HIGHLIGHTS

- Typhoon Yolanda made landfall on 8 November 2013 with Region VI, VII, and VIII of the Philippines being the worst affected regions.
- SPEED surveillance system was implemented in Regions VI, VII, and VIII to permit the early detection and response to the epidemic-prone diseases and to minimize morbidity and mortality of the predetermined 21 conditions.
- A total of 411 health facilities in the typhoon affected areas of Region VI, VII and VIII reported over 340,000 total consultations through SPEED from 10 November 2013 to 8 March 2014.
- The transition away from emergency surveillance system (SPEED) is nearly complete and the strengthening of the routine surveillance systems (ESR and PIDSR) is ongoing.
- An integral part of the SPEED surveillance is the post-incident evaluation; a two-day validation/assessment workshop will be held in the last week of March.
- This is the last issue of the EWARN report. Other information on post-typhoon Yolanda response and recovery activities will be available at DOH website [http://typhoonyolanda.doh.gov.ph/]. For further information on disease surveillance and response please look at the Philippine Department of Health website [http://www.doh.gov.ph/diseasesurveillance.html] and the Health Cluster Bulletin (http://www.wpro.who.int/philippines/typhoon_haiyan/reports/en/).
- This final report provides an overview of the EWARN activities and events reported during the post-typhoon Yolanda response.
- Acknowledgements go to all the partners that have supported and continue to support post-typhoon Yolanda surveillance and response.

OVERALL SPEED REPORTING FROM TYphoon-AFFECTED AREAS

- A total of 411 health facilities in the typhoon affected areas of Region VI, VII and VIII reported at least once through SPEED from 10 November 2013 to 8 March 2014. Of these 145 were Rural Health Units (RHU), 131 Barangay Health Stations (BHS), 63 hospitals, 38 mobile clinics, 20 evacuation centers, 12 foreign medical teams, 6 hospitals run by foreign medical team.
- There have been over 340,000 consultations in the affected areas since the typhoon. The number of total consultations increased from the time of the typhoon to spike in the second week of December (44,183 consultations). In the weeks following the peak the number of consultations generally decreased to remain stable until the first week of February. Since the second week of February, the decrease in the number of total consultations may also be due to a malfunction of the Globe access code used for the SMS SPEED reporting.
- Since Yolanda, SPEED generated approximately 3,000 “alert” signals in the typhoon-affected areas (Table 1). The majority of these were for acute watery diarrhoea (58%), fever and rash (13%), acute hemorrhagic fever (9%), acute bloody diarrhoea (6%) and suspect leptospirosis (5%).

Areas reporting to SPEED since typhoon Yolanda

Region VI
- Aklan
- Antique
- Capiz
- Iloilo
- Negros Occidental

Region VII
- Cebu

Region VIII
- Biliran
- Eastern Samar
- Leyte
- Western Samar

![SPEED reporting by facility type and week, Yolanda affected areas](image)

![SPEED total consultations by age and week, Yolanda affected areas](image)
Total consultations reported through SPEED from 10 November 2013 to 8 March 2014, by municipality:

**REGION VI (Western Visayas):** Aklan: Buruanga Altavas (2,220), Balete (548), Banga (1,589), Batan (464), Buruanga (184), Ibajay (194), Kalibo (1,198), Lezo (563), Madalag (788), Makato (449), Malay (20), Nabbas (293), New Washington (578), Tangalan (45). **Antique:** Anini-Y (179), Barbaza (475), Belison (231), Bugasong (448), Caluya (28), Culasi (213), Hamtic (194), Laua-An (453), Libertad (215), Pandan (499), Patnongon (676), San Jose (94), San Remigio (678), Sebate (354), Sibalom (49), Tibiao (414), Tobias Fornier (112), Valderrama (87). **Capiz:** Cauetero (128), Dao (4,599), Dumalog (1,335), Dumarao (1,072), Isuan (1,922), Jamindan (1,922), Ma-Ayon (636), Mambusao (8,475), Panay (3,061), Panitan (2,341), Pilar (2,177), Pontevedra (3,035), President Roxas (908), Roxas City (14,384), Sapi-An (1,483), Sigma (3,398), Tapaz (2,334). **Iloilo:** Ajuy (1,251), Alimodian (10), Balasan (897), Banate (19), Barotac Viejo (585), Batad (39), Cabatuern (437), Calinog (384), Carles (1,634), City Of Passi (194), Concepcion (663), Estancia (1,846), Guimbal (333), Iloilo City (2,487), Janiuay (447), Lambunao (30), Leganes (67), Lemery (473), Miagao (25), Mina (25), Oton (14), Pototan (14), San Diosno (113), San Joaquín (89), San Miguel (201), Santa Barbara (263), Sara (1,726), Tigbauan (167), Zaragosa (43). **Negros Occidental:** Cadiz City (485).

