South Sudan Suspect Meningitis Update

Epidemiological week 10

as of 11 Mar 2018

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Suspect meningitis alerts - 2018

• Since 14 Feb 18 at least 4 counties have reported suspect meningitis cases
  • Pibor
  • Jur River
  • Wau
  • Torit
• In Pibor, one suspect case was reported on 14 Feb 18 but tested negative for bacterial meningitis on culture. Preventive MenAfriVac campaign is pending for Pibor
• Since 1 Jan 18, Jur River has reported 5 suspect meningitis cases, while Wau has reported 2 suspect meningitis cases. The most recent case from Jur River on 28 Feb 18 tested positive for Streptococcus pneumoniae
• A total of 7 suspect meningitis cases have been line listed in Jur River and Wau counties
• In Torit county; the initial suspect meningitis alerts were reported from Iyire payam (Nyara East & Nyara West villages) on 15 Feb 18
• A second cluster of suspect meningitis alerts was then reported from Imurok and Khurmush in Imurok payam starting 27 Feb 18.
• Interagency response involving (National MoH, sMoH, CHDs, ARC, SCI, OCHA, WHO, Unicef, CARE, SSRC, HLSS) initiated from 20 Feb 18 and is still ongoing
• Current interventions entail case investigations and sample collection
• A treatment center has been set up in Khurmush PHCU with SCI as the lead case management partner; supported by sMoH, CHD, CARE, WHO, UNICEF, SSRC, and partners
• SSRC is leading active case search and community sensitization with support from WHO, UNICEF, and the sMoH
The national and state rapid response teams are involved in ongoing case investigations and sample collection. Emergency coordination meetings are held every two days and are Chaired by the sMoH and attended by all the partners supporting the response (OCHA, SCI, ARC, CARE, WHO, UNICEF, SSRC, HLSS).

At least 13 CSF samples have been tested with 9/13 (69%) samples showing Gram positive diplococci. Culture testing is inconclusive.

Following the initiation of the current response the number of new cases started rising from week 6 to a peak in week 9 and have started reducing in week 10.

Most new cases since week 9 have been reported from Imurok payam. Iyire payam has been silent since week 8.

There are no community deaths being reported currently.

There are no new admissions - on 11 March 2018.
Suspect meningitis alerts, Torit - 2018

• The drugs and supplies for managing suspect meningitis have been availed with support from SCI, IOM, WHO, UNICEF, ARC
• Rapid pastorex kits were supplied by MSF-CH and WHO is importing additional kits to facilitate field testing
• Plans are underway to ship the meningitis CSF samples to a collaborating center for PCR testing
• The meningitis action plan, communication strategy, and messages along with the IEC materials are in the process of being finalized
• Regular supportive field visits are being conducted to Khurmush and a field visit to Iyire is planned for 14 March 2018
• There are plans by SCI to functionalize the HF in Iyire and Imurok payams since they have been closed for the last two years due to insecurity
• In the interim; outreaches and temporary clinics will be set up by CARE and SCI to optimize routine healthcare.
Epidemiological description, Torit - 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Neck stiffness</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>(blank)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>15</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Yes</td>
<td>14</td>
<td>151</td>
<td>2</td>
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</tr>
<tr>
<td>(blank)</td>
<td></td>
<td></td>
<td>2</td>
<td>187</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>166</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

- Since **20 Feb 18**; a total of **187 suspect cases** have been line listed
- As seen from the table above; these were reclassified based on the case definition with a total of 166 being retained for having fever+neck stiffness and or neck stiffness of other sign of meningeal irritation
### Case distribution by location, Torit - 2018

<table>
<thead>
<tr>
<th>Payam</th>
<th>Total Died</th>
<th>Total cases</th>
<th>CFR%</th>
<th>Cumulative Attack rate (cases/100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imurok</td>
<td>21</td>
<td>143</td>
<td>14.7%</td>
<td>953</td>
</tr>
<tr>
<td>Iyire</td>
<td>9</td>
<td>23</td>
<td>39.1%</td>
<td>115</td>
</tr>
<tr>
<td>Torit county total</td>
<td>30</td>
<td>166</td>
<td>18.1%</td>
<td>102.7</td>
</tr>
</tbody>
</table>

- A total of 166 cases including 30 deaths (CFR 18.1%)
- More deaths in Imurok (21) but CFR highest in Iyire payam - 39.1%
- Imurok payam most affected with AR of 953 cases per 100,000
**Case distribution by gender, Torit - 2018**

<table>
<thead>
<tr>
<th>Age</th>
<th>Female</th>
<th>Male</th>
<th>Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4yrs</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>5-14yrs</td>
<td>17</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td>15-29yrs</td>
<td>28</td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>30+yrs</td>
<td>67</td>
<td>18</td>
<td>85</td>
</tr>
<tr>
<td><strong>Total Cases</strong></td>
<td><strong>114</strong></td>
<td><strong>52</strong></td>
<td><strong>166</strong></td>
</tr>
</tbody>
</table>

- Overall, more suspect cases reported in females 114 (68.7%)

- The proportion of affected females increased with age from 17 (53%) in 5-14 year olds; 28 (64%) in 15-29 year olds; to 67 (79%) among individuals 30+years.
Case distribution by time, Torit - 2018

- Initial cases in Torit county reported in week 3 but consistent and increasing transmission started in week 6 reaching a peak in week 9 and declining thereafter
- Most deaths occurred in week 9

![Figure 1: Suspect meningitis cases Iyire and Imurok payams, Torit, week 1-10, 2018 (n=166)](image-url)

CFR = 30/166 (18%)
- Initial cases from Iyire starting week 3 till week 8
- Transmission in Imurok started in week 9; peaked in week 9 and declined thereafter
- All recent transmission reported from Imurok
Case distribution by age, Torit - 2018

- As seen from the age-specific attack rates; the risk of disease increased from 0 in <1yrs olds to 175 in persons 30+years
- The CFR highest in persons 5-14 years of age
Weekly CFR and Attack rates, Torit - 2018

- Weekly attack rate surpassed alert threshold in week 7 and action threshold in week 9
- In week 10, weekly attack rate reduced to 17 cases per 100,000 but remains above the action threshold
- CFR for week 10 stands at 7% (WHO threshold is <10%)
Recommendations and way forward

1. Continue with active surveillance, case investigation & sample collection to determine etiology
2. Deploy rapid pastorex kits to facilitate field testing
3. Ship CSF samples to collaborating laboratory for PCR testing
4. Prompt investigation and initiation of appropriate care for newly detected cases
5. Enhance countrywide surveillance and investigation of suspect meningitis cases
6. Finalize the suspect meningitis action plan; communication strategy; messages to facilitate community awareness, improved health seeking behavior, and reduced high risk behavior
7. Conduct regular coordination meetings at national and sub-national levels
8. Regular field visits to affected locations - Khurmush and Iyire (visit slated for 14 Mar 18)
9. Optimize routine health care in the affected areas - open static and mobile clinics
Thank You