Section

I

Family Survey and Clinico-social Cases

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5. Environmental Health Status
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7. Sociocultural Environment
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Chapter 1

Spot Map of Field Practice Area

Competency		Suggested teaching	Suggested assessment
CM2.1	Describe the steps and perform a clinical socio-cultural, and demographic assessment of the individual, family and community	Lecture, small group discussion, DOAP (Demonstration, Observation, Assistance and Performance) session	Written/viva voce/ skill assessment

Community Spot Map (Fig. 1.1)

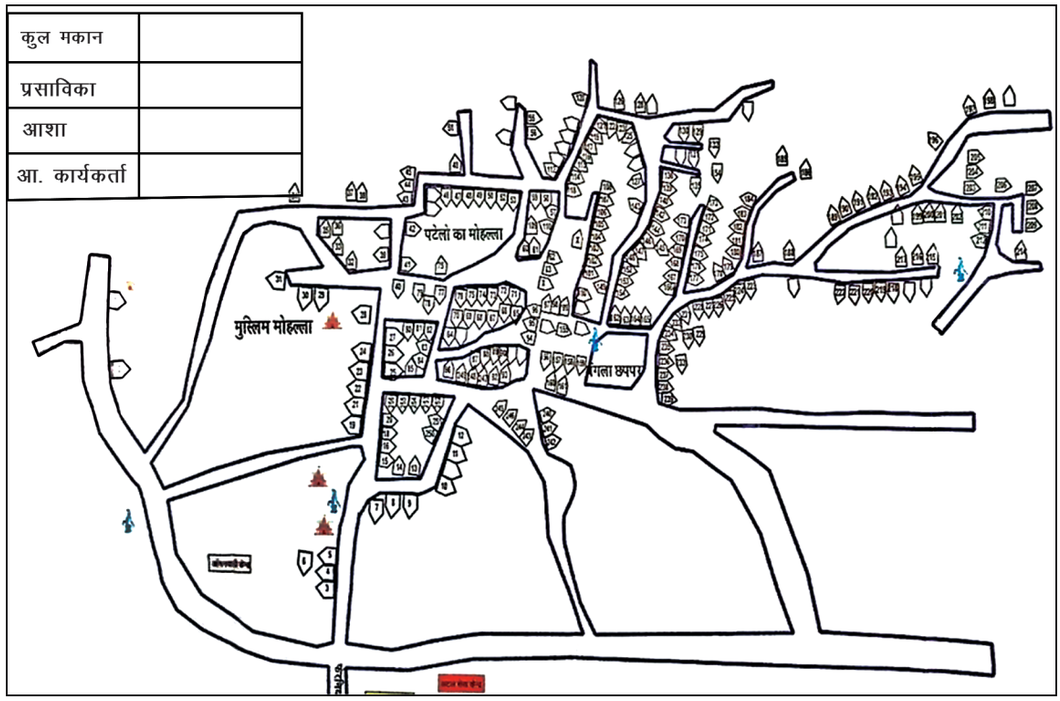

Fig. 1.1: Example of a community spot map

Demographic Details of Field Area

1. Name of the area _____

_____

2. Age distribution_____

_____

3. Sociocultural distribution_____

_____

4. Educational facilities_____

_____

5. Socioeconomic status _____

_____

6. Health seeking behaviour _____

_____

7. Total population _____

_____

8. Gender distribution_____

_____

9. Principal mode of livelihood _____

_____

10. Literacy status _____

_____

11. Health/Anganwadi centres _____

_____

12. Endemic diseases_____

_____

13. Other information _____

_____

Chapter 2

Demographic Details and House Survey

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP sessions	Skill assessment
CM2.1	Describe the steps and perform a clinical sociocultural and demographic assessment of the individual, family and community	Lecture, small group discussion, DOAP session	Written/viva voce/skill assessment

A. Introduction

1. Respondent (name, age and gender):_____
2. Address: _____
3. Setting: ☐ Rural ☐ Urban ☐ Semi-urban (*Tick appropriate*)

B. Family Structure

1. Head of family: _____
2. Type of the family: ☐ Joint ☐ Nuclear ☐ Others
3. Social group: ☐ Hindu ☐ Muslim ☐ Others, ☐ General ☐ SC ☐ ST ☐ OBC
4. Monthly income of the family:
   a. Per capita income:_____
   b. Socioeconomic status: ☐ APL ☐ BPL, Class: _____ *(Chapter 6)*

   Total expenditure of the family:
   a. Food:_____
   b. Medical: _____
   c. Substance abuse (beedi/cigarette/alcohol/gutkha, etc.): _____

5. Profile of the family members:

S. No.	*Name of family members*	*Relation to head of family*	*Age/ gender*	*Marital status*	*Education*	*Occupation*	*Income (per month)*	*Any disease*
1.								
2.								
3.								
4.								
5.								
6.								

6. Nearest health-care facility or provider: Name:_____ ☐ Private ☐ Government

7. Vital events in the family in the past 1 year:

☐ Births ☐ Deaths ☐ Marriage ☐ Migration ☐ Adoption ☐ Divorce

8. Social security: ☐ Bank account ☐ Ration card ☐ RSBY ☐ Ayushman Bharat ☐ Others:_____

C. Environmental Conditions of the Family

1. House

a. Possession: ☐ Owned ☐ Rental

b. Residing since _____ (years) ☐ Permanent ☐ Temporary

c. Outset: ☐ Open ☐ Closed

d. Construction of the house: ☐ Pucca ☐ Semi-pucca

e. Walls: ☐ Not plastered ☐ Plastered-mud ☐ Cement

f. Lighting: Natural: ☐ Adequate ☐ Inadequate, Artificial ☐ Adequate ☐ Inadequate

g. Cross ventilation: ☐ Present ☐ Absent

h. Overcrowding: ☐ Present ☐ Absent

If present, _____

Criteria: ☐ People/Room ☐ Area ☐ Gender separation

i. Surroundings of the house:

☐ Open drains ☐ Vector breeding sites ☐ Waste disposal area ☐ Stray animals

☐ Other hazards (Specify) _____

j. Domestic hazards: ☐ Present ☐ Absent ☐ If present, specify _____

2. Kitchen

a. Construction: ☐ Separate ☐ Combined
b. Fuel used for cooking: ☐ Smoke forming ☐ Smokeless
If smoke forming, smoke outlet: ☐ Present ☐ Absent
c. Storage of general food items: ☐ Proper ☐ Improper
d. Storage of raw food items: ☐ Covered ☐ Not covered ☐ Container, open

3. Water

a. Source: ☐ Private ☐ Public, ☐ Piped ☐ Borewell, ☐ Others: _____
b. Supply: ☐ Continuous ☐ Intermittent
c. Storage of water: ☐ Open ☐ Closed
d. Household purification of water: ☐ Absent ☐ Boiling ☐ Filtration ☐ Others: _____
e. Fetching of drinking water from the container: ☐ Tap ☐ Ladle ☐ Dipping vessel ☐ By hand

4. Sanitation

a. Sanitary latrine: ☐ Present ☐ Absent
b. Location: ☐ Within the house ☐ Attached to the dwelling unit ☐ Away from house
c. Regularly used: ☐ Yes ☐ No
d. Privacy consideration: ☐ Yes ☐ No
e. Availability of water: ☐ Yes ☐ No
f. Cleanliness: ☐ Satisfactory ☐ Unsatisfactory
g. Floor: ☐ Slippery ☐ Nonslippery
h. Solid waste disposal: ☐ Dustbin or covered container ☐ Open
i. Frequency of collection and disposal: ☐ Daily ☐ Alternate days ☐ Irregular
j. Domestic animals in the house: ☐ Present ☐ Absent
k. Rodents: ☐ Present ☐ Absent
l. Arthropod Vectors: ☐ Present ☐ Absent

D. Dietary Practices of the Family

a. Type of diet: ☐ Vegetarian ☐ Non-vegetarian
b. Fruit/vegetable intake: ☐ Adequate ☐ Inadequate
c. Calorie intake: ☐ Adequate ☐ Inadequate
d. Protein intake: ☐ Adequate ☐ Inadequate
e. Hand washing: ☐ Yes ☐ No
f. Storage of cooked food: ☐ Proper ☐ Improper
g. Prior cleaning of vegetables: ☐ Yes ☐ No

h. Type of salt used: ☐ Iodized ☐ Not iodized

i. Type of oil used: ☐ Vanaspathi ☐ Sunflower oil ☐ Mustard oil ☐ Groundnut oil ☐ Others_____

E. Knowledge, Attitude and Practices (KAP) Regarding Health and Disease

a. How are diseases caused? ☐ Disease agents and body dysregulation ☐ Diet-related ☐ Evil spirits/God ☐ Others _____

b. How are diseases treated? ☐ Medicine/surgery ☐ Holy intervention/God ☐ Others_____

c. Preferred health care provider? ☐ Trained doctors (allopathic) ☐ Trained doctors (AYUSH) ☐ Quacks/faith healers ☐ Others _____

d. Proper age for marriage for girls?_____

e. The optimum number of children for a couple?_____

f. Family planning: ☐ Desirable ☐ Undesirable.

