IMNCI
(BASED ON WHO GUIDELINES-
MARCH 2014)
GOALS OF IMNCI

• Standardized case management of sick and new-borns and children.
• Focused on most common causes of mortality like perinatal, ARI, diarrhoea, measles, malaria
• Home care of new-borns
  – To promote exclusive breastfeeding
  – To prevent hypothermia
  – Improve illness recognition and timely referral
CLASSIFICATION

• Integrated management of childhood illnesses classifies sick children into 2 age categories
  – Sick child aged 2 months upto 5 years
  – Sick young infant upto 2 months
STEP 1 : ASSESS AND CLASSIFY

• Ask the mother what are the problems of the child
• Classify the illness
• Identify treatment
• The IMNCI booklet has colour codes from which you can decide the next action
  – Pink: needs urgent referral for in patient care
  – Yellow: needs specific treatment which can be advised to the mother to administer at home and follow up
  – Green: needs no medical treatment
SICK CHILD AGE 2 MONTHS – 5 YEARS
1. First check for any danger signs
   • Ask:
     – Able to drink or breast feed?
     – Vomit everything?
     – Had convulsions?
   • Look
     – Lethargic/unconscious?
     – Convulsing now?
ANY DANGER SIGNS..

PINK: VERY SEVERE DISEASE

- Give diazepam if convulsing now
- Quickly complete the assessment
- Give any preferred treatment immediately
- Treat to prevent low blood sugar
- Keep the child warm
- Refer URGENTLY
COUGH/DIFFICULTY IN BREATHING?

1. Main symptom is cough or difficult breathing
   • Count breaths in 1 minute
   • Look for chest indrawing
   • Look and listen for stridor child must be calm
   • Look and listen for wheezing

2. Fast breathing
   – 2 months-12 months $\geq 50/min$
   – 12 months to 5 years $\geq 40/min$

3. If wheezing present: give trial of inhaled bronchodilator
   3 times at 20 min interval and reassess
SEVERE PNEUMONIA

1. Any danger sign or stridor in calm child?

PINK: SEVERE PNEUMONIA OR VERY SEVERE DISEASE

- Give first dose of an appropriate antibiotic
- Refer URGENTLY to hospital
2. Chest indrawing or fast breathing?

**YELLOW: PNEUMONIA**

- Give oral amoxicillin for 5 days
- If wheezing (or disappeared after inhaled bronchodilator) give inhaled bronchodilator for 5 days
- If chest indrawing in HIV exposed/infected, give first dose amoxicillin and refer
- Soothe the throat and relieve cough with a safe remedy
- If recurrent cough/cough > 14 days, refer for possible asthma/TB assessment
- Advise mother when to return immediately
- Follow up in 3 days
NO PNEUMONIA

- No signs of pneumonia or very severe disease

**GREEN: COUGH OR COLD**

- If wheezing (or disappeared after bronchodilator), give inhaled bronchodilator for 5 days
- Soothe the throat and relieve cough with a safe remedy
- If recurrent cough/cough > 14 days, refer for possible asthma/TB assessment
- Advise mother when to return immediately
- Follow up in 3 days
2. DIARRHEA?

1. Duration of diarrhoea?
2. Any blood in stools?
3. Look and feel the child and find out
   - General condition: lethargic or unconscious / restless or irritable
   - Look for sunken eyes
   - Offer the child fluid: not able to drink or drink poorly/ drinks eagerly or thirsty
   - Pinch the skin of the abdomen: does it go back very slowly taking >2 sec/slowly?
CLASSIFY DIARRHOEA

1. Acute diarrhoea: duration <14 days
2. Persistent diarrhoea: duration >/= 14 days
3. Dysentery: presence of blood in stool
SEVERE DEHYDRATION

2 of the following signs: severe dehydration

- Lethargic or unconscious
- Sunken eyes
- Not able to drink/drink poorly
- Skin pinch goes back very slowly

