



INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS **CHART BOOK**

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March, 2016

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Printed and published on behalf of the Indira Gandhi National Open University, New Delhi, by **Prof. Pity Koul, Director, School of Health Sciences**, IGNOU, New Delhi.

We acknowledge the reference of material and figures from various sources like NNF, AIIMS, WHO, UNICEF, IGNOU, Govt. of India etc.

Laser Typeset by : Tessa Media & Computers, C-206, A.F.E-II, Jamia Nagar, New Delhi-110025

Printed at:

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INTRODUCTION TO CHART BOOK

Newborns form a special group in the health care system. In order to improve the health care of this group, Government of India has adopted the Integrated Management of Childhood Illness (IMCI) approach of World Health Organization (WHO) and has renamed it as Integrated Management of Neonatal and Childhood Illness (IMNCI). IGNOU has also adapted the IMNCI approach in training package of Nursing personnel.

The IMNCI approach is a very recent development and will help you to manage neonates. You should follow this approach correctly so that you will be able to prevent a lot of newborn mortality and morbidity.

You have to use the Chart Book to assess, classify and manage the sick young infant and record your findings on Recording Forms.

This Chart Book has three main sections. They are indicated by three headings:

- Assess
- Classify
- Identify Treatment

The Assess and Classify column of chart has four columns such as: Assess, Signs, Classify As and Identify Treatment described below:

Assess column lists the signs and symptoms that you have to check and how to check them.

Signs column summarises the signs and symptoms present in the sick young infant.

Classify As column helps you in classifying each illness of the sick young infant.

Treatment column lists appropriate treatment decisions for each classification. Also the chartbook is organized in three **different colours (red, yellow and green)**.

- **Red Colour** indicates severe illness. Infants with severe illness must be referred to a hospital or sent to the doctor as advised in the guide.
- **Yellow Colour** means the disease should be treated with medicine at home and home care advice needs to be given to the mother.
- **Green Colour** means the disease can be treated with home care without the use of medicines.

Remember that the three basic steps in case management of a sick infant are **Assessment, Classify** and **Identify Treatment**.

Now we shall focus on how to proceed to assess the sick young infant using Chart Book. You have to look at the assessment column and assess the infant as per this column. Identify the signs and symptoms that the sick young infant has, match these signs with signs listed in the **Signs** column of Chart Book and encircle the signs on Recording Form/Chart Book that are present in the sick young infant.

Depending on the combination of the young infant's signs and symptoms, you have to classify young infant either in the **red, yellow** or **green** row.

Let us give an example:

1. If the young infant has any of the signs in red column. Select the severe classification, i.e., **POSSIBLE SERIOUS BACTERIAL INFECTION**.
2. If the young infant does not have the severe classification, i.e., sign in **red** column. Look at the **yellow** rows and identify: Is the umbilicus

red or draining pus? Pus discharge from ear? Does the young infant have less than 10 skin pustules and classify the illness accordingly as **Local Bacterial Infection** depending on the signs present in young infant.

Note that the classification table for bacterial infection does not have a green row.

Next, we will proceed to assess and classify **Jaundice and body temperature**. Then classify Diarrhoea.

CLASSIFY DIARRHOEA

There are three classification tables for classifying diarrhoea:

- All infants with diarrhoea are classified for DEHYDRATION.
- If the infant has diarrhoea for 14 days or more and dehydration is present, classify the infant as having SEVERE PERSISTENT DIARRHOEA.
- If the infant has blood in the stool, classify the infant as DYSENTERY.

There are three possible classifications of dehydration in an infant with diarrhoea:

- Severe Dehydration
- Some Dehydration
- No Dehydration

To classify the infant's dehydration, begin with the red (or top) row.

- If two or more of the signs in the red row are present, classify the infant as having SEVERE DEHYDRATION.

If two or more of the signs are not present in the red row then infant does not have severe dehydration.

- Then, look at the yellow (or middle) row. If two or more of the signs are present in the yellow row, classify the infant as having SOME DEHYDRATION.
- If two or more of the signs are not present either in the red row or yellow row, classify the infant as having NO DEHYDRATION. This infant does not have enough signs to be classified as having SEVERE OR SOME DEHYDRATION.

Once you have classified an illness in the young infant you have to treat as given in Identify Treatment column.

Similarly you have to assess, classify and treat all other illnesses in sick young infant.

Recording Form: The purpose of Recording Form is to help you record information collected about the infant's signs and symptoms, when you do exercises in the module and when you see infants during clinical practice sessions.

There are two sides to the form. The front side is similar to the Assess and Classify chart. The other side of the form has spaces for you to use when you plan the infant's treatment.

Look at the top of the front side of the form.

- The infant's name and age
- The mother's answer about the infant's problems.
- Whether this is an initial visit or follow up visit.
- The form is divided into two columns - one is for 'Assess' and the other is for 'Classify'.
- In the Assess column on the Recording Form you have to record any signs and symptoms that are present.
- In the Classify column on the Recording Form you have to record the infant's classification.

When you use the Recording Form to do exercises in this course or when you are working with sick infant during clinical sessions, you have to record information by:

- Circling any sign that is present (circle a sign on the Recording Form). If the infant does not have a sign, you do not need to circle anything.
- Tick 'Yes' if a main symptom is present or 'No' if it is not present.
- Write specific information in space such as the one for recording the number of breaths per minute.

Remember three basic steps which include the Assessment, Classify and Identify Treatment.

These three steps must be carried out in a sequence. First assess as recommended, then classify and finally, choose treatment for conditions marked for each classification. Always take assistance from your counsellor.

We hope this Chart Book will help you to make correct assessment of sick young infant, classify the illness, give appropriate treatment and make referrals as required.

1. SICK YOUNG INFANT AGE UPTO 2 MONTHS

1.1 Assess , Classify and Identify Treatment

ASSESS

ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE

- Determine if this is an initial or follow-up visit for this problem.
 - If follow-up visit, use the follow-up instructions on the bottom of this chart.

