

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W4 2018 (Jan 22-Jan 28)



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Cholera

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Sources of data

1. Weekly IDSR Reporting Form
2. Weekly EWARS Reporting Form
3. Daily cholera line list
4. Event based surveillance form

- Completeness for IDSR reporting is 63% at county level and 77% for the IDP sites.

- A total of 5 alerts were reported, of which 20% have been verified. 0 alerts were risk assessed and 0 required a response.

- Rift Valley Fever outbreak - Yirol East with 26 suspect human cases including 3 confirmed; 3 probable; 4 none-cases; and 16 pending classification. One confirmed animal case (cow).

- Measles outbreak confirmed in Aweil Center while in Panyijiar, active transmission is still ongoing after four measles IgM positive cases were confirmed in the week. In Cueibet county, and a reactive campaign is underway. Investigations are underway into the suspect measles outbreaks in Kiyala payam, Torit county and Mayendit county.

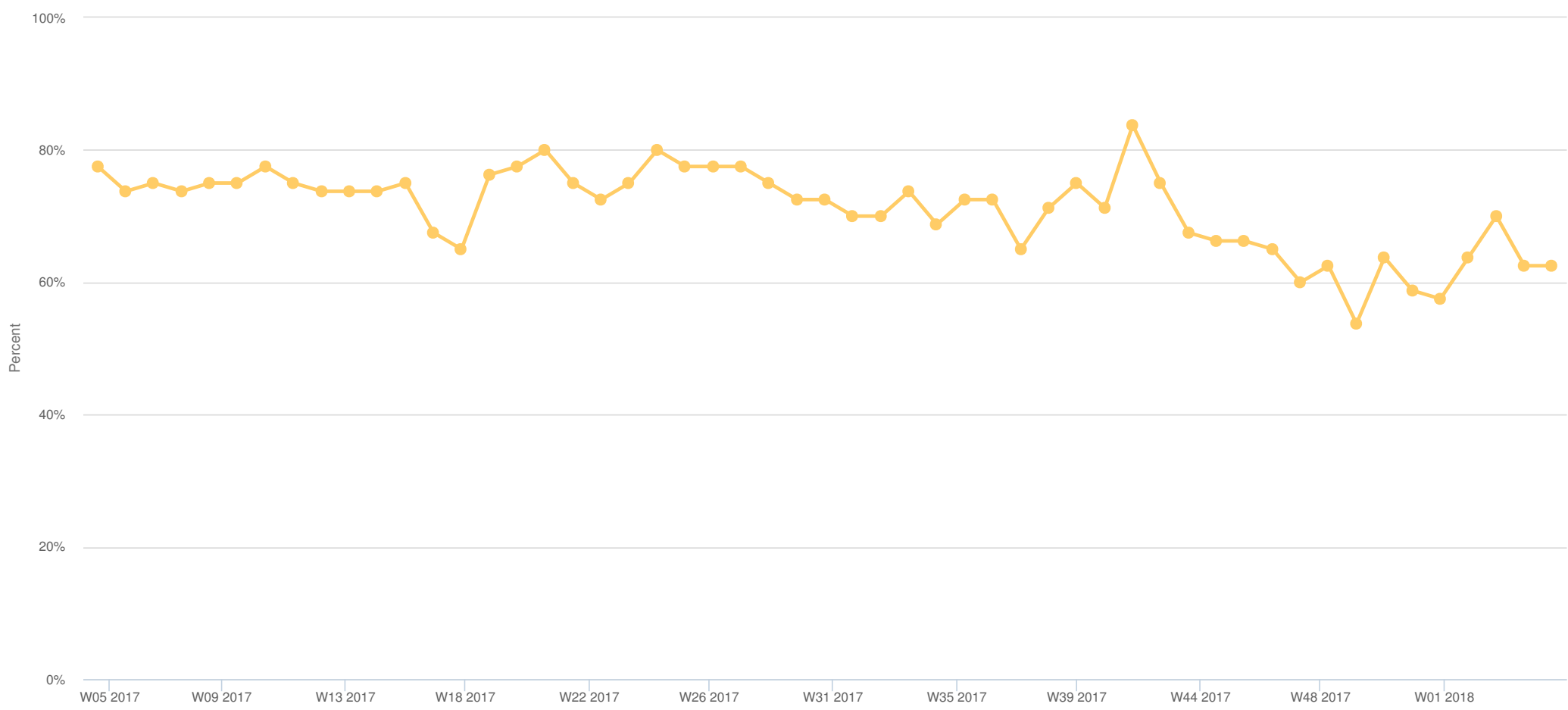
- Suspect pertussis cases are being investigated in Yirol East, Aweil Center and Aweil South counties.

Table 1 | IDSR surveillance performance indicators by county (W4 2018)

| Hub | Reporting | | Performance (W4 2018) | | Performance (Cumulative 2018) | |
|--------------------|------------|--------------------|-----------------------|------------|-------------------------------|------------|
| | # counties | # reports received | Completeness | Timeliness | Completeness | Timeliness |
| Aweil | 5 | 4 | 80% | 80% | 95% | 95% |
| Bentiu | 9 | 3 | 33% | 33% | 39% | 28% |
| Bor | 11 | 5 | 45% | 45% | 52% | 30% |
| Juba | 6 | 5 | 83% | 83% | 83% | 75% |
| Kwajok | 7 | 5 | 71% | 71% | 86% | 75% |
| Malakal | 13 | 0 | 0% | 0% | 6% | 2% |
| Rumbek | 8 | 8 | 100% | 100% | 100% | 94% |
| Torit | 8 | 8 | 100% | 100% | 78% | 72% |
| Wau | 3 | 2 | 67% | 67% | 67% | 67% |
| Yambio | 10 | 10 | 100% | 100% | | 98% |
| South Sudan | 80 | 50 | 63% | 63% | 65% | 63% |

