South Sudan

Integrated Disease surveillance and response (IDSR)

Epidemiological Bulletin Week 36, 2021 (September 06-September 12)
Major epidemiological highlights in week 36 of 2021

- Hepatitis E virus case surge reported in Bentiu IDP settlement since week 36, 2021, total of 1,147 cases with 9 deaths (CFR 0.09%)

- Hemorrhagic Fever Outbreaks in West Africa (Marburg in Guinea & Ebola Virus Disease in Cote d’Ivoire)

- In week 36, IDSR reporting timeliness was 84% and completeness was 90% while timeliness was 81% and completeness 90% for EWARN sites.

- Of the 120 alerts in week 36; 61% were verified with malaria (34), measles (2), AWD (28), ARI (11) and ABD (17) were the most frequent alerts.

- Malaria remains the top cause of morbidity and accounted for 96,885 cases (65.9% of OPD cases).

- Of the 3,127 COVID-19 alerts detected, 2,916 (95.9%) have been verified with 11,650 confirmed cases and 120 deaths (CFR of 1.03%).

- Other hazards include floods (unseasonal) in over 11 counties
SURVEILLANCE PERFORMANCE

For the Integrated Disease Surveillance (IDSR) network and Early warning alert and response network (EWARN)
## IDSR timeliness performance at State level for week 36 & 35 of 2021

<table>
<thead>
<tr>
<th>Completeness States Ranking</th>
<th>States</th>
<th>Number of reporting sites</th>
<th>No. of HFs Reported on Time in WK 36</th>
<th>Timeliness Percentage of WK 36</th>
<th>No. of HFs Reported on Time in WK 35</th>
<th>Timeliness Percentage of WK 35</th>
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<td>114</td>
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<td>94</td>
<td>82%</td>
</tr>
<tr>
<td>6th</td>
<td>Warrap</td>
<td>134</td>
<td>111</td>
<td>83%</td>
<td>108</td>
<td>81%</td>
</tr>
<tr>
<td>7th</td>
<td>EES</td>
<td>143</td>
<td>113</td>
<td>79%</td>
<td>95</td>
<td>66%</td>
</tr>
<tr>
<td>8th</td>
<td>Lakes</td>
<td>113</td>
<td>88</td>
<td>78%</td>
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<td>82%</td>
</tr>
<tr>
<td>9th</td>
<td>Unity</td>
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<td>63</td>
<td>58%</td>
</tr>
<tr>
<td>South Sudan</td>
<td></td>
<td>1220</td>
<td>1008</td>
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<td>975</td>
<td>80%</td>
</tr>
</tbody>
</table>

### Key

- **<60%**: Poor
- **61%-79%**: Fair
- **80%-99%**: Good
- **100%**: Excellent

The timeliness of IDSR reporting (supported by EWARS mobile) at health facility level in week 36, 2021 was **83%** compared to **80%** in week 35, 2021. Only 6 states were above the target of **80%**.

**Reporting challenges**: Insecurity, internet access and new partners.
The completeness of IDSR reporting (supported by EWARS mobile) at health facility level was 92% in week 36 and 93% in week 31, 2021. 9 states were above the target of 80%.

<table>
<thead>
<tr>
<th>Completeness States Ranking</th>
<th>States</th>
<th>Number of reporting sites</th>
<th>No. of HFs Reported regardless of time in WK 36</th>
<th>Completeness Percentage of WK 36</th>
<th>No. of HFs Reported regardless of time in WK 35</th>
<th>Completeness Percentage of WK 35</th>
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<tr>
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<td>Lakes</td>
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<td>113</td>
<td>100%</td>
<td>113</td>
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</tr>
<tr>
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<td>97%</td>
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<td>EES</td>
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</tr>
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<td>Jonglei</td>
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<td>90%</td>
</tr>
<tr>
<td>8th</td>
<td>CES</td>
<td>117</td>
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<td>109</td>
<td>93%</td>
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<td>Warrap</td>
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<td>112</td>
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<td>92%</td>
<td>1137</td>
<td>93%</td>
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**KEY**

