<table>
<thead>
<tr>
<th>Eligibility Checklist</th>
<th>Y</th>
<th>N - ineligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age between 2 months and before 2\textsuperscript{nd} birthday</td>
<td>Y</td>
<td>N - ineligible</td>
</tr>
<tr>
<td>Being admitted to hospital because of acute illness</td>
<td>Y</td>
<td>N - ineligible</td>
</tr>
<tr>
<td>Parent or guardian able and available to consent</td>
<td>Y</td>
<td>N - ineligible</td>
</tr>
<tr>
<td>Able to feed orally in usual state of health</td>
<td>Y</td>
<td>N - ineligible</td>
</tr>
<tr>
<td>Known congenital syndrome</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Cleft palate</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Known congenital cardiac disease</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Known terminal illness e.g. cancer</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Admission for surgery, or likely to require surgery within 6m</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Admission for trauma?</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Sibling enrolled in study</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
<tr>
<td>Previously enrolled</td>
<td>Y - ineligible</td>
<td>N</td>
</tr>
</tbody>
</table>

#### Part 1

**Admission to Hospital and Study Enrolment**

<table>
<thead>
<tr>
<th>DATE arrived at the hospital</th>
<th>__ __ / __ __ / __ __ __ __</th>
<th>TIME arrived at the hospital</th>
<th>__ __: __ __</th>
<th>Arrival time unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>D D / M M / Y Y Y Y</td>
<td>__ __: __ __ 24h Clock</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATE of enrolment i.e. date consented and seen by research team</th>
<th>__ __ / __ __ / __ __ __ __</th>
<th>TIME of enrolment</th>
<th>__ __: __ __ 24h Clock</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>D D / M M / Y Y Y Y</td>
<td></td>
<td></td>
<td></td>
<td>Male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DOB</th>
<th>__ __ / __ __ / __ __ __ __</th>
<th>Is the DOB:</th>
<th>True</th>
<th>Estimated*</th>
</tr>
</thead>
<tbody>
<tr>
<td>D D / M M / Y Y Y Y</td>
<td></td>
<td>True</td>
<td>Estimated*</td>
<td></td>
</tr>
</tbody>
</table>

**Brought into hospital by:**

- Select all that apply
- Mother
- Father
- Grandparent
- Aunt/Uncle
- Sibling <18
- Sibling >18
- Carer (care home)
- Other__________

*if DOB is estimated, and the day is uncertain, write '15' for DD

#### Presenting Complaints

- □ Fever / Hotness of body
- □ Vomiting
- □ Lethargy
- □ Difficulty breathing
- □ Diarrhoea <14 days
- □ Convulsions
- □ Cough <14 days
- □ Diarrhoea >14 days
- □ Altered consciousness
- □ Cough >14 days
- □ Blood in stool
- □ Not feeding
- □ Poor feeding / Weight loss
- □ Developmental delay
- □ Body swelling / limb swelling / Oedema
- □ Rash / skin lesion
- □ Other (only one complaint, if not covered by above options)
**Initial Observations** (to be taken at time of examination by research team)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axillary temperature</td>
<td>____ . ____ °C</td>
<td></td>
</tr>
<tr>
<td>Heart rate Count for 1 minute</td>
<td>____ ____ ____/minute</td>
<td></td>
</tr>
<tr>
<td>Respiratory rate Count for 1 minute</td>
<td>____ ____ ____/minute</td>
<td></td>
</tr>
<tr>
<td>SaO2 To be taken from finger or toe using pulse oximeter</td>
<td>____ ____ ____ %</td>
<td></td>
</tr>
</tbody>
</table>

- Measured in °C
- Measured in °F
- Unrecordable Write 000 if unrecordable
- Oxygen Room Air

**Anthropometry**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Measurement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight To be taken using SECA scales for CHAIN study</td>
<td>____ . ____ kg</td>
<td></td>
</tr>
<tr>
<td>MUAC To be taken using MUAC tape for CHAIN study</td>
<td>Measurer 1 ____ . ____ cm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measurer 2 ____ . ____ cm</td>
<td></td>
</tr>
<tr>
<td>Head circumference To be taken using CHAIN measuring tape</td>
<td>Measurer 1 ____ . ____ cm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measurer 2 ____ . ____ cm</td>
<td></td>
</tr>
<tr>
<td>Oedema</td>
<td>□ □ + □ ++ □ +++</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Initials</td>
<td>Measurer 1 ____</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measurer 2 ____</td>
<td></td>
</tr>
</tbody>
</table>

NB: If the child is unwell the Length and Head Circumference can be taken at a later time.