PINK: SEVERE DEHYDRATION

Give PLAN C

- Or if the child has another severe classification, REFER URGENTLY to hospital with mother giving frequent sips of ORS on the way. Advise to continue breast feeding
- If child >2 years and there is cholera in that area, give antibiotic for cholera
SOME DEHYDRATION

2 of the following signs: some dehydration

- Restless/irritable
- Sunken eyes
- Drinks eagerly/thirsty
- Skin pinch goes back slowly

YELLOW: SOME DEHYDRATION

Give PLAN B

- Or if the child has another severe classification, REFER URGENTLY to hospital with mother giving frequent sips of ORS on the way. Advise to continue breast feeding
- Advise mother when to return immediately
- Follow up 5 days if not improving
NO DEHYDRATION

Not enough signs to classify as some or severe dehydration: no dehydration

GREEN: NO DEHYDRATION

- Give **PLAN A**
- Advise mother when to return immediately
- Follow up 5 days if not improving
Dehydration present

1. **PINK: SEVERE PERSISTENT DIARRHOEA**
   - Treat dehydration before referral unless the child has another severe classification
   - REFER to hospital
PERSISTENT DIARRHEA

Dehydration absent

1. YELLOW: PERSISTENT DIARRHOEA
   - Advise the mother on feeding the child who has persistent diarrhoea
   - Give multivitamins and minerals (including Zinc) for 14 days
   - Follow up in 5 days
DYSENTRY

Blood in stools

1. **YELLOW: DYSENTERY**
   - Give ciprofloxacin for 3 days
   - Follow up in 3 days
3. FEVER?

1. Diagnosis: By history/ feels hot/ temperature recorded \( \geq 37.5^\circ C \)

2. Decide malaria risk high or low

3. Then ask: how long?/ if present \( >7 \) days, has the fever been present everyday?/ had measles within last 3 months?
FEVER: LOOK AND FEEL

4. Then look and feel:

- Stiff neck?
- Runny nose?
- Any bacterial cause for fever: Eg: local tenderness, oral sores, refusal to use a limb, hot tender swellings, boils, lower abdominal pain or pain on passing urine
- Look for signs of Measles: generalised rash and one of these: cough, runny nose, red eyes
FEVER: WHEN TO TEST FOR MALARIA?

• Do **MALARIA TEST**: if NO ‘severe’ classification
  – In all fever cases if high malaria risk
  – In low malaria risk if no obvious cause for fever present
  – If malaria test not available: the above two can be treated as malaria
FEVER IN SUSPECTED MEASLES

• If the child has measles now or within last 3 months
  – Look for mouth ulcers. Are they deep and extensive?
  – Look for pus draining from the eyes?
  – Look for clouding of cornea
FEVER: CLASSIFICATION

- Fever cases are classified into 3 major categories in IMNCI
  - High or low malaria risk
  - No malaria risk or no history of travel to malaria risk area
  - Measles now or within 3 months
FEVER IN HIGH/LOW MALARIA RISK

Any general danger sign or stiff neck?

1. **PINK: VERY SEVERE FEBRILE DISEASE**
   - Give first dose artesunate or quinine for severe malaria
   - Give first dose of an appropriate antibiotic
   - Treat the child to prevent low blood sugar
   - Give one dose of paracetamol for high fever
   - Refer URGENTLY to hospital
FEVER IN HIGH/LOW MALARIA RISK

Malaria test POSITIVE, no danger sign

• YELLOW: MALARIA
  – Give recommended oral antimalarial
  – Give one dose of paracetamol for high fever
  – Give first dose of an appropriate antibiotic for identified bacterial cause
  – Advise mother when to return immediately
  – Follow up in 3 days if fever persists
  – If fever present everyday for >7 days, REFER
FEVER IN HIGH/LOW MALARIA RISK

Malaria test NEGATIVE or other causes of fever PRESENT

- **GREEN: FEVER NO MALARIA**
  - Give one dose of paracetamol for high fever
  - Give first dose of an appropriate antibiotic for identified bacterial cause
  - Advise mother when to return immediately
  - Follow up in 3 days if fever persists
  - If fever present everyday for >7 days, REFER
FEVER IN NO MALARIA RISK