g. How cholera is caused? _____

h. How malaria is caused? _____

i. How TB is caused? _____

j. What are the diseases transmitted by mosquito? _____

k. Enumerate some waterborne diseases: _____

F. Summary

- **Overall Family Health Assessment:** ☐ Excellent ☐ Good ☐ Average ☐ Poor ☐ Very poor
- **Problems identified**
  - ♦
  - ♦
  - ♦
  - ♦
- **Advise given/action taken:**
  - ♦
  - ♦
  - ♦
  - ♦

Chapter 3

Immunization Status

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor–patient relationship in a simulated environment	DOAP sessions	Skill assessment

1. Immunization data (under-five children) (Refer: Table 13.1, p. 71 for National Immunisation Programme (India):

Name	Age	Vaccines given								Status[(#)]
		At birth	6 wk	10 wk	14 wk	9 months	16–24 months	5 years	10 years	

[(#)] *Immunization status: Mark 'F' for fully immunized, 'P' for partially immunized and 'U' for unimmunized.*

2. Vaccinator and site:

_____

3. Other vaccines not given by the due date

Name	Due vaccines dose not given	Reasons for delay/failure	Advice given/action taken

Chapter 4

Personal Hygiene

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment

4.1 Personal Hygiene Data

Personal hygiene	Parameters	Family Member	1	2	3	4
Clothing	Clean/Dirty					
Handwash with soap	Yes/No					
Body cleanliness	Yes/No					
Hair clean	Yes/No					
Eyes clean	Yes/No					
Oral hygiene	Good/Bad					
Ear hygiene	Good/Bad					
Skin disease	Clean/Dirty					
	Present/Absent					
Menstrual hygiene (if applicable)	Present/Absent					
Footwear use	Regular/Occasional/Never					
Associated health problems						

4.2 Overall Assessment

☐ Excellent ☐ Good ☐ Average ☐ Poor ☐ Very poor

- **Problems identified**
  - ♦
  - ♦
  - ♦
  - ♦

- **Advise given/action taken:**
  - ♦
  - ♦
  - ♦
  - ♦

Chapter 5

Environmental Health Status

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM3.5	Describe the standards of housing and the effect of housing on health	Lecture, small group discussion	Written/viva voce
IM25.13	Counsel the patient and family on prevention of various infections due to environmental issues	DOAP (Demonstration, Observation, Assistance, and Performance) sessions	Skill assessment

5.1 House Data

a. House _____ ☐ Kutcha/☐ Pucca/☐ Semi-pucca

b. No. of living rooms _____

c. Overcrowding: ☐ Present/☐ Absent

If present, Criteria: ☐ Area ☐ People/Room ☐ Gender separation

Overcrowding criteria:

i. Area

Area (feet^2)	Person
110	2
90–100	1.5
70–90	1
50–70	0.5
<50	0

ii. People per room

Rooms	*Max. No. of persons*
1	2
2	3
3	5
4	7
5	10
Additional 2 for each further room	

iii. Gender separation: If two people over 9 years of age who are not husband and wife of the opposite sex are obliged to sleep in the same room.

d. Kitchen environment

i. Clean/Unclean _____

ii. Separate: ☐ Yes/☐ No

iii. Fuel used ..... _____

iv. Storage of food: ☐ Hygienic/☐ Unhygienic

e. Presence of pet animals ☐ Yes/☐ No. If yes (specify) _____

f. Rodents in the house: ☐ Yes/☐ No

g. Presence of arthropods in the house: ☐ Houseflies/☐ Mosquitoes/☐ Cockroaches/☐ Other

h. Sources of light:

i. *Natural:* ☐ Adequate /☐ Inadequate

ii. *Artificial:* ☐ Adequate/☐ Inadequate

Lighting criteria

1. Up to 100 lux of illumination in living rooms with measuring instruments.
2. Subjectively if one can read newsprint in all the corners and the centre of the room and also in the darkest portion of the room, the lighting can be considered adequate, provided there is no glare and the light does not directly fall in the eyes.

i. Ventilation: ☐ Adequate /☐ Inadequate

Ventilation criteria

1. *Cubic space:* 1000-1200 Cu.ft./ person
2. *Air change:* More important than cubic space
   - Living room: 2 or 3 in 1 hr
   - Work room/assemblies: 4–6/hr
   - If > 6/hr: drought (avoided)
3. *Cross ventilation*: Fresh cool air enters the building through an inlet (open window, gate) while the outlet forces warm interior air outside through another roof vent, open window or gate.

5.2 Neighbourhood/House Surrounding

a. Sanitary condition: ☐ Clean/☐ Unclean

b. Locality: ☐ Urban slum/☐ Resettlement colony/☐ Posh colony

5.3 Measurements of the House

Rooms measurement (in feet)		***Ventilators***		***Windows***		***Doors***		***Ventilation***
S.No.	Size (l × b × h)	No.	Size (l × b)	No.	Size (l × b)	No.	Size (l × b)	Satisfactory/ Not satisfactory

5.4 Water Supply

a. Source _____

b. Frequency: ☐ Continuous/☐ Intermittent

c. How drinking water is stored? ☐ Open/☐ Closed _____

d. How water is taken out for consumption? ☐ Tap/☐ Laddle/☐ Hands_____

e. Impression: ☐ Safe/☐ Unsafe

5.5 Excreta Disposal ☐ Sanitary latrine/☐ Unsanitary latrine/☐ Open air

5.6 Waste

a. Is the family aware of environmental hazards of using plastic bags? ☐ Yes/☐ No

b. Disposal: (a) Stored in ☐ Open dustbin/☐ Covered dustbin

c. Disposed off: ☐ Daily/☐ Less frequently

Mode of disposal _____

5.7 Surrounding of the House

a. Drainage: ☐ Open/☐ Covered

b. Garbage: ☐ Present/☐ Absent

c. Collection of water: ☐ Present/☐ Absent

d. Breeding of mosquitoes: ☐ Present/☐ Absent

5.8 Inspection for Breeding Places

a. Aedes mosquitoes: ☐ Not found/☐ Found (specify _____)

b. Anopheles mosquitoes: ☐ Not found/☐ Found (specify _____)

c. Housefly: ☐ Not found/☐ Found (specify _____)

5.9 Overall Environment Assessment

☐ Excellent ☐ Good ☐ Average ☐ Poor ☐ Very Poor

- **Problems identified**
  - ♦
  - ♦
  - ♦
  - ♦
- **Advise given/action taken**
  - ♦
  - ♦
  - ♦
  - ♦

Chapter

6

Socioeconomic Status

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP sessions	Skill assessment
CM2.2	Describe the correct assessment of socioeconomic status	Lecture, small group discussion, DOAP session	Written/viva voce/ skill assessment
CM2.5	Describe poverty and social security measures and its relationship to health and disease	Lecture, small group discussion	Written/viva voce

6.1 Income Source and Expenditure Pattern

1. Total monthly income (in rupees): _____
2. Total monthly expenditure (in rupees): _____
3. Total monthly expenditure on food (in rupees): _____
4. Total monthly health expenditure (in rupees):_____
5. Catastrophic health expenditure: ☐ Yes/ ☐ No
   (Catastrophic health expenditure defined as out-of-pocket payments on health in the recall period of 1 month equalling or exceeding 10% of total household expenditure)
6. Per capita income per month *(Total family income in a family divided by total family members)* _____

6.2 Socioeconomic Scales: Modified Kuppuswamy Scale (for Urban Area) (Tables 6.1 to 6.4)

Occupation is classified as follows:

1. *Professional:* Lawyer, doctor, etc.
2. *Semi-professional:* High school teacher, lecturer, insurance inspector, musician, research assistant, etc.

3. *Clerical/shopowner:* Clerk, typist, junior accountant, elementary school teacher, shopkeeper, firm owner, station master, guard, news correspondent, salesman, insurance agent, etc.

4. *Skilled worker:* Mason, carpenter, mechanic, radio repairer, engine and car driver, telephone mechanic, etc.

5. *Semi-skilled worker:* Factory or workshop labour, lab and library attendant, car cleaner, petty shopkeeper, etc.

6. *Unskilled worker:* Porter, peon, watchman, domestic servant, etc.

Table 6.1: Occupation of the head of the family

S.No.	*Occupation of the head*	*Score*
1.	Legislators, senior officials and managers	10
2.	Professionals	9
3.	Technicians and associate professionals	8
4.	Clerks	7
5.	Skilled workers and shop and market sales workers	6
6.	Skilled agricultural and fishery workers	5
7.	Craft and related trade workers	4
8.	Plant and machine operators and assemblers	3
9.	Elementary occupation	2
10.	Unemployed	1

Table 6.2: Education of the head of the family

S.No.	*Education of the head*	*Score*
1.	Profession or honours	7
2.	Graduate	6
3.	Intermediate or diploma	5
4.	High school certificate	4
5.	Middle school certificate	3
6.	Primary school certificate	2
7.	Illiterate	1

Table 6.3: Total monthly income of the family		
S.No.	***Updated monthly family income in Rupees (2021)***	***Score***
1.	≥1,23,322	12
2.	61,663–1,23,321	10
3.	46,129–61,662	6
4.	30,831–46,128	4
5.	18,497–30,830	3
6.	6,175–18,496	2
7.	≤6174	1

Table 6.4: Kuppuswamy's socioeconomic status scale 2021		
S.No.	***Score***	***Socioeconomic class***
1.	26–29	Upper (I)
2.	16–25	Upper middle (II)
3.	11–15	Lower middle (III)
4.	5–10	Upper lower (IV)
5.	<5	Lower (V)

