Republic of South Sudan
Measles Outbreak and Response Weekly Situation Update

### Issue number
15

### Issue Date
19 April 2024

### Epidemiological week
Week 15 (08 – 14 April, 2024)

### Suspected Measles Cases
**New (0) cases with date of onset in week 15**
Cumulative (14,344)

### Lab Confirmed Cases
**New (0) cases**
Cumulative (1,148)

### Deaths
New (0)
Cumulative (267)
CFR 1.9

*The above data is cumulative from 2022*

### Background

As of Epi week 15, 2024, a total of 2,239 suspected measles cases were reported, with 140 (6.3%) lab-confirmed, 39 deaths, and a case fatality rate of 1.7.

The observed surge in suspected Measles cases, rising from 828 in week 14 to 2,239 in week 15, indicates an effective increase in surveillance efforts. Despite this significant uptick, the number of lab-confirmed cases has stayed the same between these weeks. This discrepancy highlights a critical need for enhanced sample collection and robust laboratory testing to ensure accurate diagnosis. Improving these aspects will aid in more precise outbreak investigation and reporting, allowing for more targeted public health interventions and resource allocation.

As of Epi week 15 in 2024, reactive vaccination efforts have led to county-wide campaigns in Maridi, Mundri East, Tonj North and Tonj South, vaccinating 131,875 children against Measles. The Measles reactive vaccination campaign is ongoing in Tonj South of Warrap state.

Preparation is underway for 10 outbreak affected counties in WES and NBG to be implemented in the coming weeks. Details are in Annexes 1 and 2.

Epi week 15 data shows no ongoing outbreak, but ten (10) counties reporting suspected/confirmed cases yet to reach the outbreak threshold, warranting further investigation and laboratory validation.

### Key weekly Situation Update as of 14 April 2024

- A total of 1,411 additional suspected cases were reported from Aweil Centre(8), Aweil East(36), Aweil North(25), Aweil South(15) Aweil West(840), Bor South(81), Duk(7), Pigi(1) and Twic East(1) since the last update, where 548 were epi-linked and 863 clinically compatible.
  - No suspected cases in week 15
  - No newly confirmed cases this week
  - Seventeen (17) additional deaths reported from Aweil Centre (2), Aweil East (1), Aweil West (12), Bor South (1) and Duk(1)
- No county has an ongoing outbreak
  - Aweil North, Aweil West, Bor South, Ibba, Juba, Nzara, Pigi, Tambura, Tonj East and Yambio continue to report suspected/confirmed cases yet to reach the outbreak threshold and need more investigation and samples collection for testing as per the revised SOP
Out of the 2,239 suspected measles cases, 140 (6.3%) were lab-confirmed, 772 (34.5%) epi-linked, 1,254 (56.0%) clinically compatible, and 73 (3.3%) discarded cases have been reported as of epidemiological week 15, 2024. A total of 14 rubella positive cases from the discarded (negative measles cases) have also been reported.

A total of 39 reported deaths, 26 (66%) from the clinically compatible cases and 13 (34%) from the epi-linked cases.

Figure 2: Trend of suspected measles cases against their residential status by (epi week 1 2023 – week 15, 2024)

Note: Measles cases have been reported from different counties throughout 2023-2024. The observed peaks are driven by other counties that experienced a surge in measles cases at various times. The Sudan crisis started in week 14 of 2023, with the influx of returnees and refugees since then. The nationwide MFUPC also took place from week 17-20.
Figure 3: A map showing lab -confirmed outbreak counties in February (week12 to Week15, 2024)

Table 2: Distribution of reported measles cases and deaths by age groups in South Sudan, 2024

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>No. of suspected Cases</th>
<th>No. of confirmed Cases</th>
<th>% Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 yr</td>
<td>665</td>
<td>22</td>
<td>3.3</td>
</tr>
<tr>
<td>1-4 yrs</td>
<td>850</td>
<td>56</td>
<td>6.6</td>
</tr>
<tr>
<td>5-9 yrs</td>
<td>276</td>
<td>37</td>
<td>13.4</td>
</tr>
<tr>
<td>10-14 yrs</td>
<td>248</td>
<td>12</td>
<td>4.8</td>
</tr>
<tr>
<td>15+ yrs</td>
<td>200</td>
<td>41</td>
<td>20.5</td>
</tr>
<tr>
<td>Total</td>
<td>2,239</td>
<td>140</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Note: More than half 556 (67%) of all the suspected measles cases are children below 5 years of age. The case fatality rate is (1.7 %) while 724 (32%) are among other ages from 5 years and above.