Any general danger sign or stiff neck

- **PINK: VERY SEVERE FEBRILE DISEASE**
  - Give first dose of an appropriate antibiotic
  - Treat the child to prevent low blood sugar
  - Give one dose of paracetamol for high fever
  - Refer URGENTLY to hospital
FEVER IN NO MALARIA RISK

No general danger signs or stiff neck

• **GREEN : FEVER**
  
  – Give one dose of paracetamol for high fever
  
  – Give first dose of an appropriate antibiotic for identified bacterial cause
  
  – Advise mother when to return immediately
  
  – Follow up in 2 days if fever persists
  
  – If fever present everyday for >7 days, REFER
FEVER: MEASLES

Any general danger sign/ clouding of cornea/deep extensive mouth ulcers?

- **PINK: SEVERE COMPLICATED MEASLES**
  - Give vitamin A treatment
  - Give first dose of an appropriate antibiotic
  - If clouding of cornea or pus draining from the eyes, apply tetracycline eye ointment
  - Refer URGENTLY to hospital
Fever: Measles

Pus draining from the eyes or mouth ulcers

- **YELLOW: MEASLES WITH EYE OR MOUTH COMPLICATIONS**
  - Give vitamin A treatment
  - If clouding of cornea or pus draining from the eyes, apply tetracycline eye ointment
  - If mouth ulcers, treat with gentian violet
  - Follow up in 3 days
FEVER: MEASLES

Measles now or within last 3 months with no danger signs or complications

• GREEN: MEASLES
  – Give vitamin A treatment
## 4. EAR PROBLEM?

<table>
<thead>
<tr>
<th>Tender swelling behind ear?</th>
<th><strong>PINK: MASTOIDITIS</strong></th>
<th>Give first dose of appropriate antibiotic, give paracetamol for pain, <strong>URGENTLY REFERENCE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pus seen draining, duration &lt;14 days Ear pain</td>
<td><strong>YELLOW: ACUTE EAR INFECTION</strong></td>
<td>Give antibiotic for 5 days, give paracetamol for pain, dry the ear by wicking, follow up in 5 days</td>
</tr>
<tr>
<td>Pus seen draining, reported to be &gt;14 days</td>
<td><strong>YELLOW: CHRONIC EAR INFECTION</strong></td>
<td>Dry the ear by wicking, give quinolone ear drops for 14 days, follow up in 5 days</td>
</tr>
<tr>
<td>No ear pain, no pus</td>
<td><strong>GREEN: NO EAR INFECTION</strong></td>
<td>No treatment</td>
</tr>
</tbody>
</table>
5: ACUTE MALNUTRITION

1. Check for acute malnutrition by ‘look and feel’ method
   - Oedema
   - Weight for height/length: (Z scores)
   - Mid upper arm circumference (> 6 months age)

2. If wt. for Ht < 3 Z scores or MUAC <115mm
   - Check for any medical complications: general danger signs, any severe classification, pneumonia with chest indrawing
   - If no medical complications:
     • > 6 months age: offer RUTF (Ready to Use Therapeutic Food) and see whether able to finish the portion or not
     • < 6months: assess breast feeding
COMPLICATED SAM

• Edema of both feet OR wt for ht/length less than -3 Z scores/MUAC <115mm and any of the following-
  – Medical complications present
  – Unable to finish RUTF
  – Problem with breast feeding

• PINK: COMPLICATED SEVERE ACUTE MALNUTRITION
  – Give first dose appropriate antibiotic
  – Treat the child to prevent low blood sugar
  – Keep warm
  – Refer URGENTLY to hospital
## UNCOMPLICATED SAM