**Current Health**

- Previously admitted to hospital. Include other hospitals / health centres. Select 1
- Any medication last 7 days. Select all that apply
- Urine volume in last 24hrs? Select 1

**Feeding**

- Currently in outpatient nutrition program? Select one.
<table>
<thead>
<tr>
<th>Has the child eaten these nutrition products in the last 3 days?</th>
<th>Supplementary</th>
<th>Therapeutic</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Breastfeeding?</td>
<td>Y □ N</td>
<td>If yes is the child taking anything else (exclude medicine)?</td>
<td>Y □ N □ N/A</td>
</tr>
<tr>
<td>If NO breastfeeding at all, age stopped in months?</td>
<td>0-3m □ 4-6m □ 7-12m □ &gt;12m □ Unknown □ N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What did the child receive other than breast milk in the first 3 days of life?</td>
<td>Sweetened/sugar water □ Formula/powder milk □ Animal milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fruit Juice □ Tea □ Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gutthi / □ Water □ Porridge/pulp</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pure Honey □ Glycerine □ Nothing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>gripe water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Examination

Examination should be performed by CHAIN study clinician trained in clinical examination of children, and able to formulate a diagnosis based on clinical history and findings. Refer to Clinical Examination SOP.

<table>
<thead>
<tr>
<th>Airway (select one)</th>
<th>□ Clear □ Needs active support □ Obstructed/Stridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing (select all that apply)</td>
<td>□ Normal – no concerns, (move to circulation) □ Central cyanosis □ Nasal flaring □ Reduced air-entry □ Wheeze □ Acidotic</td>
</tr>
<tr>
<td>Breathing □ Grunting</td>
<td></td>
</tr>
<tr>
<td>□ Lower chest wall indrawing □ Crackles □ Dull to percussion □ Head nodding</td>
<td></td>
</tr>
</tbody>
</table>

| Circulation: |
| Cap Refill (select one) □ >3s □ 2-3s □ <2s |
| Cold Peripheries (select one) □ Shoulder □ Elbow □ Hand □ Warm peripheries |

| Disability: |
| Conscious level (select one) □ Alert □ Voice □ Pain □ Unresponsive |
| Fontanelle (select one) □ Normal □ Bulging □ Sunken □ Not present |
| Tone (select one) □ Normal □ Hypertonic □ Sunken □ Hypotonic |
| Posture (select one) □ Normal □ Decorticat □ Decerebrate |
| Activity (select one) □ Normal □ Irritable/Agitated □ Lethargic |

| Dehydration: |
| Sunken eyes? Skin pinch (select one) □ Y □ N |
| □ >2 seconds □ <2 seconds □ Immediate |

| Drinking/Breastfeeding (select one) □ Normal □ Poorly □ Not drinking □ Eager / Thirsty |

| Abdomen (select any that apply) □ Normal – no concerns □ Distension □ Hepatomegaly |
| Tenderness □ Splenomegaly □ Other abdominal mass |

| Signs of Rickets |
| Wrist □ Rachitic □ Swollen □ Bow □ Frontal |
| □ None widening rosary knees legs bossing |

| Jaundice (Select one) □ Not jaundiced □ + □ ++ □ +++ |

| ENT/Oral/Eyes (select any that apply) □ Mouth Normal □ Ears Normal □ Eyes Normal |
| Oral ulceration □ Pus from ear □ Conjunctivitis |
| Oral candidiasis □ Tender swelling behind ear (mastoiditis) □ Eye discharge |
| □ Stomatitis □ Lymphadenopathy □ Visual impairment |

| Skin (select any that apply) □ Normal □ Hyperpigmentation □ Depigmentation |
| Broken □ Dermatitis □ ‘Flaky paint’ skin/excoriation |
| Cellulitis □ Impetigo □ Pustules |
| Vesicles □ Desquamation □ Macular or papular |
### Site of skin lesions.

(Select any that apply)

- Not applicable
- Trunk
- Face / scalp
- Legs
- Palms / soles
- Buttocks
- Arms
- Perineum

### Suspected Chronic Conditions

<table>
<thead>
<tr>
<th>Select confirmed, suspected or none for all conditions:</th>
<th>Confirmed (diagnosed previously/recorded)</th>
<th>Suspected (clinician’s impression)</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral palsy/neurological problem/epilepsy</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sickle Cell disease <em>family history, crisis</em></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Thalassaemia</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Visual problem / Blindness <em>Not fixing and following</em></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Losing weight or not gaining weight</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### CHAIN Number

[5][0][0][0][2][ ] [ ] [ ]

#### TB Screening

<table>
<thead>
<tr>
<th>Known TB (on treatment)</th>
<th>Child has cough &gt;14 days</th>
<th>Household contact has TB, or cough &gt;14 days</th>
<th>Child has suspected extra-pulmonary TB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