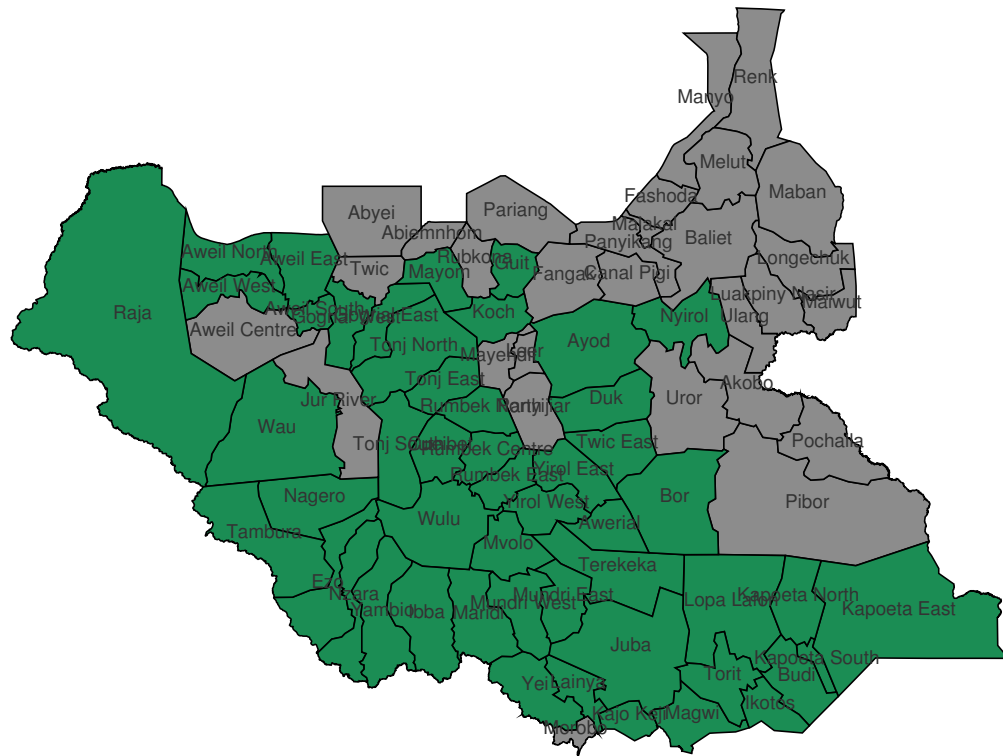
- Completeness for IDSR reporting at county level was 63% in week 4 and cumulatively at 65% for 2018
- Timeliness for IDSR reporting at county level was 63% in week 4 and cumulatively at 63% for 2018

Figure 1 | Trend in IDSR completeness over time¹

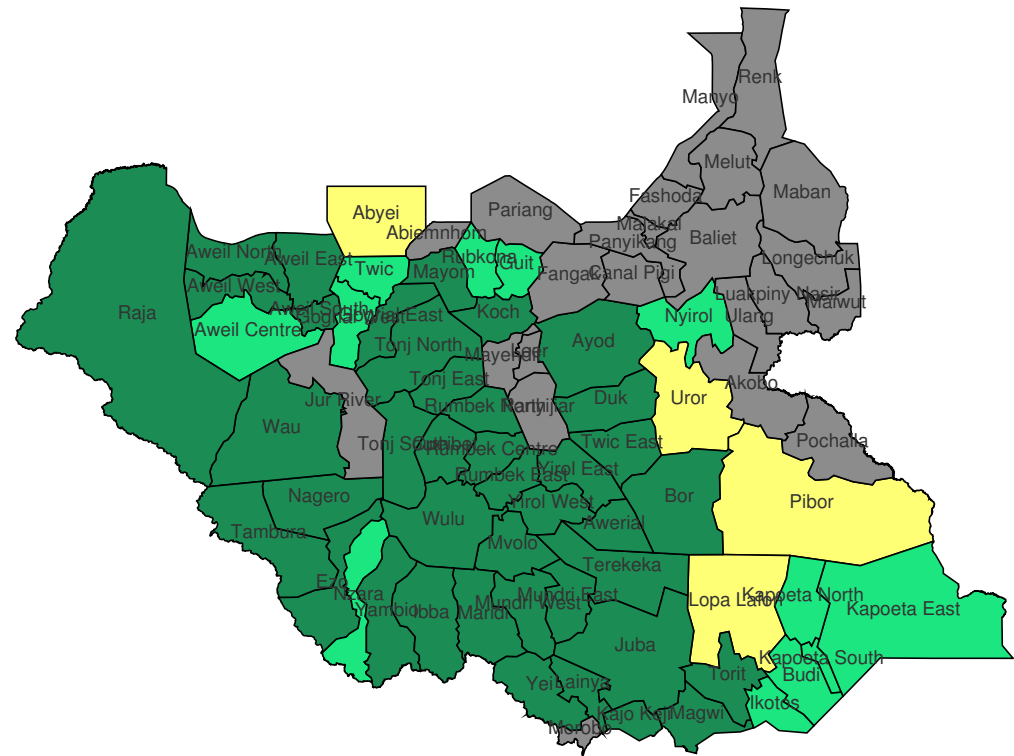


The graph shows completeness for weekly reporting at county level. The national average currently stands at 65%.

