Nutrition assessment:

## Nutritional Surveillance :

- Is the process of monitoring changes in the nutritional status of a population over a period of time.
- Nutrition surveillance involves Data collection, processing, Analyses, Interpretation and Communication

## Purpose of nutritional Surveillance:

- Nutrition data is a vital indicator for the overall health and welfare of populations especially where regular demographic and health surveys are lacking.
- is critical for making decisions that will assist in improved nutrition outcomes of a population.

## Principle Users:

- Communities involved in the design, planning and management of nutrition related programs
- Government authorities and Non Governmental Organizations supporting food security, health and nutrition related programs
- Food Aid agencies e.g. WFP
- Industries addressing nutrition and health related issues

## Steps in conducting survey:

#### Planning the survey

Administering the survey: partner contacts, training and tool pre-testing, data collection, data management, report and presentation (quality control maintained in all steps).

## Planning Survey:

- A review of the existing information related to the anticipated survey area
- Identify survey goals and objectives:
- Identify survey indicators
- Selecting survey methodology
- Select survey sample

## When to conduct Survey

- At the beginning of a nutrition project cycle to provide baseline information for program formulation
- During initial phase of emergency situation to measure nutritional status and plan a short term response
- During the course of the nutrition program to assess and monitor the impact



- monitor progress (regular monitoring of the situation)
- At the end of the project circle to evaluate its extent and impact
- Any other time deemed necessary to establish a baseline.

### Main Nutritional Assessment Methods:

- Anthropometry: wt, ht, MUAC, (mainly for <5yrs since they are sensitive to factors influencing nutritional statusillness/ food
- Biochemical Methods
- Clinical Assessment
- **D**ietary Methods

# Anthropometry:

► What is anthropometry?

Anthropometry is the measurement of body parameters to indicate nutritional status

10/6/2015

# Anthropometry:

Why is anthropometry important?

#### Anthropometry is the easiest way to measure nutritional status.

# Anthropometric measurements:





- Mid-upper arm circumference (MUAC)
- Demi-span or arm span
- Knee height
- Sitting height
- Skin fold thickness
- Head circumference

# Anthropometric index:

Combination of different measurements or combination of a measurement with other data

- Weight-for-height
- Height-for-age
- Weight-for-age
- MUAC-for-height
- MUAC-for-age
- ▶ BMI-for-age



# Which anthropometric index to use?

Depends on target group

Depends on what you want to measure

# For children <5 years of age:

Nutritional problem	Index
Chronic malnutrition (stunting)	Height-for-age
Acute malnutrition (wasting)	Weight-for-height
Any protein-energy malnutrition (underweight)	Weight-for-age

# Anthropometry in adults:

- Body mass index (BMI)
- ▶ Is ratio of weight and height: <u>Weight (kgs)</u>

(Height [m])<sup>2</sup>

## CLINICAL ASSESSMENT:

- It is an essential features of all nutritional surveys
- It is the simplest & most practical method of ascertaining the nutritional status of a group of individuals
- It utilizes a number of physical signs, (specific & non specific), that are known to be associated with malnutrition and deficiency of vitamins & micronutrients.



#### ► ADVANTAGES

- ▶ Fast & Easy to perform
- ▶ Inexpensive
- ► Non-invasive

#### ► LIMITATIONS

Did not detect early cases



- General clinical examination, with special attention to organs like hair, angles of the mouth, gums, nails, skin, eyes, tongue, muscles, bones, & thyroid gland.
- Detection of relevant signs helps in establishing the nutritional diagnosis

#### **DIETARY ASSESSMENT:**

- Nutritional intake of humans is assessed by four different methods. These are:
  - ▶ 24 hours dietary recall
  - ► Food frequency questionnaire
  - ► Food dairy technique
  - Observed food consumption

#### Initial Laboratory Assessment:

- Hemoglobin estimation is the most important test, & useful index of the overall state of nutrition. Beside anemia it also tells about protein & trace element nutrition.
- Stool examination for the presence of ova and/or intestinal parasites
- Urine dipstick & microscopy for albumin, sugar and blood

## Specific Lab Tests:

- Measurement of individual nutrient in body fluids (e.g. serum retinol, serum iron, urinary iodine, vitamin D)
- Detection of abnormal amount of metabolites in the urine (e.g. urinary creatinine/hydroxyproline ratio)
- Analysis of hair, nails & skin for micro-nutrients.

### **Advantages of Biochemical Method:**

- It is useful in detecting early changes in body metabolism & nutrition before the appearance of overt clinical signs.
- It is precise, accurate and reproducible.
- Useful to validate data obtained from dietary methods e.g. comparing salt intake with 24-hour urinary excretion.

### Limitations of Biochemical Method:



- ► Expensive
- They cannot be applied on large scale
- Needs trained personnel & facilities

### Rapid Assessment:

#### Useful when:

- ► When nutrition information are fast needed
- When resources of carrying out Nutrition survey are limited.

### Steps in planning a rapid assessment:

- Define objectives (who to assess-children, women, why),
- Determine target site/area/population
- Develop appropriate method of data collection: representative
- Staff identification and training (involve the existing authority)
- Materials and equipment

## Type of information:

- MUAC measurements: adults (women), <5yr</p>
- Food availability and accessibility
- Water sources
- Common diseases- how are recent trends
- Access to health services/ other interventions
- Livestock and population movement- destinations/ origin of emigrants
- Type of food consumed/freq. of feeding
- Security situation