3	48	3	↓ 35
III	28	3	30	2	↓ 7
IV-A	26	5	29	1	↓ 10
MIMAROPA	4	1	12	1	↓ 67
V	77	3	42	2	↑ 83
VI	56	5	206	27	↓ 73
VII	14	3	48	5	↓ 71
VIII	13	1	47	2	↓ 72
IX	11	3	80	4	↓ 86
X	8	0	23	3	↓ 65
XI	19	2	77	7	↓ 75
XII	2	0	6	1	↓ 67
ARMM	2	0	6	1	↓ 67
CAR	8	3	12	0	↓ 33
CARAGA	6	0	156	3	↓ 96
NCR	88	11	78	17	↑ 13

*From period of January 1 to April 27, 2019

**From period of January 1 to April 27, 2018

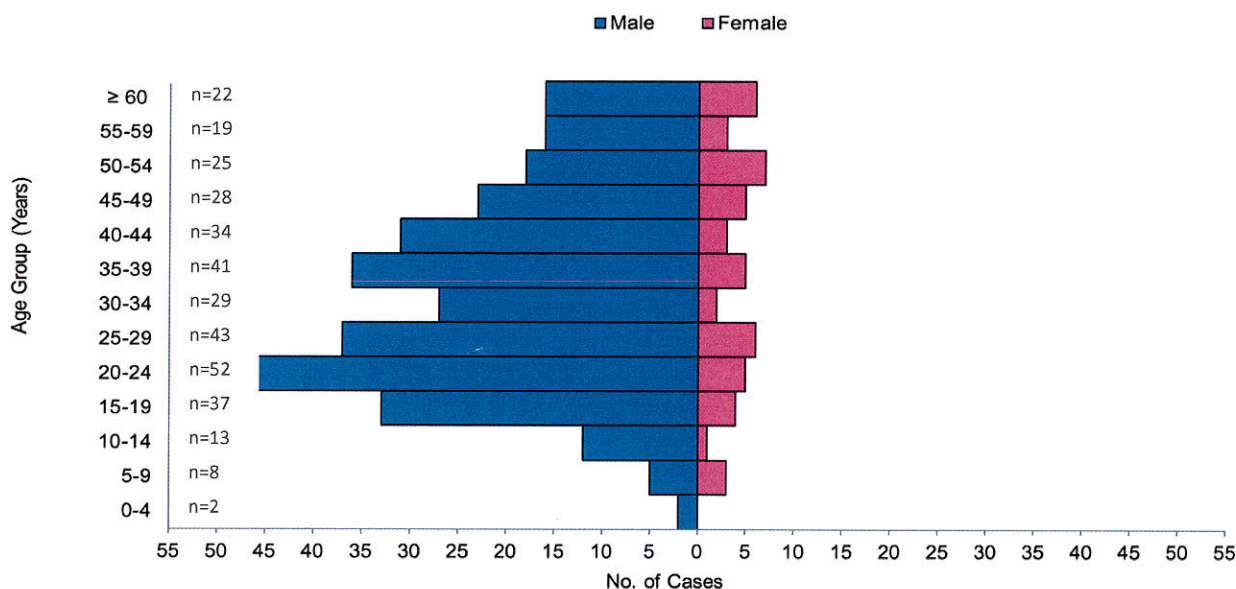
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Percentage Total may not equal to 100 due to rounding-off figures.



III. Profile of Cases

Age of cases ranged from 3 years to 88 years (median = 32 years) [Figure 2]. Majority (354 or 87%) of cases were male. Most (71 or 18%) of the cases belonged to the age group of 20-24 years old. There were 47 deaths (CFR = 11.58%).

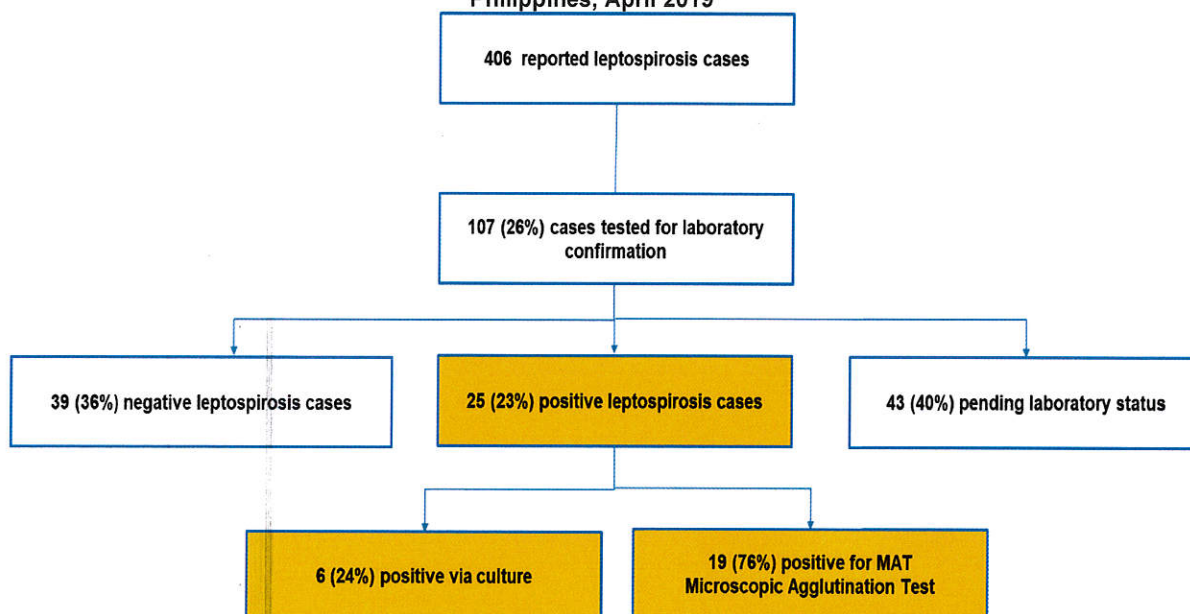
**Figure 2. Reported Leptospirosis Cases by Age Group and Sex (N=406)
Philippines, April 2019***