BG Prasad Scale 2021 (for both Urban and Rural Areas) (Table 6.5)

Table 6.5: Revision of the Prasad's social classification for the year 2021	
Social class	***Revised for 2021 (in Rs./month)***
I.	≥7,889 Upper Class
II.	3,994–7,888 Upper Middle Class
III.	2,367–3,943 Middle Class
IV.	1,183–2,366 Lower Middle Class
V.	≤1,183 Lower Class

Chapter 7

Sociocultural Environment

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM2.2	Describe the sociocultural factors, family (types), its role in health and disease and demonstrate in a simulated environment	Lecture, small group discussion, DOAP (Demonstration, Observation, Assistance and Performance) session	Written/viva voce/ skill assessment
CM2.3	Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behaviour	Lecture, small group discussion, DOAP (Demonstration, Observation, Assistance and Performance) session	Written/viva voce/ skill assessment
PE8.4	Elicit history on the complementary feeding habits	Bedside clinics, skills lab	Skill assessment
PE8.5	Counsel and educate mothers on the best practices in complementary feeding	DOAP (Demonstration, Observation, Assistance and Performance) session	Document in log book

7.1 Information Regarding Customs and Health Practices

7.1.1 Menstrual Health

1. Menstruation is a normal physiological process: ☐ Yes/☐ No
2. Any food restrictions followed during menstruation: ☐ Yes/☐ No
3. Any other restrictions during menstruation: (Custom/Religious) ☐ Yes/☐ No

   If yes (specify) _____
4. Restrictions on movement in and out of the house ☐ Yes/☐ No

7.1.2 Marriage

1. What is the legal age for marriage in India for boys _____, for girls_____
2. At what age were you married? _____
3. In your opinion, what should be the age for marriage in boys _____ years, and in girls _____ years.

7.1.3 Child-bearing (Antenatal)

1. Age of the mother at the birth of first child_____
2. Number of children born: _____
3. Age at last pregnancy: _____
4. Type: ☐ Planned ☐ Unplanned

Details regarding the last pregnancy and its outcome:

a. Registered in antenatal clinic: ☐ Yes/☐ No
   If yes, in which month (*period of gestation*) _____
b. Received antenatal care: ☐ Yes/☐ No_____
c. Number of antenatal visits _____
d. Whether food intake increased: ☐ Yes/☐ No
e. Any food restriction: _____ ☐ Yes/☐ No
   If yes, mention_____
f. Any special/additional food item given? ☐ Yes/☐ No, If yes, mention _____
g. Number of hours of rest in daytime: ☐ Nil/_____
h. Any complications during pregnancy: ☐ Yes/☐ No If yes, _____
i. Anaemia :☐ Present/ ☐ Absent (as per record/history)
j. Outcome of pregnancy: ☐ Abortion/☐ Stillbirth/☐ Preterm/☐ Full term
k. Delivery: Institutional/Home, Delivered by :☐ Doctor/☐ Nurse/☐ Trained Dai/☐ Untrained Dai/☐ Relatives or neighbours/☐ Self
l. Cord applicants :☐ Ash/☐ Cowdung/☐ Ghee/☐ Antiseptic/☐ Other _____/none applied
m. No. of days of isolation during puerperium: _____

7.1.4 Child Rearing (Postnatal)

a. Colostrum given to newborn? ☐ Yes/☐ No and
   Why/Why not?_____
b. Breastfeeding started within how many hours and why? _____
   _____
c. Any prelacteal feeds given to the child and why? _____
   _____
d. Do you give any other food than breast milk before six months of age? ☐ Yes/☐ No and
   why/ why not_____
e. Do you give water to a child before six months? ☐ Yes/☐ No _____
f. At what age complementary feeding should be started? _____
g. When did you start complementary foods for your child?_____
h. Is your child vaccinated for the vaccines due for date? ☐ Yes/☐ No
   If no, reasons _____

i. Did your child ever suffer from diarrhea? ☐ Yes/☐ No

If yes, what actions did you take:

(a) ORS given: ☐ Yes/☐ No

(b) Home available fluids given: ☐ Yes/☐ No

If yes, specify _____

Any other action, specify: _____

j. Did your child ever suffer from pneumonia? ☐ Yes/☐ No

If yes, could you recognize it? ☐ Yes/☐ No

What were the signs and symptoms?_____

What actions did you take? _____ .

7.1.5 Other Child Rearing Practices

a. Application of kajal. _____ ☐ Yes/☐ No

If yes, with common applicator ☐ Yes/☐ No

b. Massage with oil _____ ☐ Yes/☐ No

c. Exposure to sunlight _____ ☐ Yes/☐ No

d. Use of ghutti_____ ☐ Yes/☐ No

e. Food prohibited during fever:_____ ☐ Yes/☐ No

f. Restrictions of fluids during diarrhoea : _____ ☐ Yes/☐ No

7.1.6 Family Planning

a. In your opinion, how many children a couple should have?_____

b. What should be the gap between two children? _____

c. Name contraceptive methods you know. _____

d. Which permanent sterilization methods (☐ Tubectomy/☐ Vasectomy) you will prefer and why?____

_____

e. Are you using any method of contraception? ☐ Yes/☐ No. If yes, which one_____ Since when?

f. Reasons for not using any method? _____

7.1.7 Health Seeking Behaviour

a. In case of illness, preference of health facility/facilities? ☐ Hospital/☐ Dispensary/☐ MCH Centre/☐ Private practitioner (qualified)/☐ Private practitioner (unqualified)/☐ Any other _____

_____

b. Why? _____

c. Which system of medicine is preferred ? ☐ Allopathy/☐ Homoeopathy/☐ Ayurvedic /☐ Any other Specify _____

❍ Problems identified

- ♦
- ♦
- ♦
- ♦

❍ Advise given/action taken

- ♦
- ♦
- ♦
- ♦

Comprehensive Management Plan (Family)

Levels of prevention	*Primary: Health promotion and specific protection*	*Secondary: Early diagnosis and adequate treatment*	*Tertiary: Disability limitation and rehabilitation*
1. Individual			
2. Family			
3. Community			

Chapter 8

Preventive Check-up (ANC/PNC, Under 5)

8.1 Antenatal/Postnatal Check-up

Competency		*Suggested teaching*	*Suggested assessment*
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor–patient relationship in a simulated environment	DOAP (Demonstration, Observation, Assistance, and Performance) sessions	Skill assessment
PE18.3	Conduct antenatal examination of women independently and apply the at-risk approach in antenatal care	Bedside clinics	Skill station
PE18.6	Perform postnatal assessment of newborn and mother, provide advice on breastfeeding, weaning and on family planning	Bedside clinics, skill lab	Skill assessment
OG19.2	Counsel in a simulated environment, contraception and puerperal sterilization	DOAP (Demonstration, Observation, Assistance and Performance) session	Skill assessment

8.1.1 Identification Details

a. Name: _____

b. Age: _____

c. Education:_____

d. Occupation _____

e. Parity: Gravida-primigravida/Multigravida: Parity_____, Stillbirth_____, Abortion_____, Live_____

f. Husband details:

Education: _____ Occupation _____

Income_____

8.1.2 Socioeconomic Status

a. Occupation of head of household _____

b. Education of head of household _____

c. Family income (monthly): Per capita income: _____ (APL/BPL) _____

d. Socioeconomic status: _____

8.1.3 Clinical History

1. Chief complaints:
   a. Amenorrhoea (details) _____
   b. Pedal oedema: ☐ Yes/☐ No
   c. Blurring of vision: ☐ Yes/☐ No
   d. Palpitation: ☐ Yes/☐ No
   e. Bleeding p/v: ☐ Yes/☐ No
   f. Discharge p/v: ☐ Yes/☐ No
2. History of present pregnancy:
   a. Conceived spontaneously: ☐ Yes/☐ No
   b. Diagnosis of pregnancy: Urine pregnancy test (UPT) ☐ Yes/☐ No
      If yes: Self/Clinic _____
   c. ANC registration at ☐ PHC/ ☐ Govt./ ☐ Pvt. Hospital
   d. No. of ANC visits: *(Minimum 4)*
3. Trimester history

- **Trimester 1**
  a. Excessive vomiting ☐ Yes/☐ No
  b. Bleeding p/v ☐ Yes/☐ No
  c. Fever with rashes ☐ Yes/☐ No
  d. Drug intake: ☐ Yes/☐ No
  e. Weight gain: (*Minimum 1 kg)* ☐ Yes/☐ No
  f. Investigations: ☐ Hb ☐ Blood group ☐ RBS ☐ VDRL
     ☐ Hep-B ☐ HIV ☐ Urine albumin and sugar
  g. Folate supplementation: ☐ Yes/☐ No
  h. Tetanus immunization: ☐ Yes/☐ No, (If yes, Dose/Date) _____
- **Trimester 2**
  a. Quickening: ☐ Yes/☐ No
  b. Weight gain: *Minimum 5 kg* ☐ Yes/☐ No
  c. Blurring of vision ☐ Yes/☐ No
  d. Epigastric pain ☐ Yes/☐ No
  e. Pedal oedema ☐ Yes/☐ No
  f. Headache ☐ Yes/☐ No

g. Iron folic acid supplementation: ☐ Yes/☐ No
h. Side effects (IFA supplementation) ☐ Yes/☐ No If yes,
☐ Nausea ☐ Vomiting ☐ Loss of appetite ☐ Change in the colour of stools ☐ Others
i. Tetanus toxoid immunization: ☐ Yes/☐ No (If yes, Dose/Date) _____
j. Investigations: ☐ Hb, ☐ USG

