

A TEXTBOOK of COMMUNITY HEALTH NURSING for

POST-BASIC B.Sc. NURSING STUDENTS

AS PER SYLLABUS BY INDIAN NURSING COUNCIL

HEAVEN DAHIYA

B.Sc. (Hons) Nursing;

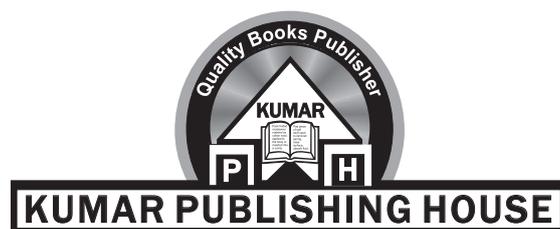
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Master of Science in Community Health Nursing;

Post Graduate Institute of Medical Sciences,

University of Health Sciences, Rohtak, Haryana

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Miss Florence Nightingale

Born on: 12th May, 1820 Died on: 13th August, 1910

*It feels good
to hear someone say
'take care'
but it feels so much better
to hear someone say
'I will take care of you!'*

Thanks Nurses!
For Your True Services

DEDICATED
to
MY PARENTS
and
LOVED ONES....

I can never pay them back for
all they have done for me,
but I can try

PREFACE

First and foremost, I would like to thank the Almighty God in the form of my parents and loved ones for their immeasurable and abundant blessings for giving me an opportunity to surpass this subject as my book. As I come to the completion of this book, I realize that I owe a huge debt of gratitude to my respected parents, teachers, supervisors, friends and well-wishers who have supported me throughout this endeavour by providing me with the gems of creative insights and critical thinking at every step of this book.

Special words of cheer are extended to my close friends and well-wishers who believed, encouraged, supported and guided me, whenever needed throughout the period of this book.

Words seem inadequate to my constant supporters who are my inner strength, my parents and loved ones and my deep sense of love to my little star **Pratham**, friends and relatives—the ineffable gifts of my life. To them I dedicate this book.

This book covers the latest syllabus, documented by INDIAN NURSING COUNCIL for the Post-Basic B.Sc. Nursing Students and I hope, this book will help nursing students establish not only a clear background but also in the implementation of better and quality nursing services in respective communities.

I wish to thank Mrs. Neelam Kumar (*Publisher*) and Mr. Ashok Kumar (*Director*) for encouraging, co-operating, being so kind and positive to publish my book 'A Textbook of Community Health Nursing for Post-Basic B.Sc. Nursing Students' and also the whole staff of KUMAR PUBLISHING HOUSE, Delhi, for their outstanding efforts.

—HEAVEN DAHIYA

SYLLABUS

COMMUNITY HEALTH NURSING

COURSE CONTENTS

Unit - I

- ☞ Introduction
- ☞ Introduction to community health— concepts, principles and elements of primary health care.
- ☞ Introduction to community health nursing.
- ☞ Concepts of community health nursing— community nursing process.
- ☞ Objectives, scope and principles of community health nursing.

Unit - II

- ☞ Family health services.
- ☞ Concepts, objectives, scope and principles.
- ☞ Individual family and community as a unit of service.
- ☞ Principles and techniques of home visiting.
- ☞ Establishing working relationship with the family.
- ☞ Working with families in relation to prevention of disease, promotion of health.
- ☞ Care of the sick in the home, physically handicapped and mentally challenged.
- ☞ Surveillance and monitoring.

Unit - III

- ☞ Organisation and administration of health services in India.
- ☞ National health policy.
- ☞ Health care delivery system in India.
- ☞ Health team concept.
- ☞ Centre, state, district, urban health services, rural health services.
- ☞ System of medicines.
- ☞ Centrally sponsored health schemes.
- ☞ Role of voluntary health organizations and international health agencies.
- ☞ Role of health personnel in the community.
- ☞ Public health legislation.

Unit - IV

- ☞ Health education.
- ☞ Aims, concepts and scope of the health education.
- ☞ National plan for health education.
- ☞ Communication techniques.
- ☞ Methods and media for health education programmes.
- ☞ Planning for health education and role of nurse.

Unit - V

- ☞ Role of the community health nurse.
- ☞ National health programmes.
- ☞ Maternal and child health programmes.
- ☞ Family welfare and school health services.
- ☞ Occupational health services.
- ☞ As a member of the health team.
- ☞ Training and supervision of health care workers.

Unit - VI

- ☞ Epidemiology
- ☞ Definition—concepts, aims, objectives, methods, principles.

- ☞ Epidemiology—theories and models.
- ☞ Application of epidemiology, principles and concepts in community health.

Unit VII

- ☞ Bio-statistics and vital statistics.
- ☞ Introduction, definition, scope and legislation.
- ☞ Report, recording and compiling of vital statistics at the local, state, national and international level.
- ☞ Definitions and methods of computing vital statistics.
- ☞ Methods of presenting data.
- ☞ Management information system.

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INTRODUCTION

COMMUNITY HEALTH

According to World Health Organization Expert Committee, a community is a social group having following characteristics:

1. Determined by geographical boundaries.
2. Common values and interests.
3. Its members know and interact with each other.
4. It functions within a particular social structure and exhibits and creates

certain norms, values and social institutions.

A EURO symposium in 1966 has defined community health as including “all the personal health and environmental services in any human community, irrespective of whether such services were public or private ones”.

Community health nursing is a comprehensive branch of nursing, which is based on RAIOE *i.e.*:

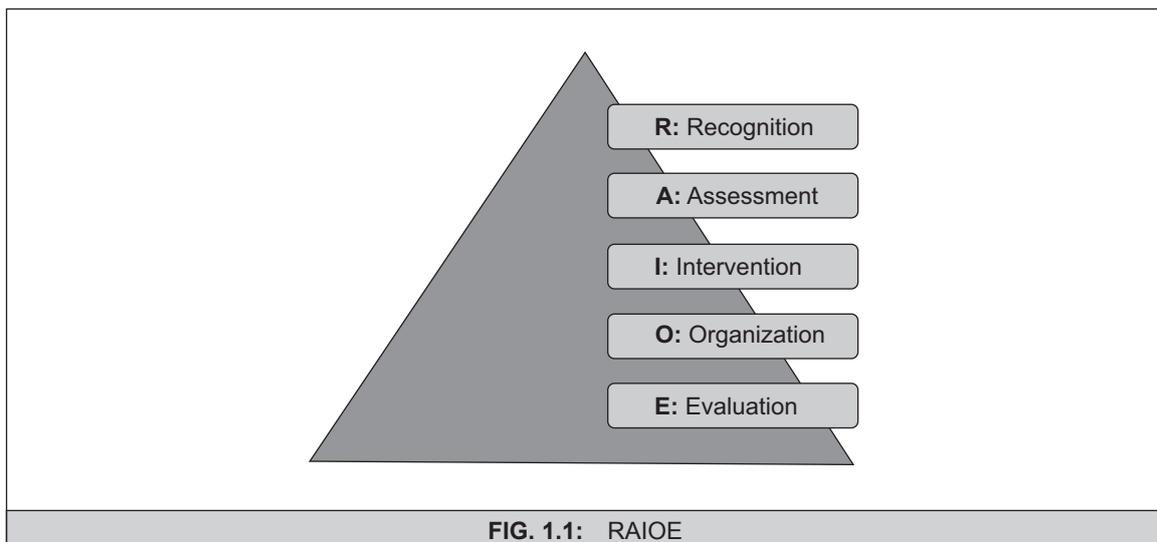


FIG. 1.1: RAIOE

COMMUNITY HEALTH NURSING/ PUBLIC HEALTH NURSE

1. According to **Harden Mailer (1985)**, formal director of World Health Organization, “Basic element of community health nursing is expansion of primary care of health and faith of patients in nurse”.
2. According to **WHO Expert Committee**, “Community health nursing/Public health nursing combines the skills of nursing, public health and some phases of social assistance and function as a part of total public health program for the promotion of health, improvement of conditions in social and physical environment, prevention of illness, disability and rehabilitation”.
3. According to **European Conference on Nursing Administration (1959)**, “The Nurse is most directly concerned with giving health education and care to individual and family in the community”.
3. It supports the entire community as well as individual, families and aggregates is a focus for community health nursing practice.
4. It believes in overall development and well-being of individuals, families, communities and nation.

Objectives, Scopes and Principles of Community Health Nursing

Goals and Objectives

- To assess the need and priorities of vulnerable group like pregnant mother, children and old age persons.
- To provide health care services at every level of community.
- To make community diagnosis.
- To evaluate the health programmes and make further plans.
- To prevent disabilities and providing rehabilitation services.
- To provide referral services at various health care levels.
- To increase life expectancy.
- To enhance the standard of nursing profession through:
 - Conducting nursing research.
 - Provide quality assurance in community health nursing.
 - Performing the role of nurse epidemiologist.

Scopes

- Rural areas and slums of cities.
- Special clinics.

Concepts of Community Health Nursing

1. Community health nursing identifies the need of holistic care approach.
2. Community health nursing supports that community based efforts and involvement is essential for the risk reduction.
3. It realizes that health promotion and primary prevention are major activities in community health nursing practice.

- Mobile camps.
- Health centres.
- Schools
- Industrial organizations.
- Outdoor patient departments of big hospitals.
- Fairs and other places of social functions/ gathering.
- Rural and poor urban families *etc.*

Principles

- Health services should be based on the needs of individuals and the community.
 - Health services should be suitable to the budget; workers and the resources.
 - Family should be recognized as a unit and the health services should be provided to its members.
 - Health services should be equally available to all without any discrimination of age, sex, caste religion, political leaning and social or economic level *etc.*
 - Health education is an important part of community health nursing. It should be preplanned, suitable to conditions, scientifically true and effective.
- Community health nursing should be provided continuously, without any interruption.
 - Preparation and maintenance of records and reports is very important in community health nursing.
 - Community health nurses and other health workers should be guided and supervised by highly educated and skilled professionals.
 - Community health nurse should be responsible for:
 - Responsible for professional development.
 - Should continuously receive in-service training and continuing education.
 - Should follow professional ethics and standards in her work and behaviour.
 - Should have job satisfaction.
 - Must have effective team spirit while working in the community.
 - Timely evaluation is must for community services.

FAMILY HEALTH SERVICES

INTRODUCTION TO FAMILY HEALTH SERVICES

Family health services are the central point of health services. It is an important component of “Health for All” goal. Health of each individual affects the health of other members of family. It is essential for community health nurse to have a sound knowledge of family. Family health can be defined as continuing ability to meet defined functions in interaction with other social, political, economical and health system.

Definition

Family Health Services can be defined as possessing abilities and resources to accomplish family development tasks. It is a special attention which is given to family members to promote their health, prevent from health problems and for the welfare of family.

Concepts

1. Family is the basic unit of any health care system. Without family care services, the target of health services cannot be achieved.

2. Family health services act as a problem solving process in which family health nurse provides services irrespective of socio-economic level of families.
3. Comprehensive health care (preventive, promotive and rehabilitative care) can be provided to community and family through health care services.
4. Family planning, nutrition, maternal and child health and geriatric care are the important aspects of family health services.

Objectives

1. To identify and appraise health problems of family.
2. Ensure family’s understanding and acceptance of problem.
3. Provide nursing services according to health needs of the family.
4. To help to develop competence in members to take care of their family.
5. Promote utilization of available resources to maintain all aspects of health of family.
6. To provide health education for leading healthy and fruitful life.

7. To provide health services to the family members at cost effective level.
8. To assist the family members in achieving their health goals.

Aims

1. Reducing maternal mortality, morbidity and infant mortality rate.
2. Spacing birth of children.
3. Solve problem of malnutrition in the family.
4. Health education.

Scopes

The goals of individual and community's health and growth in national health level can be achieved through family health services:

1. Reproductive Health
2. Child Health
3. Adolescent Health
4. Mental Health
5. Gender Issues
6. Aging

Principles

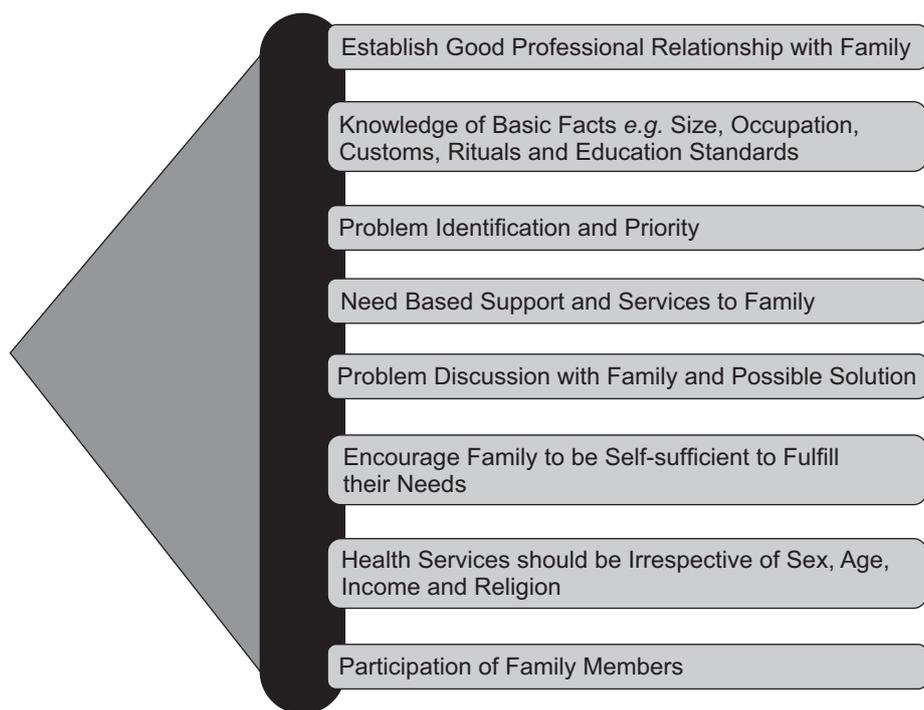


FIG. 2.1: Principles

Individual, Family and Community as a Unit of Service

1. Family is supposed to be the basic biological, cultural and epidemiological unit of society. Also, Health resources are utilized through family. Hence, family is the basic unit of health care services.
2. Health of individual depends on health of family.
3. Interdependence and interpersonal relationship create awareness about health among family members.
4. Family size, structure, income, education, environment affect health standard of family.
5. In health care needs, family plays important role.
6. Illness of one family member affect total health care of family.
7. Family plays an important role in supporting health care need.
8. Individual health problem can be tackled and solved easily through family health care.
9. Successful family life cycle can be achieved by family health care services.
10. The goal of community health nursing can be achieved through effective and most available channel for mobilizing the health needs of the society.

FAMILY HEALTH NURSING PROCESS

It is a systematic, problem solving, logical and deliberate process to help family to develop and strengthen their capabilities to meet their health needs and to solve their health problems. It facilitates standardized nursing actions to

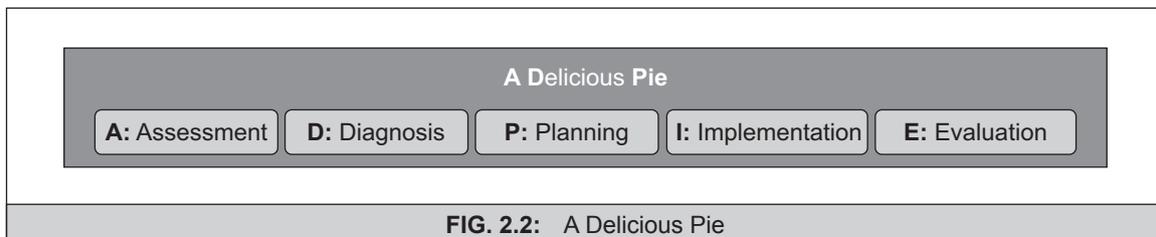


FIG. 2.2: A Delicious Pie

achieve family health nursing goals and objectives. It is a logical sequence of data collection to family health care. It consists of five phases:

1. **Assessment:** It involves Observation, Nursing history, Consultation review of Literature, Interview, Clinical records, Physical and Psycho-social history.
2. **Diagnosis:** Consists of family diagnosis.
3. **Planning:** It involves establishing priorities, setting goals and objectives and formulating family health nursing care plan.
4. **Implementation:** It consists of mobilization of resources facilitating work environment, implementation and documentation.

5. **Evaluation:** Involves summative and formative evaluation of family health nursing care plan.

Qualities of Family Health Nurse

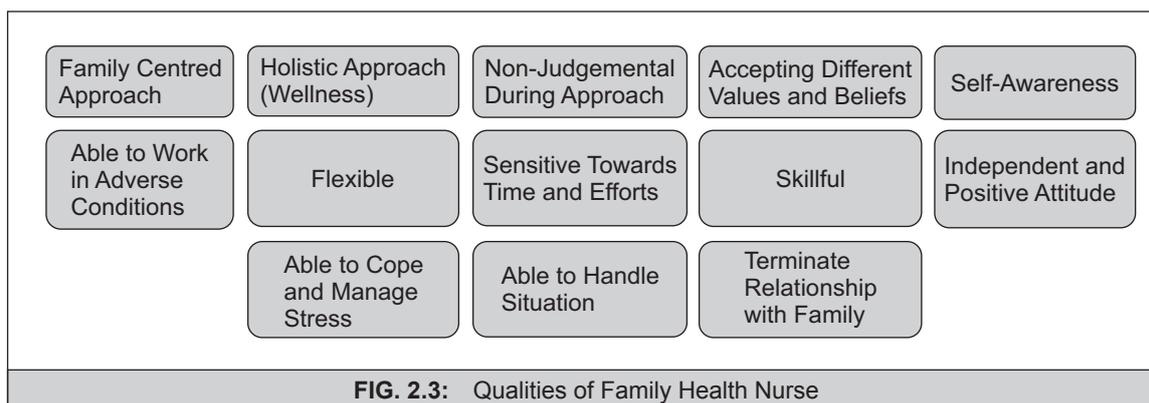


FIG. 2.3: Qualities of Family Health Nurse

HOME VISITING

Can be defined as an evidence based program that include home visiting as a primary service delivery strategy and is offered on voluntary basis to pregnant women or children up to 5 years. It also includes improved maternal and child health, prevention of child injuries or maltreatment and reduction emergency department visit, improvement in family economic, self-sufficiency and improvement in the co-ordination and referral for other community resources and support.

It is an important activity of community health services. A large part of population is confined to their homes due to illness and is not able to take advantages of institutional

health due to illiteracy and unemployment, therefore, home health services are provided to community for their well-being of health.

Aims

- Protection against diseases.
- Providing possible nursing care at home.
- Improving the health standard of family.
- Monitoring the health problems, diseases and providing follow up treatment.
- Assessing health, immunization and nutrition level of family.
- Reducing the IMR and MMR.
- Identification of sources of communicable diseases.
- Providing health education during home visiting.