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wt for ht/length less than -3 Z scores OR MUAC &lt;115mm AND Able to finish RUTF</td>
<td>Give oral antibiotic for 5 days Give RUTF for child aged &gt;=6 months Counsel the mother how to feed the child Assess for possible TB infection Advise mother when to return immediately Follow up 7 days</td>
</tr>
<tr>
<td>Wt for ht/length -3 to -2 Z scores OR MUAC 115 to 125 mm</td>
<td>Assess feeding and advise on feeding If feeding problem follow up 7 days Assess for possible TB infection Advise mother when to return immediately Follow up 30 days</td>
</tr>
<tr>
<td><strong>YELLOW: UNCOMPLICATED SEVERE ACUTE MALNUTRITION</strong></td>
<td><strong>YELLOW: MORERATE ACUTE MALNUTRITION</strong></td>
</tr>
</tbody>
</table>
NO MALNUTRITION

• Wt for height Z scores – 2 or above OR MUAC >125 mm

• GREEN: NO ACUTE MALNUTRITION
  – If child < 2 years, observe feeding and counsel mother on feeding recommendations
  – If feeding problem, follow up in 7 days
# ANAEMIA

Check for anaemia by palmar pallor: severe or mild?

<table>
<thead>
<tr>
<th>Severe palmar pallor present</th>
<th><strong>PINK: SEVERE ANEMIA</strong></th>
<th>URGENT referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some pallor</td>
<td><strong>YELLOW: ANAEMIA</strong></td>
<td>Give iron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Give mebendazole if age&gt;1 year and not had it in last 6 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advise when to return immediately</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Follow up 14 days</td>
</tr>
<tr>
<td>No palmar pallor</td>
<td><strong>GREEN: NO ANAEMIA</strong></td>
<td>If child &lt; 2 years, observe feeding and counsel mother on feeding recommendations if feeding problem follow up in 5 days</td>
</tr>
</tbody>
</table>

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TREATMENT GUIDELINES:IMNCI
BRONCHODILATORS AND PARACETAMOL

1. Inhaled bronchodilator: use salbutamol MDI (100µg/puff) with spacer. Give 2 puffs every 15 minutes before classifying pneumonia

2. Paracetamol

<table>
<thead>
<tr>
<th>Age or weight</th>
<th>PARACETAMOL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tab (100mg)</td>
</tr>
<tr>
<td>2 months upto 3 years (4 to &lt;14 kg)</td>
<td>1</td>
</tr>
<tr>
<td>3 years up to 5 years (14 kg to &lt;19 kg)</td>
<td>1 ½</td>
</tr>
</tbody>
</table>
**PNEUMONIA/EAR INFECTION**

- First line antibiotic for PNEUMONIA or ACUTE EAR INFECTION

<table>
<thead>
<tr>
<th>Age or weight</th>
<th>AMOXICILLIN (2 times/day upto 5 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tab 250mg</td>
</tr>
<tr>
<td>2 months upto 12 months (4-&lt;10kg)</td>
<td>1</td>
</tr>
<tr>
<td>12 months upto 3 years(10kg-&lt;14kg)</td>
<td>2</td>
</tr>
<tr>
<td>3 years upto 5 years(14-19kg)</td>
<td>3</td>
</tr>
</tbody>
</table>
ANTIBIOTIC IN CHILDREN REFERRED URGENTLY

1. Inj Ampicillin 50 mg/kg IM (if referral not possible or delayed repeat dose every 6 hours. When there is strong suspicion of meningitis dose can be increased 4 times)

2. Inj Gentamicin 7.5 mg/kg IM
DIAZEPAM IN CONVULSIONS

1. Turn child to his/her side and clear airway. Avoid putting anything to mouth

2. Give 0.5 mg/kg diazepam Injection solution to rectum using a small syringe without needle or a small catheter

3. Check for low blood sugar, then treat or prevent

4. Give Oxygen and REFER

5. If convulsions have not stopped after 10 min, repeat diazepam dose
TREAT/PREVENT LOW BLOOD SUGAR

• If child is able to breast feed
  – ask mother to breast feed

• If child unable to breast feed but able to swallow
  – Give expressed breast milk or milk substitute
  – If neither of these available, give sugar water (dissolve 4 level tsp-20gm- in 200 ml clean water)
  – Give 30-50 ml of milk or sugar water before departure
TREAT/PREVENT LOW BLOOD SUGAR