- **Trimester 3**
  a. Weight gain: *(Minimum 5 kg)*
  b. Warning signs
     i. Pain abdomen: ☐ Yes/☐ No
     ii. Decreased perception of fetal movements ☐ Yes/☐ No
     iii. Leaking/Bleeding PV ☐ Yes/☐ No

4. Menstrual history:
   a. Age at menarche _____
   b. Regularity of the cycles: ☐ Yes/☐ No
   c. Normal days of flow _____
   d. Excessive bleeding/clots: ☐ Yes/☐ No
   e. Pain during periods: ☐ Yes/☐ No

5. Marital history:
   a. Age at marriage _____
   b. Consanguineous/ Non-consanguineous: ☐ Yes/☐ No
   c. Contraceptive usage: ☐ Yes/☐ No

6. Obstetric history:

S.No	*Type of delivery*	*Place of delivery*	*Gender and weight of baby, whether cried immediately or not*	*Postnatal: Fever, foul smelling, lochia, bleeding PV*	*Feeding history Time of starting; Prelacteal feed; Duration of EBF; Complementary feed started*	*Present status: Immunization and nutritional status*

7. Dietary history: (24 hr recall). Refer to Chapter 10, p. 45 onwards for dietary assessment
   a. Breakfast:
   b. Lunch:
   c. Evening snacks:
   d. Dinner:

   Calories estimated: ..... Calories required: ..... Deficit or Excess (%) .....
   Protein estimated:..... Protein required:..... Deficit or Excess (%).....

8. Past history:
   a. Hypertension ☐ Yes/☐ No
   b. Diabetes mellitus ☐ Yes/☐ No
   c. Tuberculosis ☐ Yes/☐ No
   d. Blood transfusion ☐ Yes/☐ No
9. Family history:
   a. History of twins ☐ Yes/☐ No
   b. Preterm ☐ Yes/☐ No
   c. Abortion ☐ Yes/☐ No
10. Personal and social history:
   a. Appetite _____
   b. Sleep _____
   c. Addictions _____
   d. Family support _____
11. Occupational history: _____
12. Environmental history: Housing condition_____
13. Economic condition: Socioeconomic status_____
14. Social welfare measures: JSY, anganwadi services _____

8.1.4 Physical Examination

1. General
   - Pallor/Icterus/JVP/Clubbing/Cyanosis/Lymphadenopathy/Oedema
   - Breast
   - Thyroid
2. Cardiovascular: _____
3. Respiratory: _____
4. Abdominal examination:

   Inspection

   - Shape of the abdomen
   - Symmetry
   - Fullness of the flanks
   - Striae gravidarum
   - Striae nigra
   - Scar

Palpation

- Abdominal girth
- Symphysio fundal height
- Fundal grip
- Lateral grip
- 1 pelvic grip
- 2 pelvic grip

Auscultation

- Fetal heart sound (FHS)

8.1.5 Management

1. Interventions:
   a. ICDS—Anganwadi centre: ☐ Awareness ☐ Utilization

      Reasons for non-utilization _____

   b. Preparation for delivery: Money, vehicle, decision about place of delivery, awareness about JSY

   c. Plan for family planning—contraception _____

   d. Advice to continue IFA for 6 months after delivery _____

- **Problems identified**
  - ☐
  - ☐
  - ☐
  - ☐

- **Advise given/action taken:**
  - ☐
  - ☐
  - ☐
  - ☐

Comprehensive Management Plan (Family)

Levels of prevention	*Primary: Health promotion and specific protection*	*Secondary: Early diagnosis and adequate treatment*	*Tertiary: Disability limitative and rehabilitation*
1. Individual			
2. Family			
3. Community			

8.2 Under-five Child

Competency		*Suggested teaching*	*Suggested assessment*
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor-patient relationship in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
PE10.4	Identify children with under nutrition as per IMNCI criteria and plan referral	DOAP (Demonstration, Observation, Assistance and Performance) session	Document in log book

8.2.1 Identification Details

a. Name _____

b. Sex _____

c. Date of Birth _____

d. Age _____

e. Informant: _____ Reliability: _____

8.2.2 Socioeconomic Status

a. Occupation of head of household: _____

b. Education of head of household: _____

c. Family income _____: Per capita income: _____ (APL/BPL) _____

Socioeconomic status: _____

8.2.3 Clinical History

1. Chief complaints: _____
2. History of presenting complaints: *Elaborate the chief complaints. Enquire about other complaints.*

   Ask about h/o

   - ARI
   - Diarrhoea
   - Recurrent infections (respiratory and skin to be especially enquired)
   - Passing worms in stools
   - Decreased appetite
   - Chronic conditions (for example, TB)
   - Ear discharge
   - Contact with TB
   - Injuries
   - Frequency, duration, treatment sought and h/o admission in any illness reported
   - Treatment sought during any reported illness
     - Public/Private: Reason for preference
     - Duration of each episode
     - Medication given: If available
     - Cost of medication
3. Antenatal history:
   - If it is the first child: Duration between marriage and first conception
   - Birth spacing from previous delivery
   - Contraceptive use between deliveries: Reason for use/non-use
   - Registration: Govt./Pvt.
   - Antenatal visits: Total number of visits
   - Any illness during the antenatal period: Anaemia, PIH, etc.
   - H/o hospital admission, referral
   - Complications during pregnancy like
     - Hyperemesis
     - Pre-eclampsia
     - Eclampsia
     - Infections
     - Antepartum haemorrhage
   - IFA intake

- Investigations done during pregnancy:
  - Hemoglobin estimation,
  - Blood grouping,
  - Ultrasound scanning.
- Visits by health worker during antenatal period

4. Natal history
   - Mode of delivery
   - Timing
   - Place of delivery
   - Birth weight
   - Complications at the time of birth
   - Cry after birth
   - Prelacteal feeds
   - Time of starting breastfeeding
   - Admission in NICU, if any and reason for admission
   - Time of discharge from the hospital
   - Postnatal visits by health worker
5. Developmental history
   a. Gross motor
   b. Fine motor
   c. Language
   d. Personal social
6. Immunization history: Vaccines given appropriate for age: ☐ Yes/ ☐ No

   Source of immunization history: Preferably immunization card
7. Nutrition history:
   - Time of starting breastfeeding after birth
   - Frequency of feeds
   - Duration of breastfeeding both exclusive and total
   - H/o administration of pre-lacteal feed
   - Time of complementary feeding and started with what items
   - Frequency of complementary feeds
   - Whether child given any commercially available preparation
   - Use of bottle feed

- 24-hour diet recall:
  a. Breakfast
  b. Lunch
  c. Evening snacks
  d. Dinner
- Calories and protein calculation:
  - Required
  - Actually consumed
  - Deficit/excess (%)

8. Utilization of anganwadi services
   - For mother
   - For child
     - Growth monitoring
     - Pre-school education
     - Supplementary nutrition
9. Cultural beliefs on food
   - Prelacteal feeds
   - Foods avoided in general/during illness
10. Treatment history: Undergoing any treatment for chronic condition, for the present condition, h/o treatment in the past, past hospitalisation.
11. Family history:
    - H/o chronic condition in the family especially tuberculosis
    - H/o other children of the family
    - H/o contraception usage by the couple
    - H/o smoking in the family
    - Caretaker in the absence of the mother:
      - Crèche or grandmother
      - Support from other family members in taking care of the child
    - Looking after the child in mother's absence
    - Accompanying to the hospital
    - Financial aid

8.2.4 General Physical Examination

Pallor/icterus/JVP/clubbing/cyanosis/lymphadenopathy/oedema

8.2.5 Anthropometry (Tables 8.1 and 8.2)

Parameter	*Observed*	*Expected*	*Deficit*
Weight			
Height			
MUAC			

Table 8.1: Reference weight for children up to five years (kg)

Age (month)	*Boy*		*Girl*	
	If less than this, then it is low weight	*Ideal weight (kg)*	*If less than this, then it is low weight*	*Ideal weight (kg)*
0	2.5	3.3	2.4	3.2
3	5	6.4	4.5	5.8
6	6.4	7.9	5.7	7.3
9	7.1	8.9	6.5	8.2
12	7.7	9.6	7.0	8.9
15	8.3	10.3	7.6	9.6
18	8.8	10.9	8.1	10.2
21	9.2	11.5	8.6	10.9
24	9.7	12.2	9.0	11.5
27	10.1	12.7	9.5	12.1
30	10.5	13.3	10.0	12.7
33	10.9	13.8	10.4	13.4
36	11.3	14.3	10.8	13.9
39	11.6	14.8	11.2	14.4
42	12	15.3	11.6	15
45	12.4	15.8	12.0	15.5
48	12.7	16.3	12.3	16.1
51	13.1	16.8	12.7	16.6
54	13.4	17.3	13.0	17.2
57	13.7	17.8	13.4	17.7
60	14.1	18.3	13.7	18.2

Table 8.2: What should be the height of children up to five years? (kg)