Principles of Home Visiting

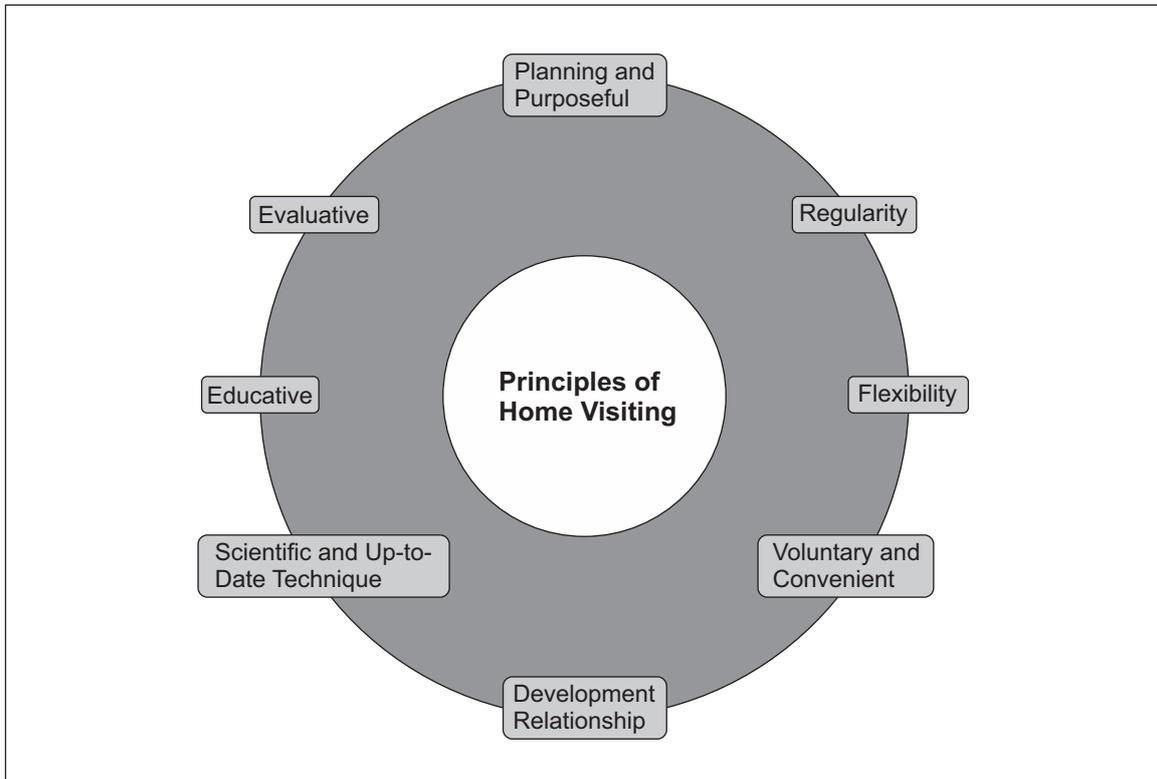


FIG. 2.4: Principles of Home Visiting

Techniques of Home Visiting

- Introduce yourself and state the cause of your visit.
- Develop good interpersonal relationship and try to win the confidence of the family.
- Motivate the individual to explore their problems.
- Maintain confidentiality.
- Don't criticize habits, culture and tradition of the family. Without criticizing, take rectifying measures, if necessary.
- Do not scold the family members for not following the advices.
- Home visiting should be planned according to the domestic conditions.
- Observe the following while communicating:
 - Physical and ecological environment.
 - Health level of pregnant mother and infants.
 - Health level of children below 5 years and their immunization.

- Any sign of malnutrition in the family.
- Their way of living, cleanliness and personal hygiene.
- Provide follow up treatment.
- Provide health education to the family members.

ESTABLISHING WORKING RELATIONSHIP WITH THE FAMILY

- To develop an effective working relationship with the family, the community health nurse should focus on the following objectives:
 - To collect complete information about the family and their environment, family health needs and available resources.
 - To provide comprehensive nursing services to the family.
 - To encourage family to become independent in taking care of their health.
 - To remove all those shortcomings of cleanliness, which can cause the illness or death.
- Home visiting helps in establishing good relationship between nurse and family members, in understanding the problems and collecting the facts.
- It also increases the faith of community in nursing and health services. So, the community health nurse should make optimum use of her/his complete knowledge, positive attitude and professional skills in home visiting.
- Home visiting should be planned and conducted as per the requirements of the community.
- A community health nurse should categorize her/his area, then visit the selected units. There should be definite aim of home visiting *i.e.* to conduct survey, statistics collection, maternal and child health services and nursing services at home.
- Class session should be pre-planned to increase active participation of family in home nursing.

Working with Families in Relation to Prevention of Disease, Promotion of Health

- According to Florence Nightingale, “the secret of national health lies in the homes of the people”.
- Family acts as a focal point of health care, as it is the right place for integrating preventive, promotive and curative services.
- Family health services consider family as a unit which starts from first contact to the ongoing care of chronic problems (from prevention to rehabilitation).
- The family health services are designed to delivery “primary care” to the family.
- Health behaviour of family members can be modified through health education during implementation of family health services.
- Family health services create awareness about inter-dependency and health among family members.

CARE OF SICK IN THE HOME, PHYSICALLY HANDICAPPED AND MENTALLY CHALLENGED

Care of Sick at Home

- Sick person should be placed in a room separated from the common areas of the house.
- The door of the sick person's room should be kept closed, if possible to limit the visits.
- The mouth of the sick person should be covered while coughing and sneezing and should wash their hands with soap and water.
- Always wear face mask to the sick person.
- One family member should be there to provide assistance to the sick person.
- Avoid sharing of utensils, clothes *etc.* of the sick person.
- Maintain quiet and calm room with adequate lightening and proper ventilation to the sick person.
- Discard the disposable items used by the sick person.
- Maintain personal hygiene of the sick person and of his/her surroundings.
- Provide plenty of fluids.
- A sick person should be bathed or washed with sponge/cotton cloth with luke-warm water everyday.
- Provide a small and frequent diet (according to disease condition) to the sick person and encourage him/her to drink plenty of sweetened drinks, especially if he/she does not eat much.

- Maintain Input Output charting.
- Frequent changing of position to prevent pressure ulcer.
- In case of emergency, seek medical help.

Care of Physically Handicapped

- Prevention of disability at all level of care.
- Early identification of risk factors and impairment/disability.
- Assessment of extend of handicapped.
- Assessment of activities of daily living (ADL's).
- Help to achieve the activities of daily living.
- Referral to specialist of consulting discipline, seeking advice.
- Co-ordination between the efforts and team members, NGO's and agencies.
- IEC activities for handicapped.
- Prevention for contractures and complications.
- Arrangement for helping device, aids and minor repairment.
- Check for further complications.
- Keen observation over any sign of pressure sore.
- Rehabilitation—physical, social, mental, psycho-social and vocational.
- Nursing research for care of handicapped.

Care of Mentally Challenged

- Assessing the extend of problem and informing the reality to relatives.
- Innovative teaching methodology for providing special education for mentally challenged.

- Psychotherapeutic intervention, as when needed.
- Strengthen the family system of mentally challenged person.
- Taking the help of NGO's, voluntary agencies in care of mentally challenged patients.
- Creating a positive attitude in the society towards mentally challenged persons.
- Loving tender care at all levels of health system.
- Proper rehabilitation according to individual need, including vocational rehabilitation of mentally challenged.
- Full participation of community people in mental health programme to make society aware about prevention of mental illness.

SURVEILLANCE AND MONITORING

Surveillance

Surveillance has been as “the continuous scrutiny of the factors that determine the occurrence and distribution of disease and other conditions of ill health”.

Or

“The continuous scrutiny of all aspects of occurrence and spread of disease that are pertinent to effective control”:

- Surveillance is essential for effective control, prevention and includes the collection, analysis, interpretation and distribution of relevant data for action.
- It connotes exercise of continuous scrutiny of health indices, nutritional status, environmental hazards, health

practices and other factors that may affect health.

- Surveillance, if properly pursued, can provide the health agencies with an overall intelligence and disease-accounting capability.
- It is an essential prerequisite to the rational design and evaluation of any disease control programme.
- It requires professional analysis and sophisticated judgement of data leading to recommendations for control activities.

Objectives of Surveillance

- Prevention.
- To detect changes in trend or distribution in order to initiate investigative or control measures.
- To provide feedback which may be expected to modify the policy and the system itself and lead to redefinition of objectives.
- Provide timely warning of public health disasters so that interventions can be mobilized.

Monitoring

Monitoring is “the performance and analysis of routine measurements aimed at detecting changes in the environment or health status of population”:

- Monitoring is the day-to-day follow-up of activities during their implementation to ensure that they are proceeding, as planned and are on schedule.
- It refers to on-going measurement of performance of a health service or a

health professional or of the extent to which patients comply with or adhere to advice from health professionals.

- It becomes one more specific and essential part of the broader concept embraced by surveillance.
- It requires careful planning and the use of standardized procedures and methods of data collection and can then be carried out over extended periods of

time by technicians and automated instrumentation.

- It is a continuous process of observing, recording and reporting on the activities of the organization or project.
- It consists of keeping track of the course of activities and identifying deviations and taking corrective action, if excessive deviations occur.

ORGANIZATION AND ADMINISTRATION OF HEALTH SERVICES IN INDIA

HEALTH ORGANIZATION IN INDIA

1. Central Level
2. State Level
3. Peripheral Level

1. At the Central Level

- The Union Ministry of Health and Family Welfare.
- Directorate General of Health Services.
- Central Council of Health and Family Welfare.

The Union Ministry of Health and Family Welfare

(i) **Central list:** International health:

- Port health research
- Technical and scientific education

Functions of Union Ministry of Health and Family Welfare

(a) **Union list:**

- International health relations; administration of port quarantine.
- Administration of central institutes.

- Promotion of research through research centres.
- Regulation of medical, pharmaceutical, dental and nursing professions.
- Establishment of drug standards.
- Census and collection and publication of other statistical data.
- Co-ordination with other states for promotion of health.
- Regulating labour in mines and oil mines.
- Immigration and emigration.

(b) **Concurrent list:**

- Prevention of extension of communicable diseases from one unit to another.
- Prevention of adulteration of food.
- Control drugs and poisons.
- Population control and family planning.
- Economic and social planning.
- Administration of ports other than major.
- Labour welfare.

Directorate General of Health Services (DGHS)

Functions of Directorate General of Health Services

- General functions
- Surveys
- Planning
- Co-ordination
- Programming
- Appraisal of all health matters
- Specific Functions
- International health relations
- Control of drug standards
- Medical store depots
- Post-graduate training
- Medical education
- Medical research
- Central government health schemes
- National health programmes
- Central health education bureau
- Health intelligence

The Central Council of Health and Family Welfare

The central council of health was set up by the presidential order on 9th August, 1952 under article 263 of the constitution of India for promoting co-ordinated and concerted action between the centre and the state for the implementation of all the programmes and measures pertaining to the health of the nation. The Union Health minister is the chairman and the State Health ministers are the members.

Functions of Central Council of Health and Family Welfare

- (a) To consider and recommend broad outlines of policy with regard to matters of health, such as:
 - Provision of remedial and preventive care.
 - Environment hygiene
 - Nutrition
 - Health education
 - Promotion of facilities for training and research.
- (b) To make proposals for legislation in the fields of medical and public health matters and to lay down.
- (c) To make recommendations to the central government regarding the health.
- (d) To establish any organization with appropriate functions for promoting and maintaining co-operation between central and state health administrations.

2. At the State Level

History

This started from the year 1919, when the states (then known as provinces) obtained autonomy, from the central government, in matters of public health. This was the first milestone in state health organization. By 1921–22, all the states had created some form of public health organization.

The State List

The Government of India Act, 1935 gave further autonomy to the states. The health subjects were divided into 3 lists under the 7th schedule of the India the constitution. They are:

- (i) The Union list
- (ii) The State list
- (iii) The Concurrent list

Functions under State List

- Public health sanitation, hospitals and dispensaries.
- Local government, that is, the constitutions and powers of municipal corporations, district boards, mining settlement, authorities for the purpose of local self-government of village administration.
- Intoxicating liquors that is production, manufacture, possession, transport, purchase and sale of intoxicating liquors.
- Relief of the disabled and unemployable.
- Burials and burial grounds, cremation grounds.
- Markets and fairs.

State Health Administration

- State Ministry of Health and Family Welfare.
- State Health Directorate and Family Welfare.

State Ministry of Health and Family Welfare

- **Headed:** Cabinet minister and deputy minister (Political head).
- **Responsibility:** Formulating policies.
- Monitoring the implementation of these policies and programmes.
- **The health secretariat:** Is the official organ of the state ministry of health.

■ Major functions of the secretariat includes:

- Formulation, review and modification of board policy outlines.
- Execution of policies programs *etc.*
- Co-ordination with government of India and other state governments.
- Control for smooth and efficient functioning of administrative machinery.

State Health Directorate and Family Welfare

- Principle advisor in matters relating to medicine and public health.
- Assisted by joint director, regional joint director and assistant directors.

Functions of state health directorate

- Providing curative and preventive services.
- Provision for control of milk and food sanitation.
- Assumes for total responsibility for taking all steps in the prevention of any outbreak of communicable diseases, especially during festivals and special seasons.
- Establishment and maintenance of central laboratories for preparation of vaccines, *etc.*
- Promotion of health education.
- Collection, tabulation and publication of vital statistics.
- Apart from governmental actions, it will be organized by State Nursing Councils and Universities. Functions of University are: organize the courses, plan for the examinations, setting question papers, planning the examination date and plan for the curriculum.

3. At the District Level

- Principal unit of administration in India.
- District health organization identifies and provides the needs of expanding rural health and family welfare programme.
- Within each district again, there are 6 types of administrative areas.
- No uniform model of district health organization.

District Health Organization

- Most districts in India are divided into two or more sub-division (in-charge is assistant collector or sub-collector).
- Each division is again divided into tehsils (talukas), in-charge is a Tehsildar.
- A tehsil usually comprises between 200–600 villages.

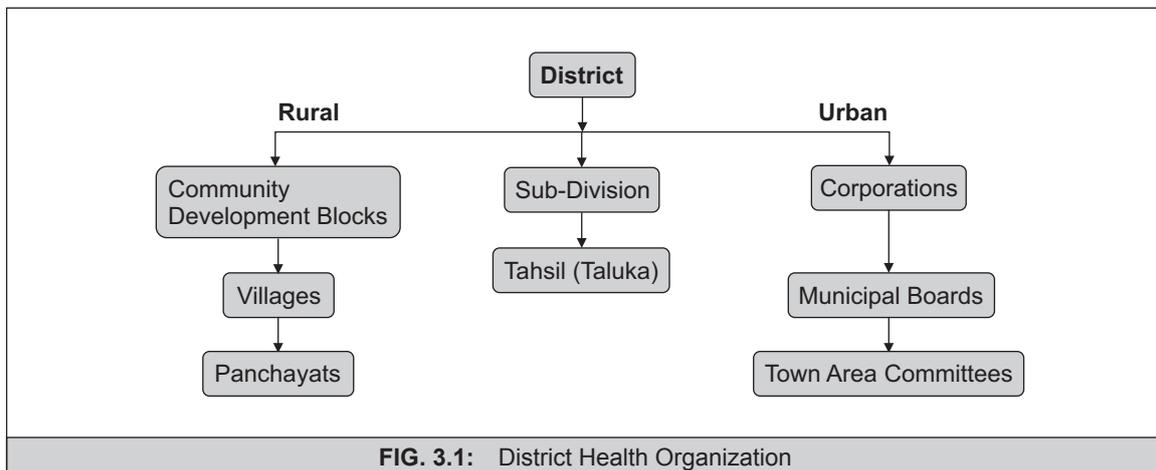


FIG. 3.1: District Health Organization

Panchayati Raj

The Panchayati Raj is a 3-tier structure of rural local self-government in India, linking the village to the district. The 3 institutions are:

- Panchayat:** At the village level.
- Panchayat Samiti:** At the block level.
- Zila Parishad:** At the district level.

(i) At the village level

This consists of:

- The gram sabha
- The gram panchayat

- The nyaya panchayat
- *The gram sabha:* It is comprised of all the adult men and women of the village. This body meets at least twice in a year and discusses important issues. They elect members of panchayat.
- *The gram panchayat:* Consists of 15–30 elected members.
- Covers the population of 5000–20000.
- Chaired by the president *i.e.* Sarpanch/Mukhiya/Sabhapati.
- There is a vice-president and a secretary.

- Responsible for overall planning and development of the villages.
- The panchayat secretary has been given powers to functions for wide areas, such as maintenance of sanitation and public health, socio-economic development of the villages *etc.*
- *The nyaya panchayat*: It is comprised of 5 members from the panchayat. It tries to solve the dispute between two parties/groups/individuals over certain matters on mutual consent.
- Representatives of women, SC/ST, two persons who have experience in administration, rural development officer *etc.*

PLANNING AND ORGANIZING NURSING SERVICES AT VARIOUS LEVELS: NATIONAL, STATE AND DISTRICT

Placement of Nurses in the Healthcare Organization

(ii) At the block level

It is known as Panchayat Samiti:

- Members of panchayat samiti are:
 - Sarpanches from all the gram panchayats in the block.
 - MLAs and MPs residing in the area.
 - Representative of women, schedule castes, schedule tribes and co-operative societies.
- The funds for the development activities are processed through panchayat samiti.
- The block development officer is the ex-officio secretary of the panchayat samiti.
- The panchayat samiti is responsible for the block developmental activities under the community development programme.

(iii) At the district level

- The panchayati raj institution at the district level is known as Zila Parishad.
- It is headed by the chairman, also known as Adhikshak.
- It includes the following members:
 - The heads of all the gram samiti in the district, MLA and MPs from the district.

A high power committee on nursing and nursing profession was set up by the Government of India in July, 1987, under the chairmanship of Smt. Sarojini Varadappan, an eminent social worker and former chairperson of Central Social Welfare Board with Smt. Rajkumari Sood, Nursing Advisor to Government of India, as the member secretary. The terms of reference of the committee were as follows:

1. Looking into the existing working conditions of nurses with particular reference to the status of the nursing care services, both in the rural and urban areas.
2. To study and recommend the staffing norms necessary for providing adequate nursing personnel to give the best possible care, both in the hospitals and community.
3. To look into the training of all categories, levels of nursing, midwifery personnel to meet the nursing manpower needs at all levels of health service and education.
4. To study and clarify the role of nursing personnel in the healthcare delivery system including their interaction with

- other members of the health team at every level of health services management.
- To examine the need for organization of the nursing services at the national, state, district and lower levels with particular reference to the need for planning, implementing the comprehensive nursing care services with the overall healthcare system of the country at their respective levels.
 - To look into all other aspects which the committee may consider relevant with reference to their terms of reference.
 - While considering the various issues under the above norms of reference,

the committee will hold consultations with the state governments.