USE ALL BOXES THAT MATCH INFANT'S SYMPTOMS

IDENTIFY TREATMENT

An infant with a red classification needs URGENT attention, complete the assessment and pre-referral treatment immediately so the referral is not delayed

1.1.1 CHECK FOR POSSIBLE BACTERIAL INFECTION / JAUNDICE

| ASK: | | LOOK, LISTEN, FEEL: | Signs | CLASSIFY AS | IDENTIFY TREATMENT (Urgent pre-referral treatments are in bold print) | |
|---|---|----------------------------------|-----------------------------------|--|--|--|
| <ul style="list-style-type: none"> • Has the infant had convulsions? | <ul style="list-style-type: none"> • Count the breaths in one minute. Repeat the count if elevated. • Look for severe chest indrawing. • Look for nasal flaring. • Look and listen for grunting. • Look and feel for bulging fontanel. • Look for pus draining from the ear. • Look at the umbilicus. Is it red or draining pus? • Look for skin pustules. Are there 10 or more skin pustules or a big boil? • Measure axillary temperature (if not possible, feel for fever or low body temperature). • See if the young infant is lethargic or unconscious. • Look at the young infant's movements. Are they less than normal? • Look for Jaundice? Are the palms and soles yellow? | <p>YOUNG INFANT MUST BE CALM</p> | <p>Classify ALL YOUNG INFANTS</p> | <ul style="list-style-type: none"> • Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanel or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements. | POSSIBLE SERIOUS BACTERIAL INFECTION | <ul style="list-style-type: none"> • Give first dose of intramuscular ampicillin and gentamicin. • Treat to prevent low blood sugar. • Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral. • Advise mother how to keep the young infant warm on the way to the hospital. • Refer URGENTLY to hospital # |
| | | | | <ul style="list-style-type: none"> • Umbilicus red or draining pus or • <10 skin pustules. | LOCAL BACTERIAL INFECTION | <ul style="list-style-type: none"> • Give oral co-trimoxazole or amoxicillin for 5 days. • Teach mother to treat local infections at home. • Follow up in 2 days. |
| | | | | <ul style="list-style-type: none"> • Palms and soles yellow or • Age < 24 hours or • Age 14 days or more | SEVERE JAUNDICE | <ul style="list-style-type: none"> • Treat to prevent low blood sugar. • Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral. • Advise mother how to keep the young infant warm on the way to the hospital . • Refer URGENTLY to hospital.# |
| | | | | <ul style="list-style-type: none"> • Palms and soles not yellow | JAUNDICE | <ul style="list-style-type: none"> • Advise mother to give home care for the young infant. • Advise mother when to return immediately. • Follow up in 2 days. |
| | | | | <ul style="list-style-type: none"> • Temperature between 35.5 - 36.4°C | LOW BODY TEMPERATURE | <ul style="list-style-type: none"> • Warm the young infant using Skin to Skin contact for one hour and REASSESS. • Treat to prevent low blood sugar. |

And if the infant has jaundice

And if the temp. is between 35.5-36.40°C

if referal is not possible see the section Where Referral is not Possible in the Block 5 of BNS-115. Treat the Young Infant and Counsel the Mother

1.1.2 THEN ASK:

Does the young infant have diarrhoea?*

ASSESS

| | |
|--|--|
| <p>IF YES, ASK:</p> <ul style="list-style-type: none"> • For how long? • Is there blood in the stool? | <p>LOOK, AND, FEEL:</p> <ul style="list-style-type: none"> • Look at the young infant's general condition. Is the infant: <ul style="list-style-type: none"> -Lethargic or unconscious? -Restless and irritable? • Look for sunken eyes. • Pinch the skin of the abdomen. Does it go back: <ul style="list-style-type: none"> -Very slowly (longer than 2 seconds)? -Slowly? |
|--|--|

Classify
DIARRHOEA

for
DEHYDRATION

and if diarrhoea
lasts 14 days or
more

and if blood
in stool

*** What is diarrhoea in a young Infant?**
If the stools have changed from usual pattern and are many and watery (more water than fecal matter). The normally frequent or loose stools of a breastfed baby are not diarrhoea.

if referral is not possible, see the section Where Referral is not Possible in the Block 5 of BNS-115 . Treat the Young Infant and Counsel the Mother.

| SIGNS | CLASSIFY AS | IDENTIFY TREATMENT |
|--|---|--|
| <p>Two of the following signs:</p> <ul style="list-style-type: none"> • Lethargic or unconscious • Sunken eyes • Skin pinch goes back very slowly. | <p>SEVERE DEHYDRATION</p> | <ul style="list-style-type: none"> • Give first dose of Intramuscular ampicillin and gentamicin. • Infant also has low weight or another severe classification: <ul style="list-style-type: none"> - Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way. # - Advise mother to continue breastfeeding. - Advise mother how to keep the young Infant warm on the way to the hospital. OR • If infant does not have low weight or any other "Severe classification": <ul style="list-style-type: none"> - Give fluid for severe dehydration (Plan C) and then refer to hospital after rehydration. |
| <p>Two of the following signs:</p> <ul style="list-style-type: none"> • Restless, irritable • Sunken eyes • Skin pinch goes back very slowly. | <p>SOME DEHYDRATION</p> | <ul style="list-style-type: none"> • Infant also has low weight or another severe classification: <ul style="list-style-type: none"> - Give first dose of intramuscular ampicillin and gentamicin - Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way. # - Advise mother to continue breastfeeding. - Advise mother how to keep the young Infant warm on the way to the hospital. • If infant does not have low weight or another severe classification : <ul style="list-style-type: none"> - Give fluids for some dehydration (Plan B). - Advise mother when to return immediately. - Follow up in 2 days. |
| <p>Not enough signs to classify as some or severe dehydration</p> | <p>NO DEHYDRATION</p> | <ul style="list-style-type: none"> • Give fluids to treat diarrhoea at home (Plan A). • Advise mother when to return immediately. • Follow up in 5 days if not improving. |
| <ul style="list-style-type: none"> • Diarrhoea lasting 14 days or more | <p>SEVERE PERSISTENT DIARRHOEA</p> | <ul style="list-style-type: none"> • Give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification. • Treat to prevent low blood sugar . • Advise how to keep infant warm on the way to hospital. • Refer to hospital.# |
| <ul style="list-style-type: none"> • Blood in Stool | <p>SEVERE DYSENTERY</p> | <ul style="list-style-type: none"> • Give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight , dehydration or another severe classification . • Treat to prevent low blood sugar . • Advise how to keep infant warm on the way to hospital. • Refer to Hospital.# |

