



# Steps for Blood Culture Sample Collection



Assemble Materials



Label bottle appropriately



Perform hand hygiene



Clean venipuncture site



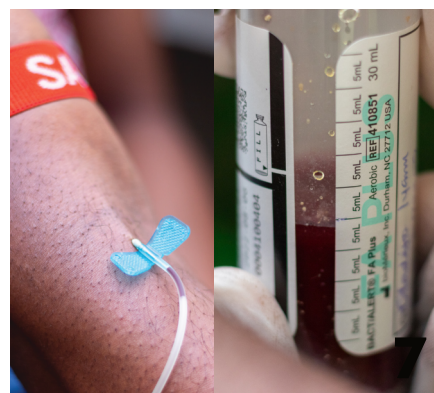
Apply tourniquet.  
**DO NOT TOUCH**  
after cleaning



Dispose sharps appropriately



Shake broth gently to mix the sample





Collect blood into bottle with butterfly needle, Fill up to **CORRECT MARK**



Clean the top of the bottle with alcohol  
**DO NOT TOUCH**  
after cleaning



# Appropriate Volume for Blood Culture

Weight in kg	Venipuncture	Culture set <sup>b</sup>	Culture set <sup>c</sup>	Total blood volume drawn	Correct bottles for sampling
1 ≤	1 site	2 ml	-	2 ml	
1.1-2	2 sites	2 ml	2 ml	4 ml	
2.1-12.7	2 sites	4 ml	2 ml	6 ml	
12.8-36.3	2 sites	5 ml	5 ml	10 ml	
>36.3	2 sites	5 ml	10 ml	20 ml	



# PAEDIATRICS SEPSIS CASE FINDING

## General principles

1. Early detection
2. Early targeted treatment
3. Infection, prevention and control



### A. Fever or hypothermia

Axillary Temp  $\geq 38^{\circ}\text{C}$  or  $\leq 36^{\circ}\text{C}$   
History of fever in the last 48hrs

### B. Immunosuppressive state or co-morbidity

E.g. Diabetes, malnutrition, HIV, etc.

## Signs to look for in suspected sepsis



### Heart rate (bpm) - Tachycardia

Preterm	> 170
0 – 12 months	> 160
1 – 3 years	> 150
3 – 6 years	> 120
>6 years	> 100



### Respiratory rate (cpm) - Tachypnea

Preterm	>70
0 – 6 months	>45
6 months - 3 years	>30
> 3 years	>20

## Suspect severe localized infection from:

- Respiratory Tract Infections
- Meningitis
- Osteomyelitis
- Urinary tract infection
- Abscess, skin or soft tissue infection
- Abdominal infection e.g. typhoid



# ADULT SEPSIS CASE FINDING



## A. Fever or hypothermia

Axillary Temp  $\geq 38^{\circ}\text{C}$  or  $\leq 36^{\circ}\text{C}$   
History of fever in the last 48hrs

## B. Immunosuppressive state or co-morbidity

E.g. Diabetes, malnutrition, HIV, etc.

## Signs to look for in suspected sepsis



**Systolic blood pressure  $\leq$  100mmHg**  
**Tachycardia or Bradycardia**



**Increased or decreased respiratory rate appropriate for age**



**Altered sensorium e.g. restlessness, confusion, loss of consciousness, etc.**

## Suspect severe localized infection from:

- Respiratory Tract Infections
- Meningitis
- Osteomyelitis
- Urinary tract infection
- Abscess, skin or soft tissue infection
- Abdominal infection e.g. typhoid
- Pelvic inflammatory disease





# Be an Antibiotic Vanguard



## General Principles

- Rational use of antibiotics is everybody's business.
- Get tested in the hospital before using antibiotics.
- Take antibiotics according to doctor's prescription.
- Do not share your medicines with others.
- Report any side effect of antibiotics to your doctor.
- Antibiotics are **critical** resources – PRESERVE THEM FOR THE FUTURE.
- Infection prevention = Antibiotic use prevention.

Ensure you conduct a laboratory test each time you feel unwell before taking an antibiotic



Wash your hands regularly to prevent infections



Vaccinate yourself and your children to reduce risk of infections



Do not buy antibiotics without a doctor's prescription



Do not share the antibiotic prescribed for you with anyone else



Complete your antibiotic doses as prescribed by the doctor



## Golden Rules of Antimicrobial Prescribing

### General Principles

- Rational use of antibiotics concerns both health workers and patients.
- Target antibiotic treatment by conducting a laboratory test – culture and sensitivity.
- Ensures prescription by clinical guidelines.
- Health workers should
  - ensure correct doses and duration of antibiotic therapy
  - reduce over-use of injections when oral formulations would be more appropriate
  - teach patients to adhere to prescriptions, complete dose and not to share medicines with others or store them for future use

# M

### Microbiology guides therapy

Diagnosis enables effective targeted antibiotic treatment



# I

### Indication should be evidence based

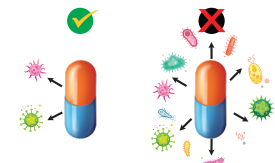
History taking and physical examination guides clinical diagnosis of sepsis



# N

### Narrowest spectrum of antibiotic required

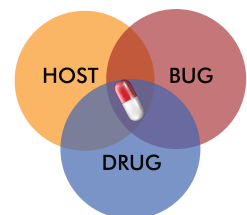
Use narrow-spectrum antibiotics whenever possible to reduce the occurrence of antibiotic resistance



# D

### Dose according to site and type of infection

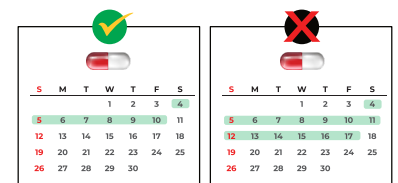
Consider **HOST** (patient physiology) **BUG** (antibiotic susceptibility test) **DRUG** (microbiological spectrum and chemical properties) interactions



# M

### Minimize duration of antibiotic treatment

Antibiotics work best during the first days of treatment and not when used for longer period without evidence



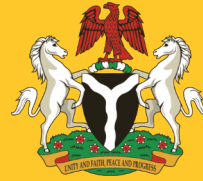
# E

### Ensure monotherapy in most cases

Antibiotic combination therapy should be evidence based.  
*More is not always better!*



# Blood Sample Collection Criteria



**Label containers appropriately according to requisition form**



**Collect adequate quantity of samples**



**Store samples in a well-sealed container for transportation**



**Specimen collection and arrival at laboratory should be timely**