The findings of this committee give a grim picture of the existing working condition of nurses, staffing norms for providing adequate nursing personnel and education of nursing personnel to meet the nursing manpower needs at all levels and the role of nursing personnel in the healthcare delivery system. Their recommendations on the organization of nursing services at central, state and district levels and the norms of nursing service and education are given below:

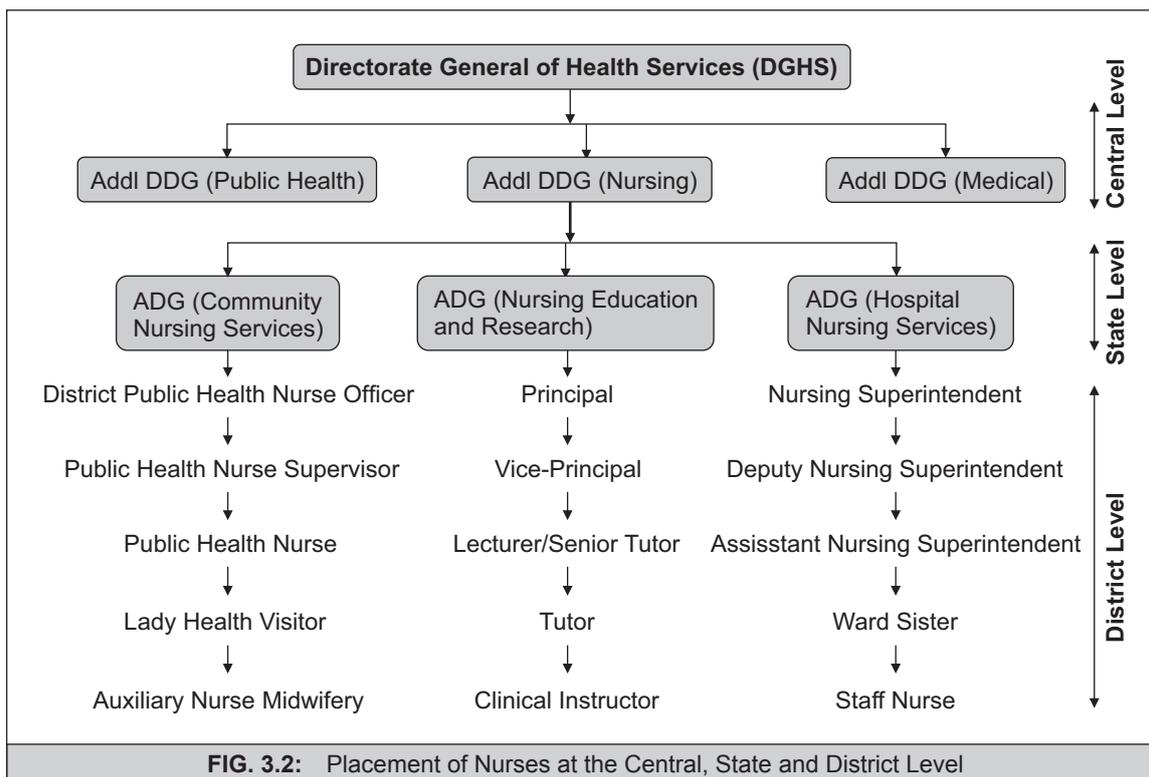


FIG. 3.2: Placement of Nurses at the Central, State and District Level

Note: At central level: Directorate General of Health Services (DGHS) and Additional Deputy Directorate General of Health Services (Addl DDG).

At state level: Assistant Directorate General of Health Services (ADG) (Nursing Services) in Community, Education and Hospital settings.

NATIONAL HEALTH POLICY, 2000

The Ministry of Health and Family Welfare, Government of India, evolved a National Health Policy in 1983, keeping in view the national commitment to attain the goal of health for all by the year 2000.

Main Objectives

1. To achieve and acceptable standard of good health among the general population of the country.
2. The approach would be increase access to decentralize public health system by establishing new infrastructure in the existing institutes.

3. Ensure equitable access to health services across the social and geographical expanse of the country.
4. Primacy will be given to preventive and first line curative initiatives at primary health level.
5. Focus on those diseases, which are principally contributing to disease burden, such as TB, HIV/AIDS, Malaria, Blindness *etc.*
6. Emphasis will be laid on rational use of drugs within the allopathic system.

Goals

S. No.	Goals	By the Year to be Achieved
1.	Eliminate Lymphatic Filariasis.	2015
2.	Eliminate Kala-Azar.	2010
3.	Eliminate malaria and vector and water borne diseases.	2010
4.	Reduce prevalence of blindness to 0.5 per cent.	2010
5.	Reduce IMR to 30/1000 and MMR to 100/1 Lakh.	2010
6.	Increase utilization of public health facilities from current level of <20→75 per cent.	2010
7.	Increase health expenditure by government as a per cent of GDP from the existing 0.9–2 per cent.	2010
8.	Increase share of central grants to constitute at least 25 per cent of total health spending.	2010
9.	Further increase to 8 per cent of the budget.	2010
10.	Achieve zero level growth of HIV/AIDS.	2007
11.	Eradicate Polio and Yaws.	2005
12.	Eliminate Leprosy.	
13.	Establish an integrated system of surveillance, National health accounts and health statistics.	2005
14.	Increase state sector health spending from 5.5–7 per cent of the budget.	2005

HEALTH CARE DELIVERY SYSTEM IN INDIA

Definition

According to World Health Organization, “Health Care Delivery System is an integrated care containing promotive, preventive and curative elements that bear the longitudinal association with an individual, extending from

womb to tomb and continuing in the state of health as well as disease.”

Model of Health Care System

Health Status or Health Problems

An assessment of the health status and health problems is the first requisite for any planned effort to develop health care services. This is also known as Community Diagnosis. The data

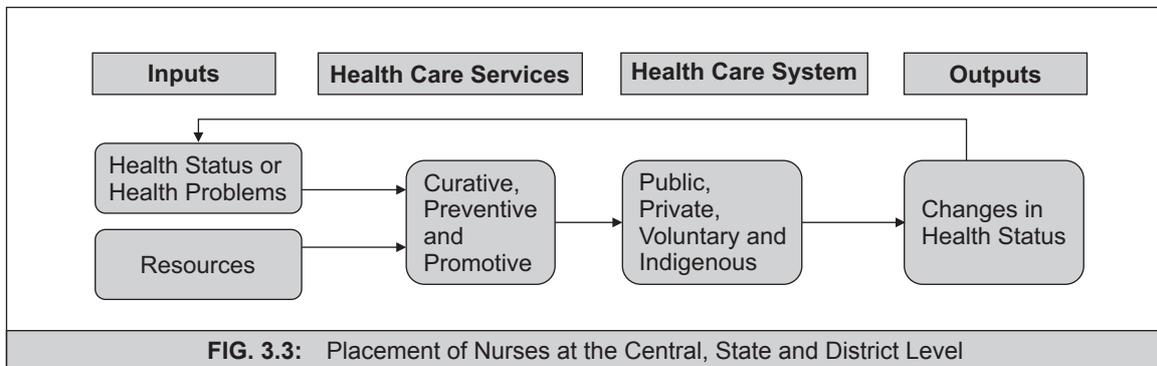


FIG. 3.3: Placement of Nurses at the Central, State and District Level

required for analyzing the health situation and for defining the health problems comprise the following:

1. Morbidity and mortality statistics.
2. Demographic conditions of the population.
3. Environmental conditions which have a bearing on health.
4. Socio-economic factors which have a direct effect on health.
5. Cultural background, attitudes, beliefs and practices which affect health.
6. Medical and health services available.
7. Other services available.

Health Problems of India

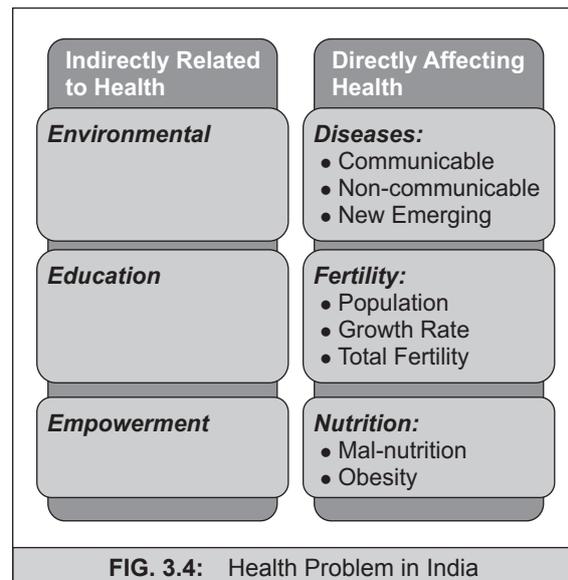
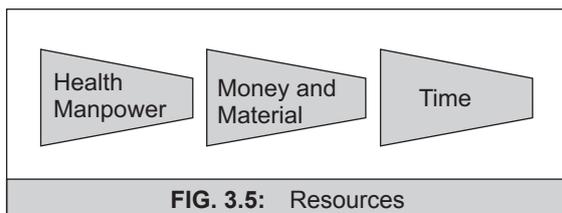


FIG. 3.4: Health Problem in India

Resources

The basic resources for providing health care are:



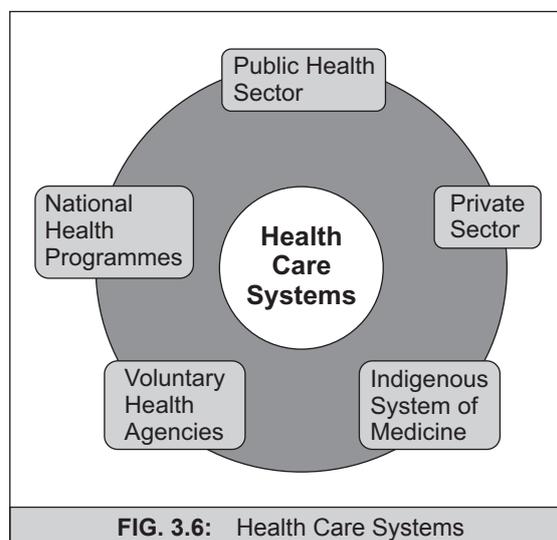
Health Care Services

- The purpose of health care services is to improve the health status of the population.
- The goals to be achieved have been fixed in terms of mortality and morbidity reduction, increase in expectation of life, decrease in population growth rate, improvements in nutritional status, provision of basic sanitation, health manpower requirements and resources development and certain other parameters, such as food production, literacy rate, reduced level of poverty *etc.*
- The health care services should be:
 - Comprehensive
 - Accessible
 - Acceptable
 - Provide scope for community participation.
 - Available at a cost community and country can afford.

Health Care Systems

- The health care system is intended to deliver the health care services.

- It constitutes the management sector and involves organizational matters.
- It operates in the context of the socio-economic and political framework of the country.
- In India, the health care system is represented by five major sectors/agencies:



Public Health Sector

Public Health Sector consists of:

- (a) **Primary Health Care:** Involves Primary Health Centres and Sub-Centres.
- (b) **Hospitals/Health Centres:** Involves Community Health Centres, Rural Hospitals, District Hospitals/Health Centres, Specialist Hospitals and Teaching Hospitals.
- (c) **Health Insurance Schemes:** Involves Employee State Insurance, Central Government Health Scheme.

- (d) **Other Agencies:** Involves Defence Services and Railways.

Private Sector

Private Sector consists of:

- (a) Private hospitals, polyclinics, nursing homes and dispensaries.
- (b) General practitioners and clinics.

Indigenous System of Medicine

Indigenous System of Medicine consists of AYUSH and Unregistered practitioners.

of health resources *i.e.* health care must penetrate into the farthest reaches of rural areas and everyone should have access to them. To implement this policy at village level, the following schemes are in operation:

1. Village Health Guides Scheme
2. Training of Local Dais
3. ICDS Scheme
4. ASHA Scheme

1. Village Health Guides Scheme

- The Village Health Guides Scheme was introduced in 1977 with the idea of securing people's participation in the care of their own health.
- The Village Health Guide serves as a link between the community and the government infrastructure.
- They provide the first contact between the individual and the health system.
- The guidelines for the selection of Village Health Guide:
 - They should be permanent residents of the local community, preferably women.
 - They should be able to read and write, having minimum formal education at least upto the VI standard.
 - They should be acceptable to all sections of the community.
 - They should be able to spare at least 2–3 hours everyday for community health work.
- After selection, the Health Guides undergo a short training of 3 months in primary health care.

HEALTH CARE DELIVERY SYSTEM

1. In 1977, the Government of India launched a Rural Health Scheme based on the principle of “placing people's health in people's hands”.
2. It is three-tier system of health care delivery in rural areas, based on the recommendations of the Srivastava Committee in 1975.
4. Keeping in view the WHO goal of “Health for All” by 2000, the Government of India evolved a National Health Policy, based on primary health care approach in 1983.
5. Further development of rural health infrastructure took place in view to implement National Health Policy, National Population Policy and more recently National Health Mission with formulation of Indian Public Health Standards.

Village Level

One of the basic tenets of primary health care is universal coverage and equitable distribution

- The duties assigned to health guides include treatment of simple ailments and activities in first-aid, maternal and child health including family planning, health education and sanitation.
- The national target is to achieve 1 health guide for each village or 1000 rural population.

2. Training of Local Dais

- An extensive programme has been undertaken, under the Rural Health Scheme, to train all categories of local dais (Traditional Birth Attendants) for 30 working days in the country to improve their knowledge in the elementary concepts of maternal and child health and sterilization, besides obstetric skills.
- Training is given at PHC/Sub-centre or MCH centre for 2 days in a week and on the remaining four days, they accompany the health workers to the villages preferably in the dai's own area.
- During the training period, each dai is required to conduct at least 2 deliveries under the guidance and supervision of the health workers.
- The emphasis during training is on asepsis so that home deliveries are conducted under safe hygienic conditions, thereby reducing the maternal and infant mortality.
- After successful completion of training, each dai is provided with a delivery kit and a certificate.
- The national target is to train 1 local dai in each village.

3. ICDS Scheme

- Under the Integrated Child Development Scheme, there is an Anganwadi worker for a population of 1000.
- The Anganwadi worker is selected from the community, she is expected to serve.
- The Anganwadi worker undergoes training in various aspects of health, nutrition and child development for 4 months.
- The services rendered by Anganwadi worker include maintenance of growth chart, immunization, supplementary nutrition, health education, non-formal preschool education and referral services.
- The beneficiaries are especially nursing mothers, pregnant women, other women (15–45 years), children below the age of 6 years and adolescent girls.

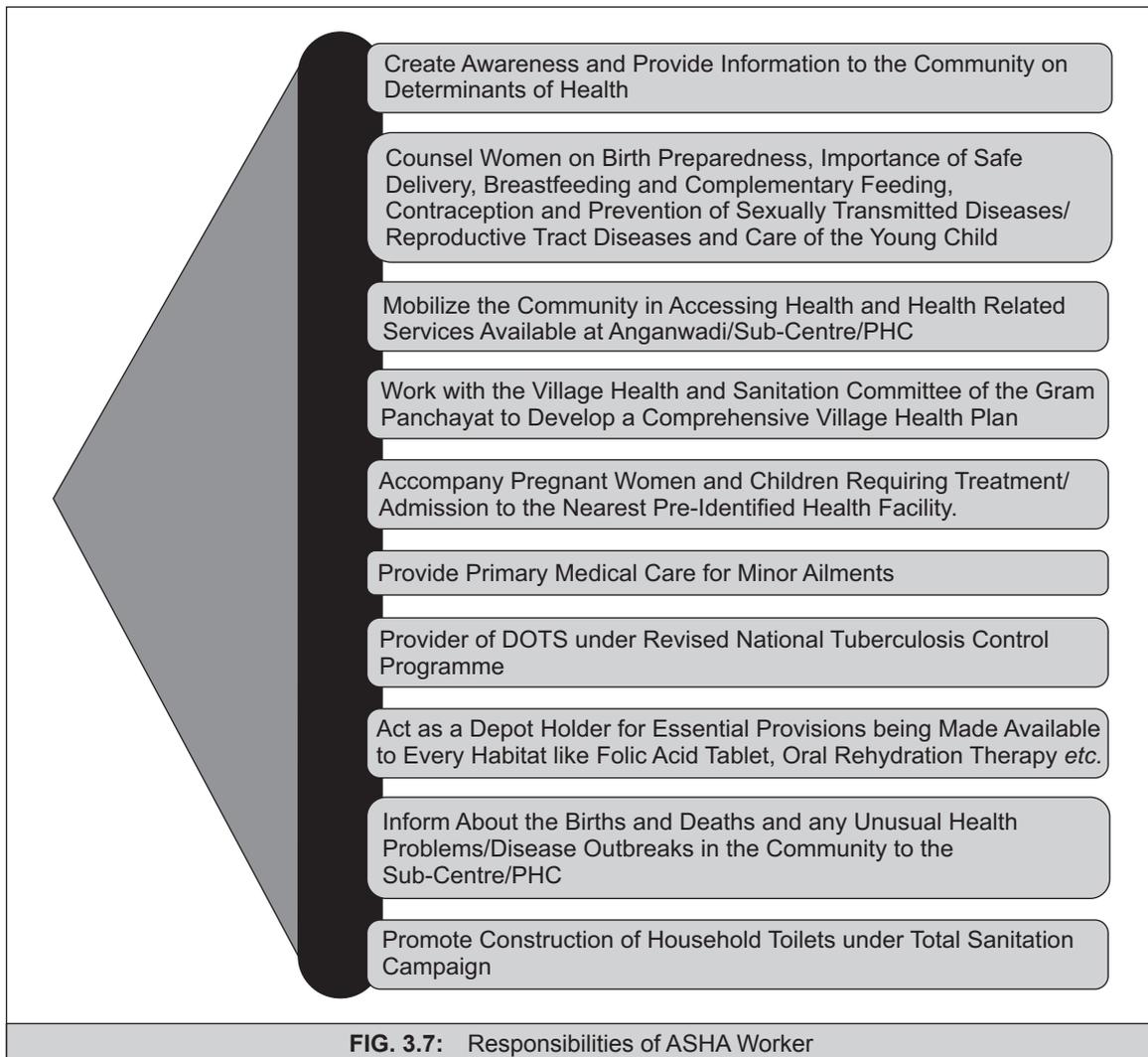
4. ASHA Scheme

- The main aim of National Rural Health Mission is to provide accessible, affordable, accountable, effective and reliable primary health care and bridging the gap in rural health care through creation of a cadre of Accredited Social Health Activist (ASHA).
- The guidelines for the selection of ASHA:
 - Must be resident of the village.
 - A woman (married/widow/divorced) preferably in the age group of 25–45 years with formal education upto 8th standard, having communication skills and leadership qualities.

- The general norm of selection will be one ASHA for 1000 population.

Responsibilities of ASHA Worker

The ASHA will be a health activist in the community, who will create awareness on health.



Sub-Centre Level

- The Sub-Centre is the peripheral outpost of the existing health delivery system in rural areas.
- Most peripheral and first contact point between the primary health care system and the community.

- Manned by at least 1 ANM/Female Health Worker and 1 Male Health Worker.
- Under NRHM, one additional second ANM on contract basis.
- Provide services in relation to maternal and child health, family welfare, nutrition, immunization and control of communicable diseases.
- Ministry of Health and Family Welfare is providing 100 per cent Central assistance to all the Sub-Centre's.