1.1.3 Then Check for Feeding Problem and Malnutrition

| ASSESS | SIGNS | CLASSIFY AS | IDENTIFY TREATMENT |
|--|--|--|---|
| <p>ASK:</p> <ul style="list-style-type: none"> Is there any difficulty feeding? Is the infant breastfed? If yes, how many times in 24 hours? Does the infant usually receive any other foods or drinks? If yes, how often? What do you use to feed the infant? <p>IF AN INFANT: Has any difficulty feeding, or Is breastfeeding less than 8 times in 24 hours, or Is taking any other foods or drinks, or Is low weight for age, AND Has no indications to refer urgently to hospital</p> | <ul style="list-style-type: none"> Not able to feed or No attachment at all or Not suckling at all or Very low weight for age. | <p>NOT ABLE TO FEED-POSSIBLE SERIOUS BACTERIAL INFECTION OR SEVERE MALNUTRITION</p> | <ul style="list-style-type: none"> Give first dose of intramuscular ampicillin and gentamicin. Treat to prevent low blood sugar. Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral. Advise mother how to keep the young infant warm on the way to the hospital. Refer URGENTLY to hospital.# |
| <p>LOOK, FEEL:</p> <ul style="list-style-type: none"> Determine weight for age. <p><i>Classify FEEDING</i></p> <hr/> <p>ASSESS BREAST FEEDING:</p> <ul style="list-style-type: none"> Has the Infant breastfed in the previous hour? <ul style="list-style-type: none"> If the infant has not been fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes. (If the infant was fed during the last hour, ask the mother if she can wait and tell you when the infant is willing to feed again) . Is the infant able to attach? <p><i>no attachment at all not well attached good attachment</i></p> <p>TO CHECK ATTACHMENT, LOOK FOR:</p> <ul style="list-style-type: none"> Chin touching breast Mouth wide open Lower lip turned outward More areola visible above than below the mouth <p>(All these signs should be present if the attachment is good)</p> <ul style="list-style-type: none"> Is the infant suckling effectively (that is, slow deep sucks, sometimes pausing)? <ul style="list-style-type: none"> <i>not suckling at all not suckling effectively suckling effectively</i> Clear a blocked nose if it interferes with breast-feeding. Look for ulcers or white patches in the mouth (thrush). <ul style="list-style-type: none"> Does the mother have pain while breastfeeding? <ul style="list-style-type: none"> If yes, look and feel for: <ul style="list-style-type: none"> Flat or inverted nipples or sore nipples. Engorged breasts or breast abscess. | <ul style="list-style-type: none"> Not well attached to breast or Not suckling effectively or Less than 8 breastfeeds in 24 hours or Receives other foods or drinks or Thrush (ulcers or white patches in mouth) or Low weight for age or Breast or nipple problems | <p>FEEDING PROBLEM OR LOW WEIGHT FOR AGE</p> | <ul style="list-style-type: none"> If not well attached or not suckling effectively, teach correct positioning and attachment. If breastfeeding less than 8 times in 24 hours, advise to increase frequency of feeding. If receiving other foods or drinks, counsel mother about breast feeding more, reducing other foods or drinks, and using a cup and spoon. If not breast feeding at all, advise mother about giving locally appropriate animal milk and teach the mother to feed with a cup and spoon. If thrush, teach the mother to treat thrush at home. If low weight for age, teach the mother how to keep the young infant with low weight warm at home. If breast or nipple problem, teach the mother to treat breast or nipple problems. Advise mother to give home care to the young infant. Advise mother when to return immediately. Follow-up any feeding problem or thrush in 2 days. Follow-up low weight for age in 14 days. |
| <p># If referral is not possible, see the section Where Referral is not Possible in Block 5 of BNS-115. Treat the Young Infant and Counsel the Mother.</p> | <ul style="list-style-type: none"> Not low weight for age and no other signs of inadequate feeding. | <p>NO FEEDING PROBLEM</p> | <ul style="list-style-type: none"> Advise mother to give home care to the young infant. Advise mother when to return immediately. Praise the mother for feeding the infant well. |

1.1.4 Then Check the Young Infant's Immunization Status

| IMMUNIZATION SCHEDULE* : | <u>AGE</u> | <u>VACCINE</u> | | |
|---------------------------------|-------------------|-----------------------|-------|--------|
| | Birth | BCG | OPV 0 | |
| | 6 weeks | DPT 1 | OPV 1 | HEP-B1 |

*Hepatitis B to be given wherever included in the immunization schedule

1.1.5 Assess Other Problems

1.2 TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER

1.2.1 Give these Treatments in Clinic Only

- Explain to the mother why the drug is given.
- Determine the dose appropriate for the infant's weight (or age).
- Use a sterile needle and sterile syringe. Measure the dose accurately.

Do Not mix Ampicillin and Gentamicin.