IV. Laboratory Status of Leptospirosis Cases

Out of the 406 reported leptospirosis cases, there were 107 cases (26%) tested for laboratory confirmation. Out of the tested, 25 cases (23%) yielded for positive results, 39 cases (36%) yielded negative results, while there were 43 cases (40%) awaiting laboratory results [Figure 3].

**Figure 3. Laboratory Status of Reported Leptospirosis Cases
Philippines, April 2019***



*From period of January 1 to April 27, 2019

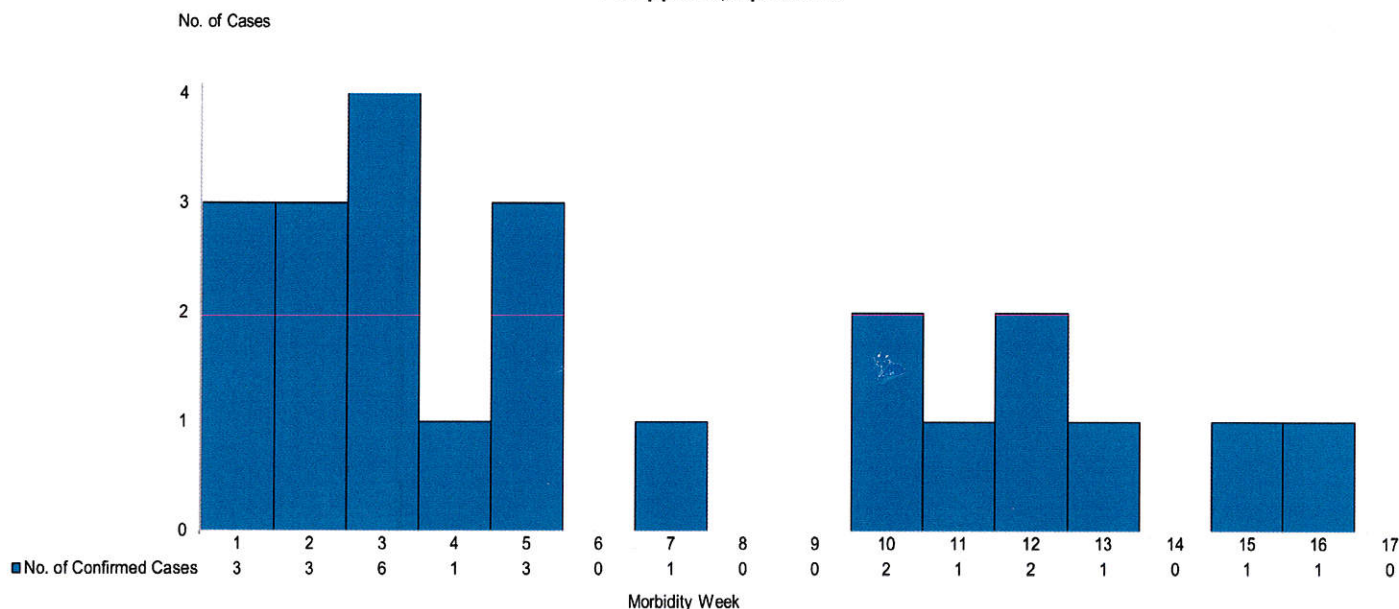
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V. Profile of Confirmed Leptospirosis Cases

Out of the 406 reported leptospirosis cases, a total of **25** confirmed leptospirosis cases were reported nationwide from January 1 to April 27, 2019 [Figure 4].

Figure 4. Confirmed Leptospirosis by Morbidity Week (n=25)
 Philippines, April 2019*



VI. Geographic Distribution of Confirmed Leptospirosis Cases

Most of the confirmed leptospirosis cases were from the following regions: **NCR** (14 or 56%), **REGION VI** (4 or 16%) and **REGION IV-A** (3 or 12%). Among the reported confirmed leptospirosis cases, 1 death was noted from NCR (CFR 4%).