Centre	Plain Area	Hilly/Tribal/Difficult Area
Community Health Centre	1,20,000	80,000
Primary Health Centre	30,000	20,000
Sub-Centre	5,000	3,000

- According to Indian Public Health Standards for Sub-Centres, the following services are being prescribed to provide basic promotive, preventive and few curative primary health care services to the community and achieve an acceptable standard of quality of care:

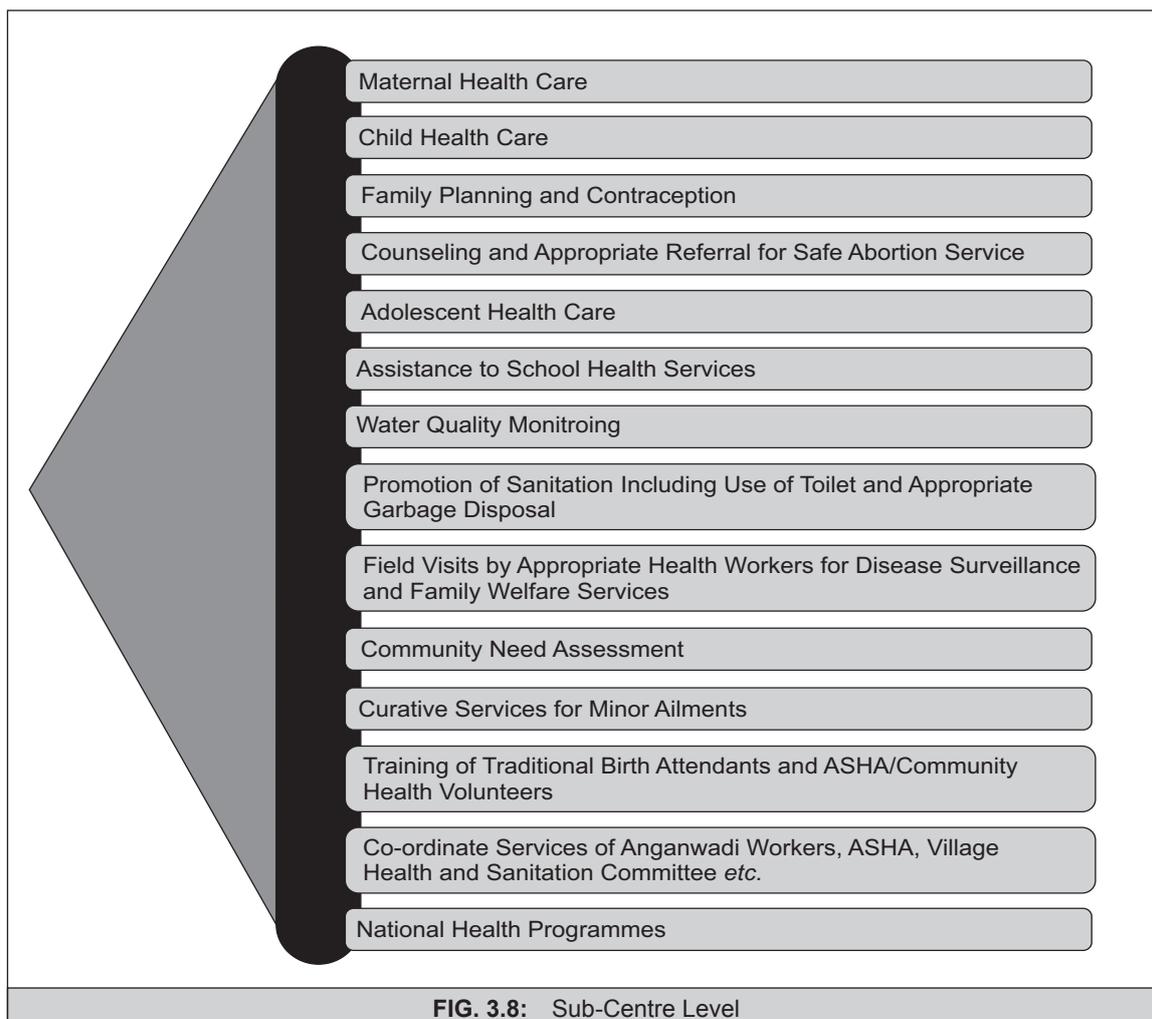


FIG. 3.8: Sub-Centre Level

Primary Health Centre Level

Primary Health Care

The Alma-Ata Conference has defined “Primary Health Care is essential health care made

universally accessible to individuals and acceptable to them, through their full participation and at a cost the community and the country can afford”.

Elements of Primary Health Care

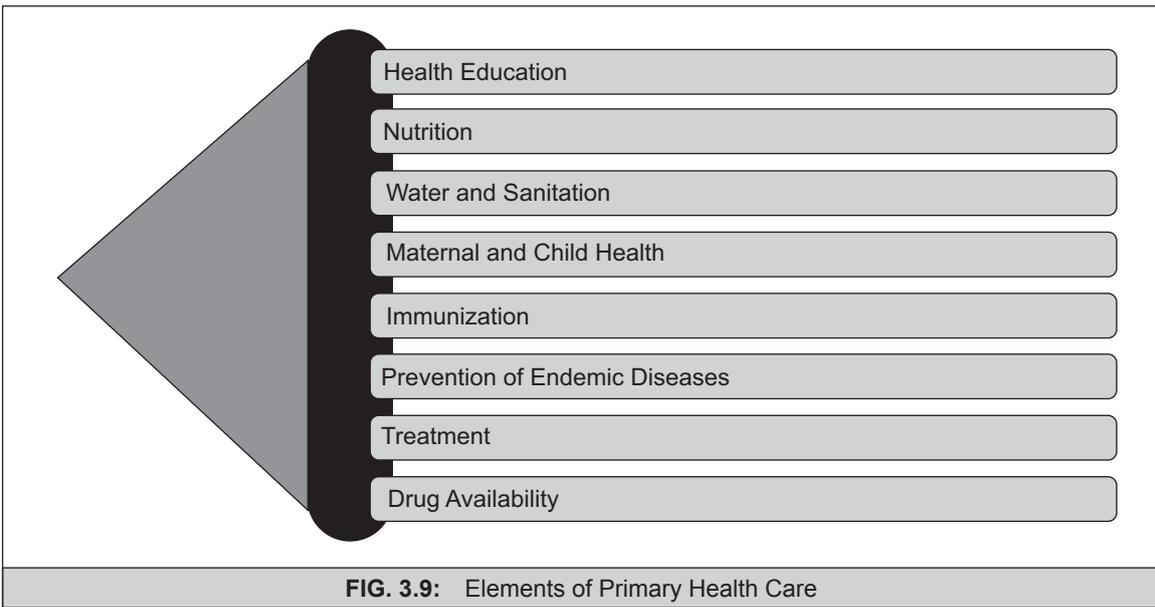


FIG. 3.9: Elements of Primary Health Care

Principles of Primary Health Care

- The Bhole Committee, in 1946, gave the concept of primary health centre as a basic health unit, to provide an

integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care.

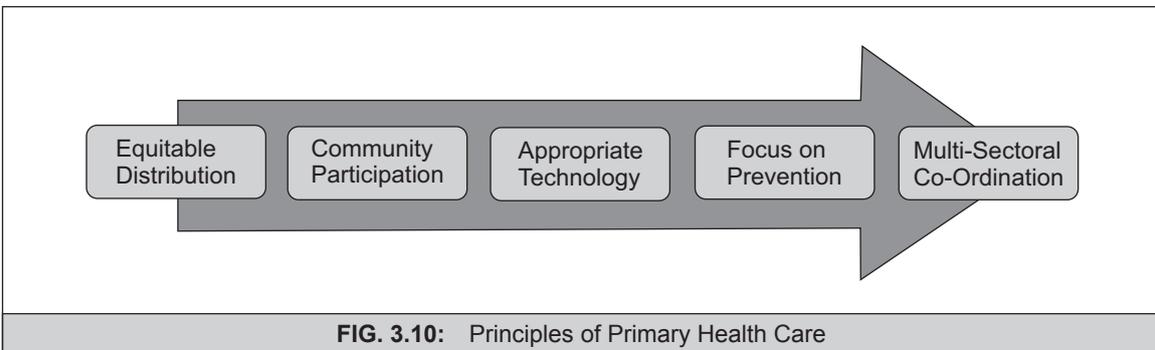
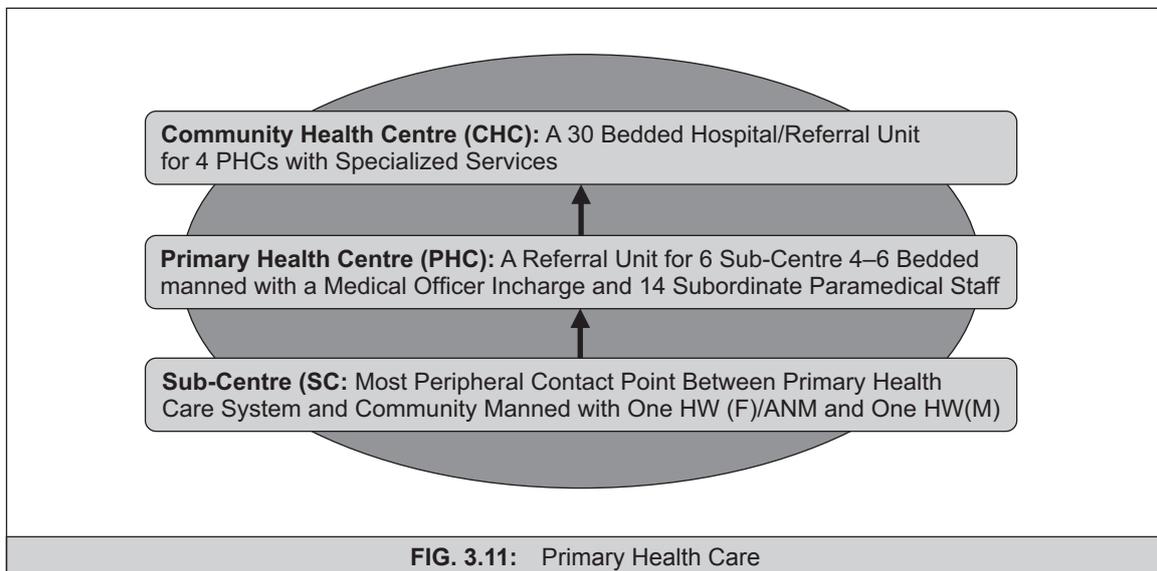


FIG. 3.10: Principles of Primary Health Care

- The National Health Plan (1983) proposed reorganization of primary health centres on the basis of one PHC for every 30,000 rural population in the plains, and one PHC for every 20,000 population in hilly, tribal and backward areas for more effective coverage.
- First contact point between village community and the Medical Officer.
- Established and maintained by the State Governments under the Minimum Need Programme.
- Manned by a Medical Officer supported by 14 paramedical and other staff.
- NRHM two additional Staff Nurses at PHCs (contractual).
- It acts as a referral unit for 6 Sub-Centre's and has 4–6 beds for patients.



According to Indian Public Health Standards for PHCs, the objectives for PHCs are:

- To provide comprehensive primary health care to the community through the Primary Health Centres.
- To achieve and maintain an acceptable standard of quality of care.

- To make the services more responsive and sensitive to the needs of the community.

According to Indian Public Health Standards for Public Health Centres, the following services are being prescribed to provide basic promotive, preventive and curative primary health care

services to the community and achieve an acceptable standard of quality of care:

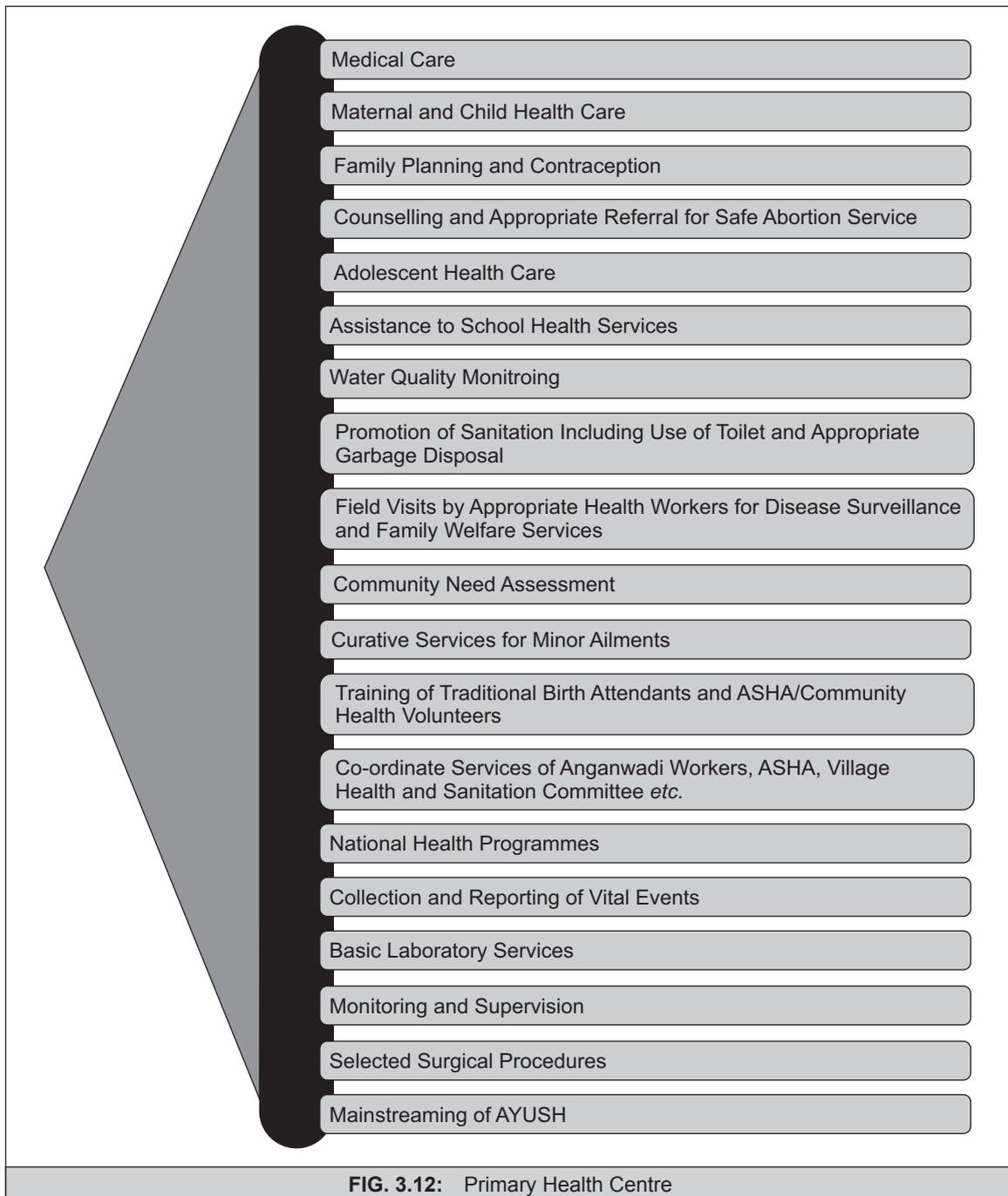


FIG. 3.12: Primary Health Centre

Community Health Centre Level

- Established and maintained by the State Government under Minimum Need Programme.
- Each CHC covers a population of 80,000–1.20 lakh.
- As per minimum norms, a CHC is required to be manned by four Medical Specialists *i.e.* Surgeon, Physician, Gynecologist and Pediatrician supported by 21 paramedical and other staff.
- It has 30 indoor beds with 1 OT, X-ray, Labour Room and Laboratory facilities.
- It serves as a referral centre for 4 PHCs and also provides facilities for obstetric care and specialist consultations.
- According to Indian Public Health Standards for CHCs, the following services are being prescribed to provide optimal expert care to the community and achieve an acceptable standard of quality of care:

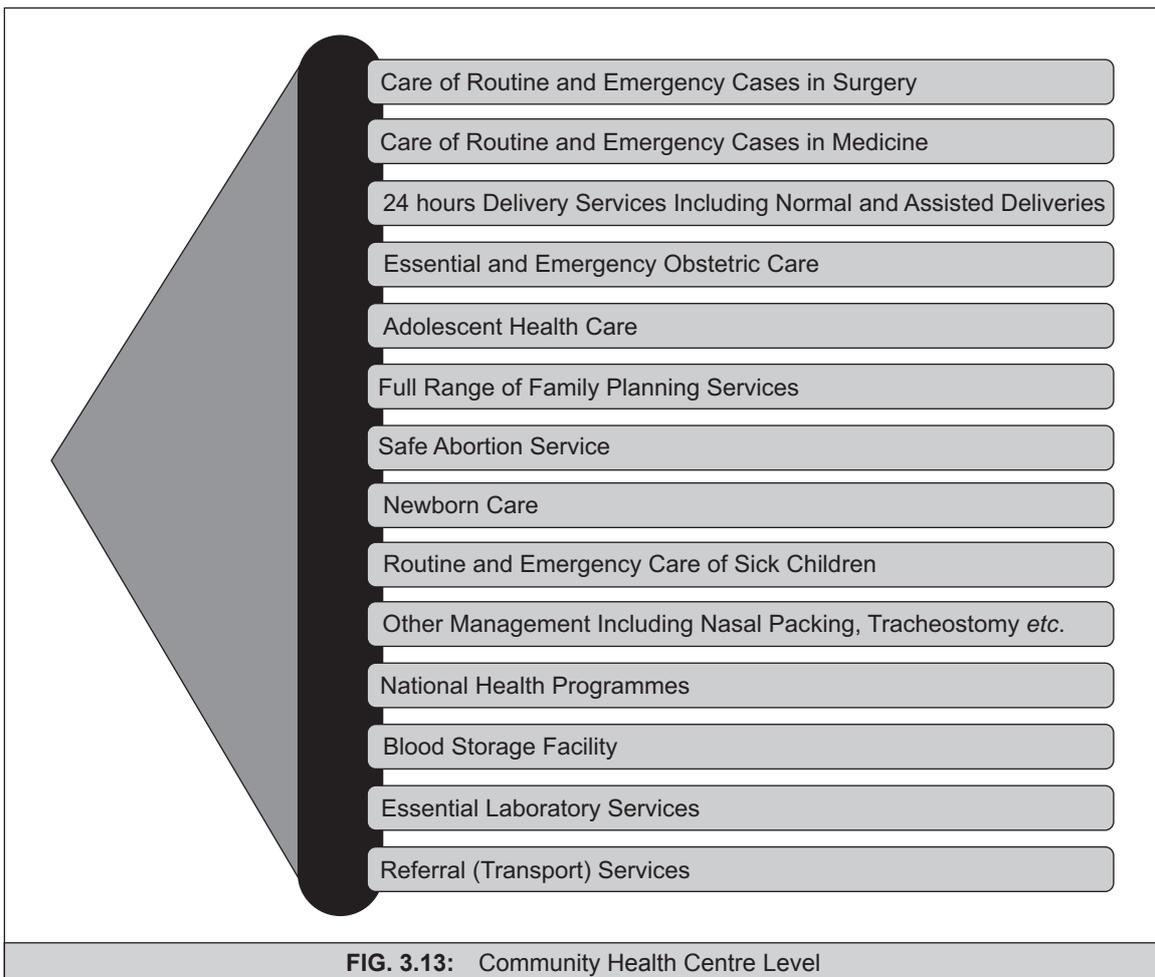


FIG. 3.13: Community Health Centre Level

HEALTH TEAM CONCEPT

Definition

Health Team has been defined as “a group of persons who share a common health goal and common objectives, determined by community needs and towards the achievement of which each member of the team contributes in accordance with his/her competence and skills and respecting the functions of the other”.