- <60% Poor
- 61%-79% Fair
- 80%-99% Good
- 100% Excellent
Surveillance: EWARS timeliness performance indicator by partner for week 36 and 35 of 2021

<table>
<thead>
<tr>
<th>Partner</th>
<th>HF</th>
<th># of reports received on Time in Week 36</th>
<th>Timeliness of Week 36</th>
<th># of reports received on Time in Week 35</th>
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</tr>
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</tr>
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</tr>
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<td>4</td>
<td>67%</td>
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<tr>
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<tr>
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<tr>
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<td>23</td>
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<tr>
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<td>84</td>
<td>57</td>
<td>68%</td>
<td>77</td>
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Timeliness for EWARS partners supported sites were at 68% in week 36, 2021 compared to 92% at week 35, 2021
Surveillance: EWARS completeness performance indicator by partner for week 36 and 35 of 2021

<table>
<thead>
<tr>
<th>Partner</th>
<th>HFs</th>
<th>Number of reporting sites</th>
<th>Reporting</th>
<th>Performance</th>
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<td></td>
<td># of reports received regardless of Time in Week 36</td>
<td>Completeness of Week 36</td>
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<td>ALIMA</td>
<td>3</td>
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<td>100%</td>
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<tr>
<td>CMD</td>
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<td></td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>IHO</td>
<td>2</td>
<td></td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>IRC</td>
<td>1</td>
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<td>100%</td>
</tr>
<tr>
<td>SSHCO</td>
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<td>100%</td>
</tr>
<tr>
<td>TADO</td>
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<tr>
<td>TRI-SS</td>
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</tr>
<tr>
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<td>100%</td>
</tr>
<tr>
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<td>100%</td>
</tr>
<tr>
<td>UNH</td>
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<td>10</td>
<td>100%</td>
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<tr>
<td>World Relief</td>
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<td>100%</td>
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<tr>
<td>UNIDOR</td>
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<td>2</td>
<td>100%</td>
</tr>
<tr>
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<tr>
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<td>90%</td>
</tr>
<tr>
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<td>6</td>
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<td>4</td>
<td>67%</td>
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<tr>
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<td>67%</td>
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<tr>
<td>MSF-H</td>
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<td>57%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
<td></td>
<td>76</td>
<td>90%</td>
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Completeness for EWARS partners supported sites was at 90% in week 36, 2021 compared to 94% at week 35, 2021
EVENT-BASED SURVEILLANCE

Alert management including detection; reporting; verification; risk assessment; & risk characterization
### Alert by disease and hubs in week 36 of 2021 [ a total of 87 events specific alerts generated by state ]

<table>
<thead>
<tr>
<th>State</th>
<th>Acute Jaundice syndrome</th>
<th>Acute Respiratory Infections (ARI)</th>
<th>Acute Watery Diarrhoea</th>
<th>AFP</th>
<th>Bloody Diarrhoea</th>
<th>Malaria</th>
<th>Guinea Worm</th>
<th>EBS</th>
<th>Covid-19</th>
<th>Total alerts</th>
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<tbody>
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<td>CES</td>
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<td>3</td>
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<td></td>
<td></td>
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</tr>
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<tr>
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<td></td>
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<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Warrap</td>
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<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>WBGZ</td>
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<td>24</td>
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<td>13</td>
<td>28</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>87</td>
</tr>
</tbody>
</table>

### During this week:

- **10 ARI alert:** 2 from CES, 2 from Jonglei State, 1 from Unity State, 2 from Upper Nile State, 3 from WES
- **24 AWD alert:** 3 from CES, 3 from EES, treated for diarrhea, 2 from Jonglei State, 1 from Unity State 5 from Upper Nile State, 4 from Warrap State, 3 from WBGZ, 3 from WES.
- **13 ABD alert:** 1 from CES, 3 from EES, 3 from Jonglei patients given treatment, 2 from Unity investigation under way, 1 from Upper Nile, and 3 from WES.
- **28 Malaria alerts:** 1 from EES, 3 from Jonglei State, 1 from Unity State, 1 from Upper Nile State, 2 from WBGZ State, 20 from WES, all these are due to the high increase of malaria cases in the Country.
- **8 COVID-19 alert:** 1 from Jonglei, 2 from Unity State, 1 from Warrap State and 4 from WES
- **1 EBS alert:** from EES, Ikotos County, in the villages of Lofayo, Ngutume and Kekerek in Ikoto Payam and reported to Ikotos PHCC by the chief of those villages about animals dying every day in their areas presenting with blood coming out from the mouth and also running nose.
- **1 AJS alert:** 1 from Unity State in Rubkona County, Bentiu PoC Hospital
- **1 Guinea Worm alert:** from Upper Nile State, Fashoda County and Bol PHCU
- **1 AFP alert:** from Jonglei State, Bor County in Werkok PHCC
Alert: Map of key disease alerts by county of week 36 of 2021