Map 1a | Map of IDSR completeness by county (W4 2018)



Map 1b | Map of IDSR completeness by county (2018)



- Counties that submitted IDSR reports in W4 are shown in green in map 1a
- Counties that did not submit IDSR reports in W4 are shown in grey in map 1a

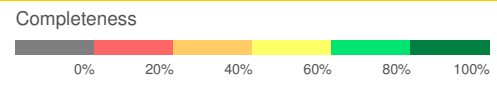
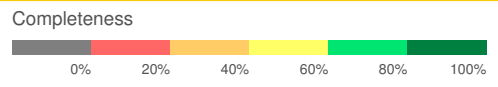


Table 4 | EWARS surveillance performance indicators by partner (W4 2018)

| Partner | Performance | | Reporting (W4 2018) | | Reporting (Cumulative 2018) | |
|--------------|-------------|--------------------|---------------------|------------|-----------------------------|------------|
| | # sites | # reports received | Completeness | Timeliness | Completeness | Timeliness |
| CMD | 2 | 2 | 100% | 100% | 100% | 100% |
| GOAL | 2 | 2 | 100% | 100% | 50% | 50% |
| HLSS | 1 | 1 | 100% | 100% | 100% | 100% |
| IMA | 4 | 3 | 75% | 75% | 88% | 56% |
| IMC | 8 | 5 | 63% | 63% | 69% | 69% |
| IOM | 7 | 7 | 100% | 100% | 100% | 100% |
| IRC | 1 | 1 | 100% | 100% | 100% | 100% |
| Medair | 2 | 2 | 100% | 100% | 100% | 100% |
| MSF-E | 2 | 1 | 50% | 50% | 75% | 75% |
| MSF-H | 1 | 1 | 100% | 100% | 100% | 75% |
| SMC | 3 | 3 | 100% | 100% | 100% | 92% |
| UNIDO | 1 | 1 | 100% | 100% | 100% | 100% |
| UNKEA | 2 | 0 | 0% | 0% | 25% | 25% |
| World Relief | 1 | 1 | 100% | 100% | 100% | 100% |
| Total | 39 | 30 | 77% | 77% | 79% | 75% |

Timeliness and completeness for EWARN/IDP reporting stands at 77% for week 4 while cumulatively, completeness and timeliness are 79% and 75% respectively for 2018

Table 7 | Alert performance indicators by Hub

| Hub | W4 | | Cumulative (2018) | |
|--------------------|----------|------------|-------------------|------------|
| | # alerts | % verif. | # alerts | % verif. |
| Aweil | 0 | 0% | 10 | 50% |
| Bentiu | 0 | 0% | 1 | 0% |
| Bor | 1 | 100% | 7 | 29% |
| Juba | 0 | 0% | 8 | 38% |
| Kwajok | 0 | 0% | 7 | 100% |
| Malakal | 0 | 0% | 4 | 0% |
| Rumbek | 0 | 0% | 9 | 11% |
| Torit | 2 | 0% | 7 | 29% |
| Wau | 0 | 0% | 4 | 0% |
| Yambio | 2 | | 13 | 15% |
| South Sudan | 5 | 20% | 70 | 31% |

Table 8 Summary of key alert indicators

| W4 | Cumulative (2018) | |
|------------|-------------------|------------------------|
| 5 | 70 | Total alerts raised |
| 20% | 31% | % verified |
| 0% | 0% | % auto-discarded |
| 0% | 0% | % risk assessed |
| 0% | 0% | % requiring a response |

A total of 5 alerts were reported in week 4 [majority reported from Torit and Yambio hubs]. Only 20% of the alerts reported in week 4 were verified; 0 were risk assessed and 0 required a response.

Table 9 | Alert performance indicators by event

| Event | W4 | | Cumulative (2018) | |
|-------------------------------------|----------|----------|-------------------|----------|
| | # alerts | % verif. | # alerts | % verif. |
| Indicator-based surveillance | | | | |
| Malaria | 0 | 0% | 8 | 50% |
| AWD | 2 | 50% | 97 | 31% |
| Bloody Diarr. | 1 | 0% | 22 | 38% |
| Measles | 1 | 0% | 14 | 50% |
| Meningitis | 0 | 0% | 0 | 0% |
| Cholera | 0 | 0% | 0 | 0% |
| Yellow Fever | 0 | 0% | 1 | 0% |
| Guinea Worm | 0 | 0% | 2 | 0% |
| AFP | 0 | 0% | 35 | 50% |
| VHF | 0 | 0% | 0 | 0% |
| Neo. tetanus | 0 | 0% | 0 | 0% |
| Event-based surveillance | | | | |
| EBS total | 1 | 0% | 5 | 20% |

Table 10 | Event risk assessment

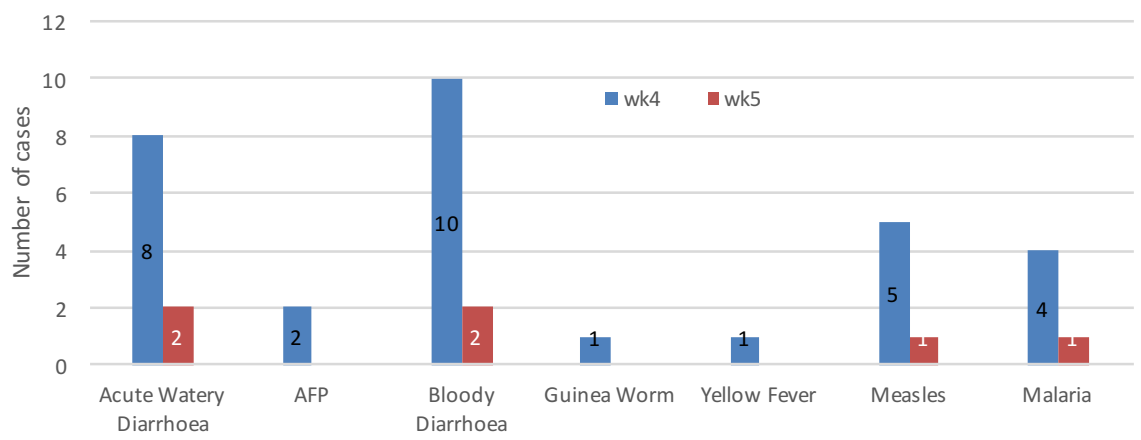
| W4 | Cumulative (2018) | |
|----|-------------------|----------------|
| 0 | 0 | Low risk |
| 0 | 0 | Medium risk |
| 0 | 0 | High risk |
| 0 | 0 | Very high risk |

