**Situation Report #08 Sulawesi Earthquake and Tsunami, Indonesia**

**Date of issue:** 17 October 2018  
**Location:** Central Sulawesi, Indonesia  
**Emergency type:** Earthquake and Tsunami  
**Date of onset:** 28 September 2018

### KEY HIGHLIGHTS

- Rapid assessment of immunization programme status in Sigi district has been completed.
- There are 1793 health personnel on the ground, including 91 EMTs comprising of 855 healthcare volunteers. Fifteen hospitals and 50 primary health centers (PHC) are operational by national EMTs and volunteers. Eleven pharmacies in Palu and three pharmacies in Sigi are functional.
- The most common diseases presenting to health posts are diarrhea, fever, influenza-like illnesses (ILI) and trauma injuries. The risk of vector borne diseases such as dengue, chikungunya and malaria is anticipated to increase during the coming weeks as above-average rainfall is expected in affected areas.
- Ten Field Epidemiology Training Programme (FETP) students have been mobilized to 10 PHCs at three districts to support surveillance during disaster and strengthen overall surveillance system.
- Ministry of Health (MoH) has delivered 5.50 tons medicines, 2.81 tons complementary food for pregnant women, 3 tons complementary food for children, 6725 surgical masks, 583 polybags, 1500 body bags, 10 sprayers, 150 kg liquid disinfectant, 5000 disinfectants, 23 insecticides, 50 jerry cans, 216 gloves, 18 tents, 1 orthopedic set, 4 Doppler equipment, 50 boots, 50 pregnant women kits, 240 kit delivery sets, 27 midwife kits, 5 delivery sets, 5 minor surgery kits.
- Five reproductive health tents have been established by the Reproductive health sub-cluster and MoH is planning to conduct assessment for placement of 11 additional reproductive health tents.
- As of 13 October 2018, MoH and Health Polytechnic collected 27 samples for water quality testing from internally displaced persons (IDP) locations. Water quality testing covered chemical and microbiology parameters.
- Eleven government institutions and NGOs are working to provide mental health and psychosocial support.
- Psychological assessments amongst the IDPs are in progress. Instances of mild depression, anxiety and disorientation were found in 26 IDP camps in Donggala; 19 IDP camps in Sigi Districts and 21 IDP camps in Palu Districts. Onsite Mental Health and Psychosocial support trainings involving health workers, teachers in progress at four PHCs.

### SITUATION OVERVIEW

- A 7.7 magnitude earthquake and its aftershocks, tsunami, and subsequent liquefaction and landslides have severely affected Donggala, Palu municipality, Sigi and Parigi Mountong Central Sulawesi. Electricity and communication have improved.

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<table>
<thead>
<tr>
<th>Affected</th>
<th>Severely Injured</th>
<th>Fatalities</th>
<th>Health Facilities Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>616,684</td>
<td>4,612</td>
<td>2,100</td>
<td>78,994</td>
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78,994 displaced population in 112 sites

4,612 severely injured

2,100 fatalities

22 health facilities affected
To date, 2100 deaths, 4612 severely injured and 680 missing persons are recorded. There are currently 78994 displaced people in 112 camp sites. Public kitchens are operational in IDP camps.

Twenty two healthcare facilities are affected. These include three hospitals, ten primary health centers (PHC), four sub-primary health centers and five village posts. Four in Sigi District are classified as severely damaged. Eighteen PHCs and two district hospitals in Donggala are intact.

PUBLIC HEALTH CONCERNS

- Insufficient and uneven distribution of clean water supply coupled with insufficient provision of adequate number of functioning latrines increase the risk of diarrhea cases.
- Large scale of movement of populations into unplanned settlements/camps and insufficient provision of water and sanitation still persists. Water tank is available for cooking and drinking (boiled first) but people are using unsealed containers/chambers to take the water from the tank, and garbage piles around the IDP camp. Water contamination from livestock around the IDP camp and poor sanitation as well as food contamination.
- Health facilities waste is dumped in the public waste site. Medical waste management is a concern. The mixed medical and non-medical wastes are usually placed outside of the hospitals/health centers, without a proper medical waste disposal.
- There is a need to strengthen referral system for patients, such as TB patients HIV patients.
- The Sigi DHO could not access medical warehouse, due to damages. Therefore, distribution of essential medicines to Sigi is important.
- There are an estimated 351 754 women of reproductive age, 45 306 women currently pregnant, and 14070 women who will give birth in the next three months in the total affected population of 1.4 million.
- An estimated 2111 women are likely to experience obstetric complications at the time of delivery and require emergency obstetric care at a functioning health center for delivery in the next three months.

