**Republic of Namibia**
**Ministry of Health and Social Services**

**Outbreak of Hepatitis E Virus (HEV) in Namibia**
**Situation Report (SITREP No. 112)**

**Reporting Date: 18/08/2021**
**Reporting Period: 19 July-15th August 2021**
**Epidemiological weeks: 31 - 32 of 2021**

## 1. SIGNIFICANT ACTIVITIES & HIGHLIGHTS:

During this reporting period **(02-15th August 2021),** one **(1)** Hepatitis E Virus (HEV) case was reported country-wide, whilst two **(2)** HEV cases were reported in the last two weeks (**19 July-1st August 2021,** epi weeks **29 & 30**).

- The one **(1)** case reported during the reporting period (**02-15th August 2021**), was reported from Khomas Region.
- In the last eight (8) weeks (21 June -15 August 2021), a total of **10** HEV cases were reported nationwide, with Khomas Region reporting **9 (90%)**, and Erongo Region recorded just **1 (10%)** case. The rest of the regions did not report any case.
- All 10 cases reported from Khomas and Erongo Regions, are suspected.

**Table 1: Summary of reported HEV cases by regions during the last reporting two weeks (31 & 32) compared to the previous two weeks (week 29 & 30) up to 15 August 2021, Namibia.**

| Regions | Current reporting period -week 31 and 32 | | | | | | Previous reporting week 29 and 30 |
|---|---|---|---|---|---|---|---|
| | Reporting Districts | Lab Confirmed | Epi-linked | Suspected | Discarded | Total | Total HEV cases |
| **Khomas** | Windhoek | 0 | 0 | 1 | 0 | **1** | **1** |
| **Erongo** | Swakopmund, Walvisbay | 0 | 0 | 0 | 0 | **0** | **1** |
| **Omusati** | Okahao | 0 | 0 | 0 | 0 | **0** | **0** |
| **Ohangwena** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Oshana** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Oshikoto** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Kavango** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Omaheke** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Otjozondjupa** | Otjiwarongo | 0 | 0 | 0 | 0 | **0** | **0** |
| **Kunene** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Hardap** | Rehoboth | 0 | 0 | 0 | 0 | **0** | **0** |
| **Karas** | - | 0 | 0 | 0 | 0 | **0** | **0** |
| **Total** | - | **0** | **0** | **1** | **0** | **1** | **2** |

## 2. BACKGROUND

- The Ministry of Health and Social Services (MoHSS) declared HEV outbreak on 14 December 2017 in Windhoek district, Khomas region. The outbreak eventually spread to other regions around April 2018, involving thirteen **(13)** regions, with the exception of Zambezi Region.
- Since the outbreak began, cases have been reported mainly from informal settlements such as Havana and Goreangab in Windhoek, DRC in Swakopmund and Kuisebmund in Walvisbay, and similar settings in other regions where access to potable water, sanitation, and hygiene is limited.
- As of 15 August 2021, a cumulative number of **8090** HEV cases were reported since the outbreak began. This includes **2117 (26.2%)** laboratory-confirmed, **4738 (58.5%)** Epi-linked, and **1235 (15.3%)** suspected cases.
- A cumulative of **2375** specimens tested negative for Hepatitis E and were therefore classified as discarded.
- Most cases, **5004**, are reported from Khomas Region compared to other regions, accounting for **61.9%** of reported cases, followed by Erongo with **1717 (21.2%).** The remaining regions account for **1371 (16.9%)** of the reported cases.

- Majority of HEV cases, **5766 (71.3%)** are among the age group 20-39. Few cases, **12 (0.1%)** were recorded among the under 1 year age group. Most cases are reported among males **4794 (59.3%)** compared to females **3296 (40.7%)**.
- A total of **66** HEV deaths have been reported nationally (Case Fatality Rate (CFR) of **0.8%**) since the outbreak began. Among the **66** deaths, **27** are maternal deaths, representing **41%** of the total HEV deaths and **6.2%** of all the reported maternal HEV cases.
- Since January 2020 to date, four **(4)** HEV deaths were recorded of which two are maternal deaths, the first one occurred in February 2020, and the last one occurred in September 2020. No HEV deaths were reported in 2021.
- Hepatitis A Virus (HAV) infections have also been reported from some of the HEV affected regions, mainly in Khomas, Erongo and Omusati regions. About two-thirds of the reported cases, 249 (65.2%) out of 382 cumulative HAV cases, are reported from Omusati region.