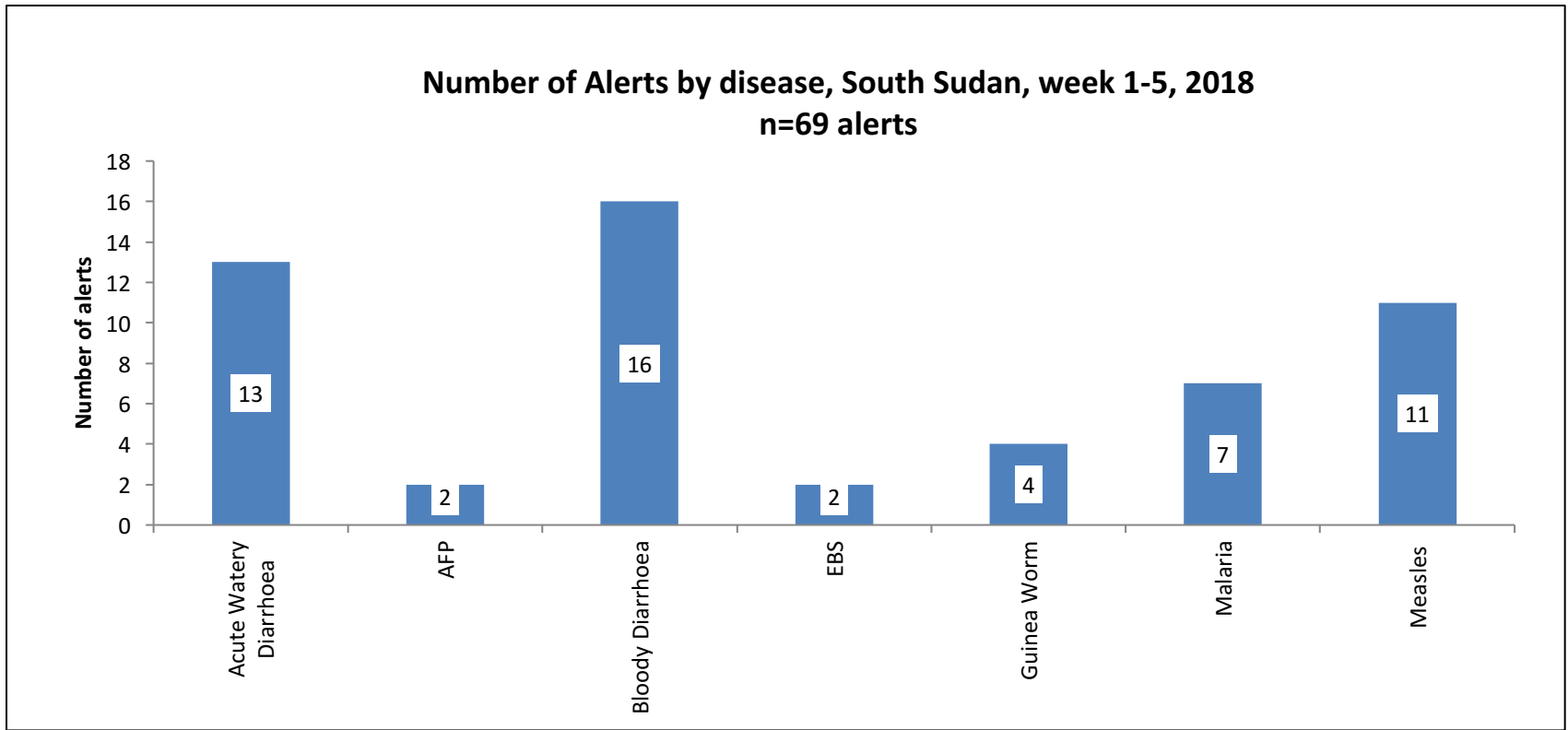
- During the week, acute bloody diarrhoea and acute watery diarrhoea were the most frequent infectious hazards reported.

| County | Acute Watery Diarrhoea | Bloody Diarrhoea | Measles | Malaria | Total Alerts |
|---------------------|------------------------|------------------|----------|----------|--------------|
| Bor | 1 | | | | 1 |
| Tambura | 1 | 1 | | | 2 |
| Torit | | | 1 | | 1 |
| Twic East | | 1 | | 1 | 2 |
| Total Alerts | 2 | 2 | 1 | 1 | 6 |