Or

Health team is a group of people working together for common goal in order to provide preventive, promotive, curative, rehabilitative, restorative services to the individual, family and community:

- The health team concept has taken a firm root in the delivery of health services, both in the developing and developed countries.
- The health team approach aims to produce the right ‘mix’ of health personnel for providing full health coverage of the entire population.
- The auxiliary is an essential member of the team.
- The team must have a leader. The leader should be able to evaluate the team adequately and should know the motivations of each member in order to stimulate and enhance their potentialities.

Functions of Health Team

- Maternal and child health activities.
- Family planning.

- Medical termination of pregnancy.
- Nutrition
- Prevention, control of communicable and non-communicable diseases.
- Dai training.
- Registration of vital events.
- Maintenance of records.
- Provision of primary medical records.
- Team activities.
- To conduct survey.
- Organization and implementation of immunization programme.
- Identification of reports about communicable diseases.
- To provide control services.
- Follow up/referrals.
- Guiding the health workers for planning programmes.
- Conducting group meetings.
- Organization of health programmes.
- Supervision and guidance.
- Team work
- Supplies, equipment and maintenance.
- Training and supervision.
- Primary medical care.
- Continuing education.
- Co-operate activities within the team members and village persons.
- Home visiting.
- Administration in primary and sub-centres and districts levels.
- Education
 - Orientation
 - In-service education.
 - Dai training.
 - Training of student nurses.

- Team will work together for achieving their objectives.
- Records and reports.
- Provision of school health services.
- Educates about environmental sanitation.
- Encourages in community involvement and decision-making.
- Conducting laboratory investigations and procedures.

Characteristics of Effective Health Team

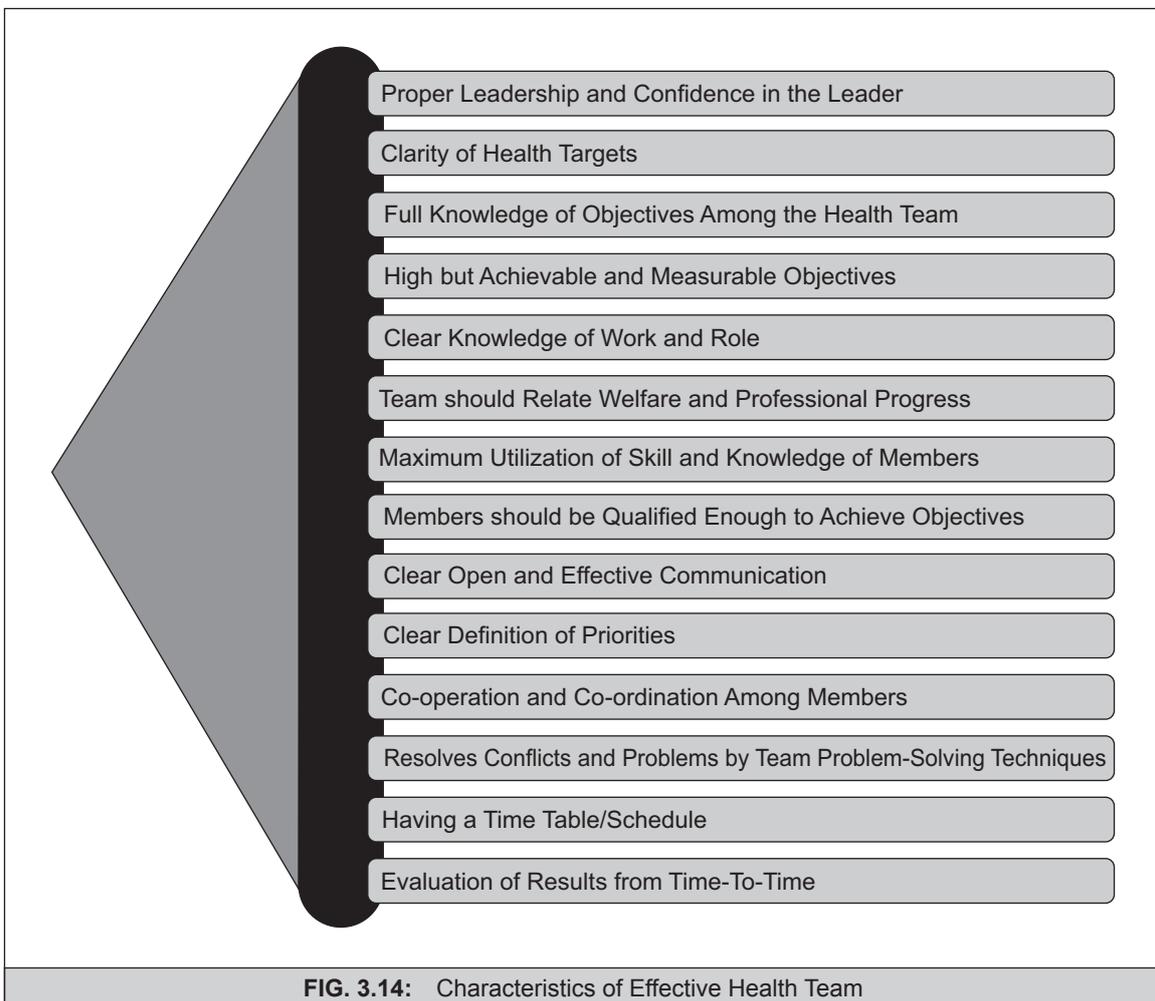
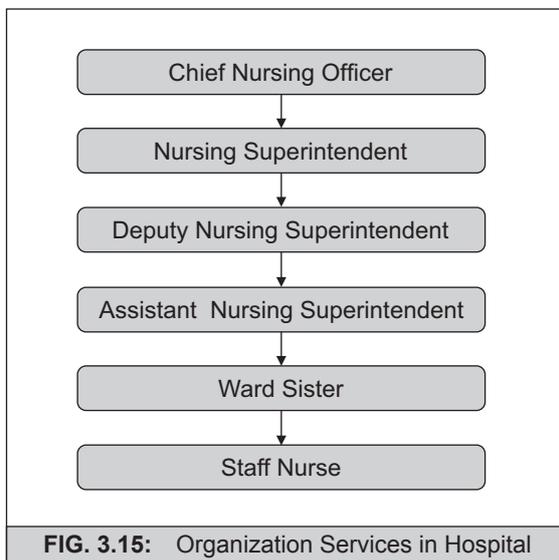


FIG. 3.14: Characteristics of Effective Health Team

ROLES AND RESPONSIBILITIES OF NURSING PERSONNEL IN HOSPITAL, COMMUNITY AND EDUCATIONAL SETTINGS

Organization of Nursing Services in Hospital Settings



1. Chief Nursing Officer (CNO)

A CNO is the head of the nursing department and in-charge of developing programs, policies and procedures to ensure high quality patient care. She is accountable for creating a nursing environment, which is based on excellent clinical care services, education and supported by research knowledge and evidence based practices. The duty of the CNO is to work towards the constant enhancement and advancement of the Nursing

profession within the organization. Chief Nursing Officer 1:500 beds.

Educational Qualifications and Experience

- (i) **General:** As prescribed for staff nurse.
- (ii) **Professionals:** M.Sc. Nursing or equivalent Master degree in Nursing recognized by INC.

Or

B.Sc. or equivalent degree in Nursing recognized by INC.

- (iii) **Registration:** Registered with State Nursing Council.
- (iv) **Experience:** Should have minimum 15 years experience in nursing service of which 5 years in administration and education/as Assistant Director of Nursing or 3 years as a Director of Nursing.
- (v) **Standard norms:** As per Indian Nursing Council.

Skills

- To advice the Ministry of Health on all nursing matters and provides leadership for the nursing profession in order to achieve the highest standard of nursing service and education.
- Understands national nursing issues.
- Understands the process of policy formulation and implementation.

Behaviours and Qualities

- Inclination for policy and regulatory work.
- Good team facilitating skills.
- Ability to gain the respect of nursing leaders in the public and private sector.

Duties and Responsibilities Related to Nursing Services



FIG. 3.16: Duties and Responsibilities Related to Nursing Services

Planning for

- (i) An organization of nursing services which provides for effective functioning of all nursing service personnel:
 - (a) Define lines of authority and areas of responsibility.
 - (b) Delegate responsibility and authority consistent with position assignment.
- (ii) Appropriate numbers and categories of personnel to meet nursing needs:
 - (a) Analyze with personnel concerned, nursing service needs of all areas, in which nursing service personnel are assigned and considering:
 - Plan of medical therapy.
 - Physical, emotional, rehabilitative and teaching needs of patients.
 - Length of stay of patients.
 - Post-hospital needs of patient.
 - Nursing service responsibility for assisting in medical research programs and orientation of medical personnel.
 - Preparation and abilities of nursing service personnel.
 - (b) Number of patients.
 - Kinds and amounts of equipment and the effect of the physical plan on the nursing workload.
 - (b) Determine nursing service activities consistent with sound utilization of personnel and accepted nursing practice.
 - (c) Establish quantitative standards of nursing care to patients.
 - (d) Analyze personnel abilities in the light of activities to be performed.
- (iii) Promotion of the personal and professional growth of all nursing service employees:
 - (a) Provide for and participate; in education and training programs for all professional and non-professional nursing service personnel.
 - (b) Provide for:
 - Counseling and guidance programs.
 - Regularly scheduled group conferences.
 - Special committees and work groups.

- (c) Provide opportunity for additional experience and encourage advances study.

Directing by

Utilizing sound personnel management practices in administering the nursing service:

- (i) Select for employment qualified professional and non-professional personnel.
- (ii) Provide for assignment of personnel on the basis of qualifications and ability.
- (iii) Provide professional nurse supervision of personnel which promotes development to their highest potential and which contributes to efficiency and economy in providing nursing care.
- (iv) Establish performance requirements for all the employees which permit:
 - (a) Identification of substandard performance and form the basis for appropriate action.
 - (b) Identification of outstanding performance and form the basis for recognition and reward.

Controlling by

- (i) Planning budgetary requests for nursing service and participating in planning for equipment and supplies, which affect nursing service programs:
 - (a) Submit budgetary estimate for nursing service personnel.
 - (b) With appropriate personnel, participate in budgetary planning for equipment and supplies, which increase efficiency and economy of nursing service activities.

- (ii) Establishing channels of communications and means for reporting nursing service activities:

- (a) Devise a systematic plan for disseminate of information up and down the nursing service organization.
- (b) Participate in inter-divisional and intra-divisional planning for effective communications which affect nursing service, including communications; with regional office clinics and community nursing agencies.
- (c) Prepare comprehensive reports on all phases of nursing service.

Co-ordinating by

Inter-relating nursing service activities with all other hospital services:

- (i) With services concerned, develop working arrangements which are mutually acceptable and which facilitate operational activities in providing nursing care.
- (ii) Establish and maintain co-operative relationships with all hospital services.

Evaluating by

Conducting continuous review and analysis of nursing service programs:

- (i) Initiate studies of local problems in nursing service activities and co-ordinate plans of action for their execution.
- (ii) Interpret findings of studies and initiate appropriate actions.
- (iii) Review functions of nursing service personnel to determine whether or

not they are consistent with changes in therapeutic programs and professional practices.

Major Responsibilities

- (i) Overall administration of the department of the nursing.
- (ii) Assistance to the hospital administrator:
 - (a) Direct reporting about patients and her departmental activities
 - (b) Responsibility for delegated tasks in her absence
- (iii) Intra-departmental “TOP-LEVEL” decision maker and describer of jobs of nursing personnel.
- (iv) Inter-departmental “TOP-LEVEL” relationships:
 - (a) Morale setter.
 - (b) Determiner of boundary lines of departmental responsibility.
- (v) Personnel administration:
 - (a) Appointment
 - (b) Evaluation
 - (c) Problem-solving
 - (d) Staff development

2. Nursing Superintendent

The Nursing Superintendent, who is also called the Director of Nursing, is responsible for the running and supervision of a nursing department. Depending on the size of the facility, she may control subsidiary departments, such as house-keeping. Nursing Superintendents generally report to the hospital director or medical director of their facility. Nursing Superintendent 1:300 beds (wherever beds are over 200).

Educational Qualifications and Experience

- (i) **General:** As prescribed for staff nurse.
- (ii) **Professionals:** M.Sc. Nursing or equivalent Master degree in Nursing recognized by INC.
Or
B.Sc. or equivalent degree in Nursing recognized by INC.
- (iii) **Registration:** Registered with State Nursing Council.
- (iv) **Experience:** Should have minimum 15 years experience in nursing services of which 5 years in administration and education.
- (v) **Standard norms:** As per Indian Nursing Council.

Functions

Supervising nursing staff

- (i) The top priority of a Nursing Superintendent is to ensure that the nursing staff members are providing the best care to the patients.
- (ii) She makes sure that individual nurses and nurses aids are carrying out care plans and ensures that communication between shifts happens smoothly and thoroughly.
- (iii) The Superintendent also monitors stock and supplies to make sure that nurses have the equipment, they need to provide quality care.

Oversee hiring and training

- (i) The Nursing Superintendent is responsible for the hiring and training of new staff.

- (ii) She must search for nurses that complement the existing team, design training programs and make sure that nursing instructors and trainers are adequately preparing new staff for the workplace.
- (iii) Often this includes hearing an evaluation of new nurses from the floor staff during the training period.

Patient care

- (i) Although the nursing superintendent does not have a high level of direct patient care, she is responsible for the well-being of patients at the facility. This means that the superintendent must monitor nurses' care and the attitude and health of the patients.
- (ii) In cases, where the family requests alternate care, the Nursing Superintendent must hear the request and make the final decision.

Create work schedules

- (i) Each pay period, the Nursing Superintendent is responsible for setting the work schedules for the entire department.
- (ii) She must take into account holidays, hear requests for time off, and create a schedule that gives the appropriate number of hours to each nurse.
- (iii) As a part of the process, the Nursing Superintendent assigns duties and responsibilities to each nurse.

Make disciplinary action

- (i) In situations where a nurse, nurse's aid or other staff member is involved in a dispute, the Nursing Superintendent must handle disciplinary actions.

- (ii) In extreme cases like patient abuse or staff coming to work under the influence, the Nursing Superintendent is responsible for terminating contracts, as needed.

Manage other department

- (i) In a large facility, the Nursing Superintendent may be responsible for directing the activities of the housekeeping, linen and kitchen facilities.
- (ii) She must handle any problems that arise, communicate with department leaders and address any supply issues.

Negotiate with vendors

- (i) Because the Nursing Superintendent is responsible for the supply of equipment and medical necessities, she often negotiates with vendors for the new contracts.
- (ii) In large facilities, a purchasing manager may handle these duties and report to the Superintendent.

3. Deputy Nursing Superintendent

The Deputy Nursing Superintendent (in hospital with =/< than 150 beds) is responsible to the Chief Nursing Officer/Nursing Superintendent.

Educational Qualifications and Experience

- (i) **General:** As prescribed for staff nurse.
- (ii) **Professionals:** M.Sc. Nursing or equivalent Master degree in Nursing, recognized by INC with 6 years experience, of which 3 years in administration.

Or

B.Sc. or equivalent degree in Nursing recognized by INC with 10 years total professional experience.

Or

RN, RM with Diploma in Hospital administration preferable with 10 years experience in administration.

- (iii) **Registration:** Registered with State Nursing Council.
- (iv) **Experience:** Should have about 10 years experience in nursing service of which 3 years in administration.
- (v) **Standard norms:** Since, it is the second level nursing supervisory role; it needs at least the Deputy Nursing Superintendent for three Assistant Nursing Superintendents (1:3).

Skills

- (i) Responsible for developing and supervising nursing services in order to achieve highest standard of nursing services.
- (ii) Responsible for smooth management of the nursing services in the hospital at all times and every time.

Functions

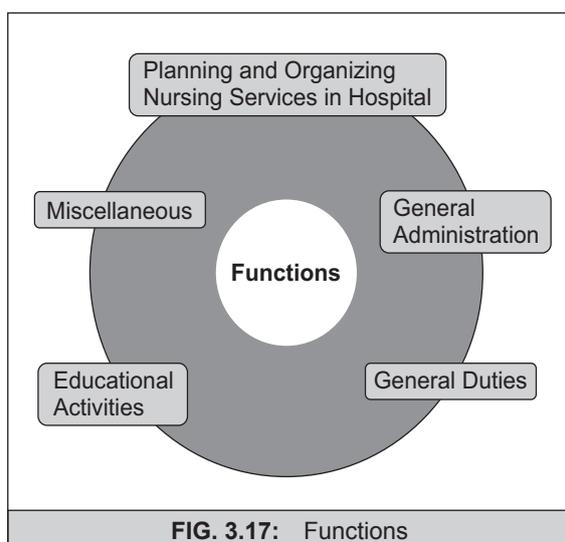


FIG. 3.17: Functions

(i) Planning and organizing nursing services in hospital

Deputy Nursing Superintendent will assist the Nursing Superintendent on planning and organizing nursing services in the hospital for:

- Preparing a philosophy and objectives for the nursing department in accordance with those of the hospital.
- To see that all services areas are managed, as per their needs.
- Utilizing specially trained nurses in that particular area only.
- Planning and putting up of proposals to the authorities for increase of staff in different categories so as to fulfill the INC recommendations.
- Co-operating with the authorities during emergencies in setting up special nursing squads, ward or any other machinery required.
- Preparing an organizational chart showing channels of communication.

(ii) General administration

- Assist the Nursing Superintendent in framing policies, keeping within the framework of government rules and regulations.
- Interpreting and implementing the policies and procedure of the government body, the hospital and the INC to sub-ordinate staff and others.
- Carrying out correspondence with the hospital with nurses and others.
- Attending to the correspondence from outside agencies and individuals.
- Submitting proposal for special equipments required for nursing services giving specifications.