• If child unable to swallow
  – Give 50 ml milk or sugar water through naso gastric tube
  – If naso gastric tube not available put 1 tsp sugar moistened with 1-2 drops of water sublingually which can be repeated every 20 min
DIARRHEA PLAN A

• 4 Rules of home treatment

1. Give extra fluids:
   • Give frequent breast feeding, ORS, soup, rice water, yoghurt drink.
   • Teach the mother how to mix ORS.
   • Give her 2 packets of ORS for use at home.
   • How much additional fluid to be given: **upto 2 years: 50-100ml**
     fluid for each loose stool. **2 years or more: 100-200 ml** fluid for each loose stool
   • If child vomits, stop for 10 min and resume. Continue extra fluids till diarrhoea stops
DIARRHEA PLAN A

2. Give Zinc supplement (Tab Zinc 20mg): 2 months up to 6 months: ½ Zinc tab daily for 14 days. 6 months or more: 1 Zinc tab daily for 14 days

3. Continue feeding
DEHYDRATION: PLAN B

• Amount of ORS to be given: 75 ml/kg over 4 hours

• Show mother how to give ORS solution
  – Give in small sips frequently from a cup
  – If child vomits, stop for 10 min and restart
  – Breast feeding can be continued

• After 4 hours reassess and decide further plan to be given
DEHYDRATION: PLAN B

• If mother must leave before completing 4 hours:
  Show her how to prepare ORS, Tell her how much
  ORS to complete rehydration. Give her enough ORS
  packets

• Explain the 4 rules of home treatment
# DEHYDRATION: PLAN C

<table>
<thead>
<tr>
<th>Can you give IV fluids immediately?</th>
<th>Yes</th>
<th>Age</th>
<th>First give 30 ml/kg in</th>
<th>Then give 70 ml/kg in</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td>Under 12 months</td>
<td>1 hour</td>
<td>5 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 mo - 5 years</td>
<td>30 min</td>
<td>2 ½ hours</td>
</tr>
<tr>
<td>Is IV treatment available nearby</td>
<td>Yes</td>
<td>Refer URGENTLY. During the trip give ORS sips orally or as NG drip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you trained to use NG tube?</td>
<td>Yes</td>
<td>Start NG drip of ORS 20ml/kg/hour for 6 hours. If vomits, give drip more slowly. Refer if hydration status does not improve after 3 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can the child drink?</td>
<td>Yes</td>
<td>Follow the above step with ORS by mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No : Refer URGENTLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ANTIBIOTICS IN DYSENTRY AND CHOLERA

• Dysentery: first line antibiotic: Oral ciprofloxacin

<table>
<thead>
<tr>
<th>Age</th>
<th>Ciprofloxacin (15 mg/kg twice daily for 3 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>250mg tab</td>
</tr>
<tr>
<td>&lt;6 months</td>
<td>½</td>
</tr>
<tr>
<td>6 months - 5 years</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>500mg tab</td>
</tr>
<tr>
<td></td>
<td>¼</td>
</tr>
</tbody>
</table>

• Cholera

<table>
<thead>
<tr>
<th>Age</th>
<th>Erythromycin (give 4 times/day for 3 days)</th>
<th>Tetracycline (give 4 times/day for 3 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>250mg tab</td>
<td>250mg tab</td>
</tr>
<tr>
<td>2-5 years</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
ORAL ANTIMALARIALS FOR MALARIA

• Artemether (20mg) – Lumifantrine (120mg) combination tab: give first dose in the clinic and if child vomits in 1 hour repeat the dose
• Give second dose at home after 8 hours
• Then twice daily for 2 more days as shown below
• This medicine should be taken with food
ORAL ANTIMALARIALS FOR MALARIA