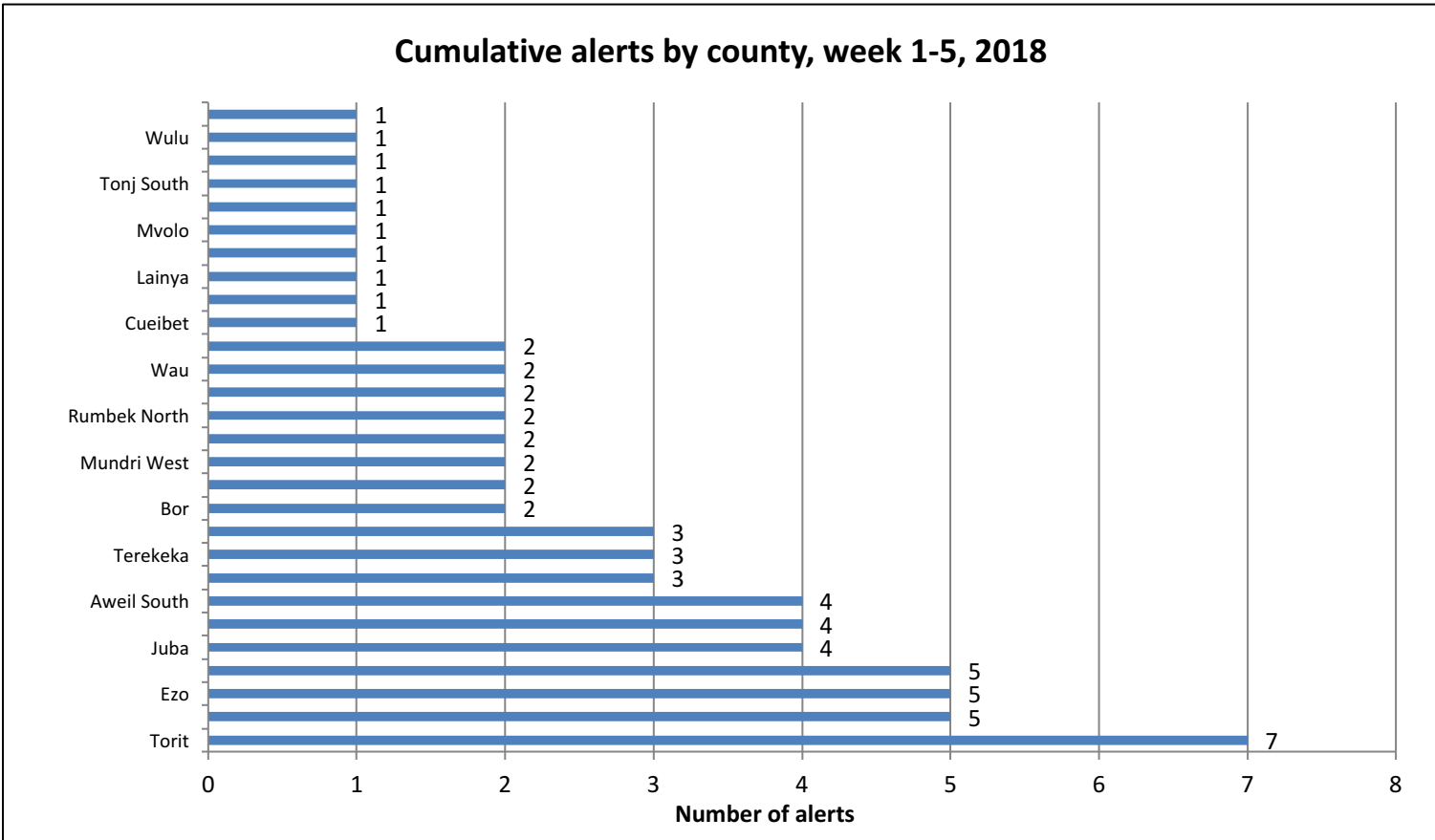
- During week 5, a total of 6 alerts were triggered
- Bloody diarrhoea; acute watery diarrhoea; were the most frequent infectious hazards reported in the week.
- During the week, two suspect measles cases were reported from Rubkuai, Mayendit with one testing positive for measles IgM.
- Following further active case search in Kiyala payam, Torit, five samples were collected and sent to Juba during the week. All the samples tested negative for measles and rubella IgM.
- Measles has been confirmed in Aweil Center after two more samples tested measles IgM positive thus making a total of three measles IgM positive samples in the last four weeks.

Alerts by hazard in week 4 and week 5, 2018





- The Figure shows the cumulative number of alerts triggered in 2018 by hazard and location.
- Since the beginning of 2018, most alerts are due to Bloody diarrhoea, measles, and acute watery diarrhoea
- A special investigation into the bloody diarrhoea cases is planned (protocol and case form finalized).



- The Figures show the cumulative alerts triggered in 2018 by location
- Most alerts have been reported from Torit, Ezo, and Juba.

| County | OUTCOME | RISK_ASSESS | VERIFICATION | Total Alerts |
|------------------------|----------|-------------|--------------|--------------|
| Acute Watery Diarrhoea | | | 17 | 17 |
| AFP | | | 2 | 2 |
| Bloody Diarrhoea | | | 22 | 22 |
| EBS | | | 2 | 2 |
| Guinea Worm | 1 | | 3 | 4 |
| Malaria | | | 8 | 8 |
| Measles | | 2 | 11 | 13 |
| Yellow Fever | | | 1 | 1 |
| Total Alerts | 1 | 2 | 66 | 69 |

- The Figures show the cumulative alerts by risk assessment state in 2018
- Of the 69 alerts reported in 2018; a total of 66 alerts are at verification stage; and the rest are at risk assessment stage (3 alerts); one at outcome stage.

| Aetiologic agent | Location (county) | Date first reported | New cases since last bulletin | Cumulative cases to date (attack rate %) | Interventions | | | |
|--|-------------------|---------------------|-------------------------------|--|-----------------|-------------|------------------|------|
| | | | | | Case management | Vaccination | Health promotion | WASH |
| New epidemics: one (1) new epidemic | | | | | | | | |
| Measles | Aweil Center | 6/Jan/2018 | 2 | 10 (0.0095) | Yes | No | Yes | N/A |
| Ongoing epidemics: | | | | | | | | |
| RVF | Yirol East | 28/12/2017 | 6 | 20 (0.02) | Yes | N/A | Yes | N/A |
| Measles | Cueibet | 14/10/2017 | 0 | 20 (0.012) | Yes | Yes | Yes | N/A |
| Measles | Panyijiar | 2/07/2016 | 0 | 324 (0.47) | Yes | Yes | Yes | N/A |
| Cholera | 27 counties | 18/06/2016 | 0 | 20,438 (0.49) | Yes | Yes | Yes | Yes |