Map 2a | Malaria (W36 2021)
Map 2b | Bloody diarrhoea (W36 2021)
Map 2c | Measles (W36 2021)
Map 2d | Guinea Worm (W36 2021)
Map 2e | Event-based surveillance (W36 2021)

W36  | Cumulative (2021)
--- | ---
1   | 10  | Low risk
9   | 9   | Medium risk
0   | 53  | High risk
0   | 149 | Very high risk

77% | 89% | % verified
0%  | 0%  | % auto-discarded
2%  | 4%  | % risk assessed
0%  | 3%  | % requiring a response
SUSPECTED OUTBREAKS

Major suspected outbreaks in South Sudan in 2020
As of 28th April 2021, a total of 166 samples were collected from three sentinel sites in Juba with 156 samples testing negative for influenza; one (1) positive for COVID-19; and six (8) positive for influenza B (with four (4) sub-typed as Victoria while the other two (2) are pending sub-typing).

There are currently 13 Covid-19 designated sentinel surveillance sites in Juba and States Hospitals that are collecting epidemiological data and samples from Covid-19/ILI/SARI cases. A total of 7757 samples have been collected in 2021 with 550 (7.0%) being positive for COVID-19 from sentinel sites.
ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

Brief epidemiological description and public health response for active outbreaks and public health events.
- An estimated 90,000 people have been affected across 11 counties (Ayod, Fangak, Renk, Guit, Gogrial West, Aweil South, Mayendit, Koch, Nhaildu-Rubkona and Malakal from Fangak).
- A high-level humanitarian and government mission visited Ayod and Canal Counties on 4 August 2021 to witness the impact of the flooding in the counties.
- The heavy rains have damaged homes and agricultural fields forced families and their livestock to move to higher grounds and limited access to health and other essential services.
- The humanitarian community is responding by conducting assessments to outline the needs and damages, prepositioning of supplies, construction of dykes and acquiring alternative transport means in affected locations.
- In Greater Pibor Administrative Area, an early warning and disaster management committee was formed as part of the flood contingency plan.
- The Inter-cluster coordination group is currently finalizing an intersectoral response strategy that will guide the response measures of various clusters and stakeholders.
- There is a need for funding to support responding partners to institute ensure timely and life-saving interventions.
• Food insecurity remains a major concern in South Sudan where **7.2 million** people are projected to face high levels of acute (**IPC Phase 3+**) food insecurity during April-July 2021 as per the Integrated Food Security Phase Classification (IPC) report released in December 2020.

• In the six most affected counties (**Pibor, Akobo, Aweil South, Tonj North, Tonj South and Tonj East**), some **820 000** people were projected to face a crisis or worse levels of food insecurity while over **108 000** people were projected to be in **IPC Phase 5** catastrophe during the lean season.

• The humanitarian community and government has been responding in the affected counties since December 2020 through scaling up of access to life-saving food security and livelihood, health and nutrition, protection and WASH services and assistance.

• WHO and Health Cluster partners aim at reducing preventable mortality and morbidity by scaling up access to basic health and nutrition services, enhancing capacities of disease surveillance, prevention, detection and response to infectious disease outbreaks, and building resilience of the health system.
• Frequent sub-national violence, attacks on humanitarian workers and properties, inadequate funding for essential supplies and weak health systems have continued to impede humanitarian operations in the priority locations.

