

Nutrition Surveillance For Children

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Introduction

Malnutrition is one of the major burdens of disease in public health, good nutrition is necessary for the national development of countries and the well-being of mother and children, poor nutrition is affecting mainly the entire population of countries but mother and children are the most vulnerable population to be affected due to their physical and socioeconomic factors [1].

Malnutrition is mainly based on three broad groups, which include: 1) undernutrition, which further includes “stunting, which means low height for age, meaning low weight for age, and wasting, meaning low weight for height; 2) micronutrient deficiencies (lack of essential vitamins and minerals); micronutrient excess 3) overweight or obesity or diet-related non-communicable diseases.

Good nutrition with a well-balanced diet is essential for the growth and development of children from the time of conception till 2 years of age since this is the important time period for their physical and intellectual productivity, cognitive and brain development, and physical growth.

Prevalence And Burden Of This Problem

Global Situation Analysis

According to 2016 estimates globally due to stunting 154.8 million children 0-59 years of age are affected by stunting, its prevalence is 22.9%, 16.9 million are affected by wasting, and its prevalence is 2.5%, 94.5 million are underweight, and its prevalence is 14 %, 40.6 million are overweight, and its prevalence is 6%.

Regional Situation Analysis

According to 2016 estimates regionally of developing regions due to stunting, 152 million children 0-59 months of age are affected by stunting, its prevalence is 25%, 16.9 million are affected by wasting, and its prevalence is 2.8%, 93.5 million are underweight, and its prevalence is 15.4%, 33.6 million are overweight, and its prevalence is 5.5%.

Pakistan Situation Analysis

According to a Pakistan demographic survey done in 2012-2013, 45% of children under five are stunted, 11% are wasted, 30% are underweight, and 4.8% are overweight.

Prevent-Ability

1. Community-based programs should be organized in order to address malnutrition.
2. Health education should be given to all mothers of undernourished children, and it should be related to the importance of food hygiene, nutritional care of the child, benefits of immunization and growth monitoring, breastfeeding importance, and proper and healthy weaning practices through lady health workers.
3. Parents or caregivers should monitor growth with the help of growth charts especially in children under 2 years of age to assess the child's growth, if the chart shows that the child is not gaining weight then the child should be taken to a trained health physician.
4. Educate women regarding the fact that the breast milk is the only food and drink that a baby needs to be fed on in the first six months of life, after six months a variety of different kinds of foods along with breast milk should be given for his/her healthy growth and development.
5. Political commitment should be there to address malnutrition; investments should be made in nutrition interventions.

Objectives

The need for nutritional surveillance systems is to identify nutritional and health-related indicators for their populations, with special attention given to children 0-59 months of age. Surveillance systems communicate this information to relevant government official also to international partners so they can respond to nutritionally related problems. The following are the key objectives of a surveillance system.

- To evaluate and monitor the health and nutrition status of the population
- Determine the population at risk
- Gather sustainable data on the nutritional status of people and ensure that it is communicated at appropriate national and international levels.
- Gather evidence for planning, policy analysis, program evaluation, and trends associated with nutritional and health emergencies.
- Should raise awareness in relation to nutritional problems
- Provide guidance towards nutritional interventions.
- Help establish or expand the existing surveillance
- Give a timely warning of the need for intervention to prevent deterioration in food consumption

Case Definition

What Type Of Surveillance

Sentinel site surveillance is appropriate for nutritional surveillance systems as compared to the cost and complexities of large nutritional surveillance systems since sentinel site surveillance is less costly and a straightforward system to measure trends over time. The reason for this type of surveillance system is:

1. It is very helpful for the chronically vulnerable population since it provides close monitoring to those who require it.
2. Measures and provides trends over time.
3. Though few sites are selected, the information obtained has more detail and depth by including other indicators such as disease outbreaks and market trends.
4. The cost will be less since few sites are involved
5. Helps in understanding the differences in geographical locations
6. Sites can be selected to evaluate areas of low access and livelihood groups and where services are poor

Population

The target population for this surveillance system is children 0-59 months of age since they are an appropriate indicators to present the entire community's general health due to the following reasons:

1. They are a vulnerable group of the population since they are affected by external factors such as lack of food and diseases.
2. Their status of nutrition is very sensitive to external factors and interventions.
3. Children are easily accessible at home in relation to the older age group people.
4. This group of population is pretty well documented and tested according to agreed international guidelines to evaluate their nutritional status.

Period Of Surveillance

Information To Be Collected

- Care practices
- Breastfeeding practice
- Complementary feeding
- Young child feeding practice

- Food security
- Access to food, its availability, and utilization
- NUTRITIONAL STATUS
- Physical evaluation of the child
- Height
- Age
- Weight
- Health and Sanitation
- Hygiene
- Water quality
- Food safety and its quality
- Sanitation
- Socio-economic factors
- Education level
- Household characteristic
- Livelihood characteristic

Who Will Provide Surveillance

Data Source, Data Collection Method

- Repeated nutrition surveys
- sentinel site surveillance
- mass screening data
- Data from feeding program admissions
- clinical based
- School census data

Data Collection Instruments

- questionnaires
- focus group
- discussion guides,
- interview schedules
- observation checklists

Analysis

Dissemination Mechanism

Ensuring The Use Of Analysis And Interpretation Ethics

Challenges In Establishing Surveillance

- To ensure effective links between information gained and action taken, that should be manageable and sustainable.
- Data should be reliable and reported on time.
- Lack of political commitment
- Appropriate resources and technical expertise should be available to do an assessment.
- This is to ensure relevance to decision-makers and that it is communicated at appropriate levels.
- To identify an appropriate institutional location for the system and dissemination channels for information and the setting in which the analysis will be presented
- Series of sources that cut across several government ministries, including agriculture, education, and health

References

Bhatia PWAR. A Manual: Measuring and Interpreting Malnutrition and Mortality. July 2005