**REGION VII (Central Visayas):** Cebu: Bantayan (7,511), Borbon (187), Cebu City (805), City Of Bogo (989), Daanbantayan (789), Lapu-Lapu City (170), Madridejos (2019), Medellin (907), Pilar (514), San Remigio (1,615), Santa Fe (893), Tabogon (698), Tabuelan (255).

**REGION VIII (Eastern Visayas):** Biliran: Biliran (457), Cabucugan (718), Naval (858). **Eastern Samar:** BAilangiga (9,530), Balangkayan (2,601), City Of Borongan (1,527), General Macarthur (4,414), Giporlos (2,718), Guiuan (24,001), Hernani (1,322), Lawaan (3,083), Llorente (2,530), Maydolong (2,127), Mercedes (2,039), Quinapondan (4,327), Salcedo (5,575), San Julian (75). **Leyte:** Abuyog (1,097), Alangalang (1,239), Albuera (3,198), Babatong (747), Barugo (745), Buraunan (14,836), Calubian (1,052), Capoocan (747), Carigara (5,132), City Of Baybay (1,053), Dagami (2,482), Duluag (2,061), Isabel (5,566), Jaro (3,032), Javier (189), Julita (7,213), Kananga (2,982), La Paz (3,176), Leyte (2,933), Macarthur (1,216), Matag-Ob (1,067), Mayorga (1,500), Merida (11,493), Ormoc City (43,809), Palo (6,224), Palompon (8,067), Pastrana (1,559), San Isidro (320), San Miguel (599), Santa Fe (1,077), Tabango (2,355), Tabontabon (1,264), Tacloban City (16,035), Tanauan (3,575), Tolosa (4,228), Tunua (648), Villaba (3,344).

**PROVINCIAL SUMMARIES (SOURCE INCLUDE: EVENT-BASED SURVEILLANCE, PIDS, SPEED)**

**REGION VI – WESTERN VISAYAS**

**AKLAN PROVINCE**

**Reporting:** a total of 15 RHUs and 4 hospitals reported at least once through SPEED in the period 10 November – 28 December 2013. **Consultations:** when considering the 21 SPEED health conditions, a total of 5,009 consultations were reported. For the whole reporting period the leading reasons for consultation were acute respiratory infection (2,039), open wounds and/or bruises (1,235), fever (463), high blood pressure (443) and skin disease (253). **Alerts:** 71% of the “alert” signals generated through SPEED were acute watery diarrhea, investigations were conducted and water hygiene and sanitation activities were implemented.
**ANTIQUE PROVINCE**

**Reporting:** A total of 19 RHUs and 3 hospitals reported at least once through SPEED in the period 10 November 2013 – 8 March 2014.

**Consultations:** When considering the 21 SPEED health conditions, a total of 5,464 consultations were reported. For the whole reporting period, the leading reasons for consultation were acute respiratory infection (3,139), open wounds and/or bruises (499), high blood pressure (424), fever (389) and skin disease (285).

**Alerts:** 89 “alert” signals were generated through SPEED; of these, 69% were for acute watery diarrhoea.

**CAPIZ PROVINCE**

**Reporting:** A total of 18 RHUs, 9 hospitals, 5 mobile clinics and 2 BHSs reported at least once through SPEED in the period 10 November 2013 – 8 March 2014.

**Consultations:** When considering the 21 SPEED health conditions, a total of 24,098 consultations were reported. For the whole reporting period, the leading reasons for consultation were acute respiratory infection (11,519), open wounds and/or bruises (3,910), high blood pressure (2,385), fever (2,113), and skin disease (1,165).