• A 13% reduction in food prices was reported in July 2021 as compared to the previous two months.
Ongoing Response Activities:

- Partners provided primary health and nutrition through static and mobile health facilities. The emergency health partners funded by different donors are supporting to reach locations without functional health facilities. Since the beginning of 2021, 363,143 consultations have been conducted in the six priority counties as at end of week 30.

- WHO supported emergency partners operating in the six priority counties with the essential emergency supplies as the core pipeline manager, 249 interagency health kits (can support 249,000 people for three months), 106 pneumonia kits, 20 severe acute malnutrition with medical complication (SAM/MC) kits, and 45 cholera investigation kits to the responding partners in the priority counties.

- WHO supported the state ministries to capacity build 42 health workers on management of severe acute malnutrition with medical complications in Tonj North, Tonj East and Tonj South counties; Total of 116 (31 in Pibor, 45 in Akobo East, 40 in Aweil South) health workers and rapid response teams to strengthen the Integrated Disease Surveillance and Response (IDSR); Supported training of 40 participants on community-based surveillance in Aweil South. Further, a refresher training was conducted for 78 community surveillance focal points in Pibor and Akobo East Counties.
## Ongoing epidemics

<table>
<thead>
<tr>
<th>Aetiological agent</th>
<th>Location (county)</th>
<th>Date first reported</th>
<th>New cases since last bulletin</th>
<th>Cumulative cases to date (attack rate %)</th>
<th>Interventions</th>
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**Descriptive epidemiology**

- The persistent transmission of HEV in Bentiu IDP camp continues with **1,147** cases since beginning of 2019
- There were **23** new cases reported in week 37, 2021
- All the cases were managed as outpatient cases except for seven cases who were admitted
- 9 deaths reported in 2019, 2020 and 2021
- 48% are female and 52% are male.
- Age group less than 15 years had the most cases with (62%) cases.
- There is risk of adverse outcomes women are infected in their last trimester
- Use of unsafe drinking water is likely to be source of infection
- Up to week 37, 2021; a cumulative of 1,086 cases of HEV in Bentiu IDP camp including 9 deaths (CFR 0.07%)
- There is an upsurge of HEV cases since the beginning of 2021. The upsurge is attributed to declining WASH in the IDP camp as the daily workers and hygiene promoters have not been working for months now amidst reduced funding for WASH activities in IDP camp.
Ongoing Response

- The HEV taskforce has been activated to implement comprehensive HEV control interventions to interrupt transmission.
- HEV strategy has been developed to guide implementation and mobilization of resources to support the response.
- Deployment of WASH partners to initiate emergency WASH interventions including;
  - Hygiene promotion; water quality surveillance; solid waste management etc.
- Microplanning underway to import and deploy HEV vaccines targeting 57,000 individuals aged 16-40 years with two doses of HEV vaccine this year. Third dose to follow in the second quarter of 2022.
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COVID-19 Updates
COVID-19 Virus Situation Summary

Situation update as of 12th September 2021

- **Globally**, 12th September, there have been **224,180,411 confirmed cases** of COVID-19, including **4,621,205 deaths**, reported to WHO. As of **20 August 2021**, a total of **4,562,256,778 vaccine doses** have been administered.

- **In Africa**, as of 12th September 2021, there have been **5,813,020 confirmed cases** of COVID-19, including **140,010 deaths** reported to WHO.

WHO: [https://www.who.int/health-topics/coronavirus](https://www.who.int/health-topics/coronavirus)
One hundred and twenty-four new cases were identified in Week 36, bringing the cumulative number of confirmed cases to 11650, including 414 imported cases mainly from South Sudanese returnees (242), Uganda (53), and Kenya (19).

At the end of Week 36, 35 (43.8%) of the 80 counties in the country have a confirmed case [Figure 1]. There was no county with a first confirmed case this week.

This week showed an 8.8% decrease in the number of reported cases compared to Week 35. This is first recorded decrease after five consecutive weeks of recorded increase in new cases.

Average positivity yields increased for five consecutive epi weeks, before falling to 2.4% this week.

Thirty alerts tested positive for COVID-19 this week. Cumulatively, 3127 alerts have been reported, of which 2999 (95.9%) have been verified, and 2916 (97.2%) of the verified alerts were sampled.