Table 3. Confirmed Leptospirosis Cases by Region (n=25)
 Philippines, April, 2019

Region	Cases	Deaths	CFR%
PHILIPPINES	25	1	4.00
I	2	0	0.00
IV-A	3	0	0.00
V	1	0	0.00
VI	4	0	0.00
VIII	1	0	0.00
NCR	14	1	7.14

*From period of January 1 to April 27, 2019

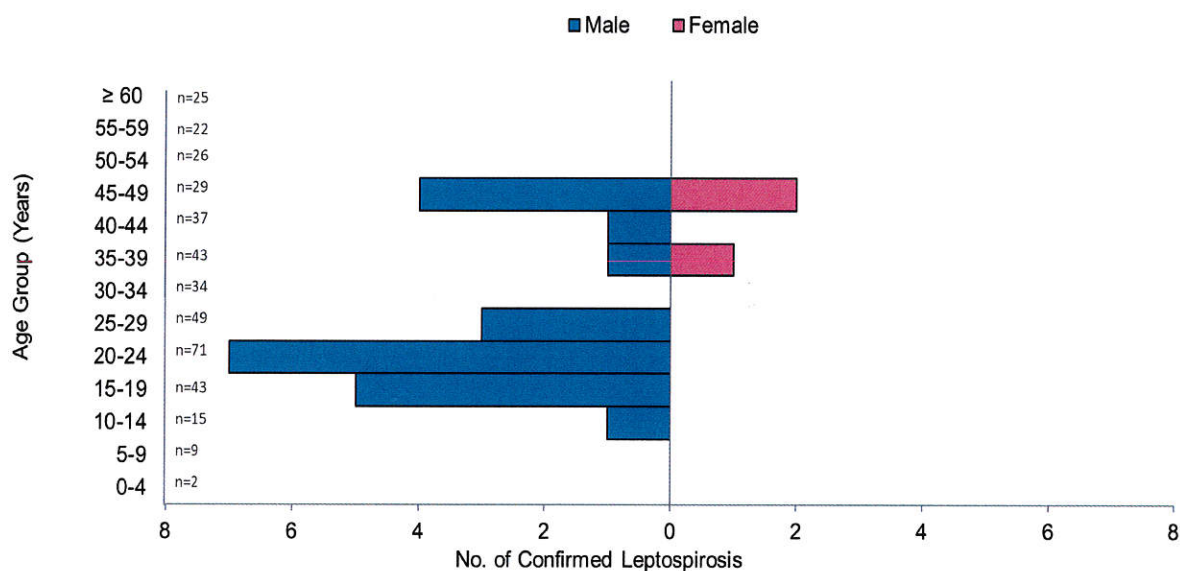
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VII. Sex and Age Group of Confirmed Leptospirosis Cases

Age of confirmed leptospirosis cases ranged from 13 years to 49 years (median = 24 years). Majority (22 or 88%) of confirmed cases were male. Most (7 or 28%) of the confirmed leptospirosis cases belonged to the age group of 20-24 years old [Figure 5].

**Figure 5. Confirmed Leptospirosis Cases by Age Group and Sex (n=25)
Philippines, April 2019***



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Figures 6-22. Leptospirosis Alert and Epidemic Thresholds per Region as of April, 2019

Fig. 6 Reported Leptospirosis Cases by Morbidity Week
Region I, as of January 1-April 27, 2019 (n=13)

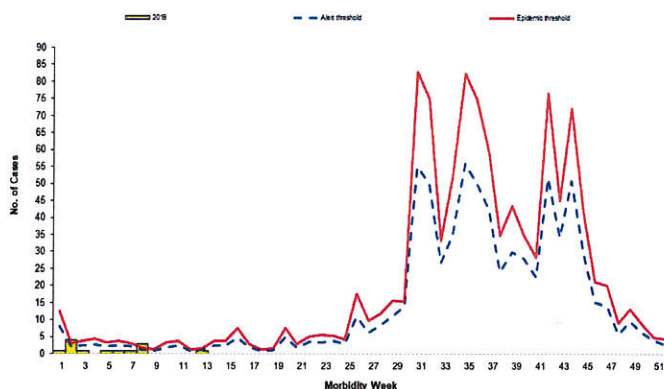


Fig. 7 Reported Leptospirosis Cases by Morbidity Week
Region II, as of January 1-April 27, 2019 (n=31)

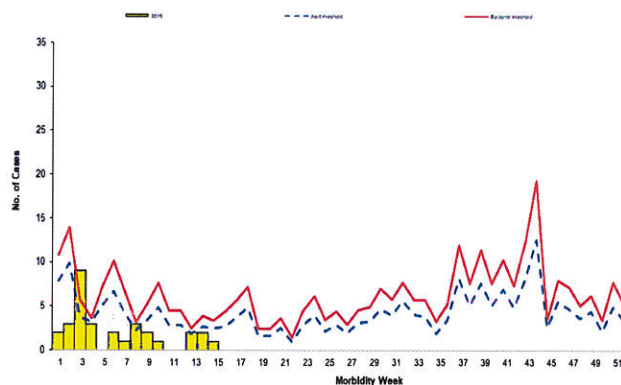


Fig. 8 Reported Leptospirosis Cases by Morbidity Week
Region III, as of January 1-April 27, 2019 (n=28)

