



### Introduction

Neonatal Tetanus (NT) is an acute, often fatal disease characterized by generalized, increased rigidity and convulsive spasms of skeletal muscles caused by the spore-forming bacterium *Clostridium tetani*. The disease is not transmitted from person to person. It is acquired when dirt-containing tetanus spores enter open wounds (injections, cutting the umbilical cord) or breaks in the skin. The incubation period is 3 to 21 days, with an average of 6 days. It is particularly common in rural areas where deliveries are done at home without adequate sterile procedures. Unclean cord care practices during delivery for neonates and lack of tetanus antibody protection from inadequately immunized mothers are the risk factors for the disease.

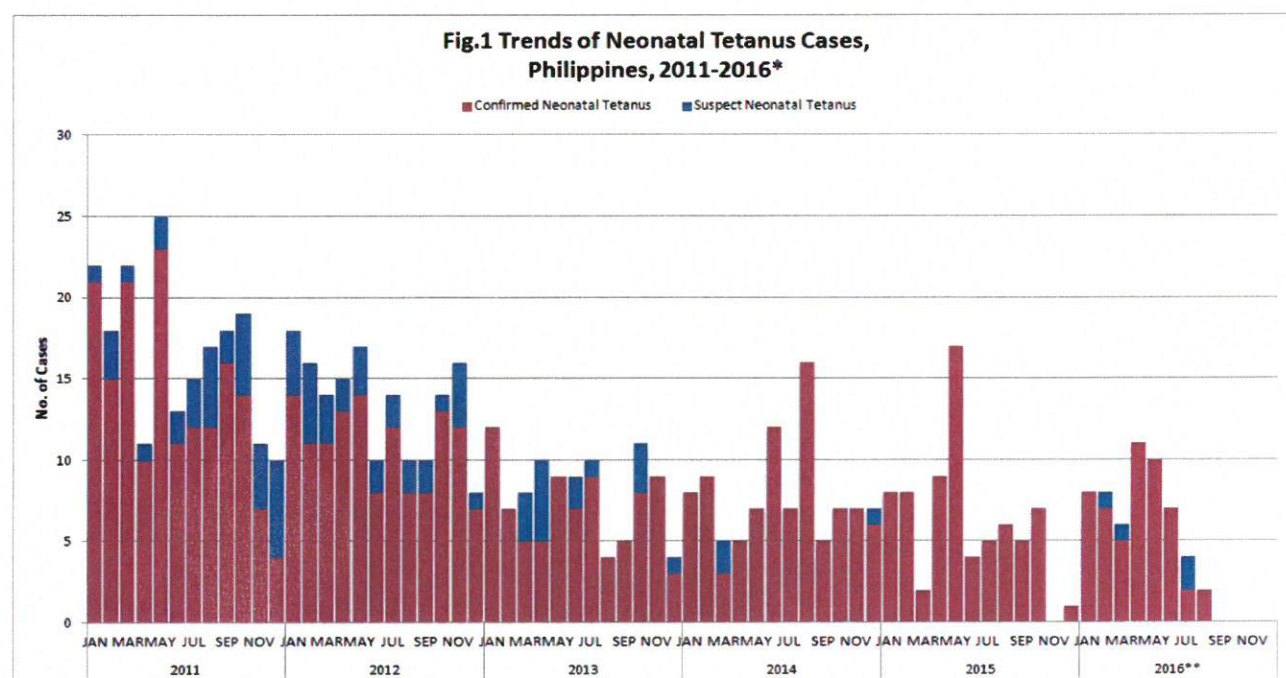
### Neonatal Tetanus Elimination in the Philippines

NT elimination is defined as the achievement of <1 NT case per 1,000 live births (LB) in every province/city of every country. This is operationally defined by an algorithm assessing four major indicators: reported incidence of NT, the reliability of NT surveillance (quality NT surveillance indicators), the proportion of women with at least two doses of tetanus toxoid (TT2+) and the estimated clean delivery rate.

In 2015, 16 out of the 17 regions in the Philippines have been certified to eliminate NT. This was after an external validation of the UNICEF and WHO conducted in February 2015 in partnership with the Department of Health. Efforts are now being made for ARMM to meet WHO requirements and be NT free as well.