- Dose: 2 months to 3 years (5 kg to <14 kg): 1 tab/dose, 3 years up to 5 years (14 kg to <19 kg): 2 tab/dose
SEVERE MALARIA

- For children being referred with very severe febrile illness
- Or for treatment if referral not possible. Stop this treatment and give full oral dose as soon as oral intake is possible.
SEVERE MALARIA

• Drugs used:
  – **Artesunate suppositories**: first dose stat before referral or if being treated: same dose every 24 hours
  – **IM Artesunate**: 1 dose IM stat before referral/ repeat same dose after 12 hours and then daily
  – **IM Quinine**: give 1 dose IM stat. Patient should lie down for 1 hour after injection. Repeat dose at 4 hours, 8 hrs and then every 12 hours
## SEVERE MALARIA: DRUG DOSAGES

<table>
<thead>
<tr>
<th>Age or weight</th>
<th>Artesunate suppository (10mg/kg)</th>
<th>IM Artesunate (2.4 mg/kg)</th>
<th>IM Quinine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50mg</td>
<td>200mg</td>
<td>Vial 20mg/ml</td>
</tr>
<tr>
<td>2-4 months</td>
<td>1</td>
<td>-</td>
<td>½ ml</td>
</tr>
<tr>
<td>4-6 months</td>
<td>2</td>
<td>-</td>
<td>1ml</td>
</tr>
<tr>
<td>12 mo-2 years</td>
<td>2</td>
<td>-</td>
<td>1.5ml</td>
</tr>
<tr>
<td>2-3 years</td>
<td>3</td>
<td>1</td>
<td>1.5ml</td>
</tr>
<tr>
<td>3-5 years</td>
<td>3</td>
<td>1</td>
<td>2ml</td>
</tr>
</tbody>
</table>
TREATMENT WITH VITAMIN A

• Given in Measles or persistent diarrhoea

• Dose
  – Age 6 months to 12 months: 1 lac IU
  – Age 12 months to 5 years: 2 lac IU

• On day 1 and day 2
MOUTH ULCERS

- Use gentian violet to treat
- Wash hands and wash child’s mouth with clean soft cloth wrapped around finger and wet with salt water
- Paint mouth with ½ strength gentian violet (0.25% solution)
MOUTH ULCERS

• Wash hands again

• Continue treatment for 48 hours after the ulcers have healed

• Give paracetamol for pain relief
EYE INFECTION

• Use tetracycline eye ointment
• Clean both eyes 4 times daily
• Wash hands and use clean cloth and water gently to wipe away pus
• Apply by squirting a small amount of the ointment on the inside of the lower lid.
• Wash hands again
• Continue treatment till no more pus comes
IRON SUPPLEMENTS

<table>
<thead>
<tr>
<th>Dose: once daily for 14 days</th>
<th>Iron/folate tab</th>
<th>Iron syrup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron 200mg+folate 250µg 60mg elemental iron)</td>
<td>Ferrous fumarate 100mg/5ml (elemental iron 20mg)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Dose</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 months-4 months</td>
<td>1 ml</td>
<td>1 ml</td>
</tr>
<tr>
<td>4 months-12 months</td>
<td>1.25 ml</td>
<td>1.25 ml</td>
</tr>
<tr>
<td>12 months-3 years</td>
<td>½ tab</td>
<td>2 ml</td>
</tr>
<tr>
<td>3 years-5 years</td>
<td>½ tab</td>
<td>2.5 ml</td>
</tr>
</tbody>
</table>
Sick young infant age upto 2 months
CHECK FOR SEVERE DISEASE AND LOCAL BACTERIAL INFECTION

• **Ask:** Is there feeding difficulty?/ Has the infant had convulsions?

