UNIT 1 COMMUNITY NEED ASSESSMENT AND IDENTIFICATION OF COMMON HEALTH PROBLEMS

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1.0 INTRODUCTION

Assessment of community strengths, weaknesses and needs is an essential step in planning an effective health service for the community. The community assessment helps in better understanding of dynamics of the community and helps the service providers and beneficiaries in prioritizing services. The needs assessment also enables to know the health status of community in terms of morbidity, mortality, fertility and nutritional status. The present unit discusses community needs assessment approach in health and how to measure health.

1.1 OBJECTIVES

After completing this unit, the learner will be able to:

- define community needs assessment concept;
- describe and apply the community needs assessment process while planning health care services;
- enumerate tools of measurement of health;
- enumerate indicators of health and calculate as per need; and
- enumerate determinants of health.

1.2 COMMUNITY NEEDS ASSESSMENT

Let us discuss the concept of Community Needs Assessment (CNA) as given below:

Community needs assessment concept refers to need assessment and planning for services with the involvement of the following:

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- Non-governmental organisations (NGOs),
- community health volunteers,
- women's group and
- Panchyat.

It is a process that describes the state of health of people, enables the identification of major risk factors, causes of ill health, and identification of actions needed to address these.

Box 1: CNA Approach

- Need based participatory planning
- Community involvement in assessment of their needs and planning, monitoring and surveillance
- Self estimated goals of health workers
- Integrated package of services
- Good quality of work
- Educating community

Needs assessment will enable the mid level health care provider to:

- Plan and deliver the most effective care to those in greatest need;
- Ensure that scarce resources are allocated where they can give maximum health benefit; and
- Work collaboratively with the community, other professionals and agencies to determine which health issues cause greatest concern and plan interventions to address those issues.

Community Needs Assessment Process

Community Needs Assessment process at village level/sub-centre level has two teams i.e. working team and the consultative team.

Health Worker (Female) are the key person on whom the outcome of the programme depends. She has to prepare the sub-center action plan in consultation with community and then to implement the same.

The working team will help in developing action plan under your leadership. The team consists of: Anganwadi workers, traditional birth attendants, Mahila Swasthya Sangh or any equivalent group, Accredited Social Health Activist (ASHA) and leaders of youth organisation. They assist HW(F) for conducting household surveys, collection of relevant information and reporting to health workers like birth, death, marriage, epidemics etc.

The information such as number of:

- eligible workers,
- pregnant mothers,
- births,
- deliveries,
- abortions,
- children etc.
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Format for data collection are mentioned in the same block under Unit 7.

The second team is the consultative team comprises of: Panchayati Raj members, teachers, religious leaders, priests, members of NGOs and members of informal organisations. The members of the consultative team can directly collaborate with the working team for collection of relevant information and reporting of the major events. Meetings with two teams should be regularly conducted and they should be involved in planning and in the provision of services, and discussion of the priority issues, the actions taken and their results.

Remember:
At the primary health centre (PHC) level, work out matching resources needed for estimated volume of services. Supplies need to be procured and generate community resources through the working team. The requirement of services for the current year also needs to be compared with actual performance of previous year and it should be ensured that these are 5-25 per cent higher.

Let us discuss one case study so that you can get familiar with the assessment of health indicators as given below:

Case study: Community needs assessment of Myasandra village, Karnataka

Data was collected from the surveys to provide a descriptive analysis of the population, to assess certain health indicators of Mayasandra, and guide prospective planning of a future health clinic. The front of the survey instrument served as a medical intake sheet and queried information such as name, age, date of birth, height, weight, blood pressure and haematocrit and haemoglobin levels of patient. The back of the survey solicited information on family structure, prenatal care, delivery, breastfeeding practices, immunisation history, source of drinking water, and water treatment practices. Finally, clinic demand was assessed as well as willingness to pay.

Survey data was collected concerning 419 children in Mayasandra. Survey respondents were assumed to be children's caretakers and data refer to the children and their households. Data analysis revealed that 54% of sample was male while 46% were female.

Household size averaged 5, of which 2 were children. Thirty-six per cent of the sample used bore wells as primary drinking source, while 55% used tap water. Fifty-eight per cent of the sample treated water, either by boiling or filtration methods.