## 3. RESULTS

**Table 2: Cumulative Hepatitis E Virus cases reported in all affected regions, Namibia, September 2017 – 15 August 2021 (n=8090)**

| Region | District | Laboratory Confirmed | Epi-linked | Suspected | Cum HEV[1] cases reported | Discarded | Total cases with AJS[2] | HEV Deaths[3] (CFR)[4] | Maternal cases[5] reported | Maternal deaths (CFR) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Khomas** | Windhoek | 456 | 3872 | 676 | 5004 | 154 | 5158 | 35 | 285 | 13 |
| **Erongo** | All 4 districts | 585 | 820 | 312 | 1717 | 222 | 1939 | 12 | 86 | 5 |
| **Omusati** | All 4 districts | 223 | 1 | 120 | 344 | 647 | 991 | 5 | 20 | 4 |
| **Ohangwena** | All 3 districts | 96 | 2 | 63 | 161 | 200 | 361 | 1 | 9 | 1 |
| **Oshana** | Oshakati | 93 | 5 | 12 | 110 | 54 | 164 | 3 | 7 | 1 |
| **Oshikoto** | All 3 districts | 103 | 0 | 13 | 116 | 115 | 231 | 0 | 5 | 0 |
| **Kavango** | All 4 districts | 140 | 24 | 2 | 166 | 687 | 853 | 3 | 1 | 1 |
| **Omaheke** | Gobabis | 138 | 14 | 3 | 155 | 98 | 253 | 3 | 13 | 2 |
| **Otjozondjupa** | All 4 districts | 120 | 0 | 21 | 141 | 61 | 202 | 0 | 7 | 0 |
| **Kunene** | Khorixas and Outjo | 37 | 0 | 7 | 44 | 18 | 62 | 1 | 2 | 0 |
| **Hardap** | Rehoboth and Mariental | 114 | 0 | 6 | 120 | 102 | 221 | 2 | 5 | 0 |
| **Karas** | Luderitz and Karaburg | 12 | 0 | 0 | 12 | 17 | 29 | 1 | 0 | 0 |
| **Total** | - | **2117** | **4738** | **1235** | **8090** | **2375** | **10465** | **66 (0.8%)** | **440** | **27 (6.2%)** |

[1] Hepatitis *E Virus Which Excludes discarded and cases with unassigned classification, and includes only lab confirmed, epi-linked, and suspected cases*

[2] *Acute Jaundice Syndrome (AJS)which includes lab confirmed, epi-linked, suspected, discarded, and unclassified cases*

[3] *HEV deaths include those reported among lab confirmed, epi-linked, or suspected cases. Discarded cases are excluded*

[4] *Case fatality rate is calculated using the number of lab confirmed, epi-linked, or suspected cases who died divided by the cumulative number of lab confirmed, epi-linked, or suspected cases. Discarded cases are not included in the calculation as they have been ruled out as cases of hepatitis E infection, and unassigned are not included as they have not been ruled in as a case*

[5] *Maternal cases include those labs confirmed, epi-linked, or suspected cases reported as pregnant, miscarriage, or postpartum. Discarded or cases with unassigned classification cases are excluded*