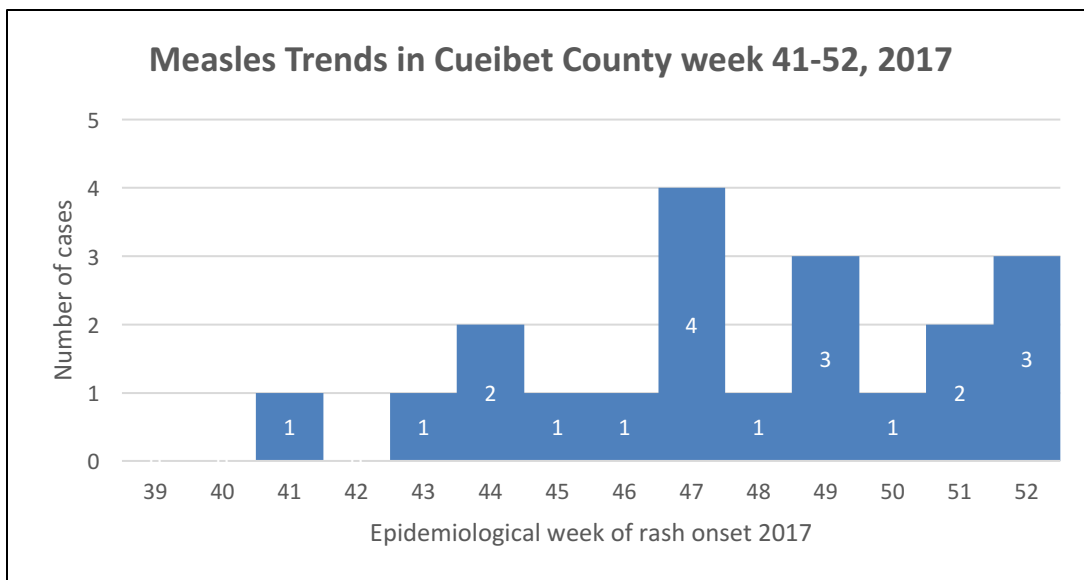
Epidemics - Update (RVF, Yirol East)

A Rift Valley Fever (RVF) outbreak reported in Thonabutkok village, Yali Payam, Yirol East county with the initial case dating back to 7 December 2017.

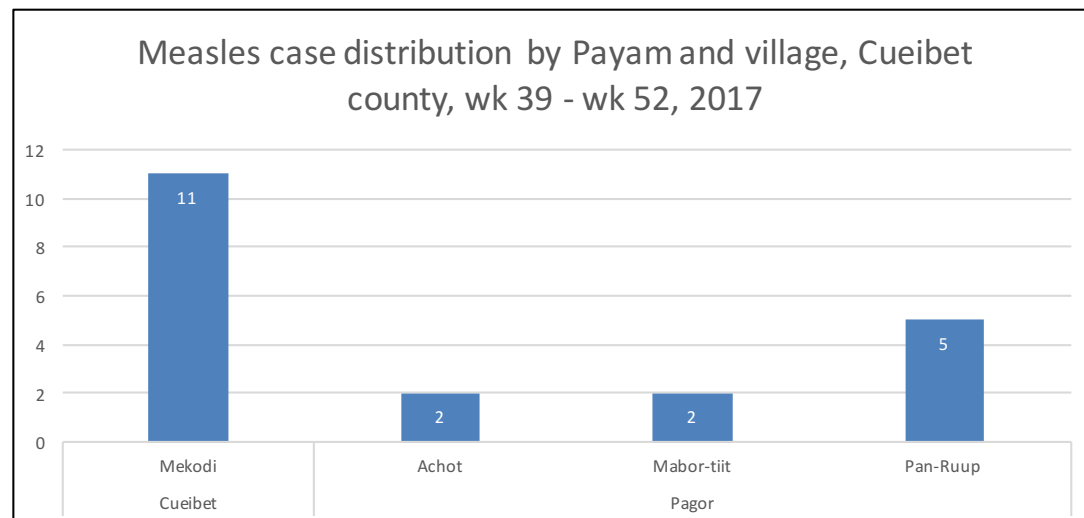
As of 2 February 2018, a total of **26 suspect RVF human cases** have been reported in Eastern Lakes State. Out of the 20 suspect human cases reported since 7 December 2017, **three human cases have been confirmed, three died** and were classified as **probable cases** with epidemiological linkage to the three confirmed cases, **four were classified as none-cases** following negative laboratory results for RVF, and **laboratory testing is pending** for the other **16 suspect cases**.

At the moment - field investigation (human, animal, entomological) are ongoing; supportive care to suspect cases; and social mobilisation and risk communication. Discussions on a joint Ministry of Health and Ministry of Livestock and Fisheries outbreak declaration are ongoing at the highest levels of Government (details in situation report).