Age (month)	*Boy*		*Girl*	
	If less than this, then child is stunted	*Ideal height (cm)*	*If less than this, then child is stunted*	*Ideal height (cm)*
0	46.1	49.9	45.4	49.1
3	63.3	67.6	61.2	65.7
6	63.3	67.6	61.2	65.7
9	67.5	72.0	65.3	70.1
12	71.0	75.7	68.9	74.0
15	74.1	79.1	72.0	77.5
18	76.9	82.3	74.9	80.7
21	79.4	85.1	77.5	83.7
24	81.7	87.8	80.0	86.4
27	83.1	89.6	81.5	88.3
30	85.1	91.9	83.6	90.7
33	86.9	94.1	85.6	92.9
36	88.7	96.1	87.4	95.1
39	90.3	98.0	89.2	97.1
42	91.9	99.9	90.9	99.0
45	93.5	101.6	92.5	100.9
48	94.9	103.3	94.1	102.7
51	96.4	105.0	95.6	104.5
54	97.8	106.7	97.1	106.2
57	99.3	108.3	98.5	107.6
60	100.7	110.0	99.9	109.4

Reference weight and height/length for identifying wasting (Table 8.3, Figs. 8.1 and 8.2)

Table 8.3: Moderate acute malnourished and severe acute malnourished table

Length (cm)	*Boy*			*Girl*		
	Below this severe wasting (kg) (SAM)	*Between this moderate (kg) (MAM)*	*Between this normal (kg)*	*Below this severe wasting (kg) (SAM)*	*Between this moderate (kg) (MAM)*	*Between this normal (kg)*
46.0	2.0	2.0–2.1	2.2–3.1	2.0	2.0–2.1	2.2–3.2
48.0	2.3	2.3–2.4	2.5–3.6	2.3	2.3–2.4	2.5–3.6
50.0	2.6	2.6–2.7	2.8–4.2	2.6	2.6–2.7	2.8–4.0
52.0	2.9	2.9–3.1	3.2–4.5	2.9	2.9–3.1	3.2–4.6
54.0	3.3	3.3–3.5	3.6–5.1	3.3	3.3–3.5	3.6–5.2
56.0	3.8	3.8–4.0	4.1–5.8	3.7	3.7–3.9	4.0–5.8
58.0	4.3	4.3–4.5	4.6–6.4	4.1	4.1–4.4	4.5–6.5
60.0	4.7	4.7–5.0	5.1–7.1	4.5	4.5–4.8	4.9–7.1
62.0	5.1	5.1–5.5	5.6–7.7	4.9	4.9–5.2	5.3–7.7
64.0	5.5	5.5–5.9	6.0–8.3	5.3	5.3–5.6	5.7–8.3

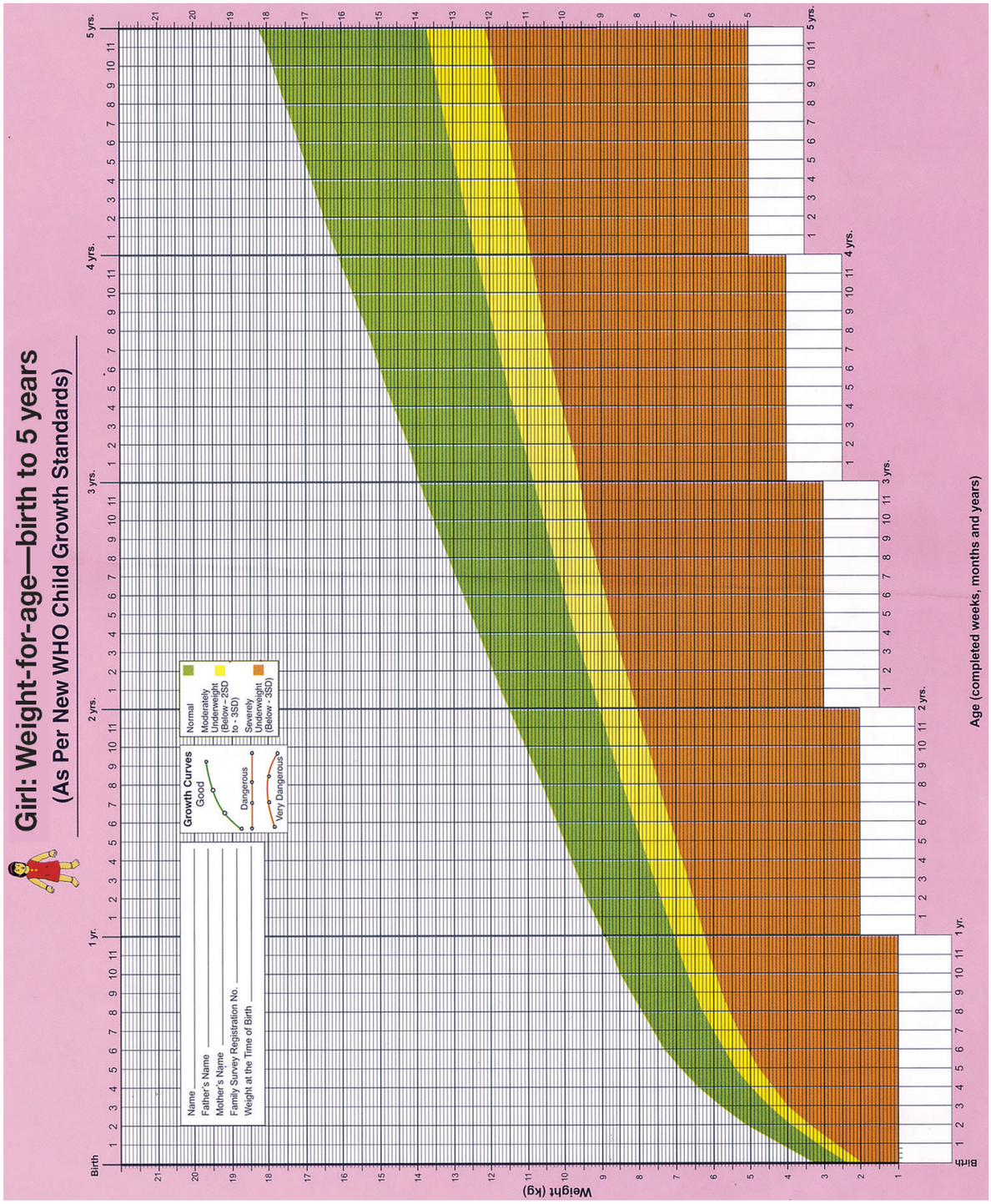

Fig. 8.1: Weight-for-age (Girl: birth to 5 years)

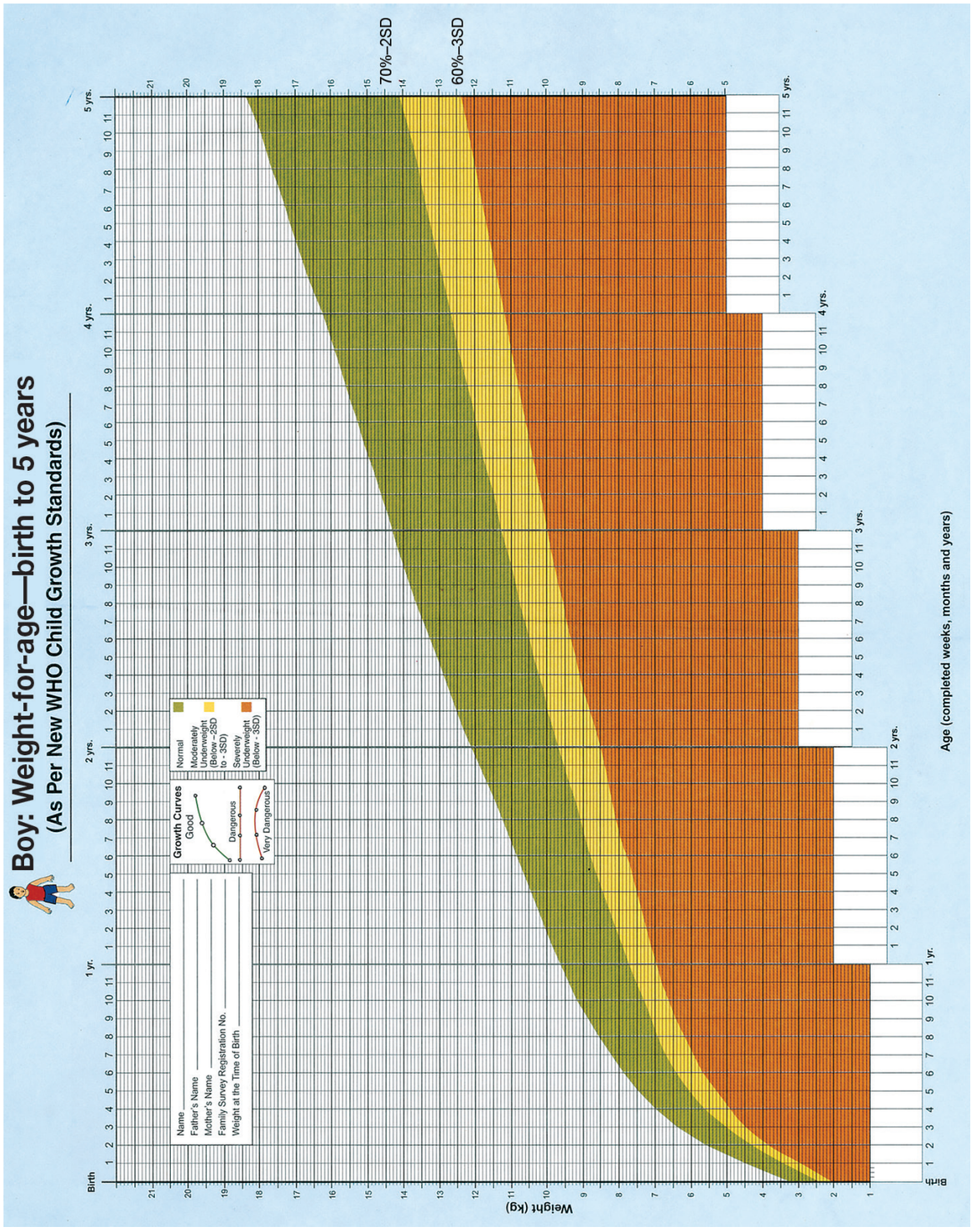

Fig. 8.2: Weight-for-age (Boy: Birth to 5 years)