#### Immediate Clinical Investigations and HIV status

<table>
<thead>
<tr>
<th>Malaria RDT circle result</th>
<th>Positive</th>
<th>Negative</th>
<th>Not done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood glucose</td>
<td>__ __ mmol/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time glucose measured</td>
<td>__ __ 24h clock</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urine Dipstick (can be done at any time during admission)</th>
<th>Protein</th>
<th>Nitrites</th>
<th>Leucocytes</th>
<th>Blood</th>
<th>Ketones</th>
<th>Glucose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine sample stored?</td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIV status known?</th>
<th>Yes, known, PCR positive</th>
<th>Yes, antibody positive, unknown PCR status</th>
<th>Yes, known exposed, known PCR negative (children under 18m with PCR result SEEN BY RESEARCH TEAM. If not seen select below and perform HIV RDT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No, known to be HIV exposed, but child untested</td>
<td>No, child not tested, not known to be exposed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If child known HIV positive or exposed</th>
<th>On any ART?</th>
<th>Co-trimoxazole select one</th>
<th>On prophylactic dose co-trimoxazole</th>
<th>Not on co-trimoxazole</th>
<th>Caregiver unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y</td>
<td>N</td>
<td>Unknown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If not known positive</th>
<th>HIV RDT now select one</th>
<th>PCR sent</th>
<th>Reactive / positive</th>
<th>Non-Reactive / Negative</th>
<th>Declined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIV test offered to caregiver?</th>
<th>Yes, Reactive</th>
<th>Yes, Non-reactive</th>
<th>No, Declined</th>
<th>No, Caregiver is known positive</th>
<th>Missed</th>
<th>N/A child in care home</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Did the mother have interventions or medication during delivery to prevent transmission of HIV to baby?</th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
</table>

#### Vaccinations – Ask carer or check book / card if available

<table>
<thead>
<tr>
<th>BCG scar</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Book</td>
<td>Self report</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not received</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rotavirus</th>
<th>Book</th>
<th>Self report</th>
<th>Not received</th>
<th>Doses received:</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumococcus</td>
<td>Book</td>
<td>Self report</td>
<td>Not received</td>
<td>Doses received:</td>
<td>Unknown</td>
</tr>
<tr>
<td>DTP/Penta</td>
<td>Book</td>
<td>Self report</td>
<td>Not received</td>
<td>Doses received:</td>
<td>Unknown</td>
</tr>
<tr>
<td>Polio</td>
<td>MenAfriVac</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Book</td>
<td>□ Self report</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Not received</td>
<td>□ Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Book</td>
<td>□ Self report</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Not received</td>
<td>□ Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Suspected Initial Diagnoses:**
*Clinical diagnosis should be based on examination and investigation findings.* Tick the three most likely diagnoses.

<table>
<thead>
<tr>
<th>Respiratory</th>
<th>Infection</th>
<th>CNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ LRTI/pneumonia</td>
<td>□ Gastroenteritis</td>
<td>□ Febrile convulsions</td>
</tr>
<tr>
<td>□ Bronchiolitis</td>
<td>□ Sepsis</td>
<td>□ Epilepsy</td>
</tr>
<tr>
<td>□ URTI</td>
<td>□ Malaria</td>
<td>□ Probable meningitis</td>
</tr>
<tr>
<td>□ Pulmonary TB</td>
<td>□ Extra pulmonary TB</td>
<td>□ Other encephalopathy</td>
</tr>
<tr>
<td>□ Otitis media</td>
<td>□ Soft tissue infection</td>
<td>□ Hydrocephalus</td>
</tr>
<tr>
<td>□ Asthma</td>
<td>□ UTI</td>
<td>□ Developmental delay</td>
</tr>
<tr>
<td>General</td>
<td>□ HIV related illness</td>
<td>□ Cerebral palsy</td>
</tr>
<tr>
<td>□ Anaemia</td>
<td>□ Measles</td>
<td></td>
</tr>
<tr>
<td>□ Sickle Cell Disease</td>
<td>□ Varicella</td>
<td></td>
</tr>
<tr>
<td>□ Thalassaemia</td>
<td>□ Osteomyelitis</td>
<td></td>
</tr>
<tr>
<td>□ Renal impairment</td>
<td>□ Febrile illness unspecified</td>
<td></td>
</tr>
<tr>
<td>□ Nephrotic syndrome</td>
<td>□ Enteric fever</td>
<td></td>
</tr>
<tr>
<td>□ Nephritis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Liver dysfunction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Ileus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Congenital cardiac disease</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other suspected diagnosis:**
- □ Other
- □ Unknown
- □ Failed appetite test only

**CLINICIANS IMPRESSION OF RISK**
*How likely does the clinical team think this child is to die during this admission? Select one*

- □ Almost certainly not
- □ Very unlikely
- □ Quite unlikely
- □ Unsure
- □ Quite likely
- □ Very likely
- □ Almost certainly

**INITIAL TREATMENT**
*Admitted to: select one*

- □ Admission to ward
- □ Admission to HDU
- □ Admission to ICU
**CHAIN Enrolment CRF V1.64**

