KEY HIGHLIGHTS

- Emergency Medical Team (EMT) operational mapping and health facility functionality mapping for Palu city and Sigi district has been developed and shared with medical care unit MoH. EMT daily reporting system has already started adopting simplified existing EMT form.
- Five primary health centers (PKM) out of 16 in Donggala district and one PKM from Sigi district out of 13 PKMs are able to send report; one PKM out of eleven PKM in Palu City has been operationalized in an outside building.
- 1793 health personnel including 91 EMTs consist of 855 healthcare volunteers are on the ground. 15 hospitals and 50 primary health centers are operational by national EMTs and healthcare worker volunteers for patient treatments. Eleven pharmacies in Palu and three pharmacies in Sigi are functional.
- WHO facilitated first Immunization sub cluster meeting in the field in collaboration with MoH, PHO, DHO and UNICEF.
- MoH has conducted Td vaccination at Palu for 2 894 health volunteers. Similarly, MR campaign is still ongoing in three districts affected and being delivered in the IDP camps. As per 9 October 2018, 618 800 children aged 9 months up to below 15 years old have been vaccinated against measles & rubella under MR campaign in Central Sulawesi province.
- Early Warning Alert and Response System (EWARS) data reporting SOP is being developed.
- Field investigation and laboratory confirmation from one suspect measles case in Sigi District is underway.
- The most common diseases presenting to health posts are diarrhea, fever, influenza-like illnesses (ILI) and trauma injuries. The risk of increased transmission of vector borne diseases such as dengue, chikungunya and malaria is anticipated as above-average rainfall is expected in affected areas in the coming weeks.

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. Access, electricity and communication have been improved.
- To date, 2010 persons have died, 2 549 people severely injured, 8130 mild injured, 671 people are missing. There are currently 82 775 displaced people in 112 sites. Public kitchen are operational in IDPs.
- 20 healthcare facilities are affected. These include one hospital (Anutapura hospital in Palu) and ten primary health centers (including four primary health centres heavily damages in Sigi), four sub primary health centers, and five village posts. 18 PKMs and two district hospitals in Donggala are intact.
- Five primary health centres (PKM) out of 16 in Donggala District and one PKM from Sigi District out of 13 PKMs are able to send report via sms; one PKM out of eleven PKM in Palu City operationalized outside building.

PUBLIC HEALTH CONCERNS

- Injuries and their complications continue to be a major concern.
- Anticipated increased health risk include water borne diseases (such as cholera, dysentery, typhoid) and vector borne diseases (malaria, dengue, and chikungunya) and vaccine preventable diseases (such as, measles, tetanus and diphtheria). Waste management and provision of water and sanitation as well as vector control is essential.
- Quick review on the EPI coverage in 2018 as per 7 October 2018 has showed low immunization coverage: MCV1 coverage of 49.2%, MCV2 of 37.3%, DPT3 40% and dropout rate (DPT-HB-Hib1/DPT-HB-Hib3) 2.9% out of 60 656 surviving infant in the provinces.
- Disruption of activities of different disease control programmes such as Mass Drugs Administration for filariasis control and schistosomiasis.
RESPONSE

EPIDEMIOLOGICAL SUMMARY

- Most diseases reported are Acute Respiratory Infection, followed by acute diarrhea, ILI, Hypertension. Other diseases include skin diseases, fever, and susp. Typhoid fever.
- One suspect measles case is reported from Sigi district and Palu municipality. Field investigation and laboratory confirmation is underway.

HEALTH OPERATIONS AND LOGISTICS

- 1793 health personnel including 91 EMTs consist of 855 healthcare volunteers are on the ground. These include 387 medical doctors, 78 specialists, 79 midwives, 446 nurses, 16 anesthetist, 34 pharmacists, 84 other healthcare workers, 669 nonmedical/paramedics.

Surgery at Budi Agung hospital Palu by Emergency Medical Team from Andalas University (UNAND)- Photo Credit: Foto/Ist

15 hospitals are operational by national EMTs and healthcare worker volunteers for patient treatments. These include 12 hospitals in Palu, two hospitals in Donggala (including medical ships) and one hospital in Sigi. Medical team has conducted 283 orthopedic surgeries.

50 unit primary health centers are functional. These include 13 primary health centers (PKM) in Palu, 19 PKMs in Donggala and 18 PKMs in Sigi. 11 pharmacies in Palu and three pharmacies in Sigi are functional.

