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EDITORIAL

ABCDE OF COMMUNITY NUTRITIONAL ASSESSMENT

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Nutritional status of an individual generally depends on two factors; external factors including food safety, cultural, political & socio-economic and internal factors such as sex, age, behavior, physical activity, nutrition and overall health. Nutritional status of a community is the sum total of the nutritional statuses of the individuals residing in that particular community. Nutritional assessment is a detailed investigation ideally by a physician and a dietician to identify and quantify clinically relevant malnutrition. Nutritional management as a result of nutritional screening & assessment effectively reduces the risk of morbidity and mortality among communities. Nutritional screening involves two methods: directly through objective criteria from individuals and indirectly using community health and nutritional indices.

According to WHO, malnutrition denotes deficiency, excess or imbalance in energy or nutrient intake and diseases causing low absorption or high losses. Malnutrition covers two categories; undernutrition and overnutrition. Undernutrition includes wasting, stunting, underweight and a lack of vitamins & minerals. Overnutrition includes overweight, obesity and diet-related diseases like hypertension, cardio-vascular diseases, diabetes, stroke and cancer. Wasting is low weight-for-height resulting from acute malnutrition that may present as marasmus or kwashiorkar. Stunting is low height-for-age or short stature from chronic malnutrition. Underweight is low weight-for-age. These along with vitamin & mineral deficiencies may present in mild, moderate and severe forms.

Early years of human life exhibit maximal growth and development of brain. Development of young children depends on their biological health, nutritional status and support provided by the family and health professionals working in the community. So, available resources should be offered to decrease children undernutrition.

The four steps in the nutrition care process are nutrition assessment, nutrition diagnosis, nutrition intervention and nutrition monitoring and evaluation. The purpose of nutritional assessment of a community is to identify already malnourished or at risk groups, define nutritional status and to monitor and evaluate the effectiveness of the nutritional interventional program such as education or addition of the food components of specific diet plans for improving individual and community at large and ultimately national socio-economic development.

Nutritional assessment is the interpretation of anthropometric, biochemical, clinical, dietary and economic data to determine whether a person or group of people is well nourished or malnourished. An easy way to remember types of nutrition assessment is ABCDE.

A. Anthropometry (anthropos; human, metry; measurement in Greek) is the measurement of the height, weight, mid upper arm circumference (MUAC), head & chest circumference (for < 2 years children) and skinfold thickness using calipers. Height and weight for less than two years children are taken using wooden sliding board and salter weighing sling, whereas MUAC is taken for less than five years children and pregnant ladies using shaker's tape. BMI is useful index for adults and non-pregnant women. BMI value < 18.5 kg/m2 means underweight, 18.5 to 24.9 is considered normal, 25.0 to 29.9 means overweight while ≥ 30.0 is obesity.

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B. Biochemical assessment, being expensive includes laboratory investigations of blood, urine and feces. Hb estimation, serum iron, enzyme levels, nutrient/ byproduct levels such as thiamine, folates, serum protein, micronutrients, and metabolic parameters etc. are measured for nutritional status.

C. Clinical examination through medical history of

medications, psycho-social issues that may preclude adequate intake and physical examination is done for detecting any nutritional deficiency disorders. General appearance, pallor of palms, tongue & conjunctivae, creamy triangular Bitot's spots on white of the eyes, hair loss, inability to perform work, pitting edema in mild to severe acute malnutrition, goiter and angular stomatitis etc. are some of the examples.
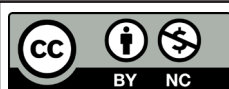
D. Dietary information from a household includes history of previous day diet intake regarding quality as well as quantity of food. Dietary diversity score (DDS) of six per day is considered ideal as it includes all six essential food groups given in food pyramid; carbohydrates, fats, proteins, minerals, vitamins & fibers and anything less than this value is considered as un-balanced food intake. Below this level indicates food insecurity of the household. Besides iodine level of household salt is measured twice a year to determine whether it is > 15 PPM, the recommended value.

E. Economic and social status is calculated from job status, education, marital status and cooking facilities.

In the end, it is recommended that the public health officials should encourage to periodically conduct, country-wide nutritional surveys to estimate magnitude of the malnutrition on the first hand and to come up with at risk groups in need of public health interventions, keeping limited resources of the country in mind. Besides such surveys will go a large deal in monitoring and evaluation of the nutritional programs for effectiveness.