Prenatal care was received by 91% of mothers and the mean number of visits equaled 6.8, of which 81% were provided by doctors. Seventy-nine per cent of the deliveries were institutional (hospital, health center, clinic), while 20% of children were delivered at home. Sixty-five per cent of total deliveries were attended by a doctor, 25% were delivered by nurses, 3% by midwives and 7% by other (usually by the neighbour or mother-in-law). Ninety-seven per cent of women breastfed children for an average of 14 months. Ninety-four per cent of children had received all immunisations to date and 95% received vitamin A supplements. Most frequent health concerns included respiratory disorders, of which 24% of the sample was diagnosed. The average willingness to pay per service equaled
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59 rupees, the equivalent of $1.30. Seventy one per cent of the sample stated that it had access to some form of healthcare. A handful of participants claimed that distance to the clinic and the absence of paediatric care were major issues. As a result, 24% of the population expressed the need for a family doctor and 72% felt the need of a paediatrician.

Example of an interview schedule when asking people their view about their local health needs:

1) How would you describe the health of the community?
   ..........................................................................................

2) What do you think affects people’s health here?
   The good things are: ..........................................................
   The bad things are: ..........................................................

3) Which three things would you change here to improve people’s health?
   1) 
   2) 
   3) 

4) What are the best things about the services you use?
   ..........................................................................................

5) What are the worst things about the services you use?
   ..........................................................................................

6) Who else do you think I should speak to?
   ..........................................................................................

1.3 MEASUREMENT OF HEALTH

There are number of measures commonly used to identify health of the population. Indicators are required to measure the health status of a community and to draw comparisons with other populations. Indicators are also used for assessment of health needs; for allocation of scarce resources and for monitoring and evaluation of health services and programmes.

An indicator should be valid i.e. it should actually measure what it is supposed to measure; should be reliable and objective i.e. the answers should be the same when measured by different people in different circumstances; should be sensitive i.e. it should be able to sensitive to changes in the situation concerned; should be specific i.e. it should reflect changes in the situation concerned; should be feasible i.e. it should have the ability to obtain the data needed; and should be relevant i.e. they should contribute to the understanding of the phenomenon of interest.

As you have gone through earlier in theory course also, health is multi-dimensional and to measure each dimension of health there are number of indicators as given below:

- Mortality indicators
• Morbidity indicators
• Disability indicators
• Nutritional status indicators
• Fertility indicators
• Health care delivery indicators
• Utilisation rates
• Indicators of social and mental health
• Environmental indicators
• Socio-economic indicators
• Health policy indicators
• Other indicators

1.3.1 Tools for Measurement of Health

The basic tools of measurement of health are:

• Rate
• Ratio
• Proportion

i) **Rate**: A rate measures the occurrence of some particular event (development of disease or the occurrence of death) in a population during a given time period. It comprises of the following elements: numerator, denominator, time specification and multiplier. The rate is expressed per 1000 or some other round figure (10,000 or 1,00,000). Example: crude death rate.

ii) **Ratio**: It expresses a relation in size between two random quantities. The numerator is not a component of denominator. It is expressed in the form of x:y or x/y. Example: maternal mortality ratio

iii) **Proportion**: The proportion is a ratio which indicates the relation in magnitude of a part of the whole. The numerator is always included in the denominator. Example: (Total number of children with scabies at a certain time/Total number of children in the village at the same time) ×100

1.3.2 Indicators of Health

Health is measured by following indicators as given below:

1) **Mortality indicators**:
   a) **Crude death rate**: It is defined as number of deaths per 1000 population per year in a given population.
   b) **Age specific death rates**: It is defined as total number of deaths occurring in specific age group of the population in a defined area during specific period per 1000 estimated population of the same age group of the population in same area during the same period.
   c) **Infant mortality rate**: It is the ratio of deaths under 1 year of age in a given year to total number of live births in the same year, usually expressed as a rate per 1000 live births.
d) **Child mortality rate:** Number of deaths at ages 1–4 years in a given year per 1000 children in that age group at midpoint of the year concerned. It excludes infant mortality.

e) **Maternal mortality rate:** It is defined as total number of female deaths due to complications of pregnancy, childbirth or within 42 days of delivery from "puerperal causes" in an area during a given year per 1,00,000 live births in the same area and year.

f) **Case fatality rate:** It is defined as the number of deaths from a specific disease during a specific time period divided by number of cases during the same time period usually expressed as per 100.

2) **Morbidity indicators:** The following morbidity rates are used to estimate the burden of disease in a given population:

   a) Incidence and prevalence rate
   
   b) Notification rates
   
   c) Admission, re-admission rates and discharge rates.
   
   d) Out-patient department (OPD) attendance

3) **Disability indicators:**

   a) **Event type indicators:** Number of days of restricted activity, bed disability rates, work loss days in a given period.
   
   b) **Person type indicators:**
   
      i) Limitation of mobility: Confined to bed or confined to house, special aid in getting around inside or outside the house.
   
      ii) Limitation of activity: Limitation to perform basic activity of daily living (ADL) like eating, dressing, washing etc. or limitation to perform major activity like ability to work in job etc.