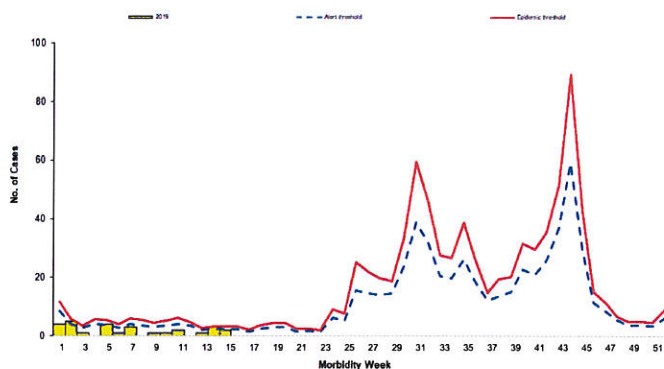


Fig. 9 Reported Leptospirosis Cases by Morbidity Week
Region IV-A, as of January 1-April 27, 2019 (n=26)

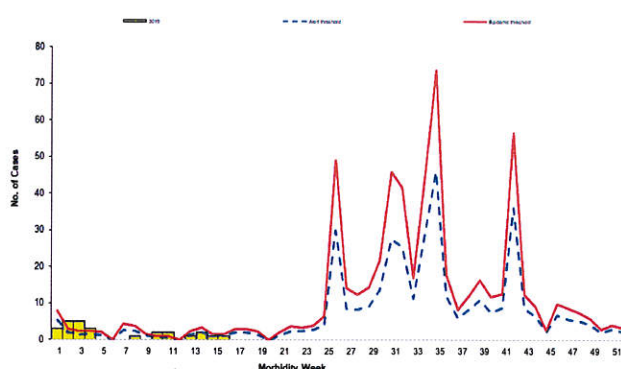


Fig. 10 Reported Leptospirosis Cases by Morbidity Week
Region MIMAROPA, as of January 1-April 27, 2019 (n=4)

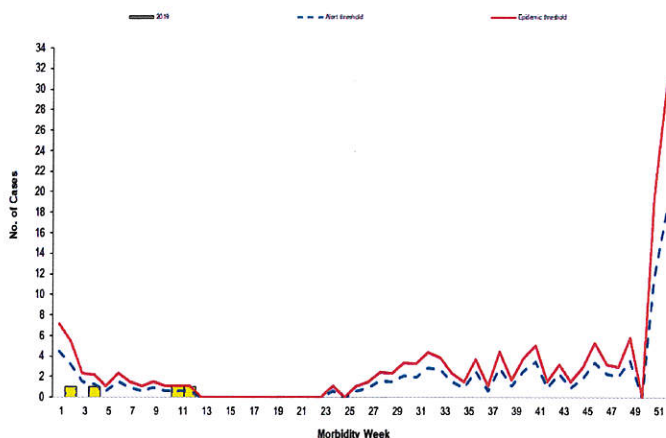
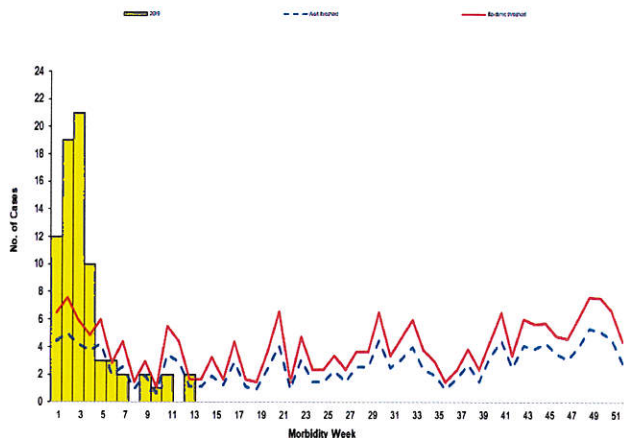


Fig. 11 Reported Leptospirosis Cases by Morbidity Week
Region V, as of January 1-April 27, 2019 (n=77)



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Figures 6-22. Leptospirosis Alert and Epidemic Thresholds per Region as of April, 2019

Fig. 12 Reported Leptospirosis Cases by Morbidity Week
Region VI, as of January 1-April 27, 2019 (n=56)