8.2.6 Head to Toe Examination to Look for Evidence of Protein Energy Malnutrition

- Fontanelles, eye changes
- Skin changes: Erythema and hyperpigmentation—flaky paint dermatosis, petechiae
- Hair changes: Brittle, hypopigmented easily pluckable hair
- Nail changes: Koilonychia (iron deficiency), hypoalbuminaemia

Signs of other micronutrient deficiencies:

- Vitamin A: Bitot's spots
- Vitamin D: Features of rickets like pot belly, wrist widening, rachitic rosary, bow legs, knock knees

Signs of repeated infections

- Repeated ARI: Harrison's sulcus
- Repeated skin infections

8.2.7 Oral Examination

a. Dental hygiene

b. Dentition

8.2.8 Systemic Examination

a. Cardiovascular system

b. Respiratory system

- Wheeze: In case of current LRI or repeated LRI leading to asthma

c. Per abdomen

- Hepatomegaly
- Ascites

d. Central nervous system

8.2.9 Environmental History

1. Housing: Type, no. of living rooms, no. of persons, overcrowding,
2. Ventilation:
   a. Adequacy of ventilation
   b. Cross ventilation
3. Lighting
4. Drinking water: Source, storage, method of retrieval
5. Cooking fuel
   a. Major mode
   b. Presence of exhaust ventilation inside the house
6. Personal hygiene: Frequency of bathing, brushing teeth, cutting nails, practice of wearing chappal

7. Cleanliness of the house
8. Cleanliness of surrounding area: Look for possible breeding areas, garbage, etc.
9. Sanitary latrine: Present/absent
10. Drinking water supply: Any household purification method used
11. Waste disposal:
    a. Sewage, sullage and refuse
    b. Children's fecal matter
12. Pets in the house
13. Assess risk of childhood injuries
    a. Flooring: Slippery
    b. Sharp or projecting edges in the house
    c. Height of the bed
    d. Power sockets, insect repellents, kerosene, medications, etc., in reach of the child

Diagnosis

8.2.10 Management

1. Interventions:
    a. *Immediate:* Clinical management of any existing condition, deworming
    b. Dietary advice for malnourished child:
        i. Supplement deficiency in calories and proteins
            - Supplement deficiency in calories and micronutrients
            - Locally available and low cost foods
            - Food items preferred by the family and the child
        ii. Micronutrient deficiency, if exists
        iii. *Long-term:* Personal hygiene, vaccination, vitamin prophylaxis, nutritional advice, weight monitoring, anganwadi service utilisation, family planning choices, importance of birthspacing.

Negative Factors

- **Problems identified**
    -
    -
    -
    -

- **Advise given/action taken:**
  -
  -
  -
  -

Comprehensive Management Plan (Family)

Levels of prevention	*Primary: Health promotion and specific protection*	*Secondary: Early diagnosis and adequate treatment*	*Tertiary: Disability limitation and rehabilitation*
1. Individual			
2. Family			
3. Community			

IMNCI (Integrated Management of Neonatal and Childhood Illnesses):

The IMNCI clinical guidelines target children less than 5 years old—the age group that bears the highest burden of deaths fromcommon childhood diseases.

The guidelines based on evidence-based syndromic approachare used by the health worker to determine the:

- Health problem(s) the child may have;
- Severity of the child's condition;
- Actions that can be taken to care for the child (e.g. refer the child immediately, manage with available resources, ormanage at home)

The case management process is presented on a series of charts, which show the sequence of steps and how to perform them.

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name: _____ Age: _____ Weight: _____kg Temperature: _____°C Date _____

Ask: What are the infant's problems? _____

Initial visit? _____

Follow-up visit _____

ASSESS (Circle all signs present) **Classify**

CHECK FOR POSSIBLE BACTERIAL INFECTION/JAUNDICE

- Has the infant had convulsions?

- Count the breaths in one minute ____ breathes per 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 fontanelle
- 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)
  - 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?

Does the young infant have diarrhoea?

- For how long? ____ Days
- Is there blood in the stool?

Yes _____ No _____

- Look at the young infant's general condition. Is the infant:
  - Lethargic or unconscious?
  - Restless and irritable?
- Look for sunken eyes
- Pinch the skin of the abdomen, Does it go back?
  - Very slowly (longer than 2 seconds)?
  - Slowly

Contd.

Then check for feeding problems and malnutrition

- If there any difficulty feeding? ☐ Yes/ ☐ No Determine weight for age. Very low__low__not low__
- 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?

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:

- 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.
  - Is the infant able to attach? To check attachment, look for:
    - 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

      no attachment at all *not well attached* *good attachment*
  - Is the infant suckling effectively (that is, slow deep sucks, sometimes pausing)?

    not sucking at all *not sucking effectively* *sucking effectively*
  - Look for ulcers or white patches in the mouth (thrush).
- Does the mother have pain while breastfeeding? If yes, then look for:
  - Flat or inverted nipples, or sore nipples
  - Engorged breasts or breast abscess

Check the young infant's immunization status Circle immunizations needed today

BCG _____ DPT 1 _____

OPV 0 _____ OPV 1 _____

HEP-B 1a _____

Return for next Immunization on:

Date: _____

Assess other problems:

MANAGEMENT OF THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS

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**
Check for General Danger Signs • Not able to drink or breastfeed • Vomits everything • Convulsions	Lethargic or unconscious	General danger sign present? ☐ Yes/ ☐ No Remember to use danger sign when selecting classifications
Does the child have cough or difficult breathing? ☐ Yes / ☐ No • For how long? _____ Days	• Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor _____	
Does the child have diarrhoea? ☐ Yes / ☐ No • For how long? _____ Days • Is there blood in the stool?	• Look at the child's general condition. Is the child: ◊ Lethargic or unconscious? ◊ Restless and irritable? • Look for sunken eyes • Offer the child fluid. Is the child: ◊ Not able to drink or drinking poorly? ◊ Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: ◊ Very slowly (longer than 2 seconds)? ◊ Slowly	
Does the child have fever? (by history/feels hot/temperature 37.5°C or above) ☐ Yes / ☐ No Decide malaria risk: ☐ High ☐ Low		

Contd.

✱ Fever for how long? _____ Days ✱ If more than 7 days, has fever been present every day?	✱ Look and feel for stiff neck ✱ Look and feel for bulging fontanelle ✱ Look for running nose	
✱ Has the child had measles within the last 3 months?	Look for signs of measles: ✱ Generalized rash ✱ One of these: Cough, runny nose, or red eyes	
Does the child have an ear problem ✱ Is there ear pain? ✱ Is there ear discharge? If yes, for how long? _____ Days	☐ Yes/ ☐ No ✱ Look for pus draining from the ear. ✱ Feel for tender swelling behind the ear.	
Then check for malnutrition	✱ Look for visible severe wasting. ✱ Look for edema of both feet ✱ Determine weight for age Very low _____ Not very low _____	
Then check for anaemia	✱ Look for palmar pallor ◈ Severe palmar pallor? ◈ Some palmar pallor? ◈ No pallor?	
Check the Child's Immunization, Prophylactic Vitamin A and Iron-Folic Acid Status Circle immunizations and vitamin A or IFA supplements needed today. BCG _____ DPT 1 _____ DPT 2 _____ DPT 3 _____ DPT (Booster) _____ DT _____ OPV 0 _____ OPV 1 _____ OPV 2 _____ OPV 3 _____ OPV _____ IFA _____ HEP-B1 _____ HEP-B2 _____ HEP-B3 _____ Measles ____ Vitamin A _____		Return for next immunization or vitamin A or IFA supplement on: Date: _____
Assess child's feeding if child has very low weight or anaemia or is less than 2 years old ✱ Do you breastfeed your child ☐ Yes/ ☐ No If yes, how many times in 24 hours? _____ times. Do you understand during the night? ☐ Yes/ ☐ No ✱ Does the child take any other food or fluids? ☐ Yes/ ☐ No If yes, what fluids or fluids? _____ _____ How many times per day? _____ times. What do you use to feed the child and how? _____ How large are the servings? _____ Does the child receive his own serving? ..... Who feeds the child and how? _____ ✱ During this illness, has the child's feeding changed? ☐ Yes/ ☐ No If yes, how?		
Assess other problems:		

Chapter 9

Preventive Check-up (Other Individuals)

Competency		*Suggested teaching*	*Suggested assessment*
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor–patient relationship in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment

9.1 Enter the Relevant Information in the Format given below for each of the individuals (Refer to Chapter 11, p. 48 onwards for clinical case workup)

Name	*Age*	*Conditions for which individual needs to be screened*	*Methods of screening*	*Findings/ Results*	*Action taken*

9.2 List the Medical Problems Detected

1. _____
2. _____
3. _____

Chapter

10

Dietary Assessment

Competency		Suggested teaching	Suggested assessment
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor–patient relationship in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
PE9.4	Elicit, document and present an appropriate nutritional history and perform a dietary recall	Bedside clinic, skill lab	Skill assessment
PE9.5	Calculate the age-related calorie requirement in health and disease and identify gap	Bedside clinics, small group discussion	Skill assessment

10.1 Calorie Chart of Common Indian Foods

Calorie-sheet					
Item	*Quantity*	*Caloric value*	*Item*	*Quantity*	*Caloric value*
Breakfast			**Beverages**		
Egg boiled	1	80	Tea, black, no sugar	1 cup	10
Egg fried	1	110	Coffee, black, no sugar	1 cup	10
Egg omelette	1	120	Tea with milk and sugar	1 cup	45
Bread slice with butter	1	90	Coffee, milk and sugar	1 cup	45
Chapati	1	60	Milk without sugar	1 cup	60
Puri	1	75	Milk with sugar	1 cup	75
Paratha	1	150	Horlicks, milk and sugar	1 cup	120
Sabji	1 cup	150	Fresh fruit juice	1 cup	120

Contd.