RESPONSE

EPIDEMIOLOGICAL SUMMARY

- Progress has been observed for EWARS reporting from primary health centers, even though reporting is not optimal yet.
- Most common reported diseases are Acute Respiratory Infection (ARI), followed by acute diarrhea, ILI, hypertension. Other diseases include skin diseases, fever, and suspect typhoid fever.
- An increase of diarrhea cases is observed, around 10 days post-earthquake onset. Significant increase of diarrhea cases is reported from Tompe PHC Donggala, followed by Pantolan PHC and Tawaeu PHC in Palu. The highest cases are reported from Lende village where people are using irrigation canal as their water source for bathing, washing cooking utensils and latrine. While for cooking and drinking, however, they are using clean water supply. PHO and DHO conducted joint field investigation to PHC Wani, Batusuya, and Tompe of Donggala districts. The field investigation team found risk factor of diarrhea cases in the area due to river is contaminated by wastes from human and livestock around IDPs as risk factors for diarrhea cases.
- Field investigation has been ongoing for suspect measles case. Suspect measles are not come from IDPs camp. Health promotion and education has been given to the families and requested to self-isolated and report to the nearest PHC for any unusual development symptoms.

HEALTH OPERATIONS AND LOGISTICS

- There are 1793 health personnel; including 91 EMTs consist of 855 healthcare volunteers, on the ground. They are 387 medical doctors, 78 specialists, 79 midwives, 446 nurses, 16 anesthetists, 34 pharmacists, 84 other healthcare workers, and 669 nonmedical/ paramedics.
To activate all essential health services, PHO has requested all health staff to be back on duty. More PHO health staffs have come back on duty as of 15 Oct 2018. Donggala District Health Office has reported that almost 100% staff are back on duty.

MoH has delivered 5.50 tons medicines, 2.81 tons complementary food for pregnant women, 3 tons complementary food for children, 6725 surgical masks, 583 polybags, 1500 body bags, 10 sprayers, 150 kg liquid disinfectants, 5000 disinfectants, 23 insecticides, 50 jerry cans, 216 gloves, 18 tents, 1 orthopedic set, 4 Doppler equipment, 50 boots, 50 pregnant women kits, 240 kit delivery sets, 27 midwife kits, 5 delivery sets, 5 minor surgery kits.

MoH, in collaboration with health partner, has completed a rapid health assessment that focuses on the health facilities functionality. 32 out of 50 primary health centers are operational.

Antiretroviral (ARV) mobile team has conducted outreach for ARV distribution.

MoH is planning to distribute health education materials consisting of 5000 leaflets, 50 banners, 15 health informational movies, and other risk communication materials for community awareness.

### Mental Health

Psychological assessments amongst the IDPs are in progress. Instances of mild depression, anxiety and disorientation were found in 26 IDP camps in Donggala; 19 IDP camps in Sigi Districts and 21 IDP camps in Palu Districts. Onsite Mental Health and Psychosocial support trainings involving health workers, teachers in progress at four PHCs.

Eleven government institutions and NGOs are working to provide mental health and psychosocial support for IDPs.

MoH will integrate the MPHSS programme with the existing psychosocial support established by Ministry of Social Affairs and Health Reproduction unit of the MoH.

MoH and health partners are implementing the MHPSS Strategy. These include psycho-education, mental health screening using Self Reporting Questioner (SRQ) and provision of basic mental health services.

People in 34 IDPs camps in Sigi Districts have been provided with psychosocial support and psychological First Aid by Association of psychologist.

### Environmental Health

Palu health polytechnic laboratory and Donggala drinking water company laboratory conducted microbiology and chemical parameters testing, however complete parameters (microbiological, chemical and physical) should be done in Makassar public health laboratory which the result can be received within 6 days.

Water and sanitation joint assessment is ongoing. Assessment results includes:

- As of 13 October 2018, WHO, UNICEF in collaboration with MoH and Health polytechnic collected 27 samples for water quality testing at IDPs and non IDPs settlement locations. These include water production sites for water trucking, several public hydrants, and dug-wells. Water quality testing covers chemical and microbiology parameters. The result of 17 out of 27 water quality samples taken by Health polytechnic indicated that 6 of 17 samples do not meet the MoH water quality standard. Three samples from Makassar public health laboratory also found that 2 of 4 locations are contaminated.
- Manado public health laboratory in collaboration with armed forces will collect samples for quality testing in Balaroa.
- Water source for drinking and cooking at lapangan Lumbuna Welker IDPs is from the river around the IDP camp.
- Water treatment static is available at Petobo Atas IDP camp. Capacity of the water treatment plant is 5000 litre/day and water source from Palu. Agency of assessment and application of technology is
going to conduct water quality testing and provide latrines in Petobo. The sanitation status in the public kitchen IDP camp is poor.