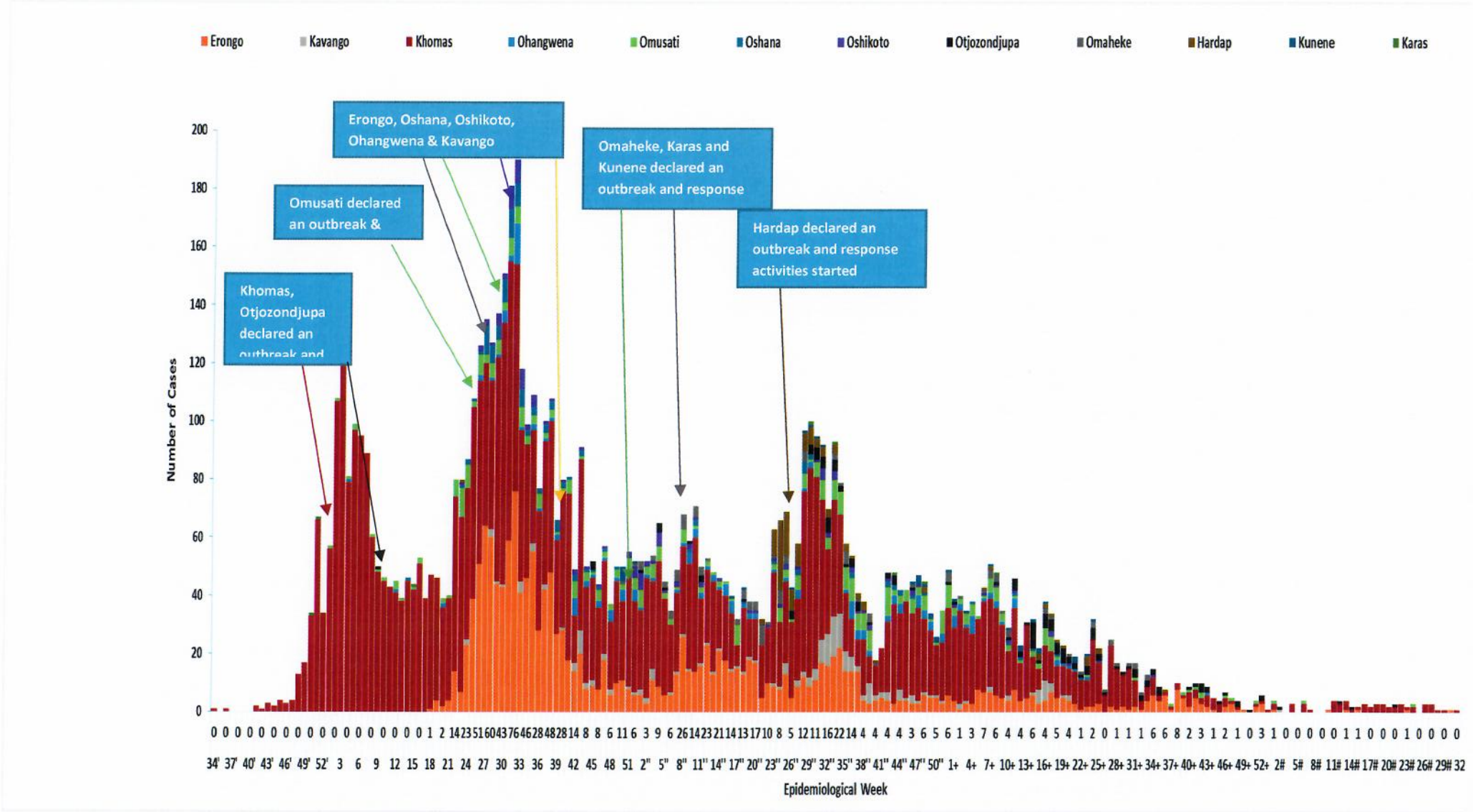


**Figure 1: Epi Curve of HEV cases (Lab confirmed, epi-linked, and suspected hepatitis E cases) by epidemiological weeks, Namibia, September 2017 – 15 August 2021 (n=8090)**