**CHAIN Number**

```
[5][0][0][0][2][ ][ ][ ]
```

<table>
<thead>
<tr>
<th>Date and time First antibiotics given</th>
<th>___ / ___ / ___ ___</th>
<th><em><strong>:</strong></em></th>
<th>☐ Not given</th>
</tr>
</thead>
<tbody>
<tr>
<td>24h clock</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Intravenous Antibiotics Given?**

- ☐ Benzy/penicillin
- ☐ Gentamicin
- ☐ Ceftriaxone / Cefotaxime
- ☐ Co-amoxiclav /
- ☐ Flu/Cloxacillin
- ☐ Chloramphenicol
- ☐ Augmentin
- ☐ Amoxicillin
- ☐ Amikacin
- ☐ Meropenem / Imipenem
- ☐ Levofloxacin
- ☐ Vancomycin
- ☐ Metronidazole
- ☐ Ceftriaxone / Cefotaxime
- ☐ Augmentin
- ☐ Pivmecillinam
- ☐ Other ________________

**Oral Antibiotics Given?**

- ☐ Amoxicillin
- ☐ Erythromycin
- ☐ Azithromycin
- ☐ Co-trimoxazole
- ☐ Metronidazole
- ☐ Ciprofloxacin
- ☐ Co-amoxiclav /
- ☐ Cefalexin / cefaclor
- ☐ Nalidixic acid
- ☐ Augmentin
- ☐ Penicillin
- ☐ Flucloxacin
- ☐ Levofloxacin
- ☐ Other ________________

**Initial treatment given**

- ☐ IV Fluid Bolus
- ☐ IV Maintenance Fluids
- ☐ Oxygen
- ☐ CPAP
- ☐ IV Glucose
- ☐ Oral Glucose
- ☐ Warmth (heater, warmed fluids)
- ☐ Blood transfusion
- ☐ Commercial F75
- ☐ Phenobarbitone
- ☐ Commercial F100
- ☐ Diazepam
- ☐ Locally prepared F75/ milk suji
- ☐ Paracetamol
- ☐ Local prepared F100 / milk suji 100
- ☐ Ibuprofen
- ☐ Expressed breast milk
- ☐ Diclofenac
- ☐ Dilute F100/ dilute milk or formula
- ☐ Salbutamol / atrovent / other bronchodilator
- ☐ Other milk/ formula/ feed
- ☐ Prednisolone/ dexamethasone/ hydrocortisone
- ☐ Nasogastric tube
- ☐ Adrenaline
- ☐ Multivitamin
- ☐ Zinc
- ☐ Micronutrients
- ☐ Folic acid
- ☐ Vitamin A
- ☐ Antimalarial (any)
- ☐ Albendazole / deworming
- ☐ ReSoMal
- ☐ Other
- ☐ ORS

<table>
<thead>
<tr>
<th>Admission Core Cohort Investigations and Sample Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC taken</td>
</tr>
<tr>
<td>Clinical chemistry taken</td>
</tr>
<tr>
<td>EDTA 2ml blood taken</td>
</tr>
</tbody>
</table>
**CHAIN Number**

[5][0][0][0][2][ ] [ ]

<table>
<thead>
<tr>
<th>EDTA 0.5ml blood taken</th>
<th>Blood gas taken (if available at site)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Y</td>
<td>☐ Capillary</td>
</tr>
<tr>
<td>☐ N</td>
<td>☐ N</td>
</tr>
<tr>
<td>☒</td>
<td>☐ Venous</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date Taken</th>
<th>Time taken ___: ___</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ __ / __ __ / __ __ ___</td>
<td></td>
</tr>
<tr>
<td>D D / M M / Y Y Y</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unable to take blood samples, why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Difficult venepuncture</td>
</tr>
<tr>
<td>☐ Child uncooperative</td>
</tr>
<tr>
<td>☐ Parent refused</td>
</tr>
<tr>
<td>☐ Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rectal swabs taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Y BEFORE ABX</td>
</tr>
<tr>
<td>☐ Y AFTER ABX</td>
</tr>
<tr>
<td>Number taken</td>
</tr>
<tr>
<td>☐1 ☐2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stool sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>in ☐ Y</td>
</tr>
<tr>
<td>☐ N</td>
</tr>
<tr>
<td>Date taken</td>
</tr>
<tr>
<td>__ __ / __ __ / __ __ ___</td>
</tr>
<tr>
<td>D D / M M / Y Y Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chest x-ray indicated (respiratory signs symptoms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Yes, but too unwell</td>
</tr>
<tr>
<td>☐ Yes, done</td>
</tr>
<tr>
<td>☐ Indicated but not done, unclear</td>
</tr>
<tr>
<td>☐ Not indicated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lumbar puncture indicated (signs of meningitis documented)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Yes, but too unwell</td>
</tr>
<tr>
<td>☐ Yes, done</td>
</tr>
<tr>
<td>☐ Not indicated</td>
</tr>
</tbody>
</table>