- WHO supports MOH to follow up the surveillance data on diarrhea cases found in the field and verify the affected area through water quality testing and sanitation inspection. Samples from Sub District Sirenja and Tawaeli have been already taken for water quality testing.
- MoH conducted disinfection at six hospitals (five in Palu and 1 in Sigi)
- Central Sulawesi PHO in collaboration with volunteers and healthy Nusantara team conduct fogging at IDP camps in West Palu.
- Health education and promotion has been delivered to IDPs for hygiene and sanitation, including for waste management in the camp.

Reproductive health

- Five reproductive health tents have been established by the Reproductive health sub-cluster and are offering life-saving delivery, ante-natal, post-natal and family planning services and information in Palu City [i.e.: Vatulemo, Donggala Kodi, and Mesjid Agung], Sigi District [Beka Village], and Donggala District [Wombo Kolonga]. MoH is planning to conduct an assessment for placement of 11 additional reproductive health tents.
- While reporting systems are still being re-established, at least 134 pregnant women benefited from ante-natal care; and 16 from post-natal care between 12-14 Oct; 22 women benefited from family planning services, 2 women benefited for normal delivery services, 1 woman was referred to emergency obstetric care services.
- Five newborn baby kits, 20 pregnant women kits, and 8 post partum kits were distributed during period 12-14 Oct.
- A total of 70 affected people including 42 women of reproductive age and 28 young people attended reproductive health awareness sessions since 12-14 Oct.
- Technical assistance includes mapping of population affected by disasters and public health facilities damaged; mapping of health services and hospital capacity/facilities in affected areas; mapping of damaged public health facilities, PHC and sub primary healthcare centre (pustu) per district; and other related health cluster snapshots.
- Psychosocial support to 23 front line health workers, including midwives, has been provided by reproductive health sub-cluster members to ensure their wellbeing. Head of MCH of PHO Central Sulawesi confirmed that the session is very helpful and provide energy and motivation.
- Three hospitals (Wirabuana, Aljufri, and Tolabero) are providing a full spectrum of services including antenatal care delivered by midwives as well as emergency obstetric care.
- Provision of basic reproductive health services in affected areas through deployment of midwives and health personnel is ongoing.
- UNFPA is distributing Kits containing essential hygiene, sanitation and protection items targeting the specific needs of pregnant and lactating women and their newborns.
- Indonesia AIDS coalition continues assessments, outreach, psychosocial support and ARV for people living with HIV in Palu, Sigi and Donggala. Only 24 people have been successfully linked to ARV in Palu.
- UNFPA is developing and training of Kobo Collect applications for data collection of RH and Gender based violence (GBV) sub-clusters.
Diseases surveillance and vector control

- Ten Field Epidemiology Training Programme (FETP) students have been mobilized to 10 PHCs at three districts to support surveillance during disaster and strengthen overall surveillance system. FETP placement sites:
  - Donggala district: PHC Wani, PHC Batusuya, PHC Tambu, PHC Delatope
  - Sigi district: PHC Biromaru, PHC Tinggede, PHC Kaleke
  - Palu municipality: Kamonji PHC, Tipo PHC.
- PHO and DSO conducted field investigation to verify increasing diarrhea and pneumonia cases in Tompe PHC. The risk factor for diarrhea is lack of access to clean water, while cooking inside the tent is a risk factor for pneumonia.
- Vector control has been conducted in the PHC Tompe working area.

Immunization

- EPI programme assessment is underway. MR campaign micro planning has been developed and MR campaign has been initiated.
- As many as 3622 volunteers have received Tetanus-diptheria (Td) vaccination.
- As of 11 October 2018, MR campaign coverage in Sigi district was 66.04% while in Palu reached 50.06% and Donggala 75.16%.
- MoH is planning in provision of Hb0 and HB1g vaccines.

COORDINATION

- UNHCT coordination meeting was held on 16 Oct 2018. The meeting discussed to improve coordination and information management for response. OCHA is compiling information from each cluster to be compiled and produce situation report twice a week.
- Health Cluster lead (Crisis Center MoH) conducted a national health cluster meeting on 16 October involving international partners.
  - Crisis Centre MoH will facilitate coordination among health partners to plan and monitor response implementation in Palu.
  - MoH emphasized that international experts are not allowed to conduct on-site field visit and assessment.
  - MoH suggested improving risk reduction capacity building and sustaining coordination among partners.
- OCHA organized first inter-cluster meeting at Palu. Next meeting will be held on 19th October 2018.
- Health coordination meeting in the field has been conducted focusing on EMT management. These include EMT mapping, deployment and information management. EMT-CC was established on the field by the Center for Health Crisis staffs with UGM as the secretariat, by compiling EMT registration and daily reports to assist the PHO focal person.
- District Health Office Donggala and Sigi has been facilitated in a meeting on 14 October 2018 to establish the health cluster coordination at the district level to capture all health service activities in their area.
- Health sub clusters have been conducting coordination meetings for response in the field. These include mental health and psychosocial support, reproductive health, nutrition, water and sanitation and diseases control.
- JOCCIA and central coordination meeting is planned either on Monday evening or Tuesday.
Emergency Management Team (EMT) Mapping in Palu