- Although most health facilities in Donggala are not damaged, the functionality is only 40-50% due to most of the staffs are evacuating to Makassar and other cities.
- Emergency Medical Team (EMT) daily reporting system already established adopting and simplification of the existing EMT form.
- Early Warning Alert and Response System (EWARS) data reporting SOP is being developed.
- Water and Sanitation cluster assessment found poor sanitation and hygiene and poor waste management at public kitchen of the IDPs. Measures taken are as follows:
  - MOH has conducted disinfectant at hospitals and in 5 IDPs.
  - Water quality sampling and monitoring is being conducted by BTKL Makassar and transported to Makassar for laboratory testing. The result will be available within 5 – 6 days. The result will be collected into the Sub Cluster WASH under Directorate of Environmental Health, MOH. WHO provide simple form for sanitarians to do water quality testing.
- MOH is conducting mental health assessment in Palu. In response to drugs shortage, MoH has sent Psychopharmacological medications, to provide operational support and ensure stock sufficiency.
- MoH conducted Td vaccination at Palu. 13 000 vial Td vaccines, 250 vial influenza vaccine, 500 ampules Anti Tetanus Serum (ATS 1500 IU) have been delivered to Palu. As per 9 October 2019, 2 894 volunteers have been protected by tetanus vaccination.
• MR campaign is still ongoing in three districts affected and being delivered in the IDP camps. As per 9 October 2018, 618,800 children aged 9 months up to below 15 years old have been vaccinated against measles rubella under MR campaign in Central Sulawesi province.

![Image](image1.jpg)

DG Disease Control MOH monitored the cold chain function in the IDP camp in Palu Photo Credit: WHO/Haryadi

![Image](image2.jpg)

MR campaign Coverage in Central Sulawesi province, update 9 October 2018 : Central Sulawesi PHO

• TB programme has been restored and is functional in most primary health centres, and DR-TB centre at Undata hospital.
  o TB drugs storage at provincial and Palu district health office is sufficient, and available at primary health centres.
  o Undata hospital as Drug Resistance TB (DR-TB) Treatment Center in Central Sulawesi has starting DR TB service in tent in front of hospitals. DR-TB patients are continuous being monitored.
  o No TB patient on treatment missing in Donggala district. Drugs and laboratory supplies for TB treatments in primary health and hospitals in Donggala are sufficient.
  o In Sigi, TB treatment at Baluase primary health is provided in shelter. Stocks of TB drugs are safe, however earthquake has damaged diagnostic tools and lab reagents. Sibalaya and Biromaru primary health centers are completely damaged, while Kulawi primary health centre is continues to be totally isolated.

• District Health Officer is working to access filariasis test strip at pharmacy installation at Sigi affected by earthquake for distribution to other districts to continue Transmission Assessment Survey (TAS). While Leprosy drug stock is being assessed.

![Image](image3.jpg)

DG Disease Control MOH monitored the surveillance activity in the affected areas including VPD surveillance. Photo Credit: WHO/Haryadi

![Image](image4.jpg)

Coordination for EMT operational mapping. Photo credit: WHO
COORDINATION

- Health coordination meeting has been conducted focusing on EMT management.
- Health sub clusters conducts coordination meeting for response.

GAPS AND CHALLENGES

- MoH indicated medical resources need for incoming one week include medical doctor, specialists (obstetric and gynecologist, pediatricians, anesthetist, and surgeon), psychiatrist, psychologist, nurse, midwives, radiographer, environmental health Officers and nutritionist.
- Rapid Diagnostic Test (RDT) for Dengue and Leptospirosis are not available. RDT for Malaria are available in primary health centre, however the number is uncertain.

HEALTH CLUSTER AND WHO RESPONSE

- WHO Emergency Officer is on the ground continuously supporting health cluster coordination.
- Surveillance Officer and data assistant are supporting MoH for restoring surveillance system to early detect outbreak prone diseases.
- WHO Officer will support PHO to ensure continuation of TB programme. This includes monitoring of DR-TB patients, conducting assessment and inventory assessment to all districts in Central Sulawesi.
- Two EPI focal persons, MR monitors who technically assisted eight districts, have been coordinating with EPI MOH to conduct cold chain assessment in the three districts affected.
- WHO continues to coordinate and supports MoH for surveillance on WASH, assessment and providing Mental Health and Psychosocial support.

FUNDING

- CERF funds proposal (US$ 15 million) is being reviewed. WHO will implement US$1, 2 M out of 3 M allocated for health cluster. The activities focusing on restoring EWARS in 22 primary health centers; strengthen health cluster coordination, mobilization of FETP students from universities to support surveillance during outbreak, vector control, and collaborate 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 Yogadhitag  
NPO Emergency Humanitarian action  
WHO Health in Emergency Programme  
Yogadhitag@who.int  
+62 8175450684

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- BNPB update as of 9th October 2018
- Crisis Centre MoH update as of 8th October 2018
- MoH Press release, 3 October 2018  