   **Disability adjusted life years (DALY):** It is expressed as years lost due to ill health, disability or early death. It combines years of life lost (YLL) which is calculated as number of deaths at each age multiplied by the expected remaining years of life according to global standard life expectancy and years lost to disability (YLD) where the number of incident cases due to injury or illness is multiplied by the average duration of the disease and a weighting factor reflecting the severity of disease on a scale of 0 to 1.

4) **Nutritional status indicators:**

   a) Anthropometric measurements of school children like height, weight, mid-arm circumference, head circumference, chest circumference.
   
   b) Prevalence of low birth weight (weight at birth less than 2.5 kg).
   
   c) Other indicators include: weight for age, weight for height, height for age.

   Format for nutritional assessment are given in the same block under Unit 7.

5) **Fertility indicators:**

   a) **Birth rate:** It is defined as number of live births per 1000 estimated mid-year population in a given year.
b) **General fertility rate**: It is defined as number of live births per 1000 women in the reproductive age group (15–44 or 49 years) in a given year in a given area.

c) **General marital fertility rate**: It is defined as number of live births per 1000 married women in age group (15–44 or 49 years) in a given year in a given area.

d) **Age specific fertility rate**: It is defined as number of live births in a year to 1000 women in any specified age group.

e) **Age specific marital fertility rate**: It is defined as number of live births in a year to 1000 married women in any specified age group.

f) **Total fertility rate**: It represents the average number of children a woman would have if she were to pass through her reproductive years bearing children at the same rates as the women now in each age group.

\[ TFR = 5 \times \text{Sum total of Age specific fertility rate (from 15–19 to 45–49 years)} \times 1000 \]

g) **Total marital fertility rate**: Average number of children that would be born to a married woman if she experiences current fertility pattern throughout her reproductive span.

\[ TMFR = 5 \times \text{Sum total of Age specific marital fertility rate (from 15–19 to 45–49 years)} \times 1000 \]

h) **Gross Reproduction Rate**: Average number of girls that would be born to a woman if she experiences current fertility pattern throughout her reproductive span (15–44 or 49 years), assuming no mortality.

\[ GRR = 5 \times \text{Sum total of Age specific fertility rate (from 15–19 to 45–49 years)} \times \text{female live births per 1000} \]

i) **Net Reproduction Rate**: It is defined as number of daughters a newborn girl will bear during her lifetime assuming fixed age specific fertility and mortality rates. NRR of 1 is equivalent to attaining 2 child norm.

j) **Other indicators**: Child woman ratio, pregnancy rate, abortion rate, abortion ratio, marriage rate.

6) **Health care delivery indicators**: These indicators reflect the equity of distribution of health resources in the whole country.

a) Doctor population ratio

b) Doctor nurse ratio

c) Population bed ratio

d) Population per health centre

7) **Utilisation rates**: Utilisation of services is expressed as proportion of people in need of a service who actually receive it in a given period. E.g. proportion of people using various methods of family planning or proportion of infants who are fully immunised against 6 vaccine preventable diseases.

8) **Indicators of social and mental health**: These include: suicide, homicide, road traffic accidents, juvenile delinquency, alcohol and drug abuse etc.

9) **Environmental indicators**: These include indicators of air or water pollution, proportion of population having access to safe water and sanitation facilities.
10) **Socio-economic indicators**: Level of unemployment, dependency ratio, per capita calorie availability, and literacy rates etc.

11) **Health policy indicators**: Proportion of Gross Net Product (GNP) spent on health services, proportion of total health resources spent on primary, secondary and tertiary care.

12) **Other indicators**: Quality of life indicators, sustainable development goals indicators etc.

### 1.4 SOCIAL AND ENVIRONMENTAL DETERMINANTS OF HEALTH

Health status cannot be the result of one factor. Many factors influence the health status. Such factors which influence the health and well-being are called as determinants of health.

#### 1.4.1 Determinants of Health

1) **Age**: There is a close relationship of diseased status with age. While some diseases are common in younger age group, chronic diseases such as hypertension, diabetes, osteoarthritis are predominant in older age groups. Age is also an important factor in determining the prognosis of diseases.

2) **Gender**: Women are considered to be biologically stronger than men. Consequently, the life expectancy of women is relatively more than men. Further, some diseases differ according to the gender. While oral cancers are more common among men, breast cancer and cervical cancer affect a large number of women. Similarly, inguinal hernias have a gender predisposition towards males. Due to the gender differences in the pattern of a distribution of a particular disease, a different approach needs to be adopted for addressing the issues related to it.