### Trend in the Philippines

Since 2011, there has been a gradual but continuous decrease of reported NT cases in the Philippines (Figure 1). From January 1 to August 27, 2016 alone, there are **56** reported NT cases nationwide. This is **11.86%** lower compared to the same time period last year (**59 cases**).



\*2016 = as of August 27, 2016



In 2013, a new Neonatal Tetanus case definition and classification was introduced retaining only Clinically Confirmed NT. These may be observed in Figure 1 which depicts a decrease in the reported suspect NT cases overtime from 2013. At present, 52 are Clinically-Confirmed Neonatal Tetanus cases while the remaining 4 cases are still for validation.

### Geographic Distribution

Clinically confirmed Neonatal Tetanus cases were variably distributed among regions, with ARMM reporting the most number of cases (*Figure 2&3*). Furthermore, NT rates in provinces with reported cases remain at the target rate of  $<1/1,000$  livebirths (*Figure 2*).

### Profile of Cases

Most of the clinically confirmed NT cases are **male** (52%). Majority of the cases are from the **3 to 7** days old age group (79%) (*Figure 4*). Larger part (77%) of the immunization status of the mother of clinically confirmed NT cases have **zero (0)** dose of **Tetanus Toxoid vaccine** (*Figure 5*).

In terms of delivery practices, all cases were delivered at **home** (100%) and majority were attended by a **hilot** (87%) with **blade** as the most common cord cutting tool used (37%). Umbilical stump of majority of the NT cases were treated with **alcohol** (42%). (*Table 1*)

Fig. 2 Clinically Confirmed NT Cases and Incidence Rate by Province, Philippines MW 34 2016 (N=52)

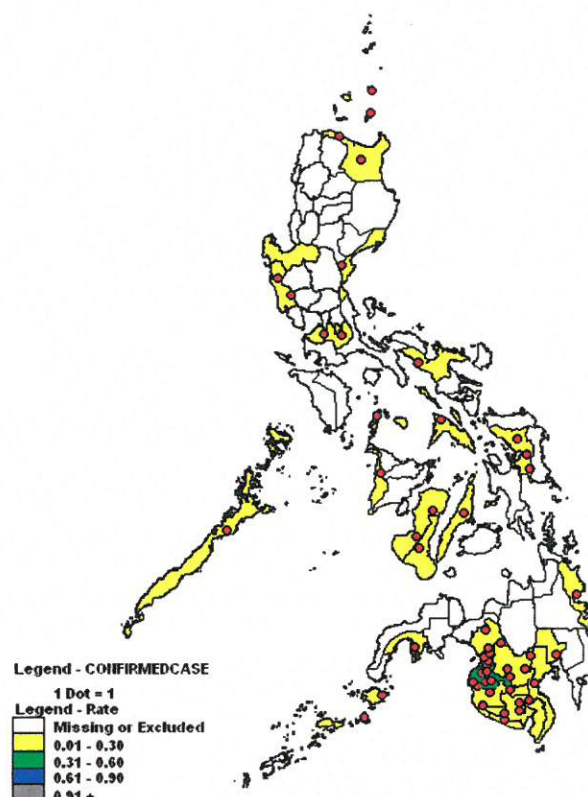
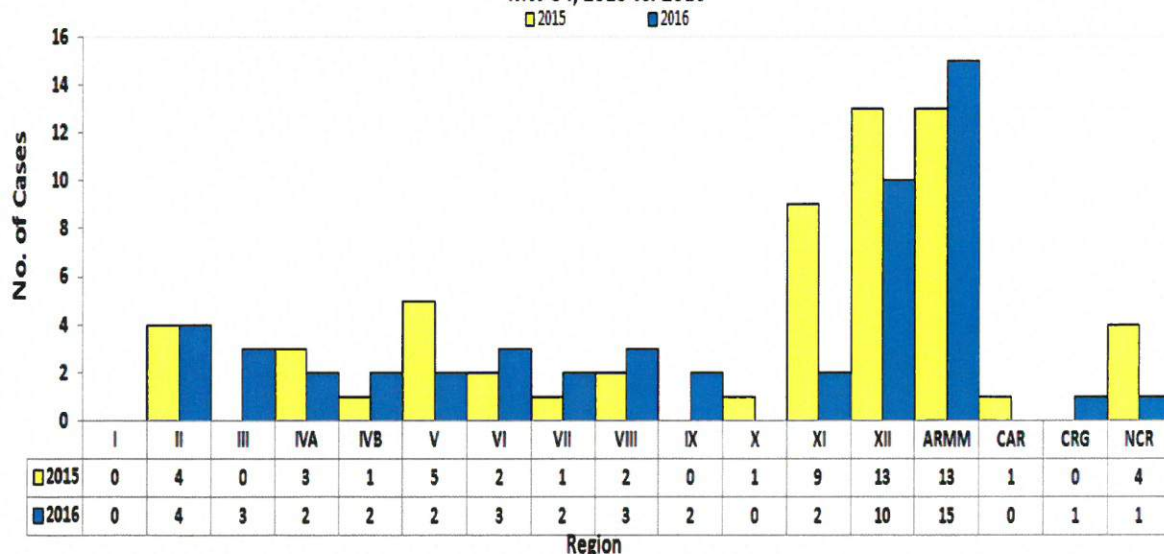