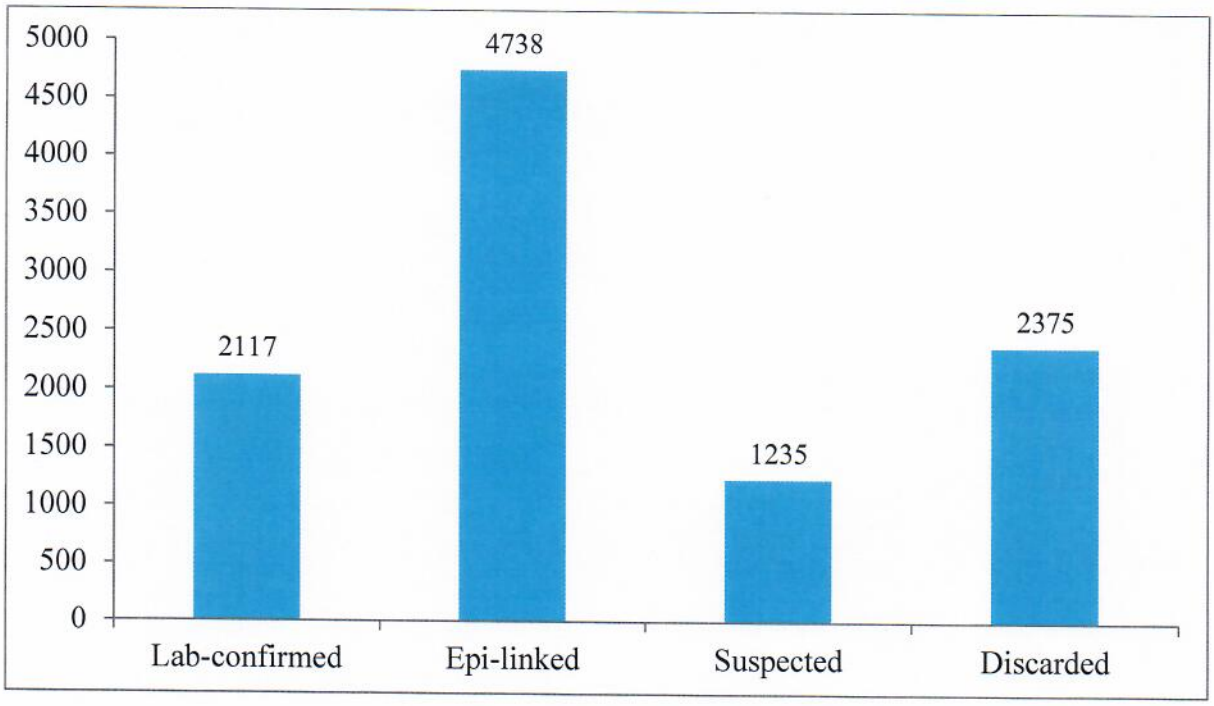


**Figure 2: Classification of AJS cases seen at health facilities, Namibia, September 2017-15 August 2021 (n=10465).**

The graph above depicts all cases of acute jaundice syndrome. Cases regarded as Hepatitis E cases are the laboratory confirmed **(2117),** epi-linked **(4738),** and suspected cases **(1235).** HEV cases are mainly from outbreak-stricken areas such as Havana and Goreagab in Windhoek and DRC informal settlement in Swakopmund .