- Give the drug as an intramuscular injection.
- If infant cannot be referred, follow the instructions provided in the section Where Referral is Not Possible in Block 5 of BNS-115. Treat the Young Infant and Counsel the Mother.

a) Give first dose of intramuscular antibiotics

- Give first dose of both ampicillin and gentamicin intramuscularly.

| Weight | GENTAMICIN Dose: 5 mg per kg | | AMPICILLIN Dose: 100 mg per kg (Vial of 500 mg mixed with 2.1 ml of sterile water for injection to give 500mg/2.5ml or 200mg/1 ml) |
|--------|--|--|--|
| | Undiluted 2 ml vial containing 20 mg = 2 ml at 10 mg/ml | OR Add 6 ml sterile water to 2 ml containing 80 mg* = 8 ml at 10 mg/ml | |
| 1 kg | 0.5 ml* | | 0.5 ml |
| 2 kg | 1.0ml* | | 1.0 ml |
| 3 kg | 1.5 ml* | | 1.5 ml |
| 4 kg | 2.0 ml* | | 2.0 ml |
| 5 kg | 2.5 ml* | | 2.5 ml |

* Avoid using undiluted 40 mg/ml gentamicin.

- Referral is the best option for a young infant with classification as POSSIBLE SERIOUS BACTERIAL INFECTION, SEVERE DEHYDRATION, SOME DEHYDRATION WITH LOW WEIGHT, AND SEVERE MALNUTRITION. If referral is not possible, give oral amoxicillin every 8 hours and intramuscular gentamicin once daily. (Remember to give drugs on prescription of doctor)

b) Treat the young infant to prevent low blood sugar

- **If the infant is able to breastfeed:**
Ask the mother to breastfeed the infant.
- **If the infant is not able to breastfeed but is able to swallow:**
Give 20-50 ml (10ml/kg) expressed breastmilk or locally appropriate animal milk (with added sugar) before departure. If neither of these is available, give 20-50 ml (10 ml/kg) sugar water.
To make sugar water: Dissolve 4 teaspoons of sugar (20 grams) in a 200-ml cup of clean water .
- **If the infant is not able to swallow:**
Give 20-50 ml (10 ml/kg) of expressed breastmilk or locally appropriate animal milk (with added sugar) or sugar water by nasogastric tube.

c) Keep the young infant warm

i) *Warm the young infant using skin to skin contact (Kangaroo Mother Care)*

- Provide privacy to the mother. If mother is not available, Skin to Skin contact may be provided by the father or any other adult.
- Request the mother to sit or recline comfortably.
- Undress the baby gently, except for cap, nappy and socks.
- Place the baby prone on mother's chest in an upright and extended posture, between her breasts, in Skin to Skin contact; turn baby's head to one side to keep airways clear.
- Cover the baby with mother's blouse, 'pallu' or gown; wrap the baby-mother duo with an added blanket or shawl.
- Breastfeed the baby frequently.
- If possible, warm the room (>25°C) with a heating device.

> **REASSESS after 1 hour:**

- Look, listen and feel for signs of Possible Serious Bacterial Infection, and
- Measure axillary temperature by placing the thermometer in the axilla for 5 minutes (or feel for low body temperature).
- **If any signs of Possible Serious Bacterial Infection OR temperature still below 36.5°C (or feels cold to touch):**
 - **Refer URGENTLY to hospital after giving pre-referral treatments for Possible Serious Bacterial Infection.**
- **If no sign of Possible Serious Bacterial Infection AND temperature 36.5°C or more (or is not cold to touch):**
 - Advise how to keep the infant warm at home.
 - Advise mother to give home care.
 - Advise mother when to return immediately.

> Skin to Skin contact is the most practical, preferred method of warming a hypothermic infant in a primary health care facility. If not possible:

- Clothe the baby in 3-4 layers, cover head with a cap and body with a blanket or a shawl; hold baby close to caregiver's body, OR
- Place the baby under overhead radiant warmer, if available.

(Avoid direct heat from a room heater and use of hot water rubber bottle or hot brick to warm the baby because of danger of accidental burns) .

ii) *Keep the young infant warm on the way to the hospital*

- By Skin to Skin contact OR
- Clothe the baby in 3-4 layers, cover head with a cap and body with a blanket or a shawl ; hold baby close to caregiver's body.

1.2.2 Treat the Young Infant for Local Infections at Home

a) Teach the mother to give oral drugs at home

Follow the instructions below for every oral drug to be given at home. Also follow the instructions listed with each drug dosage table.

- Determine the appropriate drugs and dosage for the infant's age or weight.
- Tell the mother the reason for giving the drug to the infant.
- Demonstrate how to measure a dose.
- Watch the mother practise measuring a dose by herself.
- Ask the mother to give the first dose to her infant.
- Explain carefully how to give the drug, then label and package the drug.
- If more than one drug will be given : collect, count and package each drug separately.
- Explain that the oral drugs, tablets or syrups must be used to finish the course of treatment, even if the infant gets better.

b) Give an Appropriate Oral Antibiotic

For local bacterial infection:
> Give Oral COTRIMOXAZOLE or AMOXYCILLIN

| AGE or WEIGHT | COTRIMOXAZOLE (trimethoprim + sulphamethoxazole) > Give two times daily for 5 days | | AMOXYCILLIN > Give three times daily for 5 days | |
|--------------------------------|---|---|--|-------------------------|
| | Adult Tablet Single strength (80 mg trimethoprim + 400 mg (sulphamethoxazole) | Pediatric Tablet (20 mg trimethoprim + 100 mg sulphamethoxazole) | Tablet 250 mg | Syrup 125 mg in 5 ml |
| Birth up to 1 month (<3 kg) | | 1/2* | | 1.25 ml |
| 1 month up to 2 month (3-4 kg) | 1/4 | 1 | 1/4 | 2.5 ml |

* Avoid cotrimoxazole in infants less than 1 month of age who are premature or jaundiced.

c) Teach the Mother to Treat Local Infections at Home

- Explain how the treatment is given.
- Watch her as she does the first treatment in the clinic
- She should return to the clinic if the infection worsens.
- Check the mother's understanding before she leaves the clinic.

d) To Treat Skin Pustules or Umbilical Infection

> Apply gentian violet paint twice daily.