**Blood Samples taken by (initials)**

___ ___ ___

**Rectal Swabs taken by (initials)**

___ ___ ___

**CRF Completed by (Initials) – to be signed when complete.**

_Do not sign if any fields are empty_

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ __ / __ __ / __ __ ___</td>
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</tr>
<tr>
<td>D D / M M / Y Y Y</td>
<td></td>
</tr>
</tbody>
</table>

**PART 2**

**CHAIN ADMISSION CRF: SOCIAL INFORMATION.**

_To be completed within 48h of admission when child is stable. This should ideally be done in a conversational and unhurried way, with the interviewer sitting with the caregiver._

<table>
<thead>
<tr>
<th>Initials of person interviewing caregiver and completing part 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ ___ ___</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Doctor</th>
<th>Clinical officer</th>
<th>Nurse</th>
<th>Field worker</th>
<th>Research Assistant</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tr>
<td>__ __ / __ __ / __ __ ___</td>
<td></td>
</tr>
<tr>
<td>D D / M M / Y Y Y</td>
<td></td>
</tr>
</tbody>
</table>

**Who is being interviewed?**
CHAIN Number
[5][0][0][0][2][ ][ ][ ]

- Primary □ Care □ Primary caregiver home staff caregiver and one other person □ Primary caregiver □ One person who is not the primary caregiver □ More than one person who is not the primary caregiver

Care-seeking Behaviour

Was the child in generally good health before this illness? □ Y □ N □ Unknown

If No, how long has the child had this problem of generally bad health? □ ___ weeks □ N/A

Does the child have health insurance? □ Y □ N □ Unknown

What was the main reason for bringing the child to this hospital today? Reasons given, select one

- Referred by health care
- Caregiver concern of child’s condition
- Received money for transport to hospital worker (e.g. from family, neighbour, paid work?)
- Relative / neighbour concern
- Primary caregiver returned home e.g. if Other of child’s condition working away

How did you travel to the hospital? Select all that apply

- Car/ Taxi
- Ambulance
- Bus
- Motorbike
- Tuk-tuk /CNG
- Cycle rickshaw
- Train
- Walking
- Other

How long did it take you to travel to hospital? □ <1h □ 1-< 2h □ 2-4h □ >4h □ > 1 day

How much did it cost the family to travel to hospital today (in local currency)? Estimate amount. If walked, drove own car or free ambulance write ___ ___ ___ ___

Have you sought treatment for this illness prior to coming to hospital? Select all that apply

- No treatment sought
- Shop
- Government hospital
- Government dispensary
- Traditional Healer
- Pharmacy
- Private Medical Facility/ NGO
- Herbalist
- Homeopathist
- Other

Received treatment from traditional healer, homeopathist or herbalist in last 4 weeks? Y N

Child’s Health Status Before Admission

Before this illness, how did this child’s health compare to other children of similar age in your neighbourhood? Select one

- Similar
- Better
- Worse
- Don’t know

Before this illness, how did this child’s health compare to his/her siblings at a similar age? Select one

- Similar
- Better
- Worse
- Don’t know
- N/A only child

Birth History

Source of information
- Maternal/caregiver recall
- Book/medical records

Birth weight
- ___ .___ ___kg
- Unknown

Birth details
Select any that apply
- Premature
- Born small <2.5kg
- Twin/multiple birth
- Born at term
- Unknown
**Delivery location**
Select one
- Born in hospital
- Community facility/clinic with midwife/nurse midwife/doctor
- Home without
- Home with midwife/nurse birth
- Home with midwife/nurse birth traditional
- Attend birth attendant (untrained)
- Other
- Unknown

**Delivery details**
Select all that apply
- Normal, spontaneous vaginal
- Assisted delivery (forceps, ventouse)
- Caesarean section delivery
- Mother admitted to hospital
- Admitted neonatal unit
- Home without
- Home with 
- Unknown

**Mother’s age at first pregnancy**
___ ___ years □ unknown

**Mother’s age now**
___ ___ years □ unknown

**Participant birth order**
___ ___ of ___ ___ total live births
(e.g. if youngest of 3 children 3 of 3, if oldest of 3 children 1 of 3)

**Are the biological parents of this child consanguineous?**
Ask if parents have relatives in common or are related.
□ Yes □ No □ Unknown

---

**Primary Caregiver Information**
This is the person who has responsibility for day to day care of the child, but is not a substitute carer such as childminder or grandparent who cares for child whilst, for example, mother is at work.