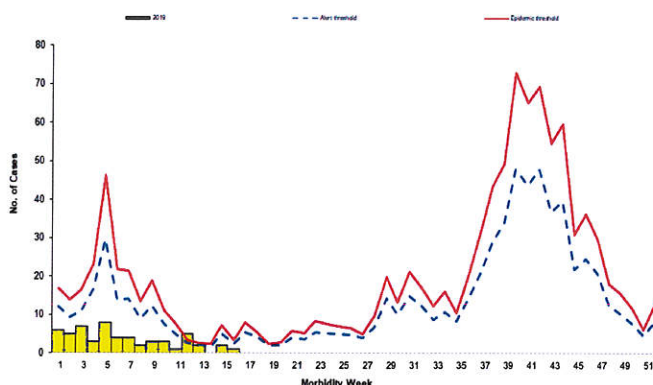


Fig. 13 Reported Leptospirosis Cases by Morbidity Week
Region VII, as of January 1-April 27, 2019 (n=14)

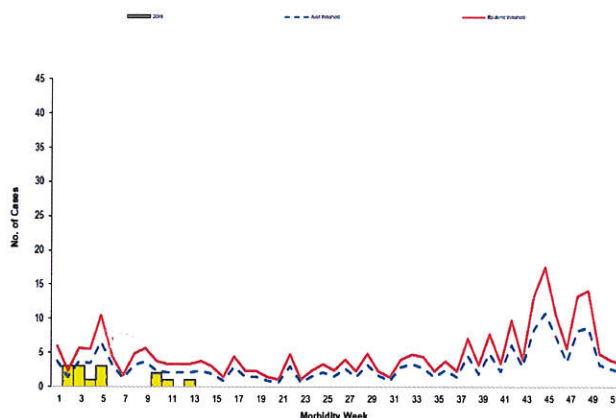


Fig. 14 Reported Leptospirosis Cases by Morbidity Week
Region VIII, as of January 1-April 27, 2019 (n=13)

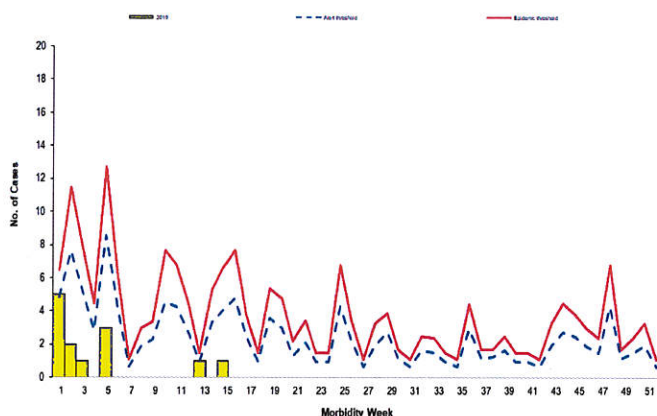


Fig. 15 Reported Leptospirosis Cases by Morbidity Week
Region IX, as of January 1-April 27, 2019 (n=11)

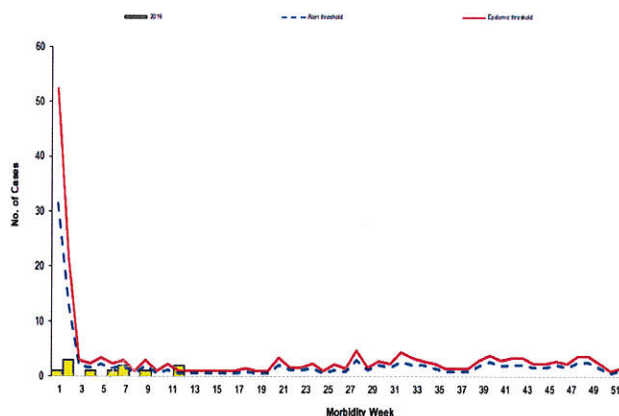


Fig. 16 Reported Leptospirosis Cases by Morbidity Week
Region X, as of January 1-April 27, 2019 (n=8)

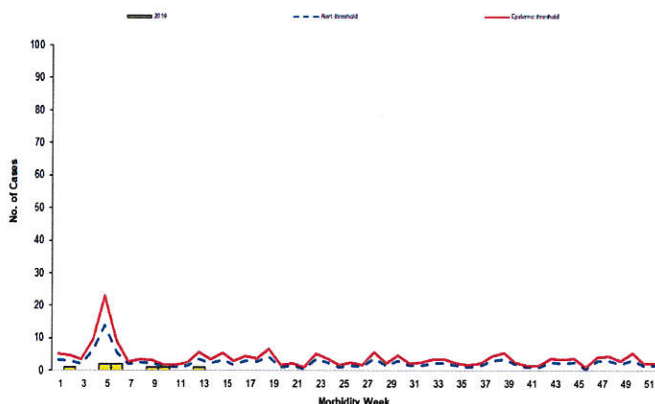
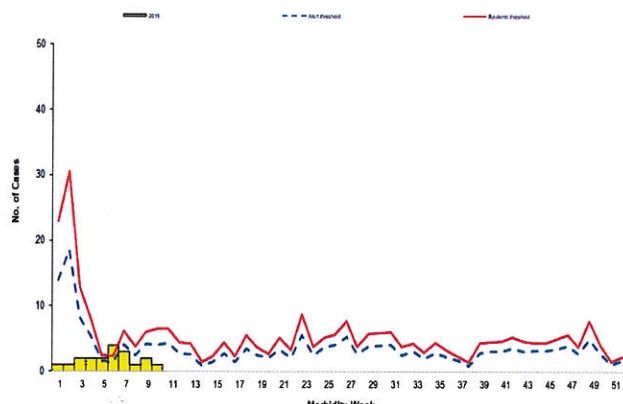