Fig. 3 Clinically Confirmed Neonatal Tetanus Cases by Region, Philippines (N=52)

MW 34, 2015 vs. 2016



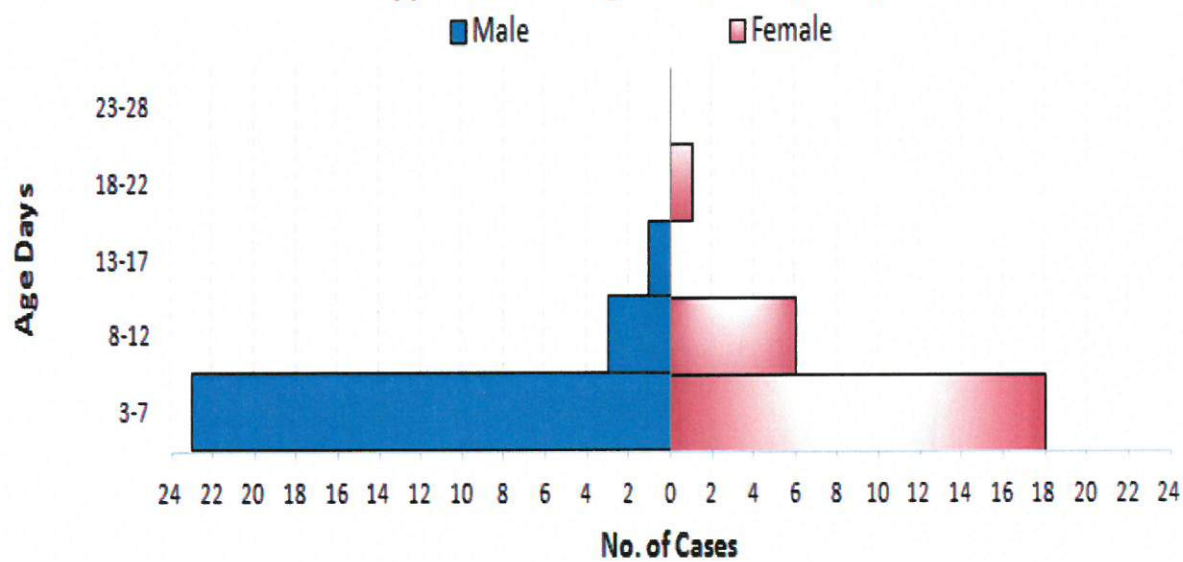




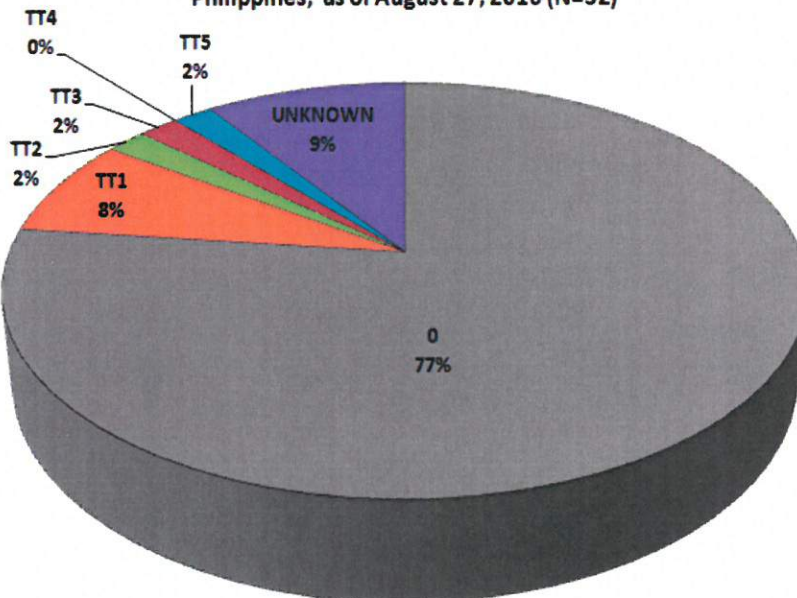
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**Fig. 4 Clinically Confirmed Neonatal Tetanus Cases by Age Group and Sex  
Philippines, as of August 27, 2016 (N= 52)**



**Fig. 5 Immunization Status of Mothers of Clinically Confirmed Neonatal Tetanus,  
Philippines, as of August 27, 2016 (N=52)**





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**Table 1. Delivery Practices of Clinically Confirmed Neonatal Tetanus Cases ,  
 Philippines, as of August 27, 2016 (N=52)**

Delivery Practices	No. of Cases	Percentage
<b>Place of Delivery</b>		
Home	52	100%
<b>Delivery Attendant</b>		
Hilot	45	87%
Self	2	4%
Husband and Mother	1	2%
Leader of the group	1	2%
Neighbor	1	2%
Patient's Grandmother	1	2%
Unknown	1	2%
<b>Cord Cut Tool Used</b>		
Blade	19	37%
Scissors	17	33%
Bamboo	10	19%
Coconut Leaf	1	2%
Thread	1	2%
Unknown	4	8%
<b>Stump Treatment Used</b>		
Alcohol	22	42%
None	4	8%
Povidone Iodine	2	4%
Water	2	4%
Amoxycillin Capsule	1	2%
Cloth, no substance	1	2%
Coconut Oil	1	2%
Hydrogen Peroxide	1	2%
Oil	1	2%
Stump was tied	1	2%
Unknown	16	31%

**Table 2. Clinically Confirmed Neonatal Tetanus Cases and Fatality Rate by Region  
 Philippines, as of January 1 – August 27, 2016**