Ongoing epidemics - Epidemic description - Measles in Cueibet county

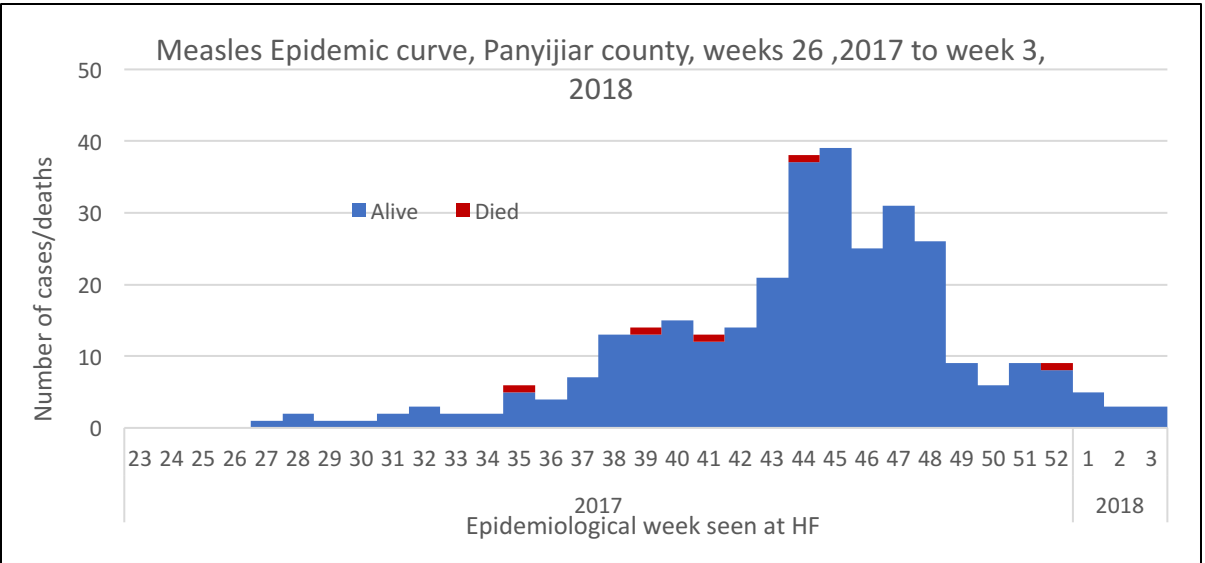


| Age (years) | Female (n) | Male (n) | Total cases | Percentage | Cum.% |
|--------------------|------------|-----------|-------------|-------------|-------|
| <1yr | 1 | 3 | 4 | 20% | 20% |
| 1-4yrs | 5 | 4 | 9 | 45% | 65% |
| 5-14yrs | 2 | 3 | 5 | 25% | 90% |
| 15+yrs | 2 | 0 | 2 | 10% | 100% |
| Grand Total | 10 | 10 | 20 | 100% | |

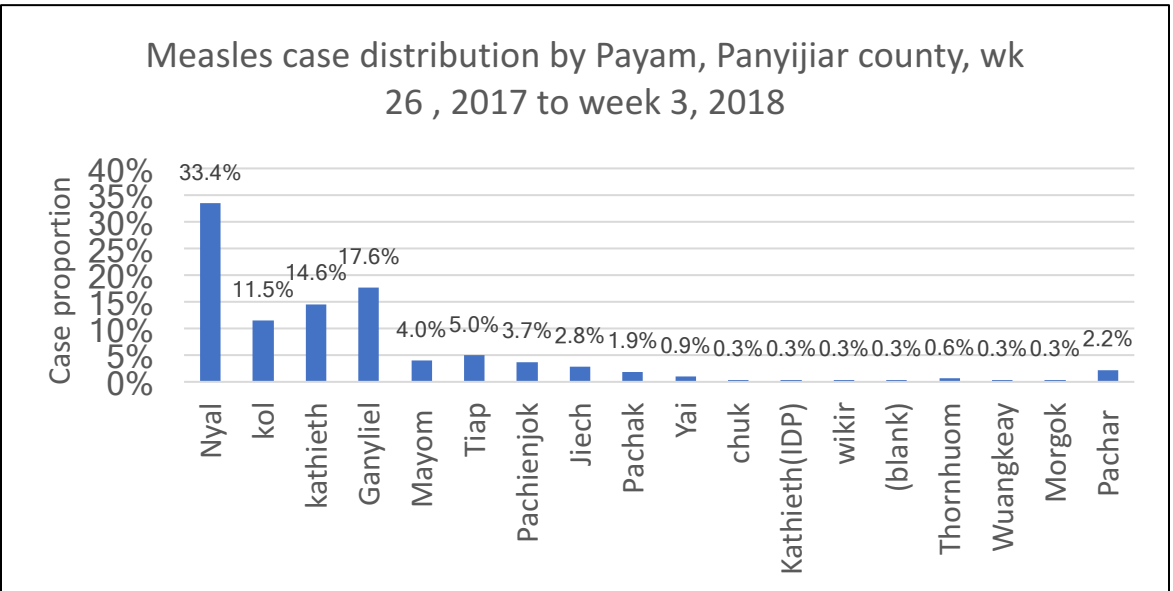


- A reactive measles vaccination campaign is underway in Cueibet with the CHD leading the response supported by CUAAM and with funding support from HPF.
- The measles outbreak in Cueibet was confirmed in week 50 of 2017 with 3 measles IgM positive cases.
- At least 20 cases including one community death (CFR 5%) line listed since week 41 of 2017.
- Most cases reported from Pagor PHCU and Cueibet hospital
- 13 (65%) are <5 years of age
- Two payams affected - Cueibet and Pagor
- Most affected villages are Mekodi and Pan-ruup

Ongoing epidemics - Epidemic description - Measles in Panyijiar county



| Age (years) | Female (n) | Male (n) | Total cases | Percentage | Cum. % |
|--------------------|------------|------------|-------------|---------------|--------|
| <1yr | 46 | 36 | 82 | 25.5% | 25.5% |
| 1-4yrs | 89 | 81 | 170 | 53.0% | 78.5% |
| 5-14yrs | 18 | 18 | 36 | 11.2% | 89.7% |
| 15+yrs | 21 | 12 | 33 | 10.3% | 100.0% |
| Total cases | 174 | 147 | 321 | 100.0% | |



- Measles test results released on 31 January 2018 showed four (4) measles IgM positive cases. This is evidence that active transmission is still ongoing despite the reactive campaign of December 2017.
- It is therefore recommended that vaccination is conducted in areas that were not reached during the campaign due to flooding or insecurity
- Enhanced routine EPI is critical for all the health facilities in the county
- Plans for follow up measles campaigns in Leer and Mayendit are underway. The campaigns will be supported by WHO, Unicef, MSF-H, MedAir, and UNIDO.