Fig. 17 Reported Leptospirosis Cases by Morbidity Week
Region XI, as of January 1-April 27, 2019 (n=19)



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Figures 6-22. Leptospirosis Alert and Epidemic Thresholds per Region as of April, 2019

Fig. 18 Reported Leptospirosis Cases by Morbidity Week
Region XII, as of January 1-April 27, 2019 (n=2)

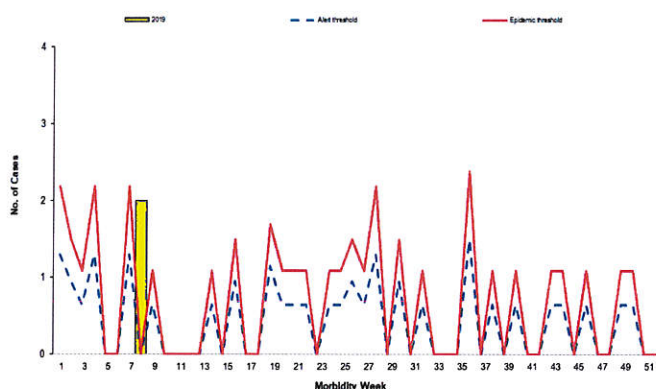


Fig. 19 Reported Leptospirosis Cases by Morbidity Week
Region ARMM, as of January 1-April 27, 2019 (n=2)

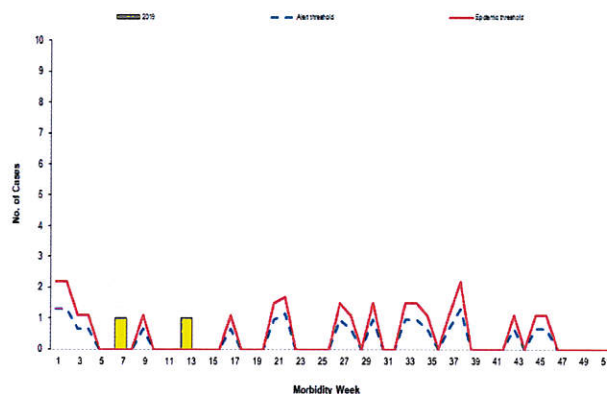


Fig. 20 Reported Leptospirosis Cases by Morbidity Week
Region CAR, as of January 1-April 27, 2019 (n=8)

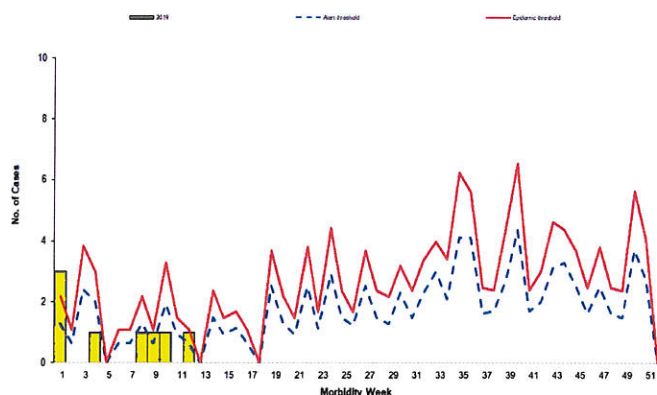


Fig. 21 Reported Leptospirosis Cases by Morbidity Week
Region CARAGA, as of January 1-April 27, 2019 (n=6)

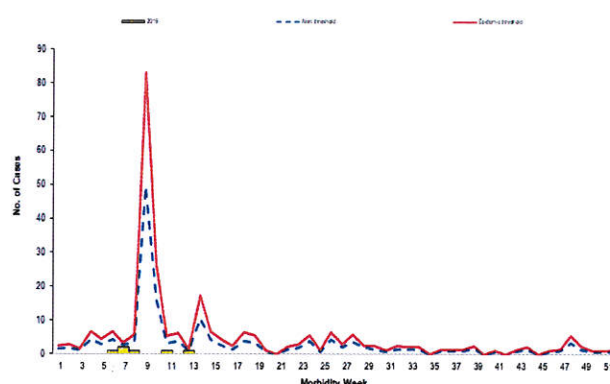
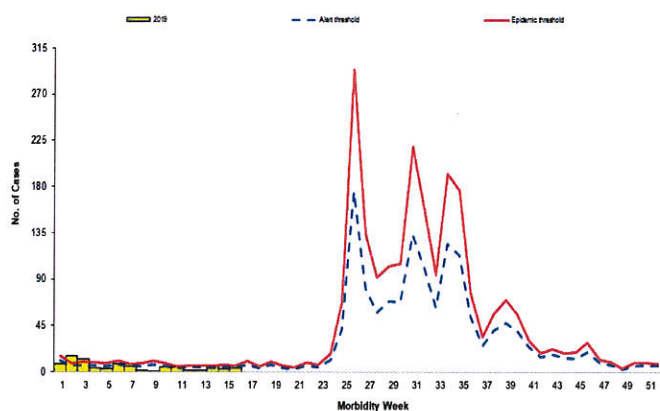