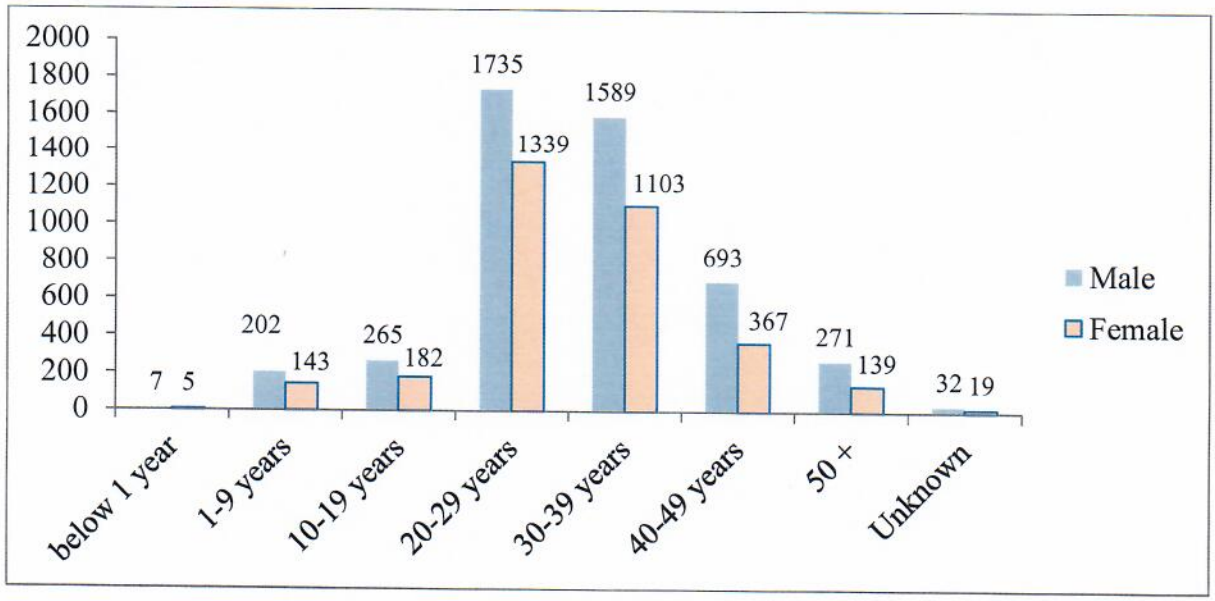


**Figure 3: HEV cases (lab confirmed, epi-linked, and suspected) by sex and age, Namibia, up to 15 August 2021 (n=8090)**

The graph above illustrates that most of the cases, **4794 (59.2%)** are male, amongst all age groups compared to females **3296 (40.8%).** Most cases are reported among those in the age-group 20-39, **5758 (71.3%)** and the lowest in children under 1 year, **12 (0.1%).**

## 4. PUBLIC HEALTH ACTIONS / RESPONSE INTERVENTIONS

### 4.1 Coordination

- The Ministry of Health and Social Services has received funding from the Government of Japan through WHO Namibia, amounting to N$ 4 million. The purpose of this funding is to intensify response activities in Khomas, Erongo, Kavango West, Kavango East, Ohangwena and Omusati Regions, improve MoHSS capacity for the outbreak preparedness and response for Hep E Virus and other infectious diseases or conditions, including the management of severe acute malnutrition. This project funding has ended on 30 June 2021.
- **Output 1: Advocacy and well-coordinated response strengthened to contain infectious disease outbreaks and Severe Acute Malnutrition (SAM)**
    - Intra Action Reviews (IAR) and support supervisions were conducted in the six regions, which aimed at assessing and strengthening the response activities.
    - This provided the opportunity for capacity building across the response thematic areas.
- **Output 2: Strengthened surveillance and early warning and response systems**
    - Conducted two-day trainings on the use of HEV Rapid Diagnostic Test kits in the six priority regions
- **Output 3: Appropriate Health and Nutrition intervention provided at all level**
    - 90 healthcare workers made up of pediatricians, medical officers, medical interns, lecturers, registered nurses and midwifes, and enrolled nurse midwives from across six regions were oriented on management of severe acute malnutrition.
- **Output 4: Social Mobilization and Risk Communication strengthened**
    - Red cross volunteers continued with community awareness
    - Printed educational materials to enhance health promotion activities
- **Output 5: Strengthened Cross-border collaboration for effective control of infectious diseases and Severe Acute Malnutrition interventions.**

- Hosted a cross border meeting between the Kavango regions in Namibia and Cuando Cubango Province in Angola to strengthen health interventions and prevention on HEP E.