The mother should:

- Wash hands.
- Gently wash off pus and crusts with soap and water.
- Dry the area and paint with gentian violet (0.5%).
- Wash hands again.

e) Dry the ear by wicking

Dry the ear at least 3 times daily.

- Roll clean absorbent cloth or soft strong tissue paper into a wick.
- Place the wick in the ear of young infants.
- Remove the wick when wet.
- Replace the wick with a clean one and repeat these steps until the ear is dry.

1.2.3 Treat the Young Infant for Feeding Problems or Low Weight

a) Teach correct positioning and attachment for breastfeeding

- » Show the mother how to hold her infant:
 - with the infant's head and body straight
 - facing her breast, with infant's nose opposite her nipple
 - with infant's body close to her body
 - supporting infant's whole body, not just neck and shoulders.
- » Show her how to help the infant to attach. She should:
 - touch her infant's lips with her nipple
 - wait until her infant's mouth is opening wide
 - move her infant quickly onto her breast, aiming the infant's lower lip well below the nipple.
- » Look for signs of good attachment and effective suckling. If the attachment or suckling is not good, try again.
- » If still not suckling effectively, ask the mother to express breast milk and feed with a cup and spoon in the clinic. To express breast milk:
 - The mother should wash hands, sit comfortably and hold a cup or 'katori' under the nipple
 - Place finger and thumb each side of areola and press inwards towards chest wall. Do not squeeze the nipple.
 - Press behind the nipple and areola between finger and thumb to empty milk from inside the areola; press and release repeatedly .
 - Repeat the process from all sides of areola to empty breast completely .
 - Express one breast for at least 3-5 minutes until flow stops; then express from the other side.
- » If able to take with a cup and spoon, advise mother to keep breastfeeding the young infant and at the end of each feed express breast milk and feed with a cup and spoon.
- » If not able to feed with a cup and spoon, refer to hospital.

b) Teach the mother to feed with a cup and spoon

- Place the young infant in upright posture (feeding him in lying position can cause aspiration).
- Keep a soft cloth napkin or cotton on the neck and upper trunk to mop the spilled milk.
- Gently stimulate the young infant to wake him up.
- Fill the spoon with milk, a little short of the brim.
- Place the spoon on young infant's lips, near the corner of the mouth.
- Gradually allow a small amount of milk to drip into young infant's mouth making sure that he actively swallows it.
- Repeat the process till the young infant stops accepting any more feed, or the desired amount has been fed.
- If the young infant does not actively swallow the milk, do not insist on feeding; try again after some time.

c) To treat thrush (ulcers or white patches in mouth)

- » Tell the mother to do the treatment twice daily.
The mother should:
 - Wash hands.
 - Wash mouth with clean soft cloth wrapped around the finger and wet with salt water.
 - Paint the mouth with gentian violet 0.25% (0.25 g/100 ml) in oral cavity at home.
 - Explain the mother to give the local treatment twice daily.
 - Wash hands.

d) Teach the mother to treat breast or nipple problems

- If the nipple is flat or inverted, evert the nipple several times with fingers before each feed and put the baby to the breast.
- If nipple is sore, apply breast milk for soothing effect and ensure correct positioning and attachment of the baby. If mother continues to have discomfort, feed expressed breast milk with katori and spoon.
- If breasts are engorged, let the baby continue to suck if possible. If the baby cannot suckle effectively, help the mother to express milk and then put the young infant to the breast. Putting a warm compress on the breast may help.
- If breast abscess, advise mother to feed from the other breast and refer to a surgeon. If the young infant wants more milk, feed undiluted animal milk with added sugar by cup and spoon.

e) Teach the mother how to keep the young infant with low weight or low body temperature warm at home

- Do not bathe young infant with low weight or low body temperature; instead sponge with lukewarm water to clean.
- Provide Skin to Skin contact (Kangaroo mother care) as much as possible, day and night.
- When Skin to Skin contact is not possible:
 - Keep the room warm (>25°C) with a home heating device.
 - Clothe the baby in 3-4 layers; cover the head, hands and feet with cap, gloves and socks, respectively.
 - Let baby and mother lie together on a soft, thick bedding.
 - Cover the baby and the mother with additional quilt, blanket or shawl, especially in cold weather.

FEEL THE FEET OF THE BABY PERIODICALLY - BABY'S FEET SHOULD BE ALWAYS WARM TO TOUCH

f) Immunize every sick young infant, as needed

1.3 COUNSEL THE MOTHER

1.3.1 Advise Mother to Give Home Care for the Young Infant

- > Food } Breastfeed frequently as often as and as long as the infant wants ,day or night, during sickness and health.
- > Fluids }
- > Make sure the young infant stays warm at all times.
 - In cool weather, cover the infant's head and feet and dress the infant with extra clothing.

1.3.2 Advise the Mother when to Return to Physician or Health Worker Immediately

a) Follow-up Visit

| If the infant has: | Return for follow-up in: |
|---|--------------------------|
| <ul style="list-style-type: none"> - LOCAL BACTERIAL INFECTION - JAUNDICE - DIARRHOEA - ANY FEEDING PROBLEM - THRUSH | 2 days |
| LOW WEIGHT FOR AGE | 14 days |

b) When to return immediately

Advise the mother to return immediately if the young infant has any of these signs:

- Breastfeeding or drinking poorly
- Becomes sicker
- Develops a fever or feels cold to touch
- Fast breathing
- Difficult breathing
- Yellow palms and soles (if infant has jaundice)
- Diarrhoea with blood in stool

1.3.3 Counsel the Mother About Her Own Health

- > If the mother is sick, provide care for her, or refer her for help.
- > If she has breast problem (such as engorgement, sore nipples, breast infection), provide care for her or refer her for help.
- > Advise her to eat well to keep up her own strength and health.
- > Give iron folic acid tablets for a total of 100 days.
- > Make sure she has access to:
 - Contraceptives
 - Counselling on STD and AIDS prevention.