3) **Genetics**: The traits transferred from parents during conception as genetic configuration are permanent and remain unaltered till the end of the life. His physique, intelligence, temperament and response to diseases agents usually resemble in many respects to either of his parents or grandparents. Many diseases in humans like chromosomal anomalies, errors of metabolism, mental retardation, diabetes etc. are known to be of genetic origin.

4) **Race, ethnicity**: Race is a cultural construction. Members of non-white racial and ethnic groups tend to experience more ill health and disease than their white counterparts.

5) **Literacy status**: Literacy and education status of the people also have an indirect impact on health as these are interrelated with occupation, economic and hygiene standards. People with good educational background have an understanding to practice better ways and means of living improving their health standard.

6) **Nutrition**: Diet has been scientifically and extensively linked to disease. The relation between high fat diet and coronary heart disease is well established. Similarly, under-nutrition predisposes the person to multitudes of infections. Thus, the health of a community depends both on the adequate availability of safe food and the intelligent consumption of it.
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7) **Environment:** A person is fully dependent on external environment for his body needs in day to day life, but its adverse conditions are responsible for a very large number of health related problems and diseases. All the diseases caused by physical and biological agents are the result of adverse conditions of the external environment. Internal environment of a person is comprised of his own anatomical body parts and physiological activities. It mostly affects health in a positive manner by promoting the physical and mental growth and development and making it immune from adverse external factors. Many of the diseases and conditions like sarcoidosis, auto-immune disorders, diabetes hypertension, coronary heart diseases (CHDs), arthritis, cataract, Alzheimer's disease and malignancies etc. are mostly caused due to adverse physiological conditions of the internal environment.

8) **Socio-economic status:** Economic status of the country, community and of an average individual has an impact on the purchasing power and thus affects the living standard of a person. Daily needs of nutrition, education, housing, clothing and standard of life are all dependent on per capita income. Further, access to health services, are also largely dependent upon the income. Certain diseases such as lifestyle disorders have been found to be associated among the group belonging to higher socio-economic status while infectious diseases such as tuberculosis, leprosy are considered to be diseases of poor.

9) **Socio-cultural conditions:** A person learns and develops the qualities to interact with others in the society in his early developmental stage. On interaction with a person, one can easily think of the culture and a society which he belongs to. These are all behavioural traits displayed by him during interaction. Development of such qualities is mostly by learning from prevailing behavioural and socio-cultural conditions in the society. The health behaviour of person is also influenced by his socio-cultural environment.

10) **Health care system/services:** Care of people provided through effective system of medical and health care services creates a positive influence on health of the people. The impact of these services can be seen by sensitive indicators of health viz. infant mortality rate, maternal mortality rate and expectation of life at birth.

11) **Other factors:** The development of newer technologies of information and communication offer tremendous opportunities in providing an easy and instant access to medical information. Other determinants include adoption of policies in the economic and social fields that would assist in raising the standards of living and hence indirectly affecting the health.

1.4.2 **Social Determinants of Health**

World Health Organization (WHO) describes social determinants of health as the “the conditions in which people are born, grow, live, work and age”. It goes on to state that these conditions or circumstances are shaped by the distribution of money, power and resources at global, national and local levels. These are themselves influenced by policy choices. It makes clear the link between the social determinants of health and health inequalities, defined as “the unfair and avoidable differences in health status seen within and between countries”. The real causes of many deaths are social determinants such as illiteracy, fatalism, gender bias, racial bias, unemployment, and poverty.
The knowledge about determinants of health is important since some of the determining factors can be modified or changed such as nutrition, literacy status, socio-economic status, delivery of health services and environment.

Assessment of social and environmental factors would help in identifying related problems among people at large. The format for collecting relevant information have been covered in this block, Unit 7, sub-section 7.2.5. You need to collect information as per format and if you come across additional information it can be recorded in remarks.

### 1.5 LET US SUM UP

For effective planning of health services, needs of the community should be assessed. The community needs assessment process is comprehensive and involves whole gamut of stakeholders. Measurement of health is an important component of needs assessment. Proportions, rates and ratio are important tools for measurement of health and using them we can calculate number of health indicators.

### 1.6 ACTIVITY

1. Plan home visit to collect background information of the community as per the formal given in Unit 7 and sub-section 7.2.5 and document the findings.

2. Prepare a working team under your supervision and identify the problems faced by people during your interaction with them. Record and report the findings to higher authority.

### 1.7 REFERENCES


5. NIHFW. Reproductive & Child Health Module for Medical Officer (Primary Health Centre) MO (PHC). Delhi, India: NIHFW; 2002.