Figure 3: Percentage distribution of measles cases and their vaccination status: 2024

Note: 1,772(79%) were unvaccinated (zero, unknown) including 1,143(65%) children less than 5 years. Among children less than one year old 665 cases, 555(83%) have not been vaccinated.

Surveillance and Laboratory

- Enhanced surveillance ongoing in silent counties
- Sample collection for all counties that last had a confirmed measles outbreak in the last four weeks to track the Measles epidemiology.
- Enhance surveillance for VPDs, especially at the points of entry for the refugees, returnees from Sudan, and in the silent counties
- Ensure weekly reporting (including zero dose reporting where applicable)
Case Management

- The MOH, WHO, and partners are intensifying measles case management (including vitamin A administration), surveillance, and risk communication in locations with suspected and confirmed outbreaks.
- In collaboration with partners and MOH, WHO is prepositioning kits to support case management in counties with active outbreaks.

Vaccinations

- The reactive campaign continued in 2024. As of Epi week 15, four counties implemented a Measles reactive campaign. Three of them (Maridi, Mundri East, and Tonj North) completed the campaign, which is ongoing in Tonj South County. The total number of under-five children vaccinated is 131,875 (102%).
  - Updated data is yet to be submitted from Tonj South County.
- The reactive campaign planned for additional 15 counties with confirmed outbreak in the last 8 weeks. MP revised and approved for all the counties (Aweil East, Aweil North, Aweil South, Aweil West, Aweil Center, Twic, Rumbek Center, Wulu, Juba, Yei, Yambio, Tambura, Nzara, Ezo and Ibba).
  - Preparation is ongoing for the 10 prioritized counties in WES and NBG using the available vaccine stock while Unicef is processing a request for additional vaccines to the country.
  - The campaign is scheduled from 23rd to 30th of April 2024.
- MoH will work with identified partners to ensure quality campaigns.
- POE/Temporary transit post vaccination activities implemented in 15 sites of 8 counties (Juba, Akobo, Aweil East, Aweil North, Malakal, Maiwut, Melut and Rubkona). The activity commenced in Dec 2023 and continued in Jan 2024. The antigens used at POE/Transit post are Measles and OPV.
  - A total of 15,143 children under 15 were vaccinated for measles, and 14,358 were vaccinated for OPV in the 15 POE/Transit post vaccination sites.
  - Operational fund is released to 7 counties to initiate the POE activities in 13 sites.

Demand Generation/ Communication

- Demand generation activities ongoing for the planned mop-up and reactive campaigns as well as routine immunization (radio talk shows and jingle broadcast)

Operational challenges and gaps

- Inadequate detailed investigation of suspected measles cases and deaths in counties reporting suspected cases of measles
- Inadequate sample collection for laboratory confirmation and classification cases of suspected measles cases
- A high proportion of unvaccinated/unknown status children (80%) was detected among the cases, noting the inadequate quality of investigations and gaps in immunization, especially among the returnees and refugees.
- Late and constant retrospective reporting of suspected cases
- Incomplete and inaccurate filling of line lists and CIFs

Way Forward

- Lab confirmed outbreaks to be followed with detailed outbreak reports
- Root cause analysis planned and led by MOH
- MOH and partners to support the planned mop-up campaign and other measles activities
- State and County MOH to continue weekly reporting of measles cases (including zero reporting where applicable)
- UNICEF to fill in the anticipated Measles vaccine rupture.
- Prompt detection and management of measles cases
- Addition of Vitamin A in future responses, and inclusion of nutrition teams
- Blood samples to be collected from suspected cases in counties that continue to report, and the lab confirmation is beyond 4 weeks to monitor the epidemiology
- Collection of nasopharyngeal swaps from new cases
- Strengthen routine immunization at POEs and within the community
Appendix: Measles Reactive Vaccination (Jan to April 2024)