- Supervise the nursing care given to the patients in various departments by taking regular rounds of her area.
 - Preparing job descriptions, where none are available and seeing that each staff member gets one.
 - Investigating complaints, preparing reports and taking disciplinary action or recommending the same.
 - Preparing annual statistics and projecting manpower needs.
 - Handling grievances and solving problems frequently.
 - Holding departmental meetings allowing free exchange of ideas and reviewing ward staffing.
 - Guiding subordinate and delegating powers depending upon the person's ability to carry out the responsibilities alongwith commensurate authority.
 - To see that ward procedure manual (nursing procedure) is maintained in all wards.
 - Sanctioning or recommending leave to nursing personnel.
 - Maintaining individual cumulative records of all nursing staff.
 - Writing reports—annual report of nursing department, confidential report of nursing staff *etc.* that may be required to be submitted.
 - Reading and analyzing daily reports of hospital situation.
 - Making of a routine to have 6 monthly or yearly health check-up for all nurses and 6 weekly for those working in Tuberculosis department, to enable adjustment in duty schedule, if found necessary.
- Act as a liaison officer between Nursing Superintendent and the nursing staff of the hospital.
 - Receive evening and night reports from ANS/Supervisors.
 - Conduct regular physical verification of hospital stocks *i.e.* drugs, equipments *etc.*
 - Initiate procedure for condemnation and procurement of hospital equipment/linen *etc.*
 - Assist the nursing superintendent in making master duty roster of nursing personnel.
 - Assist the nursing superintendent in recruitment of nursing staff.
 - Officiate in the absence of nursing superintendent.
 - Keep the senior nursing officials (CNO and NS) informed of the happenings in the wards.
- (iii) **Educational activities**
- Assist in planning/organizing and implementing staff development programmes.
 - Ensure clinical experience facilities for student nurses in various clinical areas of the hospital.
 - Provide guidance and counselling to nursing staff.
 - Arrange orientation programmes for new nursing staff.
 - Maintain discipline among nursing personnel.

- Organize educational programmes for graduate/post-graduate students from different hospitals with the co-ordination of clinical instructor/lecturer.
- Encouraging, recommending interested nurses to get further training and higher education.
- Experimenting with newer duty and staffing patterns.

(iv) General duties

- Escorts special visitors, NS, MS for hospital rounds.
- Arranges and participates in professional and social functions of the staff and students.
- Maintains good public relations.
- Any other duties assigned to her from time-to-time.

(v) Miscellaneous

- Giving leadership to the nursing department.
- Encouraging nursing personnel to become members of the professional association.
- Participating in meeting, workshop and seminars of local, state or national level and representing the profession.
- Proving counseling services to nursing personnel.
- Carrying out research or co-operating with others, who may be doing it.

- Any other activity concerned with the profession.

4. Assistant Nursing Superintendent

Assistant Nursing Superintendent is responsible to the Deputy Nursing Superintendent/Nursing Superintendent. She/he is responsible for developing and supervising nursing services of a department specific unit/floor consisting of two or more wards or units managed by nursing sisters. For every additional 50 beds, one more Assistant Nursing Superintendent.

Educational Qualifications and Experience

- (i) **General:** As prescribed for staff nurse.
- (ii) **Professionals:** M.Sc. Nursing or equivalent Master degree in Nursing, recognized by INC with 6 years experience, of which 3 years in administration.

Or

B.Sc. or equivalent degree in Nursing, recognized by INC with 10 years total professional experience.

Or

RN, RM with Diploma in Hospital administration preferable with 10 years experience in administration.

- (iii) **Registration:** Registered with State Nursing Council.
- (iv) **Experience:** Should have about 10 years experience in nursing service of which 3 years in administration.

Wards	Staff Nurse : Patient	Ward Sister : Bed	ANS
Medical Ward	1 : 3	1 : 25 each shift	1 for 3-4 wards
Surgical Ward	1 : 3	1 : 25 each shift	1 for 3-4 wards
Orthopaedic Ward	1 : 3	1 : 25 each shift	1 for 3-4 wards
Paediatric Ward	1 : 3	1 : 25 each shift	1 for 3-4 wards

Contd.....

Wards	Staff Nurse : Patient	Ward Sister : Bed	ANS
Gynaecology Ward	1 : 3	1 : 25 each shift	1 for 3–4 wards
Maternity Ward	1 : 3	1 : 25 each shift	1 for 3–4 wards
Intensive Care Unit	1 : 1	1 each shift	ANS for 3–4 units
Coronary Care Unit	1 : 1	1 each shift	-do-
Nephrology Unit	1 : 1	1 each shift	-do-
Neurosurgery Unit	1 : 1	1 each shift	-do-
Special Wards, ENT and Eye etc.	1 : 1	1 each shift	-do-
Operation Theatre	3 for 24 hours per Table		1 ANS 4–5 OT
Casualty and Emergency Unit	2–3 Depending on the Number of Days		1 ANS

Line of Authority

- Organize and plan nursing care activities of the departments, according to hospital policies and service needs.
- Plan staffing pattern and other necessary requirements of her/his department.
- Conduct and attend departmental and inter-departmental meetings and conferences from time-to-time.
- Look after the safety and general cleanliness of the department.
- Look after general comforts of the patients.
- Evaluate the nature and quantum of care required in each unit/ward.
- Plan ward management with the nursing sister of each unit/ward.
- Re-enforce the principle of good ward management in each ward.
- Help ward/unit nursing sister to procure their ward/unit supplies.
- Supervise the proper use and care of equipments and supplies in the departments.
- Acts as Public Relations Officer of the unit and deal with the problems faced by the Nursing Sister.
- Keep the Deputy Nursing Superintendent's/Nursing Superintendent's Office informed of the needs of the Nursing Units/Ward under his/her charge of any special problems.
- Arrange classes and clinical teaching of nursing students in the department related to the speciality experiences.
- Implement the ward teaching programme and clinical experience of students with the help of Tutors and Nursing Sisters.
- Counsel and guide staff and students.
- Arrange and conduct staff development programme of the department.
- Update her/his knowledge and skills by attending staff development and continuing education programmes time-to-time.
- Encourage and participate in medical and nursing research.
- Accompany Deputy Nursing Superintendent/Nursing Superintendent/

Director and Special visitors in the department/unit.

- Participate in various professional activities, *e.g.* staff education, staff meetings *etc.*
- Act as liaison officer between the Nursing Superintendent and higher hospital authorities.
- Carry out any other duties delegated by the Deputy Nursing Superintendent/ Nursing Superintendent/Director.
- She will assist the Nursing Superintendent for maintenance of cleanliness and general sanitation in the wards. She will make the roster duty of nursing staff and will hold the nursing sisters administrative work. She will make rounds in all wards and see whether the wards staff is performing their duties properly or not.
- Sundays and Holidays—She/he is responsible for the call duties on Sundays and Holidays. She will sign the night report and see that all the Nursing Staff are on duty as well as see that all categories of staff are present on their duty hours. She has to attend emergency call too.
- She has to do duty in Matron's Office, whenever required or needed.

5. Ward Sister

Ward Sister is responsible to the Assistant Nursing Superintendent for the management of the wards and supervisions of the nursing and domestic staff. She would be assisted in carrying out the following duties by staff nurse

clinical and domestic staff, as the case may be. The main aim of the ward sister should be to foster team spirit in her area of work.

Educational Qualifications and Experience

- (i) **General:** As prescribed for staff nurse
- (i) **Professionals:** B.Sc. or equivalent degree in Nursing, recognized by INC or RN, RM with Diploma in Hospital administration.
- (i) **Registration:** Registered with State Nursing Council.
- (i) **Experience:** Should have about 5 years experience in nursing service as staff nurse.

Purposes

- (i) To supervise staff nurse and their administration and to provide continuing responsibility for the management and leadership of a designated area by effective utilisation of staff and resources.
- (ii) Provide and maintain effective management and leadership promoting a high standard of safely delivered evidence based clinical care.
- (iii) Create and maintain effective communication within the multi-disciplinary team.
- (iv) Act as lead practitioner for specific speciality/specialities co-ordinating staff, resources and management skills in an efficient manner, whilst providing expert skilled assistance.
- (v) Demonstrate the ability to manage or delegate the duties effectively and efficiently meeting the service requirements.

Roles and Responsibilities

Administration and supervision

- To be able to manage own workload alongwith that of others, by ensuring appropriate delegation of their skills and capabilities.
- Maintaining plans for maintaining discipline in the ward.
- Manage the daily ward routine ensuring effective time management.
- Define levels of responsibility and role boundaries of junior staff, providing adequate opportunities for them to develop their roles.
- Improve service provided by updating and implementing new practices and products in accordance with institutional guidelines.
- To initiate and take responsibility for the reporting of critical incidents and complaints, ensuring action is taken and the process is communicated appropriately.
- Writing confidential report of staff nurses.
- Demonstrate the ability to contribute to and challenge current practice, by actively promoting change, along with acting as a change agent, where required.
- Maintaining inventory of the consumable, non-consumable items and ensuring uninterrupted supply of materials by timely indent and maintaining stocks.
- Manage ordering, stock levels and be responsible for safe handling and storage of all drugs in accordance with institutional policies.

- Making list for condemnation of articles and submitting it to the concerned authorities.
- Delegate the responsibility for ordering and the maintenance of specific stock levels in her absence.
- Writing out the weekly duty schedule.
- Promoting high staff morale by inspiring a shared vision and common goal.
- Promote and practice effective forms of communication between the patient, their family and all other healthcare professionals.
- Participate in and manage team meetings, promoting and maintaining effective communications between all staff members and departmental.
- Ensure accurate and adequate record keeping alongwith maintaining confidentiality at all times.
- Supervise the cleanliness of the ward and laundry work.
- Ensure all faults are reported and rectified effectively and efficiently.
- Act as a liaison between ward staff and administration.

Clinical professional responsibilities

- Ensure all equipment and resources are available to perform procedures according to the individual needs of the patient.
- Participate as a specialist practitioner with regard to patient care.
- Be acquainted with the physical conditions of patients and any special nursing problems and see that patients receive good nursing care.

- Co-ordinates patient care with other departments.
- Prepare for ward rounds and accompany the head of the unit on rounds and bring to the doctor's attention any point of importance.
- To lead, delegate and liaise with all members of the multi-disciplinary team ensuring appropriate skill levels and experience are available to ensure a safe patient journey through the department.
- Ensure policies/protocols are updated, monitored and maintained with regard to continually improving patient care.
- Promote high standards of care by demonstrating the ability to develop and empower the team, along with acting as a role model at all times.
- To maintain standards of infection control within the ward area and during clinical care.

Communication

- Ensure that identified lines of communication are maintained with patients, colleagues and external agencies.
- Be actively involved in team meetings and facilitate own team meetings and inter-team meetings to ensure flexible working and service provisions.
- Play an integral role in ensuring that all team members are aware of local and general Health and Safety matters and other on-going issues, which arise including patient safety issues.
- Demonstrate the ability to be able to motivate and persuade others through advanced communication skills.

Education and training

- Attend in-service courses relevant to grade and needs as identified and encourages other staff nurses to do the same.
- Participate as a clinical expert in the education and training of all grades of staff, within the multidisciplinary team, in accordance with their individual objectives, promoting an ethos of life-long learning.
- To be involved in the initiation of nursing research and co-operate with nurses carrying out research studies.
- Demonstrate a working knowledge of and work within the INC Code of Professional Conduct.
- Demonstrate continuing knowledge and skill development providing enhanced and improved standards of patient care.
- Help student nurses in understanding the patient illness and the type of care that is to be given.
- Co-operate with the clinical instructors by arranging clinical teaching and supervising the practical work.
- Give incidental teaching to patients, relatives and staff.
- Plan and implement orientation programme for new staff nurses.
- Encourage staff development programme in her ward.

6. Staff Nurse

Staff nurse is a first level professional nurse, who provides direct care to one patient or group of patients assigned to her/him during duty shift and assist in management of wards/units/special departments. She is directly responsible to Sister In-charge/Ward Sister in the ward.

Qualification

- GNM or Basic B.Sc. or Post-Basic B.Sc. Nursing from a recognized university
- Registered with Indian Nursing Council/ Respective State Nursing Council.

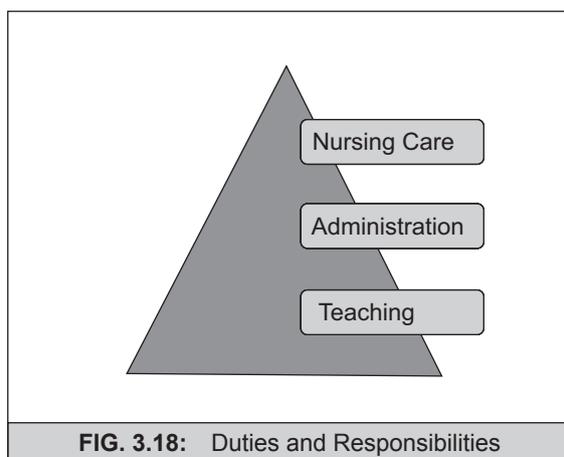
Duties and Responsibilities

FIG. 3.18: Duties and Responsibilities

(i) Nursing care

- Take over from duty nurse of the previous new and serious patient's instruments, supplies, drugs *etc.*
- Carry out the procedures of admission and discharge of the patient.
- Makes beds of serious patients and help students to make beds, supplying necessary linen.
- Administer medication properly.
- Prepare patients for operations and see that he/she is sent to OT with all necessary papers and medications.
- Take rounds with doctors and document each and every instruction.

- See that all investigation specimen are sent to the proper laboratory with forms.
- Keep Intravenous or Blood Transfusion tray ready and help the doctor with the procedure.
- Observe all patients condition and report changes to Ward In-charge or the doctors.
- Carry out nursing procedure for all serious patients.
- Check for new admissions.
- Read case properly and carry out orders carefully.
- Give expert bedside care to serious patients.
- Maintain case papers, investigation reports *etc.* in the proper file or board.
- Write day, night orders and maintain statistics.
- Talk to the pre-operative patients to reduce their tension and give them confidence.
- Discharged patients should be sending with proper instructions regarding follow up, diet and medicines *etc.*

2. Administrative

- Help the Ward In-charge to carry out her work.
- Work instead of the Ward In-charge in case of his/ her absence.
- Maintain general cleanliness of the ward and sanitary annexure.
- Write the diet register and supervise distribution of the diet.

- Maintain poisonous (scheduled) drug registers.
- Supervise medicine given by students or do it herself, in case there are no students.
- Supervise nursing care given by nursing students.
- Maintain duty room trays, sterilizer and instruments in working condition by getting indents from sisters.
- Maintain good IPR with all other staffs.
- Supervise sub-ordinates work.
- Maintain all procedure trays in readiness.
- Maintain all the records and reports of the ward.

3. Teaching

- Instruct students in their work.
- Orient newly posted students and new staffs.
- Carry out health teaching for individual or group of patients.
- Instruct orderlies and the sweepers especially the newly appointed ones in the correct way of handling bed pans, urinals, sputum cups, kidney trays, oiled linen.
- Provide for and demonstrate methods of disinfection and cleaning.
- Extends co-operation and participates in clinical teaching.
- Participates in in-service education programs.
- Plans and implements formal and informal health education program and teaching program.
- Assists and extends co-operation in medical and nursing research program.

Organization of Nursing Services in Community Settings

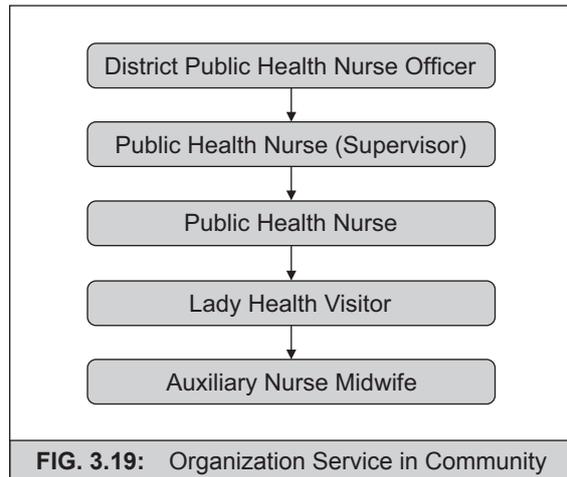


FIG. 3.19: Organization Service in Community

1. District Public Health Nurse Officer

The District Public Health Nurse Officer (DPHNO) is directly responsible to the District Health Officer and has relegated responsibility for all nursing personnel in the District Public Health field. She is guided by the Deputy/ Assistant Director of Health Services (Nursing) of District level.

Roles/Functions

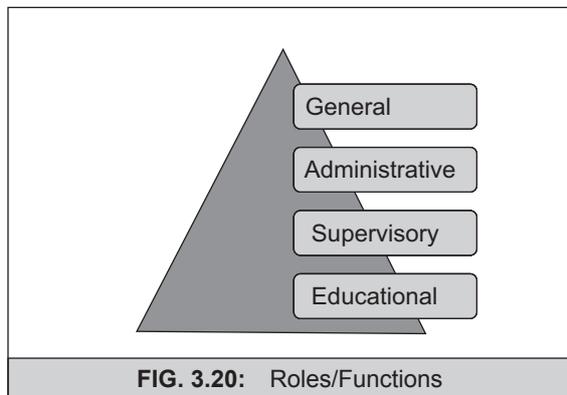


FIG. 3.20: Roles/Functions

(i) General functions

Organises, directs and develops all community health nursing and midwifery services within the district:

- Participation in all relevant discussions of health services in the district.
- Interpretation of the needs of the nursing and midwifery services to the DHO and to the Zila Parishad.

(ii) Administrative functions

Responsible for the implementation of policies and programmes relating to nursing and midwifery services in the district:

- Recommendations to the DHO regarding the Nursing administration (selection, appointment, leave, transfers, further education and possible promotion of nursing staff).
- Participation in budget planning for nursing services, material, equipment and reasonable for indenting of supplies and equipment for nursing section.
- Evaluation of all reports from nursing staff of the district sent to DHO.
- Will submit monthly and annual reports on the work done by DPHNO to the DHO.

(iii) Supervisory functions

Aim to promote harmony and efficiency within the health teams to improve the quality of work:

- Supervising the work of nursing personnel/health workers from time-to-time.
- Taking disciplinary actions.
- Encouraging the qualities of co-operation and co-ordination among nursing personnel/health workers.

- Improving the standard of patient care in the district.

(iv) Educational functions

- The DPHNO will initiate and assist with:
 - In-service educational programmes.
 - Orientation training programmes.
 - Dais training programmes.
 - Health workers training programmes.
 - Training of student nurses in rural field health centres.

- Observation of nursing educational institutions (GNMTC/ANMTC or FHWTC/DTC) of the district from time-to-time.
- Improving standard of nursing students and nursing education.
- Organizing orientation training programme for nursing personnel/health workers.
- Making programme for Dai (TBA's) training and training of nursing staff.
- Arranging for in-service training.

Other functions

- Organizing nursing workshops, seminars, discussion, *etc.*
- Participation at state level, as a nursing representative of the district.
- Getting co-operation from other institutions/organizations to improve the quality of nursing services.
- Encouraging nursing researches.

2. Public Health Nurse Supervisor

Public Health Nurse Supervisor guides and supervises the functions of public health nurses,

health workers, working in her assigned field. She is responsible to District Public Health Nurse (DPHN) or District Public Health Nurse Officer (DPHNO) for the provision, supervision and improvement of community health care.