**Who is the Primary Caregiver? Select one**
- Biological Parent
- Grandparent
- Sibling
- Aunt / Uncle / Cousin
- Stepmother / father
- Care home / orphanage
- Other / Unclear

**Is the child’s biological father alive?**
□ Y □ N □ Unknown

**Is the child’s biological mother alive?**
□ Y □ N □ Unknown

**Primary Care Giver Age**
Select one
- <18 years
- >=18 years
- >50 years
- N/A (care home or unclear)

**Primary Care Giver Sex**
Select one
- Male
- Female
- N/A

**Primary caregiver present at admission?**
□ Y □ N

**Has the primary caregiver lived in the same household as the child for the last 2 months?**
□ Y □ N □ N/A (care home)

**Marital status of primary caregiver Select one**
- Married/
- Single
- Separated / divorced
- Widowed
- N/A
- Monogamous
- Polygamous

**If not present at admission, where is the primary caregiver? Select one**
- Home
- Work
- School
- Unknown
- Other
- N/A

**If the primary caregiver is present, caregiver anthropometry:**
Use locally available adult scales and stadiometer, and adult MUAC tapes provided by CHAIN.
- Primary caregiver not present during admission, or care home

<table>
<thead>
<tr>
<th>Weight</th>
<th>MUAC</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>

**Education:** Select highest level of education achieved
- None
- Primary
- Secondary
- Above secondary
- Unknown
- N/A care home

**Able to read?**
□ Y □ N □ Unknown

**Is the primary caregiver primarily responsible for financial support and providing for the child?**
□ Y □ N
**Primary caregiver HIV status in last 6 months**

- □ Tested Positive
- □ Tested Negative
- □ Not tested or unknown

**Have there been ANY changes to the child’s social situation in the last 2 MONTHS? Select any that apply,**

| Child moved to a different household | Relocation from rural to urban setting  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y N</td>
<td>Select ‘yes’ even if this is temporary</td>
</tr>
<tr>
<td>Y N</td>
<td>Relocation from urban to rural setting</td>
</tr>
<tr>
<td>Y N</td>
<td>Relocation to live with different caregiver</td>
</tr>
<tr>
<td>Y N</td>
<td>Mother Died</td>
</tr>
<tr>
<td>Y N</td>
<td>Father Died</td>
</tr>
<tr>
<td>Y N</td>
<td>Other primary caregiver died</td>
</tr>
<tr>
<td>Y N</td>
<td>Child went into care home</td>
</tr>
</tbody>
</table>

**Primary caregiver started employment / returned to school**

- Y N

**Primary caregiver divorced / separated from partner**

- Y N

**Mother is pregnant**

- Y N

**Other primary caregiver pregnant?**

- Y N

If primary caregiver has changed in the last 2 months, who was the child’s previous primary caregiver? Select one

- □ Biologic Mother
- □ Biologic Father
- □ Grandparent
- □ Aunt/Uncle/Cousin
- □ Sibling ≥18 years old
- □ Sibling <18 years old
- □ Other
- □ N/A

**Primary caregiver earns an income now?** Ask the person accompanying the child and select one

- □ Employed full time by someone else
- □ Employed part time by someone else
- □ Works for self
- □ No work income
- □ Works casually/irregularly for someone
- □ Don’t know

If works casually, Occupation:

- □ N/A care home

**How many days worked a week?** Select one

- □ <3
- □ 3-5
- □ N/A, does not work for >5 income

**If the primary caregiver earns, main source of income?** Select one

- □ Farmer
- □ Business/trader
- □ Labourer
- □ Domestic work
- □ Other private sector employment
- □ Public sector employment
- □ Retired with pension income
- □ Begging
- □ Other
- □ N/A

**If the primary caregiver works (earning or non-earning), main place of work?** Select one

- □ In/around home (where child lives)
- □ Away for <4 hours per day
- □ Away >4 hours but comes home daily
- □ Away >8h a day but returns home daily
- □ Away >1 day, comes home weekly
- □ Away comes home, less than weekly
- □ Primary caregiver lives and works away
- □ Don’t know
- □ N/A
### The person primarily providing financial support to this child is this child’s: Select one

- Biologic Mother
- Biologic Father
- Stepfather
- Stepmother
- Grandparent
- Sibling ≥18 years old
- Sibling <18 years old
- Aunt/Uncle/Cousin
- More than one person responsible
- Unsupported / care home
- Other - specify ____________

### Person responsible for providing financial support to child, place of usual residence? Select one

- Always sleeps at home
- Sleeps away but returns weekly
- Sleeps away for > two months per year
- Works and lives abroad, contact with child once a year or less
- Sleeps away but return monthly or less often
- Don’t know
- Other ____________________________
- N/A (e.g. care home, unsupported)

### What is the Father or person responsible for providing financial support to child source of income? Select one. If the primary carer is also the person providing financial support do not complete this section.