**Alerts:** 25 “alert” signals for suspect measles were detected since the typhoon; the cases were investigated by regional epidemiology surveillance unit (RESU) and samples were taken for those who met the clinical case definition. A total of 12 suspect leptospirosis cases were detected by SPEED.
ILOILO PROVINCE

**Reporting:** a total of 24 RHUs, 14 hospitals, 8 BHSs, 2 foreign medical teams and 1 mobile clinic reported at least once through SPEED in the period 10 November 2013 – 8 March 2014.

**Consultations:** when considering the 21 SPEED health conditions a total of 12,516 consultations were reported. For the whole reporting period the leading reasons for consultation were acute respiratory infection (5,780), open wounds and/or bruises (1,930), fever (1,481), high blood pressure (786), and acute watery diarrhoea (627).

**Alerts:** 63% of the “alert” signals reported from Iloilo were for acute watery diarrhoea; water hygiene and sanitisation activities were implemented. A total of 15 “alert” signals for suspect measles were detected; investigation and outbreak response immunization (ORI) were conducted by local Public Health authorities, according to the National guidelines for measles ORI. Five alerts for acute flaccid paralysis were reported and investigated.
NEGROS OCCIDENTAL

Reporting: one RHU reported through SPEED in the week 10 November – 16 November 2013.

Consultations: when considering the 21 SPEED health conditions a total of 485 consultations were reported. The leading reasons for consultation were ARI (227), open wounds and/or bruises (84), fever (51), high blood pressure (32), and acute watery diarrhoea (29).

REGION VI – CENTRAL VISAYAS

CEBU PROVINCE

Reporting: a total of 16 BHSs, 11 evacuation centres, 9 RHUs, 2 hospitals and 1 foreign medical team reported at least once through SPEED in the period 10 November – 14 December 2013.

Consultations: when considering the 21 SPEED health conditions a total of 8,057 consultations were reported. For the whole reporting period the leading reasons for consultation were acute respiratory infection (8,057), open wounds and/or bruises (4,058), fever (1,770), high blood pressure (1,297), and skin disease (862).

Alerts: RESU reported a total of 39 suspect typhoid fever cases from 28 February to 7 March 2014 in Tuburan, Cebu. Epidemiological and environmental investigations were conducted and outbreak control measures were taken.
REGION VIII – EASTERN VISAYAS
BILiran province

Reporting: a total of 3 RHUs and 1 hospital reported at least once through SPEED in the period 12 January – 15 February 2014.

Consultations: when considering the 21 SPEED health conditions a total of 2,031 consultations were reported. For the whole reporting period the leading reasons for consultation were ARI (1,207), high blood pressure (204), skin disease (164), acute watery diarrhoea (127) and open wounds and/or bruises (108).

Alerts: A total of 20 suspect measles were detected by ESR; cases were investigated and samples were taken for those who met the clinical case definition. Outbreak response immunization was conducted according to the National guidelines for measles ORI.

EASTERN SAMAR PROVINCE

Reporting: a total of 30 BHSs, 2 evacuation centres, 16 RHUs, 10 hospitals, 2 hospitals run by foreign medical, team 1 mobile clinic and 1 foreign medical team reported at least once through SPEED in the period 10 November 2013 – 8 March 2014.

Consultations: when considering the 21 SPEED health conditions a total of 31,035 consultations were reported. For the whole reporting period the leading causes of consultation were ARI (17,238), open wounds and/or bruises (3,656), high blood pressure (2,787), skin disease (2,394), acute watery diarrhoea (1,941).

Alerts: 74% of the “alert” signals reported were acute watery diarrhoea, water hygiene and sanitation activities were implementing during this period and still ongoing. 91 suspect measles cases were reported through PIDSR; blood samples were taken and sent to RITM for serology testing. Outbreak response immunization was conducted according to the National guidelines for measles ORI and more than 26,508 children under five were targeted for immunization. 228 suspected cases of dengue were reported, vector control activities were instituted and are still ongoing. Three deaths were reported due to suspect rabies; dog vaccination, advocacy and community information campaigns are still ongoing.
LEYTE PROVINCE

Reporting: a total of 74 BHSs, 38 RHUs, 31 mobile clinics, 20 hospitals, 8 foreign medical teams, 7 evacuation centres and 4 hospitals run by foreign medical team reported at least once through SPEED in the period 10 November 2013 – 8 March 2014.