<table>
<thead>
<tr>
<th>#</th>
<th>County</th>
<th>Target age group</th>
<th>Type of vaccination</th>
<th>Supporting Partner</th>
<th>Status of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maridi</td>
<td>6 to 59 months</td>
<td>Reactive</td>
<td>WHO/Unicef</td>
<td>Completed (Final data submitted)</td>
</tr>
<tr>
<td>2</td>
<td>Mundri East</td>
<td>6 to 59 months</td>
<td>Reactive</td>
<td>WHO/Unicef</td>
<td>Complete (Final data submitted)</td>
</tr>
<tr>
<td>3</td>
<td>Tonj North</td>
<td>6 to 59 months</td>
<td>Reactive</td>
<td>WHO/Unicef</td>
<td>Complete (Final data submitted)</td>
</tr>
<tr>
<td>4</td>
<td>Tonj South</td>
<td>6 to 59 months</td>
<td>Reactive</td>
<td>WHO/Unicef</td>
<td>ongoing</td>
</tr>
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</table>

Annex 1: Measles Reactive Vaccination Data from 4 counties, January 2024

<table>
<thead>
<tr>
<th>County</th>
<th>Target pop</th>
<th>Measles Target population (6 months to 14 years)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Target</td>
<td>Host</td>
</tr>
<tr>
<td>Maridi</td>
<td>24,025</td>
<td>25,858</td>
<td>80</td>
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<tr>
<td>Mundri East</td>
<td>16,577</td>
<td>16,074</td>
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<tr>
<td>Tonj North</td>
<td>63,216</td>
<td>72,714</td>
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<tr>
<td>Tonj South</td>
<td>25,913</td>
<td>17,149</td>
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Annex 2: POE/Temporary Transit site Measles and OPV vaccination Dec 2023 and Jan 2024

<table>
<thead>
<tr>
<th>State</th>
<th>County</th>
<th># of POE/ Transit Post</th>
<th>Measles 6-11 months</th>
<th>12-59 months</th>
<th>6-14 Years</th>
<th>Total Vaccinated</th>
<th>OPV 0-11 months</th>
<th>12-59 months</th>
<th>6-14 Years</th>
<th>Total Vaccinated</th>
</tr>
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<tbody>
<tr>
<td>CES</td>
<td>Juba</td>
<td>3</td>
<td>163</td>
<td>621</td>
<td>711</td>
<td>1495</td>
<td>180</td>
<td>553</td>
<td>594</td>
<td>1,327</td>
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<tr>
<td>Jonglei</td>
<td>Akobo</td>
<td>2</td>
<td>923</td>
<td>1201</td>
<td>1902</td>
<td>4026</td>
<td>1617</td>
<td>2000</td>
<td>2360</td>
<td>5,977</td>
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<tr>
<td>Upper Nile</td>
<td>Melakal</td>
<td>1</td>
<td>26</td>
<td>195</td>
<td>417</td>
<td>638</td>
<td>50</td>
<td>201</td>
<td>409</td>
<td>660</td>
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<td>60</td>
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<td></td>
<td>482</td>
<td>675</td>
<td>637</td>
<td>1794</td>
<td>60</td>
<td>89</td>
<td>39</td>
<td>188</td>
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<tr>
<td>NBG</td>
<td>Aweil East</td>
<td>1</td>
<td>248</td>
<td>1064</td>
<td>1486</td>
<td>2798</td>
<td>287</td>
<td>918</td>
<td>1255</td>
<td>2,460</td>
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<tr>
<td></td>
<td>Aweil North</td>
<td>2</td>
<td>514</td>
<td>1104</td>
<td>811</td>
<td>2429</td>
<td>472</td>
<td>813</td>
<td>413</td>
<td>1,698</td>
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<tr>
<td>Unity</td>
<td>Rubkona</td>
<td>1</td>
<td>433</td>
<td>594</td>
<td>474</td>
<td>1501</td>
<td>563</td>
<td>579</td>
<td>481</td>
<td>1,623</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>2849</td>
<td>5703</td>
<td>6591</td>
<td>15143</td>
<td>3304</td>
<td>5360</td>
<td>5694</td>
<td>14,358</td>
<td></td>
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</tbody>
</table>

For more information, please contact above persons
This report was prepared with technical support from World Health Organization, Juba.