- Farmer
- Business/trader
- Labourer
- Domestic work
- Public sector employment
- Retired with pension income
- Begging
- None
- Unknown
- Other ____________________________
- N/A

## Substitute Care:

*Who usually looks after child when primary caretaker is working or away? Select all that apply*

- Not applicable, caregiver looks after child full time
- Not applicable, child accompanies caregiver to work
- No substitute care, child left alone
- No substitute care / unclear
- Biological Mother
- Biological Father
- Sibling <18 years old
- Sibling ≥18 years old
- Grandparent
- Aunt/Uncle/Cousin
- Childcare facility outside home
- Childminder/ day care at home

### How many days a week is the child in day care?

- N/A
- 1-2
- 3-4
- 5-6
- >6

### How many hours per day is the child in day care?

- N/A
- 1-4h
- 5-8h
- 9-12h
- >12h

### How many children are looked after at this day care?

- <3
- 4-6
- 7-10
- >10
- Unknown
- N/A

### How many of these are under 2y?

- <3
- 4-6
- 7-10
- >10
- Unknown
- N/A

### How many adults look after these children?

- 1
- 2-4
- 5-10
- >10
- N/A

### Do you feel the day care is good?

- Y
- N
- Unknown
- N/A

### Who provides food for the child at day care? Select one

- Caregiver provides
- Day care provides
- Someone else provides
- Don’t know
- N/A food for the child

### Is feeding supervised / assisted at day care?

- Y
- N
- Unknown
- N/A

## Household Food Security

*if child in care home include children in the care home only*

### During the past 7 DAYS has ANY member of the household missed a meal due to food shortage?

- Y
- N
- Unknown

### During the past 4 WEEKS
Did you worry that your household would not have enough food?

Were any of your household unable to eat the kinds of food preferred because of a lack of resources?

Have any of your household had to eat a limited variety of food due to lack of resources?

Have any of your household eaten some foods that you really didn’t want to eat because of lack of resources?

Have any of your household eaten fewer meals in a day because there was not enough food?

Did household members go to sleep at night hungry because there was not enough food?

Did you or your household members go a whole day and night without eating anything because there was not enough food?

**Child Dietary Diversity**

*What does the child eat on a typical day?*

- Ask this as an open question and select all that the caregiver mentions.
- Do not present the caregiver with this list.
- You may prompt the caregiver with open questions, e.g. *What does your child usually eat for breakfast?*

- **Milk and Milk Products**: Fresh/fermented milk, cheese, yogurt, or other milk products
- **Breast milk**
- **Cereals and Cereal Products**: Maize, rice, pasta, porridge, bread, biscuits, millet, sorghum, wheat, locally available grains
- **Fish and Sea Foods**: fresh or dried fish or shellfish
- **Roots and Tubers**: potatoes, sweet potatoes, yams, cassava, or foods made from roots or wild roots and tubers
- **Vegetables**: Cabbages, carrots, spinach, and any other locally available vegetables including wild vegetables
- **Fruits**: Oranges, bananas, mangoes, avocados, apples, grapes etc
- **Meats and Poultry**: Camel, beef, lamb, goat, rabbit, wild game, chicken or other birds, liver, kidney, heart or other organ meats or blood-based foods
- **Eggs**: Hen or other bird eggs
- **Pulses / Legumes / Nuts and Seeds**: Beans, peas, lentils, nuts, seeds or foods made from these
### Fats and Oils
- Oil, fats, ghee, margarine or butter added to food or used for cooking

### Sugars / Honey and Commercial Juices
- Sugar in tea, honey, sweetened soda, juices, chocolates, sweets or candies

### Miscellaneous
- Spices, unsweetened beverages

#### Feeding practices
**How is food USUALLY given to the child? Select one**
- Fed by adult
- Child feeds self, unsupervised
- Child feeds self, supervised by adult
- Fed from common plate or bowl
- Child feeds self, supervised by older children
- Child exclusively breastfed
- Unknown

#### Assessment of household wealth
*(DHS 7 questionnaire. Please answer all questions, for all participants, including children in care homes)*
**What is the main source of drinking water for members of your household? Choose one**
- Piped water to dwelling
- Piped water to yard / plot
- Piped to neighbour
- Public tap/ Standpipe
- Protected well / borehole
- Unknown

**What is the MAIN source of water used by your household for other purposes such as cooking and handwashing? SELECT ONE ONLY**
- Piped water to dwelling
- Piped water to yard / plot
- Piped to neighbour
- Public tap/ Standpipe
- Protected well / borehole
- Unprotected well

**How long does it take to get DRINKING water and come back? (State 0 if water supplied within home or compound)**

**In the past 2 weeks was the water from this source not available for at least one full day?**
- Y
- N
- Unknown

**Do you usually do anything to the water to make it safer to drink? Select all that apply**
- None
- Bleach/ chlorine
- Strain through a cloth
- Let it stand and settle
- Use water filter
- Solar disinfection
- Boil
- Other