Calorie-sheet (*Contd.*)					
Item	***Quantity***	***Caloric value***	***Item***	***Quantity***	***Caloric value***
Idli	1	100	Aerated soft drinks	1 bottle	90
Dosa plain	1	120	Beer	1 bottle	200
Dosa masala	1	250	Soda	1 bottle	10
Sambhar	1 cup	150	Alcohol, neat	1 peg, small	75
Lunch/Dinner			**Miscellaneous**		
Cooked rice, plain	1 cup	120	Jam	1 tsp	30
Cooked rice, fried	1 cup	150	Butter	1 tsp	50
Phulka	1	60	Ghee	1 tsp	50
Nan	1	150	Sugar	1 tsp	30
Dal	1 cup	150	Biscuit	1	30
Curd	1 cup	100	Fried nuts	1 cup	300
Curry, vegetable	1 cup	150	Puddings	1 cup	200
Curry, meat	1 cup	175	Ice-cream	1 cup	200
Salad	1 cup	100	Milk shake	1 glass	200
Papad	1	45	Wafers	1 pkt	120
Cutlet	1	75	Samosa	1	100
Pickle	1 tsp	30	Bhel puri/pani puri	1 helping	150
Soup, clear	1 cup	75	Kabab	1 plate	150
Soup, heavy	1 cup	50	Indian sweet/mithai	1 pc	150
			Fruit	1 helping	75

10.2 Method for Assessment of Average Daily Energy Intake

- Ensure the diet assessment is for a regular and typical day.
- Take dietary history by 24-hour recall.

1. Energy requirements of Indians:

Group	***Category/ Age***	***Body wt. (kg)***	***Energy (kcal/d)***	***Protein (g/d)***
Man	Sedentary work	60	2320	60
	Moderate work		2730	
	Heavy work		3490	

Contd.

Group	*Category/ Age*	*Body wt. (kg)*	*Energy (kcal/d)*	*Protein (g/d)*
Woman	Sedentary work	55	1900	55
	Moderate work		2230	
	Heavy work		2850	
	Pregnant woman		+350	78
	Lactation 0–6 months		+600	74
	6–12 months		+520	68
Infants	0–6 months	5.4	500	1.16 g/kg/day
	6–12 months	8.4	670	1.69 g/kg/day
Children	1–3 years	12.9	1060	16.7
	4–6 years	18.0	1350	20.1
	7–9 years	25.1	1690	29.5

Total number of family members: _____ .

Total number of consumption units*: _____ .

**Key for calculating consumption units:*

Adult male	Sedentary: 1.0, Moderate worker: 1.2, Heavy worker: 1.6
Adult female	Sedentary: 0.8, Moderate worker: 0.9, Heavy worker: 1.2
Adolescents (12–21 yrs)	1.0
Children	9–12 yrs: 0.8, 7–9 yrs: 0.7, 5–7 yrs: 0.6, 3–5 yrs: 0.5, 1–3 yrs: 0.4

2. Planning an appropriate diet for any special case in the family *(malnourished child, ANC/PNC, tuberculosis, diabetes, hypertension, elderly, etc.)*

   For malnourished child, ANC/PNC, tuberculosis, etc. energy intake is calculated first using 24 hour recall. After that calculate any energy deficit or excess according to age and plan diet accordingly.

   For elderly, according to FAO/WHO committee, after the age of 40 years, requirements should be reduced by 5 percent each decade until age of 60, and by 10 percent for each decade thereafter.

Chapter

11

Case Presentations (Diabetes, Hypertension, etc.)

Competency		*Suggested teaching*	*Suggested assessment*
CM1.9	Demonstrate the role of effective communication skills in health in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment
CM1.10	Demonstrate the important aspects of the doctor–patient relationship in a simulated environment	DOAP (Demonstration, Observation, Assistance and Performance) sessions	Skill assessment

List of Important Cases

a. Normal under-five child

b. Under-five child with PEM/vitamin A deficiency/worm infestation/ARI/anaemia/diarrhoea/CSOM, application of IMNCI strategy to under-five sick child, etc.

c. Normal ANC/ANC with anemia/BOH/medical problems, e.g. diabetes/pre-eclampsia /hypertension, etc.

d. Postnatal case: Normal/with complications

e. Couple with infertility/family planning issues

f. Communicable diseases, e.g. tuberculosis, leprosy, scabies, malaria, poliomyelitis, typhoid, hepatitis, measles, chickenpox, etc.

g. Non-communicable diseases, e.g. hypertension, diabetes, cataract, CAD, stroke, bronchial asthma, COPD, problems of geriatric age group, cancers, RHD, etc.

h. Nutritional disorders: Anaemia, undernutrition, obesity, goitre, rickets, etc.

i. Person living with AIDS

j. Other problems: Incomplete immunization, environmental problems, sociocultural problems, drug dependence and alcoholism, broken family, mental health problems, psychosocial problems, etc.

Case 1: Diabetes Mellitus

1. Brief information about the reference person

   Name _____

   Age _____ Gender _____

   Occupation_____Income_____

   Education_____Socioeconomic status _____

   Address_____

2. Details of family members
3. Chief complaints
4. H/o presenting illness: Pertaining to DM-

   Describe onset, progression and treatment availed in chronological order:

   - Reasons for delay in seeking treatment_____
   - Failure of early diagnosis, treatment _____
   - Places of treatment (when, where, how it was diagnosed, which symptom made him seek consultation and what health education was provided about—diet/follow-up investigations/foot exam/foot care)

     _____

     _____

     _____
   - Treatment drugs details, regular or not _____
   - Side effects of drugs ☐ Yes/☐ No
   - Reasons for different places of treatment, satisfaction with services
   - Number of consultations _____
   - Frequency of follow-up/investigations
   - Any referrals ☐ Govt/☐ Pvt
   - H/o use of other systems of medicine for treatment: AYUSH

   Complications (if any): Type, who noticed, how did it manifest, what was he/she advised?

   _____

   _____

Microvascular

- H/o blurring of vision/progressive loss of vision: Acuity/floaters/distortion/double vision/pain eyes (retinopathy)
- H/o decreased urine output/frothing of urine/oedema legs/face (nephropathy)
- H/o burning sensation/numbness/tingling/sharp pains in lower limbs/foot ulcers (neuropathy)
- Recurrent vomiting/urge to pass feces after food intake/recurrent episode of loose stools (gastroparesis —autonomic neuropathy)
- H/o postural hypotension (autonomic dysfunction)

Macrovascular

- H/o weakness in limbs/facial muscles (stroke)
- H/o chest pain as with sweating/palpitation/syncope/dyspnoea on exertion (myocardial)
- Pain during walking—intermittent claudication pain in lower limbs (atherosclerosis)

Infections

- Recurrent dysuria (UTI) _____
- H/o skin abscess/skin ulcers_____
- H/o ear pain/ear discharge (malignant otitis externa) _____
- H/o tooth pain/foul odour from mouth (dental abscess)_____
- Persistent cough with expectoration/foul smelling sputum (pneumonia) _____

Diabetic Ketoacidosis Symptoms

- Nausea/vomiting
  - Thirst/polyuria
  - Abdominal pain
  - Shortness of breath

Past History

- H/o viral infections, surgeries, major trauma, blood transfusions _____
- H/o autoimmune diseases _____
- H/o drug intake: Diabetogenic drugs/steroids/thiazide diuretics _____
- History of cardiovascular disease _____
- H/o hypertension/heart disease/known kidney disease/tuberculosis_____

Personal History

- Addictions: Smoker/alcohol/tobacco/drugs _____
- Sleep/appetite_____
- Bowel and bladder habits_____
- Hygiene _____
- Physical activity _____

Menstrual History

Marital Status

Antenatal History

History of gestational diabetes mellitus or delivery of baby >4 kg (9 lb)/recurrent foetal loss

Family History

a. Family type _____

b. Family H/o DM/HTN/Heart disease/kidney disease/paralysis _____

c. List of morbidities/complications in family _____

d. Family members screened for HTN/DM _____

e. Emotional support _____

f. Response of family towards illness, who accompanies to hospital _____

Social History

- Interaction with society
- Response of society towards person
- Stigma: Yes/No
- Participation in festivals/marriages/social activities