1.4 GIVE FOLLOW-UP CARE FOR THE SICK YOUNG INFANT

1.4.1 Local Bacterial Infection

After 2 days:

- > Look at the umbilicus. Is it red or draining pus?
- > Look for skin pustules. Are there > 10 pustules or a big boil?
- > Look at the ear. Is it still discharging pus?

Treatment:

- > if **umbilical redness or pus remains or is worse**, refer to hospital.
- > If **umbilical pus and redness are improved**, tell the mother to continue giving the antibiotic for 5 days and continue treating the local infection at home.
- > If **> 10 skin pustules or a big boil**, refer to hospital.
- > If **< 10 skin pustules and no big boil**, tell the mother to continue giving 5 days of antibiotic and continue treating the local infection at home.
- > If **ear discharge** persists, continue wicking to dry the ear. Continue to give antibiotic to complete 5 days of treatment even if ear discharge has stopped.

1.4.4 Low Weight

After 14 days:

Weigh the young infant and determine if the infant is still low weight for age. Reassess feeding. (> See "Then Check for Feeding Problem or Low Weight at 1.1.3).

- > If the infant is **no longer low weight for age**, praise the mother and encourage her to continue.
- > If the infant is **still low weight for age, but is feeding well**, praise the mother. Ask her to have her infant weighed again within a month or when she returns for immunization.
- > If the infant is **still low weight for age and still has a feeding problem**, counsel the mother about the feeding problem. Ask the mother to return again in 2 days.

1.4.2 Jaundice

After 2 days:

Look for jaundice

- Are the palms and soles yellow?
- > If **palms and soles are yellow or age 14 days or more** refer to hospital.
- > If **palms and soles are not yellow and age less than 14 days**, advise home care and when to return immediately.

1.4.3 Diarrhoea

After 2 days:

Ask:

- Has the diarrhoea stopped?
- » If **diarrhoea persists**, Assess the young infant for diarrhoea (>See ASSESS & CLASSIFY chart at 1.1.2) and manage as per initial visit.
- » If **diarrhoea stops** - reinforce exclusive breastfeeding.

1.4.5 Feeding Problem

After 2 days:

Reassess feeding. (>See "Then Check for Feeding Problem or Low Weight" at 1.1.3).

Ask about any feeding problems found on the initial visit.

- > Counsel the mother about **any new or continuing feeding problems**. If you counsel the mother to make significant changes in feeding, ask her to bring the young infant back again in 2 days.
- > If you do not think that feeding will improve, or if the young infant has **lost weight**, refer to hospital.

1.4.6 Thrush

After 2 days:

Look for ulcers or white patches in the mouth (thrush).

Reassess feeding. (> See "Then Check for Feeding Problem or Low Weight" at 1.1.3).

- > If **thrush is worse**, or the infant has **problems with attachment or suckling**, refer to hospital.
- > If **thrush is the same or better**, and if the infant is **feeding well**, continue gentian violet 0.25% for a total of 5 days.

2. Recording Forms

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name Age Weight Kg Temperature °C Date:

ASK: What are the Child's problems? Initial visit? Follow-up visit?

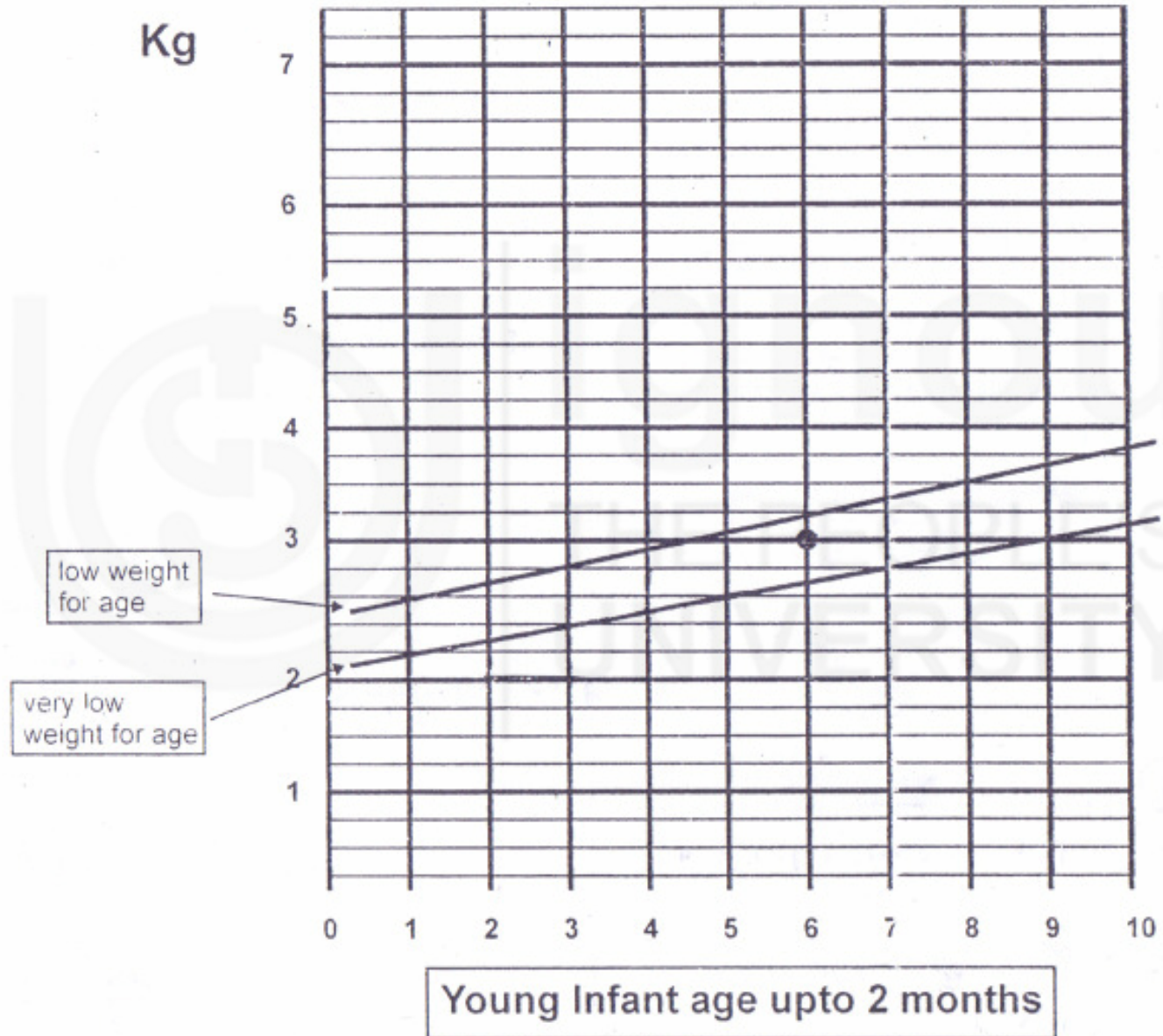
ASSESS (Circle all signs present)