(ceramic/sand/composite etc)
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kind of toilet facility do members of your household usually use?</td>
<td>( \square ) Flush or pour flush toilet to piped sewer ( \square ) Flush to septic tank ( \square ) Ventilated improved pit latrine ( \square ) Flush to pit latrine ( \square ) Flush to somewhere else ( \square ) Open pit / Pit latrine without slab ( \square ) Flush don’t know where ( \square ) Composting toilet ( \square ) Bucket toilet ( \square ) Pit latrine with slab ( \square ) Hanging toilet / hanging latrine ( \square ) No facility / bush/ field ( \square ) Unknown</td>
</tr>
<tr>
<td>Do you share this toilet facility with other households?</td>
<td>( \square ) Y ( \square ) N ( \square ) Unknown</td>
</tr>
<tr>
<td>If Yes, including your own household, how many households</td>
<td>( \square ) If &lt;10 ( \square ) &gt;10 ( \square ) Unknown ( \square ) N/A</td>
</tr>
<tr>
<td>use this toilet facility?</td>
<td>households</td>
</tr>
<tr>
<td>Where is this toilet facility located?</td>
<td>( \square ) In own dwelling ( \square ) In own yard / plot ( \square ) Elsewhere</td>
</tr>
<tr>
<td>How many rooms are there in the household for SLEEPING?</td>
<td>( \square ) 1 ( \square ) 2 ( \square ) &gt;2</td>
</tr>
<tr>
<td>What is the MAIN FLOOR material of the rooms in this household?</td>
<td>( \square ) Cement ( \square ) Earth/sand ( \square ) Wood ( \square ) Dung ( \square ) Lives on boat ( \square ) Tiles ( \square ) Carpet ( \square ) Other (specify) Unknown</td>
</tr>
<tr>
<td>What is the MAIN WALL material of the rooms in this household?</td>
<td>( \square ) Grass/straw/makuti ( \square ) Stone ( \square ) Wood ( \square ) Unknown ( \square ) Corrugated iron sheet / Tin ( \square ) Mud/wood ( \square ) Brick/block ( \square ) Planks/shingles ( \square ) No wall ( \square ) Other (specify) unknown</td>
</tr>
<tr>
<td>What is the MAIN ROOF material of the house in this household?</td>
<td>( \square ) Grass/Thatch ( \square ) Tiles/Asbestos sheets ( \square ) Corrugated iron/ Tins ( \square ) Mud ( \square ) Nylon papers/clothes ( \square ) Concrete ( \square ) Other (specify) Unknown</td>
</tr>
<tr>
<td>What is the MAIN cooking fuel used in this household?</td>
<td>( \square ) Electricity ( \square ) LPG /Natural gas/Biogas ( \square ) Paraffin ( \square ) Coal / Lignite ( \square ) Charcoal ( \square ) Firewood ( \square ) Straw/shrubs/grass ( \square ) Agricultural crop ( \square ) Animal Dung ( \square ) No food cooked in household ( \square ) Other (specify) Unknown</td>
</tr>
<tr>
<td>Do you have a separate room which is used as a kitchen?</td>
<td>( \square ) Y ( \square ) N ( \square ) Unknown</td>
</tr>
<tr>
<td>Where is this household's cooking area located?</td>
<td>( \square ) In the house ( \square ) Outdoors ( \square ) In a separate building ( \square ) Other Unknown</td>
</tr>
<tr>
<td>Does this household own any livestock, herds, other farm animals or</td>
<td>( \square ) Y ( \square ) N ( \square ) Unknown</td>
</tr>
<tr>
<td>poultry?</td>
<td>If yes, how many of the following animals does this household own?</td>
</tr>
</tbody>
</table>
CHAIN Number
[5][0][0][0][0][2][ ] [ ] [ ]

Cows/bulls__ ___ Sheep__ ___
Horses/Donkeys/Mules__ ___ Goats__ ___
Chickens or Ducks__ ___ Other _____________ number ___ ___

Does any member of this household own land?☐ Y  ☐ N  ☐ Unknown

If “Yes” How many acres of land does this household own?☐ Acres  ☐ Unknown  ☐ N/A

Does this household have a bank account?☐ Y  ☐ N  ☐ Unknown

Does this household have electricity☐ Y  ☐ N  ☐ Unknown

Does this household own a radio?☐ Y  ☐ N  ☐ Unknown

Does this household own a television?☐ Y  ☐ N  ☐ Unknown

Does this household own a computer?☐ Y  ☐ N  ☐ Unknown

Does this household own a refrigerator?☐ Y  ☐ N  ☐ Unknown

Does any member of this household own:
A watch☐ Y  ☐ N  ☐ Unknown

A mobile phone?☐ Y  ☐ N  ☐ Unknown

Standard phone☐ Y  ☐ N  ☐ Unknown

smartphone☐ Y  ☐ N  ☐ Unknown

An animal-drawn cart?☐ Y  ☐ N  ☐ Unknown

A bicycle?☐ Y  ☐ N  ☐ Unknown

A motorcycle / scooter?☐ Y  ☐ N  ☐ Unknown

A car or truck?☐ Y  ☐ N  ☐ Unknown

A boat with a motor?☐ Y  ☐ N  ☐ Unknown

CRF Completed by (Initials) – to be signed when complete.
Do not sign if any fields are empty

Date
___ / ___ / ___ ___
D D / M M / Y Y Y Y

Time
___ : ___