### 4.2 Surveillance and Laboratory

- Regional and district surveillance teams continue to trace cases and reporting of HEV cases every week.
- A testing algorithm has been developed and distributed to health facilities to guide frontline health care workers when screening the patients using RDTs, to be able to detect HEV and HAV among the patients presenting with Acute Jaundice Syndrome.
- Procured HEV RDT kits and conducted training of health care workers in the use of the RDT
- Validation for the HAV RDT kits yet to complete, however it is in the advanced stage. Namibia Institute of Pathology (NIP) is waiting for the last positive samples from NICD, South Africa..
- The team commenced with data analysis to establish the districts which might have cleared the outbreak to advise on declaring the outbreak over.
- Successfully exchanged thirty (30) CTK HEV RDT kits, which does not use whole blood sample for sixteen (16) whole blood Assure HEV RDT kits, which are appropriate for use at point of care.
- Kits are being distributed to the regions

### 4.3 Case Management and Infection Prevention and Control

- HEV case management algorithms were reprinted and distributed to the regions.
- Hygiene practices targeted for COVID-19 prevention are equally beneficial to the prevention of Hepatitis E.

### 4.4 Social Mobilization & Risk communication

- Community Health workers and Red Cross volunteers continue with health promotion and community awareness activities
- Reprinting and distribution of Hep E IEC materials is ongoing.

### 4.5 Water Sanitation and Hygiene (WASH)

- Community-Led Total Sanitation activities continue in the regions to combat open defecation.

## 5. CHALLENGES & GAPS

- HEV RDT kits procured by UNDP (stored at NIP) are not using whole blood, therefore not appropriate for point of care use, these are yet to be exchanged.
- Water purification sachets depleted.
- Due to the COVID-19 pandemic, HEV response seems to have scaled down as MoHSS and partner organizations have repurposed their staff to focus entirely on the containment of COVID-19 and the National Health Emergency Management Committee meeting does not discuss HEV outbreak anymore.

## 6. PRIORITY INTERVENTIONS NEEDED (RECOMMENDATIONS)

- Data analysis to establish districts/regions which are no longer in outbreak phase to declare the outbreak over as appropriate.
- Fast track the validation process of the HAV RDT kits by NIP
- Distribution of HAV and HEV RDT kits and staff training on the use of HAV and HEV RDTs in HEV outbreak affected regions.
- Procurement of additional HEV RDTs that can be used at point of care in health facilities.
- Procure water purification sachets for distribution to the regions.
- WASH team to scale up the WASH activities, including CLTS and active community involvement to ensure ownership and reduce vandalism and theft of provided sanitation facilities in Khomas and Erongo regions.
- To intensify surveillance activities for early detection of the cases at the facility level

## 6. CONCLUSION

- Case had significantly reduced as exhibited in the epicurve.
- To strengthen diagnosis by using the RDT kits.
- In order to determine the exact situation, it is required that all patients presenting with Acute Jaundice Syndrome be tested for Hepatitis E.
- Considering different types of viral hepatitis (Hep A, B, C) in addition to HEV that causes jaundice, it would be imperative to strengthen the testing capacity to determine the cause of acute jaundice at all facilities country-wide.

## 7. ACKNOWLEDGMENTS


- The Government of Japan
- The Ministry of Health and Social Services (MoHSS)
- Office of the Prime Minister (OPM)
- City of Windhoek (CoW)
- Ministry of Agriculture Water and Land reform
- Namibia Institute of Pathology (NIP)
- The World Health Organization (WHO)
- United Nations Children's Fund (UNICEF)
- United Nations Development Programme (UNDP)
- US Centres for Disease Control & Prevention (CDC)
- Namibia Red Cross Society (NRCS)
- Ministry of Information and Communication Technology, (MICT)
- Coca Cola Company Namibia
- Media houses
- Office of the Governor and Regional Council for Khomas Region
- Ministry of Education Art and Culture (MoEAC)
- Erongo Regional Council
- Swakopmund Municipality Regional Response Committees,
- University of Namibia (UNAM)
- Development Workshop Namibia (DWN)
- Ecabiotec (German), 'anosan'
- All other stakeholders


Incident Manager

Date: 22 September 2021

Secretariat