CLASSIFY

| | | | | | | | |
|---|---------|------|-------|-------|--|---------|--|
| <p>CHECK FOR POSSIBLE BACTERIAL INFECTION/SEVERE JAUNDICE</p> <ul style="list-style-type: none"> • Has the infant had convulsions? • Count the breaths in one minute breaths/minute. Repeat if elevated Fast breathing? • Look for severe chest indrawing. • Look for nasal flaring. • Look and listen for grunting. • Look and feel for bulging fontanel. • Look for pus draining from the ear. • Look at the umbilicus. Is it red or draining pus? • Look for skin pustules. Are there 10 or more pustules or a big boil? • Measure axillary temperature (if not possible, feel for fever or low body temperature); <ul style="list-style-type: none"> – 37.5°C or more (or feels hot)? – Less than 35.5°C? – Less than 36.5°C but above 35.4°C (or feels cold to touch)? • See if young infant is lethargic or unconscious. • Look at young infant's movements. Less than normal? • Look for jaundice. Are the palms and soles yellow? | | | | | | | |
| <p>DOES THE YOUNG INFANT HAVE DIARRHOEA? Yes No.....</p> <ul style="list-style-type: none"> • For how long? Days? • Is there blood in the stool? • Look at the young infant's general condition. Is the infant <ul style="list-style-type: none"> – Lethargic or unconscious? – Restless and irritable? • Look for sunken eyes. • Pinch the skin of the abdomen. Does it go back. <ul style="list-style-type: none"> – Very slowly (longer than 2 seconds)? – Slowly | | | | | | | |
| <p>THEN CHECK FOR FEEDING PROBLEM AND MALNUTRITION</p> <ul style="list-style-type: none"> • Is there any difficulty feeding? Yes ___ No ___ • Is the infant breastfed? Yes _____ No _____ If Yes, how many times in 24 hours? _____ times • Does the infant usually receive any other foods or drinks? Yes _____ No _____ if Yes, how often? • What do you use to feed the infant? • Determine weight for age. Very low ___ Low ___ Not Low ___ | | | | | | | |
| <p>If the infant has any difficulty feeding, is feeding less than 8 times in 24 hours, is taking any other food or drinks, or is low weight for age AND has no indications to refer urgently to hospital: ASSESS BREASTFEEDING:</p> <ul style="list-style-type: none"> • Has the infant breastfed in the previous hour? If infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes. <ul style="list-style-type: none"> • Is the infant able to attach? To check attachment, Look for: <ul style="list-style-type: none"> – Chin touching breast Yes ___ No ___ – Mouth wide open Yes ___ No ___ – Lower lip turned outward Yes ___ No ___ – More areola above than below the mouth Yes ___ No ___ <i>no attachment at all not well attached good attachment</i> • Is the infant sucking effectively (that is, slow deep sucks, sometimes pausing)? <i>no sucking at all not sucking effectively sucking effectively</i> • Look for ulcers or white patches in the mouth (thrush). • Does the mother have pain while breastfeeding? If yes, then look for: <ul style="list-style-type: none"> • Flat or inverted nipples, or sore nipples • Engorged breasts or breast abscess | | | | | | | |
| <p>CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS Circle immunizations needed today.</p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;">BCG</td> <td style="border: none;">DPT1</td> </tr> <tr> <td style="border: none;">OPV 0</td> <td style="border: none;">OPV 1</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none;">HEP-B 1</td> </tr> </table> | BCG | DPT1 | OPV 0 | OPV 1 | | HEP-B 1 | <p>Return for next immunization No:</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(Date)</p> |
| BCG | DPT1 | | | | | | |
| OPV 0 | OPV 1 | | | | | | |
| | HEP-B 1 | | | | | | |

ASSESS OTHER PROBLEMS:

3. WEIGHT FOR AGE CHART



4. MOTHER'S CARD



WHEN TO RETURN IMMEDIATELY



BRING ANY SICK INFANT



If not able to feed if becomes sicker if develops a fever

BRING INFANT WITH DIARRHOEA



If blood in stool if drinking poorly

BRING YOUNG INFANT (<2 MONTHS) IF:

Breastfeeding or drinking poorly
 Becomes sicker
 Develops a fever or feels cold to touch
 Fast breathing
 Difficult breathing
 Yellow palms and soles (if infant has jaundice)
 Diarrhoea with blood in stool

Name M/F. Date of Birth

Address

Always bring this card with you to the clinic

FLUIDS

FOR ANY SICK INFANT

- > Breastfeed frequently
- > Exclusive breast feeding
- > Increase fluids (extra fluids/ORS)



IMMUNIZATIONS VITAMIN A & IFA SUPPLEMENTATION

(Record Date Given)

| | | | | | |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| BCG | DPT 1 | DPT 1 | DPT 1 | DPT (Booster) | DT |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| OPC 0 | OPV 1 | OPV 2 | OPV 3 | OPV | IFA |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| HEP B-1 | HEP B-2 | HEP B-3 | MEASLES | VITAMIN A | |