Roles of Public Health Nurse Supervisor

- (i) **Control of communicable diseases:**
 - Ensures that all necessary steps are being taken for the control of the communicable diseases in the village.
 - Should report any outbreak of an epidemic to medical officer in-charge to take the necessary actions in the PHC area.
- (ii) **Maternal and child health:** Supervises and guides the health assistants and health workers in the effective implementation of the programme for maternal and child health.
- (iii) **School health:** Visits schools in the PHC area at regular intervals and arranges for medical check up (primary health care, immunization, environmental sanitation and health education), treatment and follow up by the Medical Officer.
- (iv) **Family planning:** Supervises and guides the health assistants and health workers in the effective implementation of the family planning programmes.
- (v) **Nutrition:** Supervises and guides the health assistants and health workers in the effective implementation of the nutrition programmes.
- (vi) **Environmental sanitation:** Supervises and guides the health assistants and health workers in the effective implementation of the environmental sanitation and provision of safe drinking water in the village.
- (vii) **Treatment of minor ailments:** Provides guidance to the health assistants and health workers, health guides, primary school teachers in the treatment of minor ailments and early referral to the Medical Officer.
- (viii) **Community involvement and health education:**
 - Maintains a close liaison with the block development officer and other developmental programme workers, community leaders for effective implementation of national health programmes.
 - Participates in the village health committee/village panchayat meeting to assess the health needs of the community, to discuss the health programmes with the community and to enlist their co-operation in the health programmes.
 - Organises camps, meetings, health education talks, demonstrations, display of posters, exhibitions and films for active participation of community in various health programmes.
- (ix) **Training of health personnel and community level workers**
 - Primarily responsible for field training, in-service and continuing

education of the health workers in the PHC area.

- Assists the Medical Officer, PHC in the monthly group activities at the PHC, Sub-Centre and community levels.

(x) **Management and supervision:**

- Assists the Medical Officer, PHC in conducting field investigations to delineate local health problems for effective delivery of health services.
- Ensures that supplies and equipments are supplied in time to sub-centres to enable the health workers to carry out their functions effectively.
- Scrutinizes the work plans of the health workers.
- Supervises the maintenance of the prescribed records at sub-centre level.
- Obtains the records from the periphery, analyses and utilises the findings for improving the implementation of the health programmes in the PHC area.
- Organize monthly staff meetings as a means of discussion, improvement and staff development and continuing education.
- Maintenance of records and reports.

Responsibilities of Public Health Nurse Supervisor

- Assisting in determination of the philosophy and objectives of the community health programmes.

- Providing leadership in the planning of total health care to all individuals, families and community in her assigned area.
- Carrying out preventive, promotive, curative and rehabilitative care.
- Assisting in development of the standard of health care with the accepted philosophy, objectives and health policies.
- Assisting in the preparation of budget for the Community Health department.
- Utilizing the budget allotted to the Community Health department.
- Supervision and guidance of Public Health Nurse/Lady Health Visitor/Female health Worker/Female Health Worker/Male Health Worker working in her field.
- Organizing educational programmes for community members including school children, RCH group or other interested/targeted groups in her area.
- Supervision of records/reports prepared by health workers working under her jurisdiction.
- Assisting the District Public Health Nurse/District Public Health Nurse Officer for the preparation of job description and assignment of responsibilities for other community health workers.

Public Health Nursing

According to Dr. C.E. Winslow, Public Health Nursing is defined as science and art of preventing disease, prolonging life, promoting health and efficiency, through organized community effort

for the sanitation of the environment, control of communicable diseases, the education of individuals in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birthright of health and longevity:

- (i) According to WHO, it is an art of applying science in the context of politics, so as to reduce inequalities in health while ensuring the best health for the greatest number.
- (ii) Special field of nursing that combines the skills of nursing, public health and some phases of social assistance and functions as part of the total public health programme for the promotion of health, the improvement of the conditions in the social and physical environment, rehabilitation of illness and disability.

3. Public Health Nurse

- A consensus conference report in 1985 has defined community health nurses as any nurses working in the community, whether or not, they had preparation in public health nursing.
- Public health nurses were nurses with speciality education and clinical practice either bachelor's, master's or doctoral, with an emphasis on public health.

Essential Qualification

B.Sc. Degree in Nursing from any recognized university or institute or certificate in public health nursing from any recognized institution.

Roles and Responsibilities of the Public Health Nurse

The District public health nurse is responsible for planning organization and directing the public health program of jurisdiction, where she is appointed:

- Participates in policy-making activities in regards to health care. She needs to learn and understand the organization, administration and states public health program are effected by quantity of public health nursing services available in rural areas.
- Evaluation of nursing services is done by District public nurse, who plans for continuously improving the quality of client care.
- The district public health nurse is attached to the District health office. She is directly responsible to the District health officer and delegates the responsibilities to all nursing personnel in the District community health field *i.e.* PHC, Sub-Centre, family planning and all national health programs. She is supervised by nursing officer at directorate level.
- District public health nurse works in close co-ordination with community health nursing, nursing tutors and hospital administration and other health workers.

(i) Responsibilities as manager

- Planning
- Organizing
- Staffing
- Directing
- Controlling

(ii) Supervisory responsibilities

- Supervisor of midwives and other auxiliary health workers.
- Formulates a supervisory plan and conducts supervisory visits to implement the plan.
- Conducts supervisory visits using a supervisory checklist.

(iii) Nursing care responsibilities

- Based on the science and art of caring.
- Uses knowledge and skill in the nursing process.
- Establishes rapport with the client to ensure good quality data and to facilitate.
- Enhance partnership in addressing identified health needs and problems.
- Home visiting is a must activity for a PHN.

(iv) Collaborating and co-ordinating responsibilities

Establishes linkages and collaborative relationships with other health professionals, government agencies, the private sector, non-government organizations and people's organizations to address health problems.

(v) Health promotion and educational responsibilities

- Uses skills in advocacy for the creation of supportive environment through

policies and re-engineering of the physical environment for healthier actions.

- Provides clients with information that allows them to make healthier choices and practices.
- Health education activities is a major component of any public health program.
- Participates in community health field experience organized for nursing students of schools or colleges.
- Suggest in selection of areas for practical experience.
- Provide facilities and resources to students of staff.
- Guide students during field experience.

(vi) Training responsibilities

- Initiates the formulation of staff development and training programs for midwives and other auxiliary workers.
- Does training needs assessment, designs training program and conducts them in collaboration with other resource persons and evaluates training outcomes.
- Community organizing is a means of mobilizing people to solve their own problems.
- Participates in community health field experience and organized for nursing students of schools or colleges:
 - Suggests in selection of areas for practical experience.
 - Provides facilities and resources to students of staff.
 - Guides students during field experience.

(vii) **Responsibilities as a researcher**

- Disease surveillance is a research activity of a public health nurse.
- Surveillance is an integral part of many programs.

hilly areas), in which there are 6 sub-centres, each with the health worker female.

Essential Qualification and Experience

12th standard with 2 years Multi-Purpose Health Worker training course with 5 years experience.

4. Lady Health Visitor/Health Assistant/Health Supervisor

A Health Assistant is expected to cover a population of 30,000 (20,000 in tribal and

Roles and Responsibilities of Lady Health Visitor/Health Assistant/Health Supervisor

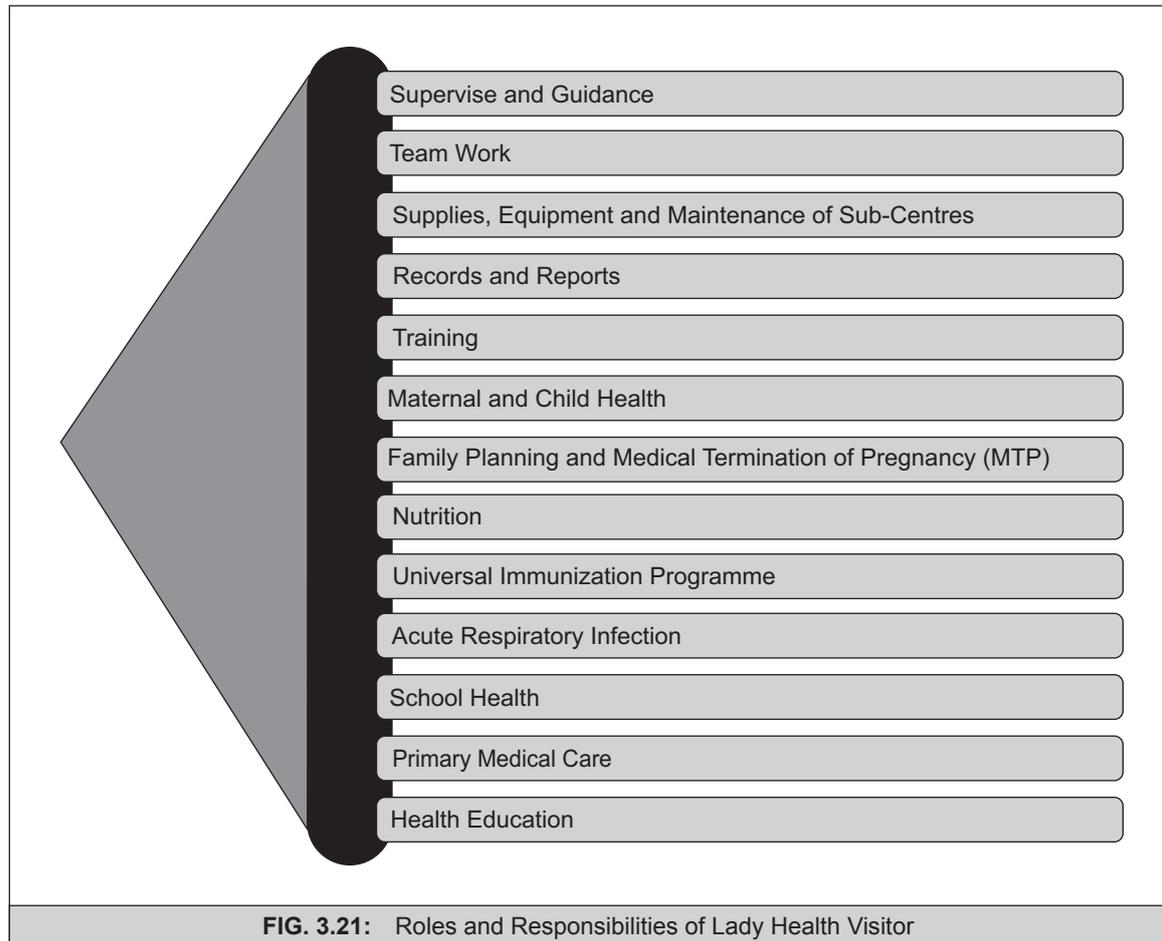


FIG. 3.21: Roles and Responsibilities of Lady Health Visitor

(i) Supervise and guidance

- Supervise and guide the health workers in the delivery of health care services to the community.
- Strengthen the knowledge and skills of the health workers for working in the community, in planning and organizing the health programmes.
- Visit each sub-centre at least once a week on a fixed day.
- Assess fortnightly the progress of work of the health workers.
- Carry out supervisory home visits in the area of the health workers and supervise referral.

(ii) Teamwork

- Help the workers to work as a part of the health team.
- Co-ordinate the health activities with the activities of workers of other department and agencies.
- Conduct regular staff meetings with the health workers in co-ordination with the Health Assistants.
- Attend staff meetings at the primary health centres.
- Assist the Medical Officer of the primary health centre in the organization of the different health services in the area.

(iii) Supplies, equipment and maintenance of sub-centres

- In collaboration with the health assistants, check the regular intervals the stores available at the sub-centre and help

in the procurement of supplies and equipment.

- Check that the drugs at sub-centre are properly stored and that the equipments are well-maintained.
- Ensure that the health workers maintains general kit, midwifery kit and dai kit in the proper way and sub-centre is kept clean and properly maintained.

(iv) Records and reports

- Scrutinize the maintenance of records by the health workers and guide them in proper maintenance.
- Review reports received from health workers, consolidate them and submit monthly reports to the Medical officer of the PHC.

(v) Training

- Organize and conduct training for Dais/ Accredited Social Health Activist with the assistance of the health workers.
- Assist the Medical officer of the primary health centre in conducting training programme for various categories of health personnel.

(vi) Maternal and child health

- Conduct weekly Maternal and Child Health clinics at each sub-centre with the assistance of the health workers.
- Respond to calls from the health workers and render the necessary help.
- Conduct deliveries, when required at PHC level and provide domiciliary and midwifery services.

(vii) Family planning and medical termination of pregnancy (MTP)

- Ensure through spot checking that the health workers maintains up-to-date eligible couple registers all the time.
- Conduct weekly family planning clinics alongwith the MCH clinics at each sub-centre with the assistance of the health workers.
- Provide information on the available services for MTP and sterilization.
- Guide the health workers in establishing female depot holder.
- Provide intra-uterine devices services and their follow up.
- Assist Medical officer and PHC in organization of family planning camps and drives.

(viii) Nutrition

- Ensure that all cases of malnutrition among infants and young children (0–5 years) are given necessary treatment and advice and refer serious cases to the primary health centre.
- Ensure that iron and folic acid, vitamin A are distributed to the beneficiaries, as prescribed.
- Educate the expectant mother regarding breastfeeding.

(ix) Universal immunization programme

- Supervise the immunization of all pregnant women and children (0–5 years).
- Guide the health workers to procure supplies, organize immunization camps, provide guidance for maintaining cold chain, storage of vaccine, health education and immunizations.

(x) Acute respiratory infection (ARI)

- Ensure early diagnosis of pneumonia cases.
- Provide suitable treatment to mild/moderate cases of ARI.
- Ensure early referral in doubtful/severe cases.

(xi) School health

Help medical officers in school health services.

(xii) Primary medical care

- Ensure treatment for minor ailments.
- Provide ORS, first-aid for accidents, emergencies and refer cases beyond the competence to the primary health centre or nearest hospital.

(xiii) Health education

- Carry out educational activities for MCH, Family planning, Nutrition and Immunization, Control of Blindness, Dental care and other National health programmes with the assistance of health workers.
- Arrange group meetings with the leaders and involve them in spreading the message for various health programmes.
- Organize and utilize women leaders, Mahila Mandal, teachers and other women in the community in the family welfare programmes, including Integrated Child Development Scheme personnel.

5. Auxiliary Nurse Midwife/Multi-Purpose Health Worker**Qualification**

12th standard with 2 years training in Multi-Purpose Health Worker vocational course.

Line of Authority

ANM is directly under the supervision of Health Assistance/LHV.

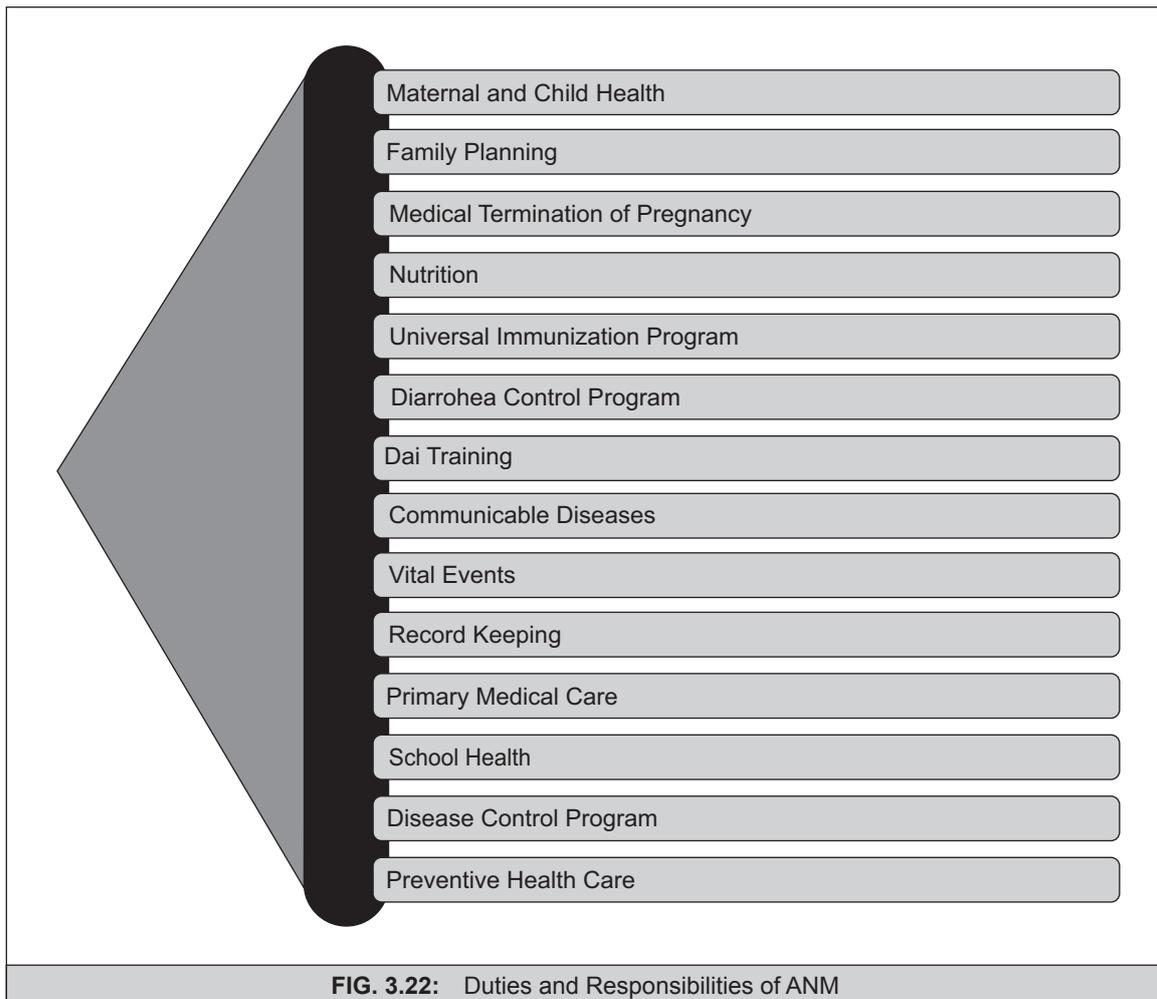
Duties and Responsibilities of ANM

FIG. 3.22: Duties and Responsibilities of ANM

(i) Maternal and child health

- Register and provide care to pregnant women throughout the period of pregnancy.
- Test urine of pregnant women for albumin, sugar and estimate haemoglobin.