Fig. 22 Reported Leptospirosis Cases by Morbidity Week
Region NCR, as of January 1-April 27, 2019 (n=88)



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**Annex A. Reported Leptospirosis Cases by Region of DRU and Name of DRUs of Cases Hospitalized
 Philippines, as of April 27, 2019 (n=387)**

REGION OF DRU	NAME OF DISEASE REPORTING UNIT	Total
01	ILOCOS TRAINING AND REGIONAL MEDICAL CENTER	1
	PANGASINAN PROVINCIAL HOSPITAL	4
	REGION I MEDICAL CENTER	4
	01 Total	9
02	CAGAYAN VALLEY MEDICAL CENTER	28
	ECHAGUE DISTRICT HOSPITAL	1
	GOV. FAUSTINO N. DY SR. MEMORIAL HOSP.	1
	QUIRINO PROVINCIAL HOSPITAL	1
	ST. PAUL HOSPITAL	1
	02 Total	32
03	BATAAN GENERAL HOSPITAL AND MEDICAL CENTER	5
	BULACAN MEDICAL CENTER	3
	CANDELARIA DISTRICT HOSPITAL	1
	DR. PAULINO J. GARCIA MEMORIAL RESEARCH AND MEDICAL CEN	5
	JOSE B. LINGAD MEMORIAL HOSPITAL	3
	PANQUI GENERAL HOSPITAL	1
	SAN MIGUEL DISTRICT HOSPITAL	1
	STO. DOMINGO DISTRICT HOSPITAL	1
	TARLAC PROVINCIAL HOSPITAL	1
	V.L. MAKABALI MEMORIAL HOSPITAL, INC.	2
	03 Total	23
04A	ANGONO GENERAL HOSPITAL	1
	BATANGAS HEALTH CARE HOSPITAL (Jesus of Nazareth)	1
	CLINICA ANTIPOLLO HOSPITAL AND WELLNESS CENTER INC.	1
	EMILIO AGUINALDO COLLEGE MEDICAL CENTER	1
	N. L. VILLA MEMORIAL MEDICAL CENTER	1
	OSPITAL NG CALACA	1
	UPH- DR. JOSE G. TAMAYO MEDICAL CENTER	1
	04A Total	7
04B	CUYO DISTRICT HOSPITAL	1
	MA. ESTRELLA GENERAL HOSPITAL	1
	OCCIDENTAL MINDORO PROVINCIAL HOSPITAL	1
	04B Total	3
05	BICOL MEDICAL CENTER	45
	BICOL REGIONAL TRAINING AND TEACHING HOSP.	16
	CAMARINES NORTE PROVINCIAL HOSPITAL	1
	DR. FERNANDO B. DURAN, SR. MEMORIAL HOSP.	1
	EASTERN BICOL MEDICAL CENTER	4
	NAGA IMAGING CENTER COOPERATIVE DOCTORS HOSPITAL	1
	STA. MARIA JOSEFA FOUNDATION HOSPITAL	5
	USI-MOTHER SETON HOSPITAL	1
	05 Total	74
06	ALFREDO MARAÑON SR. MEMORIAL HOSPITAL	2
	ANGEL SALAZAR MEMORIAL GENERAL HOSPITAL	1
	BACOLOD ADVENTIST MEDICAL CENTER	1
	CADIZ DISTRICT HOSPITAL	1
	CAPIZ DOCTORS' HOSPITAL, INC.	1
	CAPIZ EMMANUEL HOSPITAL, INC.	1
	CORAZON LOCSIN MONTELIBANO MEMORIAL REGIONAL HOSP.	21
	DR. CATALINO GALLEGO NAVA PROVINCIAL HOSPITAL	3
	HOLY MOTHER OF MERCY HOSPITAL	1
	ILOILO PROVINCIAL HOSPITAL	2
	RAMON TABIANA MEMORIAL DISTRICT HOSPITAL	2
	ROXAS MEMORIAL PROVINCIAL HOSPITAL	1
	ST. ANTHONY COLLEGE HOSPITAL	1
	ST. PAUL'S HOSPITAL	2
	TERESITA L. JALANDONI PROVINCIAL HOSP.	9
	THE MEDICAL CITY ILOILO	1
	WEST VISAYAS STATE UNIVERSITY MEDICAL CTR.	5
	WESTERN VISAYAS MEDICAL CENTER	1
	06 Total	56