Region	Clinically Confirmed Neonatal Tetanus Cases						
	Cases			Deaths			
	2016	2015	% Change	2016	CFR	2015	CFR
I	0	0	0.00	0	0.00	0	0.00
II	4	4	0.00	3	75.00	3	75.00
III	3	0	0.00	2	66.67	0	0.00
IVA	2	3	-33.33	1	50.00	2	66.67
IVB	2	1	100.00	2	100.00	0	0.00
V	2	5	-60.00	1	50.00	3	60.00
VI	3	2	50.00	3	100.00	2	100.00
VII	2	1	100.00	2	100.00	1	100.00
VIII	3	2	50.00	3	100.00	1	50.00
IX	2	0	0.00	2	100.00	0	0.00
X	0	1	-100.00	0	0.00	1	100.00
XI	2	9	-77.78	2	100.00	5	55.56
XII	10	13	-23.08	8	80.00	9	69.23
ARMM	15	13	15.38	7	46.67	7	53.85
CAR	0	1	-100.00	0	0.00	0	0.00
CRG	1	0	0.00	1	100.00	0	0.00
NCR	1	4	-75.00	1	100.00	4	100.00
PHL	52	59	-11.86	38	73.08	38	64.41






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### Standard Case Definition

- **Clinically Confirmed Neonatal Tetanus**
    - Any neonate ( $\leq 28$  days of life) that sucks and cries normally during the first 2 days of life, and becomes ill between 3 to 28 days of age and develops both an inability to suck and diffuse muscle rigidity (stiffness) and spasms (jerking of the muscles), which may include trismus, clenched fists or feet, continuously pursed lips, and/or curved back (opisthotonus);
- OR
- A neonate between 3 to 28 days of life, diagnosed as a case of tetanus by a physician

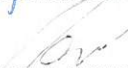
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