Return for next immunization or vitamin A or IFA supplementation on:

List of Self activities

| Sl. No. | Name of the activity | No. of Cases | Hours | Place/ Area for demonstration/practice | Weight age of marks |
|---------|--|--------------|-------|---|---------------------|
| 1. | Resuscitation of Newborn | 4 | 8 | Manikin/Labor Room / Nursery / Laboratory | 10 |
| 2. | Care of the Neonate | 2 | 3 | Nursery | 4 |
| 3. | Assessment of the Neonate | 2 | 6 | Nursery | 5 |
| 4. | Breast feeding and expressing breast milk | 2 | 4 | Nursery/Labor Room | 5 |
| 5. | Nasogastric/ Orogastric/ Gastrostomy feed | 3 | 8 | Nursery | 5 |
| 6. | Administration of Medicines | 5 | 8 | Nursery | 5 |
| 7. | Administration of IV therapy | 2 | 5 | Nursery | 4 |
| 8. | Administration of : | | | | |
| | • Oxygen therapy | 1 | 4 | Nursery | 4 |
| | • Nebulization therapy | 1 | 4 | Nursery | 4 |
| 9. | Recording of Vital Signs & BP, Blood Sugar, Capillary Blood Sampling and Oxygen Saturation | 1 each = 4 | 5 | Nursery/ Post natal ward | 3 |
| 10. | Neonatal Procedures | | | | |
| | • IV cannulation | | 2 | | 2 |
| | • Umbilical Vein Catheterization | 1 | 3 | | 3 |
| | • Blood Transfusion | each | 2 | Nursery | 3 |
| | • Phototherapy | | 2 | | 2 |
| | • Exchange Transfusion | | 2 | | 3 |
| | • Retinopathy of Prematurity Screening | | 3 | | 2 |
| 11. | Collection of Samples | | | | |
| | • Capillary Blood for Blood Sugar Monitoring | 1 | 4 | Nursery/ Post natal ward | 8 |
| | • Blood | each | | | |
| | • Urine | | | | |
| | • CSF | | | | |
| 12. | Neonatal Equipments : | | | | |
| | • Radiant warmer/Incubator | | 3 | | |
| | • Pulse oximetry | | 2 | | |
| | • Bilirubinometer and Phototherapy | 1 | 2 | Nursery/ Neonatal ICU | 8 |
| | • Infusion Pump | each | 2 | | |
| | • Weighing Scale | | 2 | | |
| | • Suctioning as Endotracheal , oral and Nasopharyngeal | | 3 | | |
| 13. | Aspetic Technique and Hand washing, Use of Gown , gloves and mask, Various disinfection procedures for neonatal equipments | 1 | 5 | Nursery | 5 |
| 14. | Assess, classify , treat sick young infant , counsel the mother and follow up care | 2 | 20 | Pediatric Ward/Nursery | 15 |

List of Supervised activities

| Sl. No. | Name of the activity | Demonstration | | Practice under Supervision | | Place/ Area for demonstration/ practice | Weight age of marks |
|---------|--|---------------|----------------------------|----------------------------|----------------------------|---|----------------------------|
| | | No. of Cases | Time (Hrs). | No. of cases | Time (Hrs.) | | |
| 1. | Resuscitation of Newborn | 1+1 | 2 | 4 | 6 | Manikin/Labor Room/ Nursery / Laboratory | 10 |
| 2. | Care of the Neonate | 1 | 1 | 1 | 2 | Nursery | 4 |
| 3. | Assessment of the Neonate | 1+1 | 2 | 2 | 4 | Nursery | 5 |
| 4. | Breast feeding and expressing breast milk | 1+1 | 2 | 2 | 2 | Nursery/Labor Room | 5 |
| 5. | Nasogastric/ Orogastric/ Gastrostomy feed | 1+1+1+1 | 4 | 4 | 4 | Nursery | 5 |
| 6. | Administration of Medicines | 1+1+1 | 4 | 3 | 4 | Nursery | 5 |
| 7. | Administration of IV therapy | 1+1 | 2 | 2 | 3 | Nursery | 4 |
| 8. | Administration of : • Oxygen therapy • Nebulization therapy | 1 1 | 2 2 | 1 1 | 2 2 | Nursery | 4 4 |
| 9. | Recording of Vital Signs & BP, Blood Sugar, Capillary Blood Sampling and Oxygen Saturation. | 1 each = 4 | 2 | 1 each = 4 | 3 | Nursery/Post natal ward | 3 |
| 10. | Neonatal Procedures • IV cannulation • Umbilical Vein Catheterization • Blood Transfusion • Phototherapy • Exchange Transfusion • Retinopathy of Prematurity Screening | 1 each | 1 1 1 1 1 1 | 1 each | 1 2 1 1 1 2 | Nursery | 2 3 3 2 3 2 |
| 11. | Collection of Samples • Capillary Blood for Blood Sugar Monitoring • Blood • Urine • CSF | 1 each | 2 | 1 each | 2 | Nursery/Post natal ward | 8 |
| 12. | Neonatal Equipments : • Radiant warmer/Incubator • Pulse oximetry • Bilirubinometer and Phototherapy • Infusion Pump • Weighing Scale • Suctioning as Endotracheal , oral and Nasopharyngeal | 1 each | 1 1 1 1 1 | 1 each | 2 1 1 1 1 2 | Nursery/Neonatal ICU | 8 |
| 13. | Aspetic Technique and Hand washing Use of Gown, gloves and mask Various disinfection procedures for neonatal equipment | 1 | 2 | 1 | 3 | Nursery | 5 |
| 14. | Assess, classify, treat sick young infant, counsel the mother and follow up care | 2 | 10 | 2 | 10 | Pediatric Ward/Nursery | 15 |
| 15. | Practical Examination /Viva Voca | | | | 8 | | |
| | Total | | 49 | | 71 49+71=120 | | 100 |