• **Look/listen/feel:**
  – Count breath rate and watch for chest indrawing
  – Measure axillary temperature
  – Umbilicus red or draining pus?
  – Look for skin pustules
  – Look at the infants movements
VERY SEVERE DISEASE

- Any one of the following signs
  - Not feeding well
  - Convulsions
  - Fast breathing 60/min or more
  - Severe chest indrawing
  - Fever 37.5°C or above or low body temperature < 35.5°C
  - Movement only when stimulated or no movement at all
VERY SEVERE DISEASE (continued)

- **PINK: VERY SEVERE DISEASE**
- Give first dose of IM antibiotic
- Treat to prevent low blood sugar
- Refer URGENTLY to hospital
- Advise mother how to keep the infant warm during transportation
LOCAL BACTERIAL INFECTION

• Umbilicus red or draining pus
• Skin pustules

• YELLOW: LOCAL BACTERIAL INFECTION
  – Give an appropriate oral antibiotic
  – Teach the mother to treat local infections at home
  – Advise the mother on home care
  – Follow up in 2 days
SEVERE DISEASE/LOCAL INFECTION UNLIKELY

• None of the signs of severe disease or local bacterial infection

• **GREEN: SEVERE DISEASE OR LOCAL BACTERIAL INFECTION UNLIKELY**

• Advise mother to give home care
JAUNDICE

If jaundice present

• Ask: when did jaundice appear first?

• Look and feel
  – Yellow eyes and skin
  – Palms and soles yellow?

• Classify jaundice as follows
# MANAGEMENT OF JAUNDICE

<table>
<thead>
<tr>
<th>Jaundice &lt;24 hours age?</th>
<th>PINK: SEVERE JAUNDICE</th>
<th>Treat to prevent low blood sugar Refer URGENTLY Advise mother how to keep baby warm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palms and soles yellow?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jaundice appeared after 24 hours</td>
<td>YELLOW: JAUNDICE</td>
<td>Advise mother on home care Advise mother to bring the baby if palms and soles are yellow Refer if infant is older than 14 days. Follow up in 1 day</td>
</tr>
<tr>
<td>Palms and sole not yellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No jaundice</td>
<td>GREEN: NO JAUNDICE</td>
<td>Advise on home care of young infant</td>
</tr>
</tbody>
</table>
DIARRHEA

• Look and feel
  – Infant move on his/her own?
  – Infant move on stimulating?
  – Infant not move at all?
  – Infant restless and irritable?

• Look for sunken eyes

• Pinch skin on abdomen
  – Goes back very slowly (>2 sec)?
  – Or slowly?
## CLASSIFY DEHYDRATION

<table>
<thead>
<tr>
<th>2 of the following Movement only when stimulated Sunken eyes Skin pinch goes back slowly</th>
<th><strong>PINK</strong>: SEVERE DEHYDRATION</th>
<th>If no other severe classification: give <strong>PLAN C</strong> If any other severe classification: refer URGENTLY giving sips of ORS Advise to continue breast feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 of the following Restless/irritable Sunken eyes Skin pinch goes back slowly</td>
<td><strong>YELLOW</strong>: SOME DEHYDRATION</td>
<td>Give fluid and breast milk for some dehydration (<strong>PLAN B</strong>) If any other severe classification: refer URGENTLY giving sips of ORS Advise to continue breast feeding Advise mother when to return immediately Follow up 2 days</td>
</tr>
<tr>
<td>Not enough signs to classify some/severe dehydration</td>
<td><strong>GREEN</strong>: NO DEHYDRATION</td>
<td>Give fluids to treat diarrhoea at home Continue breast feeding Advise mother when to return immediately Follow up 2 days</td>
</tr>
</tbody>
</table>
FEEDING PROBLEM OR LOW WEIGHT FOR AGE?

• Ask:
  – Is the infant breast fed? If so, how many times in 24 hours?
  – Does the infant receive any other food or drink? If so, how often?
  – If yes, what is used to feed the infant?

