## Typhoid Fever

**Agent’s Biosafety Level:** BSL2  
**Epidemic Potential:** Medium  
**Last Update:** 21 September 2018

### Surveillances

<table>
<thead>
<tr>
<th>Sample Collection</th>
<th>Diagnosis</th>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stool or blood sample</td>
<td>Rapid Diagnostic Test (RDT)</td>
<td>Antiserum and AMS required</td>
</tr>
<tr>
<td>Several Non-prequalified commercial tests</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Many diagnostics supplies are also used for Case Management purposes, but have been included only in Surveillance.

### Prevention & Control

- **Vaccine**
  - 1 oral vaccine (Ty21a)
  - 2 injectable vaccine (TCV, ViPS)

### Case Management

- **Treatment**
  - Aetiological: Ciprofloxacin/ Azithromycin  
  - [take local antimicrobial resistance into account]

### Key outbreak control activities considered for material supply

- **Aetiological treatment** to reduce mortality

### Interventions

<table>
<thead>
<tr>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple packaging boxes</td>
</tr>
<tr>
<td>Tubes, blood collection, EDTA</td>
</tr>
<tr>
<td>Tubes, blood collection, serum</td>
</tr>
<tr>
<td>Tubes, blood collection, plain/dry</td>
</tr>
<tr>
<td>Shrap container boxes</td>
</tr>
<tr>
<td>Stool - Swabs</td>
</tr>
<tr>
<td>Faeces collection container</td>
</tr>
</tbody>
</table>

### Technical Description

- Guidance on regulations for Transport of Infectious Substances 2017 - 2018
- WHO performance specification E10/IC.1
- WHO/UNICEF standard E10/IC.2 or equivalent

### Sample Collection

- **Stool**
  - Culture Swab, Cary-Blair Agar, single swab

- **Faeces**
  - 125ml with screw cup

### Diagnostics

- Criteria for selection of specific diagnostic tests may include historical efficacy, adherence to any existing Target Product Profiles, ease of use, necessary throughput, distribution and logistics requirements, and manufacturer production capacity. For some pathogens, consideration may need to be given to the presence of mutations in targeted gene sequences or proteins. WHO can advise on the selection of tests on a case by case basis as determined by a specific event.

### Vaccine

- On EML for some high-risk populations in accordance with WHO Vaccine Policy Paper

- Typhoid Vaccines: WHO Position Paper - March 2018

### Antimicrobial Treatment

- Ciprofloxacin/ Azithromycin
  - Pediatric and adult formulation per WHO guidelines. On EML as a WATCH group AB Resistance to Ciprofloxacin widespread. Azithromycin resistance still limited. Cipro not currently listed as first or second choice for typhoid fever. Expert committee expected to consider AB treatment for this indication in 2019.