Ongoing epidemics - Epidemic description - Cholera in South Sudan

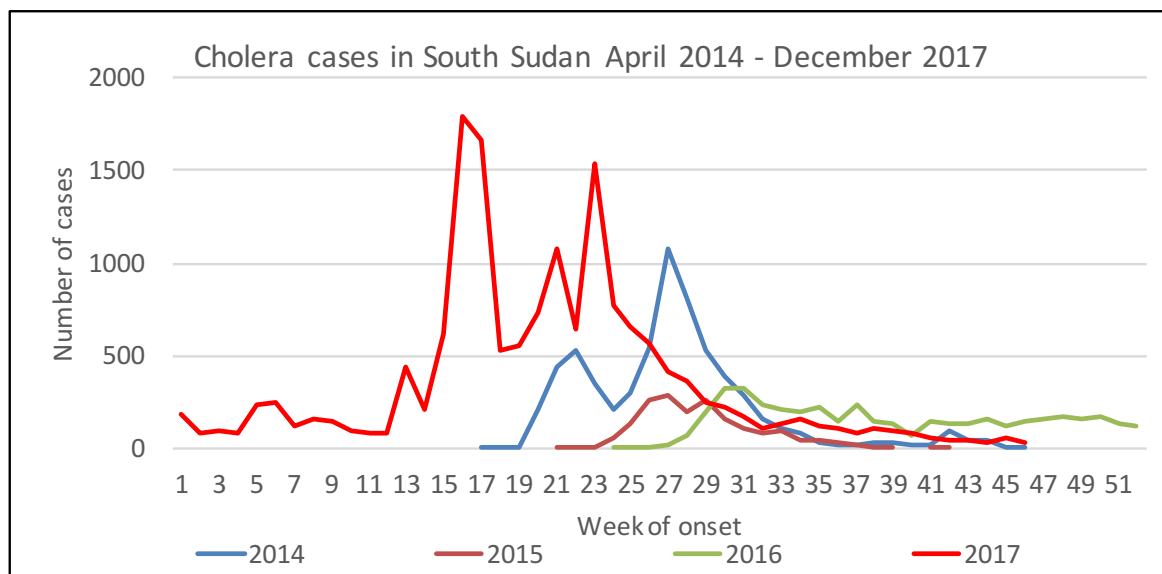


TABLE 2 | Cholera Outbreaks in South Sudan 2014-2017

| Summary measure | 2014 | 2015 | 2016/17 |
|--------------------------|------------|------------|--------------|
| No. cases | 6,421 | 1,818 | 20,438 |
| No. deaths | 167 | 47 | 436 |
| CFR% | 2.60% | 2.59% | 2.13% |
| No. counties affected | 16 | 3 | 27 |
| Duration (weeks) | 29 | 19 | (85) Ongoing |
| Outbreak start date | 24/04/2016 | 18/05/2016 | 18/06/2016 |
| Date of last case | 13/11/2016 | 24/09/2016 | Ongoing |
| Attack rate [per 10,000] | 27 | 17 | 49.38 |

- No transmission in any of the 24 counties where cholera was confirmed in 2017
- Most recent cases reported in week 50 2017 in Juba and week 47 2017 in Budi
- Active AWD/cholera surveillance initiated to support end-of-cholera outbreak declaration especially in the Juba and other counties with AWD alerts
- During the week, a suspect cholera case was admitted in Juba Teaching Hospital from Lurit (Juba). The RDT was positive for cholera but culture testing showed no growth (negative for cholera)
- Preparations are underway for the end of outbreak declaration by Government - Ministry of Health.

| Date of report | Disease suspected | Number cases (deaths) | County | Payam | Status of investigations |
|----------------|-------------------------------|-----------------------|----------|------------------|--|
| 5Feb18 | Anthrax | 02 | Mayom | | In Abyei, two suspected cases of subcutaneous and inhalation anthrax in human were referred to MSF Agok Hospital from Mayom County, former Unity state for medical care. MSF-CH contacted to provide an update on the two cases. |
| 5Feb18 | Animal deaths (susp. Anthrax) | Two cows died | Abyei | Majbuong village | Two cows died 2 nd to 3 rd Jan 2018 after a hemorrhagic illness. No human cases have been reported after RRT verification mission. FAO/Min. of Livestock conducted preventive livestock vaccination in the affected and surrounding villages from 29 Jan 2018 targeting 100,000 Herd of cattle and 10,000 goats and sheep against Animal Anthrax, Hemorrhagic Septicemia, and Blackwater diseases. |
| 30Jan18 | cholera | 01 | Juba | Lurit | One suspect case in Juba Teaching Hospital (JTH) was RDT positive for cholera but culture testing revealed no growth (negative for cholera) |
| 25Jan18 | Rabies | 28(2) | Rubkona | Bentiu PoC | At least 28 animal bite (suspect rabies) cases including 2 deaths reported by MSF since last month. There is need to mobilize human antirabies vaccine for post-exposure prophylaxis; consultations ongoing to find solution for stray dogs in the PoC. |
| 19Jan18 | measles | 01 | Mayendit | Rubkuai | One suspect measles cases from Rubkuai in Mayendit tested measles IgM positive. Plans underway for a measles follow up campaign in Leer and Mayendit. Surveillance for suspect cases is also ongoing. |

| Date of report | Disease suspected | Number cases (deaths) | County | Payam | Status of investigations |
|----------------|-------------------|-----------------------|---|--|---|
| 30Jan18 | Pertussis | 57(02) | Aweil Center; Aweil South; Aweil East | Awulic, Bar Mayen, Nyoc, Yargot, | Cases reported from four payams in three counties; investigations showed case presentation consistent with pertussis. Partners meeting to be convened on 5 Feb 2018 to organize a response (including case investigation; treatment of cases and contacts with antibiotics; and implementing accelerated routine (EPI) vaccination in affected areas. |
| 15Jan18 | Pertussis | 21(0) | Yirol East | Nyang | RRT investigations established all the affected were not vaccinated. Follow up mission underway to mobilize community for accelerated routine vaccination; line list and provide treatment for cases and their contacts |
| 14Jan18 | cholera | 5(01) | Torit | Gunyoro | Five AWD cases including one death reported in Gunyoro (12km from Torit). ICRC verification mission to the area on 19 Jan 2018 showed no evidence of a cholera outbreak |
| 6Jan18 | measles | 8(1) | Aweil Center | Nyalath; Hai Salam; Bar Mayen | Three cases investigated by ARC with one being confirmed as measles IgM positive on 19Jan18. During the week, two more samples tested measles IgM positive thus confirming a measles outbreak in the county. |
| 2Jan18 | measles | 17(0) | Torit | Kiyala payam, ogurony village | RRT investigated event on 4 Jan18. Of the five samples collected; two were measles IgM positive; one was rubella IgM positive. During the week, five more samples were collected and tested negative for measles and rubella IgM. |

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Notes

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The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