• Look, listen, feel
  – Determine weight for age
  – Look for white patches in the mouth
ASSESS BREAST FEEDING

• Observe breast feeding technique:
  • Good attachment
    – Chin touching breast
    – Mouth wide open
    – Lower lip turned outward
    – More areola visible above than below

• Is the infant suckling effectively?
  – Slow deep sucks with sometimes pausing
## CLASSIFY FEEDING PROBLEM IN BREASTFED BABY

<table>
<thead>
<tr>
<th>Not well attached OR not sucking effectively OR less than 8 breast feed /24 hours OR receives other foods or drinks OR low weight for age OR oral thrush?</th>
<th>Teach correct positioning and attachment Advising to increase the frequency of breastfeeding. Advising to reduce the use of other foods. Advising on using a cup. Show the mother how to feed, how to treat oral thrush Follow up feeding problem/thrush in 2 days Follow up low weight after 14 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YELLOW: FEEDING PROBLEM OR LOW WEIGHT</strong></td>
<td><strong>GREEN: NO FEEDING PROBLEM</strong></td>
</tr>
<tr>
<td>Weight normal/no evidence of inadequate feeding</td>
<td>Home care advised Praise the mother</td>
</tr>
</tbody>
</table>
FEEDING PROBLEM/ LOW WEIGHT FOR AGE IN NON BREASTFED BABY

• Ask:
  – What milk is given?
  – How many times day and night?
  – How much per feed?
  – How is the milk prepared?
  – Any breast milk being given?
  – Any additional foods or fluids given?
  – How is milk being given? Cup or bottle?
  – How are the utensils cleaned?
FEEDING PROBLEM IN NON BREASTFED BABY
CLASSIFICATION

- Look/listen/feel: weight for age, oral thrush

| Incorrect /unhygienic preparation | Counsel about breast feeding |
| Insufficient feeds | Identify concerns of the mother and family about breast feeding |
| Bottle feeding | Teach cup feeding if bottle feeding now |
| Low weight for age | If thrush, teach its home treatment |
| Thrush | Teach home care |
| **YELLOW: FEEDING PROBLEM OR LOW WEIGHT** | Follow up feeding problem or thrush in 2 days |
| | Follow up low weight in 14 days |
| **GREEN: NO FEEDING PROBLEM** | Home care, praise mother |

IAP UG Teaching slides 2015-16
TREATMENT: SICK YOUNG INFANT: IMNCI
ANTIBIOTIC DOSAGES

• Inj Ampicillin: 50 mg/kg/dose.
  – Give single dose before referral.
  – If infant could not be referred, continue same dose twice daily if age is <1 week and 3 times/day if older than 1 week

• Inj Gentamicin (given once daily): 5 mg/kg below 1 week of age, 7.5 mg/kg above 1 week
TREAT/PREVENT LOW BLOOD SUGAR

• Young infant able to breast feed: advise mother to breast feed

• If not able to breast feed or unable to breast feed:
  – give 20-50ml of expressed breast milk before departure.
  – If this is not possible give 20-50 ml sugar water (4 tsp sugar in 200ml water)

• If not able to swallow: give 20-50 ml expressed breast milk or sugar water by naso gastric tube
LOCAL BACTERIAL INFECTIONS

• Appropriate oral antibiotic: Amoxicillin (2 times/day for 5 days)
  – Birth to 1 month: ¼ of 250 mg tab or 2.5 ml of 125mg/5ml syrup
  – 1-2 months: ½ of 250 mg tab or 5 ml of 125 mg/5 ml syrup
LOCAL BACTERIAL INFECTIONS

• Treat pustules: twice daily for 5 days
  – wash hands and gently wash of pus and crusts with soap and water, dry the area
  – Paint with full strength (0.5%) gentian violet and wash hands
TREATMENT

• Treat thrush: treat 4 times/day for 7 days
  • Wash hands
  • Paint mouth with half strength gentian violet (0.25%) using soft cloth wrapped on finger
  • Wash hands again

• Keep warm:
  • Provide skin to skin contact
  • Keep the infant covered as much as possible. Use gloves, socks, blanket
Thank You