Environment

a. Housing _____

b. No. of living rooms _____

c. Overcrowding: P/A _____

d. Ventilation _____

e. Lighting _____

f. Cooking place/utensils/cooking gas _____

g. Toilet facilities/refuse disposal/handwashing _____

h. Methods of waste disposal/ how frequently cleared _____

i. Drinking water supply—source/frequency/quantity/quality/frequency/storage/boiling _____

j. Animals/pets _____

k. Occupational environment (insect, if possible) _____

l. Mosquito/rats _____

m. Drains/septic tank _____

n. Outdoor space _____

Economic Conditions

a. Total family income _____

b. Expenditure on diet/medical care/recreations/education _____

c. Savings/debts _____

d. Ration card: _____

e. Aadhar card:_____

f. Cost incurred:_____

Medical Expenses

- Consultation fee _____
- Investigation _____
- Treatment, travel, nutrition—extra care
  - Any loss of wage/work
  - Loss of quality of life
  - Stress

Nutritional History

- 24-hr recall dietary method _____
- Veg/non-veg _____
- Tabular format for breakfast, lunch, evening snacks and dinner_____
- Total daily calorie intake _____ deficient/adequate/excess_____
- Total daily protein intake _____ deficient/adequate/excess _____
- Fibre intake (fruits/veg) _____
- Salt/fried food intake_____
- Refined carbohydrate intake (sugar, starchy foods) _____
- Oil/any mixing of oil _____
- Food beliefs/food taboos/customs_____

General and Systemic Examination

- Conscious/oriented
- Built/nourishment
- Height/Weight/BMI/waist circumference/waist–hip ratio
- Pulse rate
  - Vessel wall thick (atherosclerosis)
  - Radio-femoral delay
  - Felt equally in all peripheral pulse (carotid/brachial/radial/fem/popliteal/dorsalis pedis/post-tibial)
- BP
- Pallor (in DM nephropathy): Icterus/cyanosis/clubbing/pedal oedema/general lymphadenopathy

Systemic Examination

Respiratory System

- Normal/abnormal—vesicular/bronchial
- Resonant on percussion
- Vocal resonance/fremitus

CVS

- Heart sounds/murmur

CNS

- No focal neurological deficit
- Pupil
- Consciousness

Abdomen

- P/A—soft
- Organomegaly

Special Senses

- Hearing: Tuning fork—520 Rinne test/Weber test
- Vision: Visual acuity (Snellen chart)/cataract/fundoscopy

Examination of both Knee Joints

Swelling/warmth/tender/oedema

Foot Examination

- Foot sensations—monofilament
- Position sense/vibration sense/crude touch/fine touch
- Ankle jerk—present/brisk/absent
- Ulcer/wasting of muscles

Clinicosocial Diagnosis

Lab Investigations

Urine Examination

Glucose, albumin, pus cells, RBC, ketones

Blood Examination

- Plasma glucose—fasting/postprandial
- HbA1c
- Urea/creatinine/Na/K
- Lipid profile

Fundus Examination

Resting ECG

- **Problems identified**
  -
  -
  -
  -
- **Advise given/action taken**
  -
  -
  -
  -

Comprehensive Management Plan (Family)

Levels of prevention	*Primary: Health promotion and specific protection*	*Secondary: Early diagnosis and adequate treatment*	*Tertiary: Disability limitation and rehabilitation*
1. Individual			
2. Family			
3. Community			

Case 2: Hypertension (HTN)

1. Brief information about the reference person

   Name _____

   Age_____Gender _____

   Occupation_____ Income _____

   Education_____ Socioeconomic status _____

   Address _____
2. Details of family members
3. Chief complaints
4. H/o presenting illness: Pertaining to HTN, Complications:
   - Giddiness, headache, vomiting
   - H/o chest pain, palpitation, tachycardia (left ventricular hypertrophy), dyspnoea
   - H/o breathlessness immediately after lying down (orthopnoea)
   - Visual disturbance/speech difficulties/limb weakness (cerebrovascular attack)
   - Decreased or increased frequency of urination, pruritus, lethargy, and weight loss, oedema legs/facial puffiness, decreased urinary output (renal failure)
   - Visual loss/headache, H/o headache/vomiting/blurring of vision/photophobia (hypertensive retinopathy)
   - Panic attacks, sweating, palpitations, and abdominal cramps (phaeochromocytoma)
   - Describe: Onset, progression and treatment availed in chronological order:
     - Reasons for delay in seeking services
     - Failure of early diagnosis, treatment
     - Places of treatment (when, where, how it was diagnosed, which symptom made him/her seek consultation) health education/treatment—drugs regular/not regular, side effects of drugs
     - Reasons for different places of treatment, satisfaction with services, number of consultation, Frequency of follow-up/investigations, referrals
     - H/o use of other systems of medicine for treatment of HTN
   - Complications: Type, who noticed, how did it manifest, what was he/she advised

Past History

History of DM/CAD/COPD/TB/seizure disorder/dyslipidemia, CVA, thyroid disease, kidney diseases, past surgeries, illnesses, blood transfusion/trauma

Personal History

- Addictions: Alcohol/tobacco/drugs _____
- Sleep/appetite; bowel and bladder habits; hygiene; physical activity_____

Menstrual History

- Menarche_____
- Menstrual cycles _____

Marital Status

Antenatal History

- Oedema legs/hypertension during pregnancy _____

Family History

Family Type

- Family h/o DM/HTN/heart disease/kidney disease/paralysis _____
- Family history of premature cardiovascular disease (men <55 years; women <65 years) _____
- List of morbidities/complications in family_____
- Family members screened for HTN/DM _____
- Family relationships (h/o psychosocial stressors) _____
- Response of family towards illness, who accompanies to hospital _____

Social History

- Interaction with society _____
- Response of society towards person_____
- Stigma _____
- Participation in festivals/marriages/social activities, involvement in social groups_____

Environment

Housing

- No. of living rooms _____
- Overcrowding: P/A
- Ventilation, lighting_____
- Cooking place/utensils/cooking gas _____
- Toilet facilities/refuse disposal/handwashing_____
- Methods of waste disposal/ how frequently cleared _____
- Drinking water supply: Source/frequency/quantity/quality/frequency/storage/boiling _____
- Animals/pets, occupational environment (insect, if possible) mosquito/rats; Drains _____

Economic Conditions

1. Total family income _____
2. Expenditure on diet/medical care/recreations/education_____
3. Aadhar card _____
4. Cost incurred _____

Medical Expenses

- Consultation fee _____
- Investigation _____
- Treatment, travel, nutrition—extra care
  - Loss of wage/work
  - Loss of quality of life
  - Stress

Welfare Schemes

- Old age pension _____
- Any other details that family is availing _____

Nutritional History

- 24-hr recall dietary method _____
- Veg/non-veg _____
- Tabular format for breakfast, lunch, eve snacks and dinner
- Total daily calorie intake _____ deficient/adequate/excess _____
- Total daily protein intake _____ deficient/adequate/excess _____
- Fibre intake (fruits/veg) _____
- Salt/fried food intake _____
- Refined carbohydrate intake (sugar, starchy foods) _____
- Oil/any mixing of oil _____
- Food beliefs/food taboos customs _____

General Examination and Systemic Examination

- Conscious/oriented _____
- Built/nourishment _____
- Height/Weight/BMI/waist circumference/WHR _____
- Pulse
  - Rate/rhythm/volume/radio-femoral delay/equally felt in all peripheral vessels/vessel wall thickening
- BP: Position—sitting/lying down
  - Both limbs
  - No of readings
- Pallor/icterus/cyanosis/clubbing/oedema/general lymphadenopathy

Systemic Examination

Respiratory System:

- Normal/abnormal—vesicular/bronchial _____
- Percussion _____
- Vocal fremitus/vocal resonance _____

Cardiovascular System

- Heart sounds _____
- Murmur _____
- Apical impulse: Outwards/downwards—hyperdynamic _____

CNS

- **Focal neurological deficit**
  - Power/tone
  - Deep reflexes: Biceps/triceps/supinator/knee/ankle
  - Superficial: Plantar
  - Cranial nerve examination
- **Gait**
  - No cerebellar signs: Ataxia, nystagmus, vertigo, incoordination of movements
  - Pupil: Size, symmetry, reaction to light

Special Senses

- Hearing _____
- Vision: Fundoscopy _____

Clinicosocial Diagnosis

Lab Investigations

Initial Routine

- Complete Blood Count: Total and differential
  - ESR
  - Platelet
  - Electrolytes: Na/K/Ca
- RFT: Urea/creatinine (kidney damage), uric acid, LFT, RBS

- X-ray: LVH, coarctation of aorta
- ECG: LVH features, prev MI
- Lipid profile
- Urine routine: Albumin, sugar

Follow-up

- BP monitoring _____
- Lipid profile _____
- Diabetic status _____
- **Problems identified**
  - ☐
  - ☐
  - ☐
  - ☐
- **Advise given/action taken**
  - ☐
  - ☐
  - ☐
  - ☐

Comprehensive Management Plan

Levels of prevention	*Primary: Health promotion and specific protection*	*Secondary: Early diagnosis and adequate treatment*	*Tertiary: Disability limitation and rehabilitation*
1. Individual			
2. Family			
3. Community			

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