



# Microbiology Specimen Collection For AMR Surveillance in Children

## Which samples should I send?

### Sepsis or Severe febrile illness

#### For **all** patients:

Urine  
Blood culture

#### For selected patients:

CSF  
Other relevant cultures (e.g. pus, throat swab)  
Malaria film  
Viral workup (e.g. dengue)

### Meningitis

#### For **all** patients:

Blood culture  
Blood glucose  
CSF if no contra-indications

#### For selected patients:

Malaria film  
TB microscopy / culture  
Viral workup (e.g. JEV)  
Fungal workup

### Severe pneumonia

#### For **all** patients:

Blood culture

#### For selected patients:

Sputum sample  
• If productive cough (older children only)  
Broncho-alveolar lavage  
• If severe or intubated  
Tracheal aspirate  
• If intubated

## When should I send a blood culture?

Always send a blood culture in these situations

Take the blood culture before the first dose of antibiotic

### Sepsis

*Dysregulated host response to infection*  
Features to alert suspicion ("red flags"):

- **Abnormal core temperature**  
< 36.0°C / > 38.5°C tympanic OR  
< 35.5°C / > 38.0°C axillary
- **Inappropriate tachycardia**  
<1y: ≥ 160 /min  
1-2y: ≥ 150 /min  
3-4y: ≥ 140 /min  
5y and above: ≥ 130 /min
- **Altered mental state**  
GCS < 15 OR  
Sleepiness, irritability, lethargy, floppiness
- **Reduced peripheral perfusion or prolonged capillary refill time**  
Cold feet or hands OR ≥ 3 sec

### Severe febrile illness

*In a children aged < 5 years*  
Fever ( $T > 37.5^{\circ}\text{C}$ ) plus ≥ 1 danger sign:

- Unable to feed or drink
- Vomiting everything
- Lethargy
- Unconscious
- Convulsion

### Meningitis

*Sudden onset fever ( $T > 37.5^{\circ}\text{C}$ ) plus ≥ 1 feature of meningism:*

- Headache
- Neck stiffness
- Photophobia
- Kernig's sign positive

### Neonatal sepsis

*Patient < 28 days old plus ≥ 1 of:*

- RR > 60
- $T > 37.5^{\circ}\text{C}$  or  $T < 35.5^{\circ}\text{C}$
- Respiratory distress
- Reduced movement
- Convulsion
- Poor feeding

### Severe pneumonia

*Cough or dyspnoea plus ≥ 1 of:*

- Cyanosis
- $\text{O}_2$  saturation < 90%
- Severe respiratory distress
- Danger sign (see above)

## How should I send my sample?

### Blood culture



Single bottle (PEDS-plus-max 3mL or Aerobic)  
1 -3 mls - infant / babies  
4-10 mls - age(yr) = vol(mL)  
**See blood culture collection instruction**

### CSF



Send 3 tubes  
0.5-1ml CSF in each tube

### General specimen pot



Pus  
Sputum / ET asp. / BAL  
Sterile fluids (e.g. pleural, peritoneal, joint fluid)  
Faeces  
Tissue / Biopsy  
Urine (specify type of sample)

### General swab



Ear, Eye, Throat  
Genital, Skin, Wound

Remember to clean a wound before taking the swab

# ACORN