Cumulatively, 17772 contacts have been listed and followed up since the first confirmed case was reported in April 2020, of which 15951 (89.8%) have completed follow-up.

Different SARS-CoV-2 lineages were detected in South Sudan. The first variant of interest (VOI) detected in the South Sudan samples is the A.23.1 lineage followed by lineages B.1.525; B.1.35; B.1.1.7 and lastly lineage B.1.617.2.

South Sudan has exhausted its first batch of vaccines from the COVAX facility in Week 28. The second batch is expected in late-August. So far, South Sudan has vaccinated 57096 people, of whom 4763 are fully vaccinated and 52313 have received one dose.
COVID-19 Response in South Sudan

COVID-19 Cases per County

COVID-19 Case Summary
Cumulative Cases: 11650
Recovered Cases: 11195
Imported - South Sudanese: 242
Imported - Unknown: 100
Total Imported Cases: 414

Legend
COVID-19 Cases
Week 36 - 2021

- 0
- 1 - 25
- 26 - 50
- 51 - 100
- >100

Figure 1. Map of cumulative reported COVID-19 cases, by county
Hemorrhagic Fever Outbreaks in West Africa

(Guinea & Cote d’Ivoire)
On August 3, 2021, notification was received of a community death of a 46-year-old in Koundou Sub-prefecture of Gueckedou Préfecture.

On August 4, 2021 the deceased was confirmed as a case of Marburg Virus. To date, 173 contacts of the index Marburg case have been listed and 172 are under follow up.

The Marburg outbreak is in the same locality (Gueckedou Prefecture) where an outbreak of EVD has recently been contained after five months and declared over on 19 June 2021.

By 19th June 2021, 23 EVD cases (16 confirmed, seven probable) of EVD including 12 deaths were reported.
On August 14, 2021, the Ministry of Health, Public Hygiene and Universal Health Coverage was informed by the Institut Pasteur in Cote d’Ivoire, of a positive case of Ebola Virus Disease (EVD) in the commercial capital of Abidjan, after arriving from Guinea.

The index case is an 18-year-old girl of Guinean nationality who left Labé in Guinea for Abidjan by road. She arrived in Côte d’Ivoire on August 11, 2021 after a five-day journey, was admitted for care on August 12, 2021, with symptoms of fever.

2 cases (1 confirmed and 1 suspected; 0 deaths and 9 contacts listed)

This is so far being treated as an isolated and imported case however preliminary genetic sequencing indicates possible linkage to the 2014-2016 EVD outbreak in Guinea.
Overall Conclusions and Recommendations
The overall performance of IDSR and EWARN reporting sites in week 36, 2021 is above the target of 80% in both Timeliness and Completeness.

11,650 confirmed COVID-19 cases (case fatality rate of 1.03%) 120 deaths. Total 17,772 contacts identified, quarantined, & undergoing follow up as of week 36, 2021.

Given the COVID-19 pandemic, and the third pandemic wave that is currently underway in Africa, resurgence monitoring and response readiness is being enhanced for all the pillars including surveillance, laboratory, case management, infection prevention and control, border health, and community engagement to emphasize adherence to public health social measures including vaccination of health workers, high risk groups, and the general population.
Recommendations

• All partners should support CHDs & State Ministries of Health to undertake IDSR/EWARN reporting

• All health facilities should report, and conduct case-based investigation of suspect measles cases and routine measles immunization should be strengthened in all counties

• Strengthen capacities for COVID-19 resurgence monitoring and response readiness through identifying and testing suspect cases (including genomic sequencing), isolating and effective management of confirmed cases, contact tracing, community engagement, COVID-19 vaccination, and strengthening adherence to PHSMs.
Thanks to the State Surveillance Officers, County Surveillance Officers and Health Facility in-charges for sharing the weekly IDSR data

Thanks to all partners for supporting IDSR weekly reporting and sharing the line lists

To access the IDSR bulletins for 2020 use the link below:

https://www.afro.who.int/publications/south-sudan-weekly-disease-surveillance-bulletin-2020
### IDSR timeliness & completeness performance at county level for week 36 of 2021

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This bulletin is produced by the Ministry of Health with Technical support from WHO

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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