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**Annex A. Reported Leptospirosis Cases by Region of DRU and Name of DRUs of Cases Hospitalized
 Philippines, as of April 27, 2019 (n=387) (continuation)**

REGION OF DRU	NAME OF DISEASE REPORTING UNIT	Total
07	ADVENTIST HOSPITAL- CEBU	1
	CHONG HUA HOSPITAL	2
	GOV. CELESTINO GALLARES MEMORIAL HOSPITAL	7
	NEGROS ORIENTAL PROVINCIAL HOSP.	1
	VICENTE SOTTO MEMORIAL MEDICAL CENTER	2
07 Total		13
08	DIVINE WORD HOSPITAL	4
	EASTERN VISAYAS REGIONAL MEDICAL CTR.	1
	NORTHERN SAMAR PROVINCIAL HOSPITAL	4
	ORMOC DISTRICT HOSPITAL	2
	REMEDIOS TRINIDAD ROMUALDEZ HOSPITAL	1
08 Total		12
09	CIUDAD MEDICAL ZAMBOANGA	2
	DR. HENRY M. DE VILLA MEMO. HOSP.	1
	MARGOSATUBIG REGIONAL HOSPITAL	1
	WEST METRO MEDICAL CENTER	1
	ZAMBOANGA CITY MEDICAL CENTER	7
	ZAMBOANGA DOCTOR'S HOSPITAL, INC.	1
09 Total		13
10	ADVENTIST MEDICAL CENTER-ILIGAN	1
	CAGAYAN DE ORO POLYMEDIC GENERAL HOSP.	1
	E and R HOSPITAL AND PHARMACY	1
	MADONNA AND CHILD HOSPITAL	2
	MALAYBALAY POLYMEDIC GENERAL HOSPITAL	1
	NORTHERN MINDANAO MEDICAL CENTER	2
10 Total		8
11	DAVAO REGIONAL HOSPITAL	14
	SOUTHERN PHILIPPINES MEDICAL CENTER (former DAVAO MEDICAL	7
11 Total		21
12	LANDERO CLINIC AND HOSPITAL	1
	SOCSEARGEN COUNTY HOSPITAL	1
12 Total		2
CAR	BAGUIO GENERAL HOSPITAL AND MEDICAL CENTER	8
	FAR NORTH LUZON GEN. HOSP. AND TRAINING CENTER	1
	KALINGA PROVINCIAL HOSPITAL	1
	PINES CITY DOCTORS' HOSPITAL	1
CAR Total		11
CARAGA	ADELA SERRA TY MEMORIAL MEDICAL CENTER	2
	CARAGA REGIONAL HOSPITAL	2
CARAGA Total		4
NCR	AMANG RODRIGUEZ MEDICAL CENTER	7
	CARDINAL SANTOS MEDICAL CENTER	1
	DR. JOSE N. RODRIGUEZ MEMORIAL HOSP.	2
	EAST AVENUE MEDICAL CENTER	12
	GAT ANDRES BONIFACIO MEMORIAL MED. CTR.	3
	JOSE R. REYES MEMORIAL MEDICAL CTR.	6
	LAS PIÑAS GEN. HOSP. & SATELLITE TRAUMA CENTER	6
	MAKATI MEDICAL CENTER	1
	NATIONAL KIDNEY AND TRANSPLANT INSTITUTE	24
	OSPITAL NG MAKATI	4
	PHILIPPINE CHILDREN'S MEDICAL CENTER	1
	QUEZON CITY GENERAL HOSPITAL	1
	QUIRINO MEMORIAL MEDICAL CENTER	6
	RIZAL MEDICAL CENTER	2
	SAN LAZARO HOSPITAL	6
	SAUYO HEALTH CENTER	1
	TONDO MEDICAL CENTER	12
	UP-PHILIPPINE GENERAL HOSPITAL	4
NCR Total		99
PHILIPPINES		387

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**Annex B. Reported Leptospirosis Cases by Region of DRU and Name of DRUs of Cases Not Hospitalized
Philippines, as of April 27, 2019 (n=19)**

REGION OF DRU	NAME OF DIEASE REPORTING UNIT	Total
03	M.V. GALLEG0 CABANATUAN CITY GEN. HOSP	1
	RAYOS-VALENTIN HOSPITAL	1
	SAN MIGUEL DISTRICT HOSPITAL	1
03 Total		3
04A	GEN. EMILIO AGUINALDO MEMORIAL HOSPITAL	1
04A Total		1
05	BICOL MEDICAL CENTER	1
05 Total		1
NCR	EAST AVENUE MEDICAL CENTER	7
	NATIONAL KIDNEY AND TRANSPLANT INSTITUTE	3
	OSPITAL NG PARAÑAQUE	1
	QUIRINO MEMORIAL MEDICAL CENTER	1
	STA. ANA HOSPITAL (NEW)	2
NCR Total		14
PHILIPPINES		19