Data Source: ERAT-OCHA-WHO, Map by MapAction
ERAT-OCHA-WHO in collaboration with MoH, PHO, DHO developed EMT response map.
GAPS AND CHALLENGES

- Destroyed health facilities and road hamper accessibilities to basic health care services including reproductive health services.
- Accommodation and transport for mobile outreach and deployment of health personnel in highly affected and remote areas remain a challenge.
- It is only around 30-40% of health workers at primary health center, 70% PHO Officer and 50% DSO Officers have returned to work in temporary offices and tents as permanent offices are damaged and unsafe.
- Limited BKKBN staff (Provincial Family Planning Office) are in the province, who are able to provide family planning services, which are being asked for by community.
- Young people need access to information and education on adolescence RH during this emergency. Young people often face barriers in accessing sexual and reproductive health services, including discrimination and stigma, and targeted Adolescent Sexual and Reproductive Health outreach is planned by the RH sub-cluster.
- Referral health system needs strengthening, including for pregnant women emergency obstetric cases.
- Limited vaccine stockpiles at Sigi district will hamper resumption of routine immunization programme. The cold chain for immunization programme has been assessed following the earthquake and results indicate limited damage. Since power supply has been fully restored, provincial cold room are functioning adequately. However, in Sigi district, the capacity for vaccine storage (cold room) is limited; only 1 unit of TCW2000 SDD available and functioning. This capacity is considered insufficient for store vaccine needed for routine and campaign.
- MoH indicated additional medical resources would be needed during the coming weeks including medical doctors, specialists (obstetric and gynecologist, pediatricians, anesthetist, and surgeon), psychiatrist, psychologist, nurse, midwives, radiographer, environmental health Officers and nutritionist.
- Rapid Diagnostic Tests (RDTs) for dengue and leptospirosis are not available. Although RDT for malaria are available in primary health center, however the number of tests may not be adequate.
- There is a need to strengthen district health office in the coordination of health services and activities.
- Information management to capture health service activities should be strengthened.
- The initial gap analysis as of 15 October 2018 according to AHA Centre, revealed that 58,226 mosquito nets and 80,468 hygiene kits are still needed.
- Post-disaster, water and sanitation conditions below acceptable minimum standard. Most of IDPs camps do not have appropriate toilets, clean water sources, and no camp coordinator. Access to clean water is limited.
- Medicine supplies for basic health services at PHCs are adequate, with the exception of some pediatric medicines and shortage of Oral Rehydration Solution (ORS)/Zinc tablets in remote PHCs.
- Diseases reporting and health programme activities is not optimal yet. Early Warning Alert and Response System (EWARS) needs strengthening. Following the disaster, Donggala and Sigi are unable to report EWARS, while in Palu completeness and timeliness dropped to 23%.
- Vector control measures should be conducted simultaneously in collaboration with parties responsible for environmental improvement.

HEALTH CLUSTER AND WHO RESPONSE

- Six WHO personnel are currently supporting health cluster coordination and technical response on-ground; including EMTs coordination, health response mapping, health facility mapping, surveillance, risk assessment, water and sanitation situation, mental health and immunization as part of response to earthquake in Palu.
- Two EPI focal persons are supporting Ministry of Health to conduct EPI program assessment including the cold chain assessment in the three districts affected. MR monitors are assisting technically in 8 districts.
• Health partners continue to support response in the field. These include EMTs, water sanitation, ARV, reproductive health, support for disability, risk communication and immunization including MR campaign.

**FUNDING**

• UN Central Emergency reserve funds (CERF) has been approved. WHO will implement USD 0.9 million to support health cluster response. WHO response will focus on restoring EWARS in 22 primary health centers, strengthening health cluster coordination, mobilization of FETP students from universities to support surveillance during outbreak, vector control, and collaboration with professional associations in supporting mental health.

**CONTACTS**

Key contacts at WHO Country Office for Indonesia are:

- Dr Rim Kwang IL  
  Technical officer  
  WHO Health in Emergency Programme  
  rimk@who.int  
  +62 8118813834

- Gde Yogadhitga  
  NPO Emergency Humanitarian action  
  WHO Health in Emergency Programme  
  Yogadhitag@who.int  
  +62 8175450684

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