Consultations: when considering the 21 SPEED health conditions a total of 127,248 consultations were reported. For the whole reporting period the leading reasons for consultation were ARI (65,992), open wounds and/or bruises (17,140), skin disease (9,651), fever (8,717), high blood pressure (8,445) and acute watery diarrhoea (5,976).

Alerts: 63% of the “alert” signals reported by SPEED were from Leyte province. Of these, 53% were for acute watery diarrhoea; water hygiene and sanitation activities were implemented and are still ongoing. 114 suspect measles cases were reported through PIDS; outbreak response immunization was conducted in more than 50 barangays according to the National guidelines for measles ORI. More than 900 suspect dengue cases were reported through PIDS from 1 January to 8 March 2014. Vector control activities were conducted during the period and are still ongoing. A total of 15 cases of tetanus including 4 deaths and 3 neonatal tetanus cases including 2 deaths were reported from eight hospitals; neonatal tetanus occurred in deliveries outside health facilities. Two deaths for suspect meningococcemia were reported; epidemiological investigation was conducted and meningococcal chemoprophylaxis was given to contacts of cases.

WESTERN SAMAR PROVINCE

Reporting: a total of 2 RHUs and 1 BHS reported at least once through SPEED in the period 1 December 2013 – 15 February 2014.

Consultations: when considering the 21 SPEED health conditions a total of 1,002 consultations were reported. For the whole reporting period the leading reasons for consultation were ARI (524), open wounds and/or bruises (133), high blood pressure (86), acute watery diarrhoea (77), skin disease (59) and fever (47).

Alerts: 8 “alert” signals were reported through SPPED; of these, 88% were for acute watery diarrhoea.
FOCUS ON: SURVEILLANCE SYSTEMS IN THE PHILIPPINES

The main disease surveillance systems detecting outbreak prone diseases in normal and emergency/disaster times are:
- Event-based Surveillance and Response system
- Philippine Integrated Disease Surveillance and Response system
- Surveillance in Post Extreme Emergencies and Disasters system

EVENT-BASED SURVEILLANCE AND RESPONSE

- Event-based surveillance and response (ESR) is the system for rapid capture of information of events with a potential risk to public health
- Objectives of ESR are:
  - to capture all types of health events with a potential to become a public health emergency
  - to immediately assess and respond to all captured health events
  - to provide input or feedback to policy makers
  - to provide information for IHR notification (especially for rare and new events)
- The ESR process includes different phases:
  - the capture of information can be passive (the information is reported) or active (the information is gathered through the media - TV, print, radio, internet)
  - the filter of information according to specific criteria to make a decision on which health events will be verified and/or discarded
  - the verification of the event within 24 hours, by getting more detailed information about the event to ascertain if the report warrants further assessment
  - the assessment within 48 hours to determine if the event has the potential to be a public health risk or threat
  - the response within 72 hours, to implement control measures
  - the feedback, to report the information to stakeholders (reporting source, people and organization involved in event response and policy makers)
- Prior to typhoon Yolanda, ESR was ongoing in all the affected areas of Region VI, VII, and VIII. In the post-typhoon Yolanda phase, an active post-disaster surveillance for diseases with potential risk of outbreak (leptospirosis, tetanus, AWD, dengue fever and measles) was implemented by the National Epidemiology Center in eight hospitals/ mobile tents in Tacloban City and other private or government hospitals and RHUs in the typhoon Yolanda affected areas of Region VIII
PHILIPPINE INTEGRATED DISEASE SURVEILLANCE AND RESPONSE

- The Philippine Integrated Disease Surveillance and Response (PIDSR) System is an enhanced surveillance system that monitors 23 notifiable diseases and other health-related events of public health importance utilizing an integrated approach
- PIDSR was established in 2007 to improve the current disease surveillance systems in the Philippines and to comply with the 2005 International Health Regulations call for an urgent need to adopt an integrated approach for strengthening the epidemiological surveillance and response system of each WHO Member State
- Objectives of PIDSR are:
  - to increase the number of local government units able to perform disease surveillance and response
  - to enhance capacities at the national and regional levels to efficiently and effectively manage and support local capacity development for disease surveillance and response
  - to increase the utilization of disease surveillance data for decision making, policymaking, program management, planning and evaluation at all levels
- The key features of PIDSR are:
  - the disease surveillance systems are integrated in terms of the use of standard case definitions, surveillance core activities (detection, registration, reporting, confirmation, analysis, feedback) and resources
  - the Disease Reporting Units (DRU) includes the community, the Barangay Health Stations (BHU), the Rural Health Units (RHU), the City Health Offices (CHO), government and private hospitals or clinics, government and private laboratories, ports and airports
  - the use of a case-based data collection; a set of data is collected for every case of notifiable disease/syndrome seen or detected.
  - Two types of case-based surveillance are used: **intensive case-based** for diseases targeted for elimination (e.g. measles, neonatal tetanus), eradication (e.g. AFP/poliomyelitis) and other priority diseases as determined by the Department of Health Management Committee on Prevention and Control of Emerging and Re-emerging Infectious Diseases; **line list case-based** for other notifiable diseases/syndromes
  - early detection and response to epidemics
  - established capacity of laboratories and strengthened involvement in disease surveillance system
  - established feedback loops at all levels
- Prior to typhoon Yolanda, PIDSR system had been implemented in sentinel sites, including 15 hospitals in Region VI, 22 hospitals in Region VII and 13 hospitals in Region VIII.

SURVEILLANCE IN POST EXTREME EMERGENCIES AND DISASTERS

- SPEED or Surveillance in Post Extreme Emergencies and Disasters is the Filipino **Early Warning Surveillance System** that is activated in **post-disasters** and extreme emergency situations
- SPEED’s role supports Republic Act 10121, known as the Philippine Disaster Risk Reduction and Management Act of 2010, which aims to strengthen the country's disaster management capability. Its goal is to institutionalize a national disaster risk management framework “to decrease disaster vulnerabilities, increase capability for recovery and develop overall resilience to disaster”
- Objectives of SPEED are the early detection of an increase in communicable and non-communicable diseases, to monitor trends of health conditions under surveillance and to enable identification of appropriate responses
- The key features of SPEED are:
  - activation within 24 hours post-disaster
  - undertake syndromic surveillance on 21 health conditions
  - use of information and communication technology (e.g. Text messaging, internet) for data collection, analysis and report generation
  - use an alert notification system for immediate response
  - complement the existing routine surveillance systems
- In typhoon Yolanda settings, the SPEED surveillance system was implemented in more than 400 facilities in the affected areas of Regions VI, VII, and VIII to permit the early detection of epidemic-prone diseases and to minimize morbidity and mortality of the predetermined 21 syndromes

SITUATION FORWARD

- The transition away from emergency surveillance system (SPEED) is nearly complete and the strengthening of the routine surveillance systems (ESR and PIDSR) is ongoing
- An integral part of the SPEED surveillance is the post-incident evaluation (PIE); a two-day validation/assessment workshop will be held in the last week of March to:
  - appreciate and validate the functionality status of the disease surveillance systems (ESR, PIDSR and SPEED) before, during and after typhoon Yolanda
  - identify factors that influenced the functionality of the three systems post Yolanda
  - recommend measures to improve disease surveillance after an emergency/disaster
ACKNOWLEDGEMENTS

We want to thank the people who contributed in one way or another in the gathering of information, analysis and the weekly write-up of the EWARN report. We wish to express how important their contribution has been: the Department of Health- Health Emergency Management Staff (HEMS), National Epidemiology Center (NEC), DOH Regional Office RESU and HEMS Division of Region VI, VII and VIII for facilitating reporting and investigation of alerts; the Provincial and Municipal Health Offices of Region VI, VII and VIII for supporting surveillance activities in their areas; the UN agencies, Foreign Medical teams, government and non-government organizations and GOARN consultants for taking their time to learn and report to the SPEED system; and to all those, who shall remain anonymous but has greatly contributed in the collection and reporting of surveillance data, thank you.