- Ensure all pregnant women get VDRL and HIV test done.
 - Refer cases with complications and any medical and gynecological abnormality.
 - Conduct 50 per cent of deliveries in the assigned area.
 - Supervise deliveries conducted by dais and assist in need.
 - Make at least 3 postnatal visits for each delivery conducted in the assigned area.
 - Assess the growth and development of the infant.
 - Educate mother individually and in group regarding better child care, family planning, nutrition and environmental hygiene.
 - Assist MO and LHVs in conducting ante-natal and post-natal clinics at sub-centers.
 - Assist in ensuring timely referral transport for pregnant women at the time of delivery.
- (ii) **Family planning**
- Utilize the information from the eligible couple and child register to the family planning program.
 - Spread message of family planning to the couples and motivate them.
 - Assist the ANMs and ASHAs in distribution of conventional contraceptives to eligible couples.
 - Provide follow up services to female planning acceptors, identify any side effects and refer for treatment.
 - Identify women leaders and help the health assistants to train them.
 - Participate in Mahila Mandal meetings.
- Provide follow-up services for acceptors of male sterilization and also motivate males for sterilization and spacing methods based on ANMs eligible couple register.
 - Assist the ANMs and ASHAs in distribution of conventional contraceptives to eligible couples.
- (iii) **Medical termination of pregnancy**
- Identify the women requiring help for medical termination of pregnancy and refer to nearest approved institutions.
 - Educate community of the consequences of septic abortion and inform about availability of services.
- (iv) **Nutrition**
- Identify cases of malnutrition among infants and young children (0–5 years).
 - Distribute iron and folic acids tablets, as prescribed to pregnant women and nursing mothers, infants and young children (0–5 years) and family planning acceptors.
 - Administer vitamin A solution, as prescribed to children from 1–5 years.
 - Educate community about nutritious diet for mothers and children.
- (v) **Universal immunisation programme**
- Administer DPT vaccine, oral poliomyelitis vaccine, measles vaccine and BCG vaccines to all infants and children.
 - Maintain report of all eligible, those vaccinated and follow-up defaulters.
 - Assist the Health Workers in administering TT to all the pregnant women.
 - Assist the Health Assistants in the school immunization program.

- Educate the community about the importance of immunization against the various communicable diseases.

(vi) **Diarrhoea control programme**

- Educate mothers regarding home management of diarrhoea with ORT.
- Provide and indent ORS.
- Monitoring of cases of diarrhoea, if any increase, report to medical officer.
- Records deaths due to diarrhoea and give monthly report.
- Arrange for mother's meeting and work closely with Anganwadi and other health workers.

(vii) **Dai training**

- List Dais in the assigned area and involve them in promoting family welfare.
- Help the health assistants in training programme of Dais.

(viii) **Communicable disease**

- Notify the MO, PHC immediately about any abnormal increase in cases of diarrhoea/dysentery, poliomyelitis, neonatal tetanus, fever with rigours, fever with rash and fever with jaundice.
- Identify cases of skin patches, especially if accompanied by loss of sensation and bring them to the notice of health workers for skin smears.
- Assist the health workers in maintaining a record of cases in the assigned area, who are under treatment for communicable diseases.
- Educate the community about the importance of control and preventive measures against communicable diseases

and about the importance of taking regular and complete treatment.

(ix) **Vital events**

Record births and deaths occurring in the assigned area in the birth and death registers and report to health workers.

(x) **Record keeping**

- Register:
 - Pregnant women from 3 months of pregnancy onward.
 - Infants 0–1 year of age.
 - Women aged 15–44 years.
- Maintain the prenatal and maternity records and child care records.
- Assist the health workers in preparing eligible couple and child register and maintaining it up-to-date.

(xi) **Primary medical care**

Provide treatment for minor ailments, provide first-aid for accidents and emergencies and refer cases beyond her/his competence to the primary health centre or nearest.

(xii) **School health**

- Visit all the schools in the assigned area and advocate personal hygiene, nutrition, safe drinking water and sanitation and other public health measures.
- Undertake awareness generation of national health programmes (Malaria, TB, and Leprosy *etc.*) for early detection of communicable and non-communicable diseases.
- Ensure completion of immunization schedules including Injection TT, as per guidelines.

- Assist Ophthalmic Assistant for eye screening of children for detection of visual defects.
- Identify cases of malnutrition in school children and refer cases to PHC Medical Officer.
- Guide teachers, parents on nutrition and anaemia.
- Help the MO in School Health Services.

(xiii) **Disease control program**

■ **Malaria:**

- Conduct domiciliary house-to-house visits covering all the assigned population, as per the schedules approved by the PHC Medical Officer.
- Collect blood smears and perform Random Diagnostic Tests from suspected fever cases and maintain records.
- Ensure immediate dispatch of collected blood smears for laboratory investigations and provide treatment to positive cases, as per the guidelines.
- Educate the community on the importance of blood smear examination for fever cases, insecticidal spraying of houses and treatment of fever cases.

■ **Tuberculosis:**

- Identify all cases of fever for over two weeks with prolonged cough or spitting of blood and refer to PHC for further investigation.
- Function as Direct Observation Short-term course Therapy (DOTS)

provider to ensure that all confirmed cases are on regular treatment and motivate defaulters for regular treatment.

- Improve community awareness on signs and symptoms of tuberculosis and guide the suspected TB cases for referral.
- Ensure that follow-up smear examinations of sputum are carried out, as per the schedules.
- Maintain the treatment cards and transmit the data weekly to the PHC.

■ **Leprosy:**

- Identify leprosy suspected cases of skin patches with loss of sensation and refer to PHC.
- Provide Multi Drug Treatment (MDT) to confirmed cases and ensure completion of treatment including retrieval of defaulters.
- Guide leprosy patients with deformities for management at appropriate health facilities.
- Assist and supervise the ASHAs/ Anganwadi Workers/Village Health Guides/local health volunteers for early detection of Leprosy cases and treatment.
- Improve community awareness on signs and symptoms of Leprosy for early detection.
- Maintain the treatment cards and transmit the data to the PHC.
- Maintain the records of domiciliary visits and records of patients on treatment.

(xiv) Preventive health care

- Surveillance for unusually high incidence of cases of diarrhoea, dysentery, fever, jaundice, diphtheria, whooping cough, tetanus, polio and other communicable disease and notify PHC.
- Ensure regular chlorination of all the drinking water sources.
- Generate community awareness regarding safe drinking water, sanitation, waste disposal and personal hygiene.
- Carry out control measures until the arrival of the health assistants and assist them in carrying out effective measures.

Organization of Nursing Services in Educational Settings

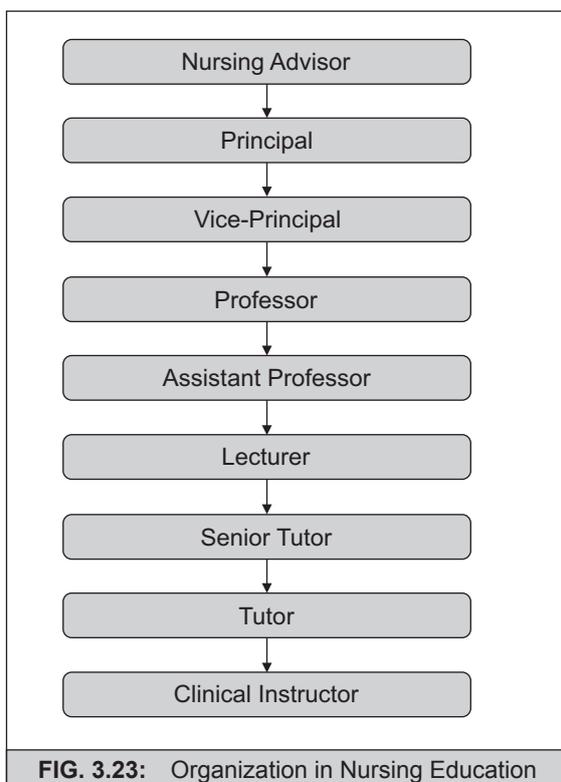


FIG. 3.23: Organization in Nursing Education

1. Nursing Advisor

- Nursing Advisor being the Head of the Nursing Services in the country is responsible for advising the Government of India on all matters concerning nursing service, nursing education and specialization in nursing, *etc.*
- She/he guides, supervises and co-ordinates nursing services and nursing education in the States.
- She/he plans total nursing manpower requirements of the country in the area of nursing service, nursing education and continuing education, *etc.*, in co-operation and co-ordination with State Government units and Voluntary agencies.
- Responsible for developing the National and International Projects concerning nursing in India.
- She/he is a program officer for nursing section in the office of the Director General of Health Services, which involves components of all the National Health Program.
- Maintains liaison with all professional bodies concerned with improving the standards of nursing services and nursing education in the country.

Educational Qualification

M. Sc. Nursing or equivalent is preferred.

Registration

Registered in any State Nursing Council.

Experience

Should have more than 15 years of experience in nursing services including administration and education.

Roles and Responsibilities of Nursing Advisor**(i) Administrator**

- Serves as manager, communicator, participator in institutional policy development and planning and as evaluator of nursing care.
- Develops policies and procedures regarding qualifications and employment of nursing staff members.
- Establishes the department philosophy, goals, objectives, standards and policies and procedures to achieve high quality nursing care.
- Develops a system for evaluation of work performance and evaluates the performance of management personnel accordingly.
- Plan ways to improve leadership skills and to anticipate and minimize problems and ways to identify these problems and to plan their resolution.
- Directs the formulation and implementation of policies, procedures and standards of practice.
- Prepares and submits budget information to administration.
- She/he attend meeting at national and international level regarding development of nursing standard.
- Organizes plans and directs department functions and activities to comply with short-and long-term objectives and with hospital philosophy and policies.
- Serves as a member of different professional organization like TNAI, INC, *etc.*

(ii) Education and specialization in nursing

- Develops policies, procedures regarding qualifications and employment of nursing staff members.
- She/he is program officer to conduct and develop various educational programs for up-gradation of nursing services.
- Collaborate with WHO and implement WHO fellowship and certificate course.
- Plan and establishes various schools and colleges of nursing to increase the qualified nursing personnel.
- Plan and submit the budget to the higher authority for implementation of various nursing courses.
- Attend workshops at International level like WHO, UNICEF, *etc.*
- Develop policies to conduct specialization courses for nursing personnel.
- Supervises various schools and colleges about the formulation and implementation of quality patient care.

(iii) Services

- Organizes department structure, interprets this relationship to nursing personnel; plans, directs and supervises the nursing service.
- Plans ways to promote the growth and development of personnel through in-service programs, workshops, seminars and other continuing educational programs.
- Implements activities necessary to meet nursing objectives.
- Establishes a system for regular monthly meeting.

- Assists management personnel in developing objectives, planned change, policy and procedure development and monitoring of standards of nursing care.
- Maintains contact and communication with administrator, department heads and medical staff concerning all areas of direct and indirect patient care and hospital matters.

2. Principal

Principal, College of Nursing is the administrative head of the College of Nursing will be directly responsible to the Director of the Medical Education/Director of Health and Family Welfare services and responsible for implementation and revision of curriculum for various courses and research activities of the College of Nursing.

Educational Qualification and Experience

M.Sc. Nursing with 15 years of experience, out of which 12 years should be teaching experience with minimum of 5 years in collegiate programme. Ph.D in Nursing is desirable.

Registration

Registered in any State Nursing Council.

Roles and Responsibilities of Principal

(i) Planning

- Develops philosophy and objectives for educational program.
- Identifies the present needs related to educational program.
- Investigates, evaluates and secures resources.
- Formulates the plan of action.

- Selects and organizes learning experience.

(ii) Organizing

- Determines the number of position, scope and responsibility of each faculty and staff.
- Analyses the job to be done in terms of needs of education program.
- Prepares the job description, indicate line of authority, responsibility in the relationship and channels of communication by means of organizational chart and other methods.
- Considers preparation, ability and interest personally in equating responsibility.
- Delegate's authority commensurate with responsibility.
- Maintains a plan of workload among staff members.
- Provides an organizational framework for effective staff functioning, such as meeting of the staff *etc.*

(iii) Directing

- Recommends appointment and promotion based on qualification and experience of the individual staff, scope of job and total staff composition.
- Subscribes and encourages developmental aspects with reference to welfare of staff and students.
- Provides adequate orientation of staff members.
- Guides and encourages staff members in their job activities.
- Consistently makes administrative decision-based on established policies.
- Facilitates participation in community, professional and institutional activities

by providing time, opportunity for support for such participation.

- Creates involvement in designing educationally sound program.
- Maintenance of attitude rightly acceptable to staff and learners.
- Provides for utilization in the development of total program and encourages their contribution.
- Provides freedom for staff to develop active training course within the framework for curriculum.
- Promotes staff participation in research.
- Procures and maintains physical facilities, which are of a standard.

(iv) Co-ordinating

- Co-ordinates activities relating to the programs, such as regular meetings, time schedule, maintaining effective communication, *etc.*
- Initiates ways of co-operation.
- Interprets nursing education to other related disciplines and to the public.

(v) Controlling

- Provides for continuous follow-up and revision of education program.
- Maintains recognition of the educational program by accrediting bodies.
- Maintains a comprehensive system of records.
- Prepares periodic report which revives the progress and problems of the entire program and presents plans for its continuous development.
- Prepares, secures approval and administers the budget.

(vi) Instruction (teaching)

- Plans for participating in educational programs for further development.
- Recognizes the needs for continuing education for self and staff provide stimulation of opportunities for such development.
- Participates as a teacher in the educational program.

(vii) Guiding

- Provides for systematic guidance program for staff members and students.
- Encourages studies, research and writing for publication.
- Provides and maintains a program for recruitment, selection and promotion of students.

3. Vice-Principal

Educational Qualification and Experience

M.Sc. Nursing with 12 years of experience, out of which 10 years should be teaching experience with minimum of 5 years in collegiate programme. Ph.D in Nursing is desirable.

Registration

Registered in any State Nursing Council.

Roles and Responsibilities of Vice-Principal

(i) Financial

- Assists Principal in carrying out financial activities.
- Planning and revising budget.
- Monitoring college expenditure.
- In the absence of Principal, performs all the functions.

(ii) Educational

- Assists Principal in planning, implementation and evaluation of the programmes.
- Assists Principal in identifying needs for professional development of faculty and conducting staff development programme.
- Supervises post-graduate students in conducting research.
- Participates in teaching of various educational programmes.
- In the absence of Principal, chairs the assigned committee meetings.
- Supervises all educational programmes in co-ordination with the co-ordinators.
- Guides faculty in day-to-day academic activities.

(iii) Supervisory

- Shares responsibility with Principal and Professor in supervision of teaching and non-teaching staff.
- Plans academic staff assignments in consultation with Principal.
- Participates in conduct of orientation programme.
- Supervises and guides staff in conducting their activities.
- Writes staff performance report and reviews evaluation report of assigned staff.
- Assists Principal in monitoring students welfare activities *e.g.* Mess, Hostel, Health, Sports, SNA *etc.*
- Assists Principal in administration and supervision of library.

(iv) Establishment

- Assists Principal in maintaining rules and regulations in college campus.
- Supervises overall functioning of staff and students' hostel.
- Assists Principal in maintaining discipline in the college.
- Assists Principal in reviewing recruitment and promotion policies of teaching and non-teaching staff.

(v) Interpersonal

- Assists Principal in maintaining human relation and communication.
- Identifies conflict among staff members, initiates solution and reports to Principal, when necessary.
- Communicates with staff in explaining administrative constraints.
- Facilitates guidance and counselling students and staff, as per need.
- Any other responsibility assigned by the Principal.

4. Professor

The Professor is overall in charge of the department and thereby responsible for administration and teaching activities and guidance of the department.

Educational Qualification and Experience

M.Sc. Nursing with 10 years of experience, out of which 7 years should be teaching experience. Ph.D in Nursing is desirable.

Registration

Registered in any State Nursing Council.

Duties and Responsibilities of Professor**(i) Administration**

- Participating in determination of educational purposes and policies.
- Contributes to the development and implementation of the philosophy and purposes of the educational program.
- Utilizes opportunities through group action to initiate improvement of the educational program.
- Interprets educational philosophy and policy to others.
- Directs the activities of staff working in the department.

(ii) Instruction

- Identifies needs of learners.
- Identifies the needs of the learners in terms of objectives of the program and utilizing records of previous experience, personal interviews, tests and observations.
- Assists learners and identify their needs.
- Develops plan for learning experience.
- Participates in the formulation and implementation of the philosophy and objectives program.
- Selects and organizes learning experiences, which are in accordance with their objectives.
- Participates in the continuous development and the evaluation of the curriculum.
- Plans within the educational unit, with the nursing services and allied groups.
- Ascertains, selects, organizes facilities, equipment and materials necessary for learning.

(iii) Helping the learners to acquire desirable attitudes, knowledge and skill

- Seeks to create a climate conducive to learning.
- Assists learners in using problem-solving techniques.
- Uses varied and appropriate teaching methods effectively.
- Uses incidental and planned opportunities for teaching.
- Encourages learners to assume increasing responsibility for own development.

(iv) Evaluating learner's progress

- Recognizes individual differences in appraising the learner's progress.
- Uses appropriate devices for evaluation.
- Measures and describes quality of performance objectively.
- Helps learners for self-evaluation.
- Participates in staff evaluation of learner's progress.

(v) Recording and reporting

- Maintains, uses adequate and accurate records.
- Prepares, channels clear and concise reports.
- Shares information about learner's needs and achievements with other concerned with instruction and guidance.
- Participates in the formulation and maintenance of comprehensive record system.

(vi) Investigative ways to improving teaching

- Measures effectiveness of instructions by use of appropriate devices.
- Increases knowledge and skill in own curriculum area.

- Analyzes and evaluates resources material.
- Devices teaching methods appropriate to objectives and contents.

(vii) Guidance

- Co-operating in guidance program.
- Shares in planning, developing and using guidance programme.
- Gives guidance within own field of competence.
- Helps the learner with special problems to seek and use additional helps, as indicated.

(viii) Counselling

- Helps the learner to grow in self-understanding.
- Promotes continuous growth and development towards maturity.
- Continues to develop competence in problem solving process.
- Co-operates in and/or initiates group activities in development and evaluation of studies.
- Utilizes findings of research.
- Makes data available concerning learners and concerning methods of teaching and evaluation.

5. Assistant Professor

The Assistant Professor usually works under Professor/Head of the Department of the particular department of speciality and assists him/her in administration, teaching, guidance and counselling and research activities.

Educational Qualification and Experience

M.Sc. Nursing with 8 years of experience, out of which 5 years should be teaching experience. Ph.D in Nursing is desirable.

Registration

Registered in any State Nursing Council.

Duties and Responsibilities of Assistant Professor**(i) Administration**

- Participates in determination of educational purposes and policies.
- Contributes to the development and implementation of the philosophy and purposes of the total educational program.
- Utilizes opportunities through group action to initiate improvement of the total educational program.
- Interprets educational philosophy and policy to others.
- Directs the activities of staff working in the department.

(ii) Instruction

- Identifies the needs of learners.
- Identifies the needs of the learners in terms of the objectives of the program by utilizing records of previous experience, personal records of previous experience, personal interviews, tests and observations.
- Assists learners in identifying their needs.
- Develops plan for learning experience.
- Participates in the formulation and implementation of the philosophy and objectives of the program.
- Selects and organizes learning experiences, which are in accordance with their objectives.
- Participates in the continue development and evaluation of the curriculum.

- Plans within the educational, with the nursing services and allied groups.
 - Ascertains, selects and organizes facilities, equipment and materials necessary for learning.
- (iii) **Helping the learners to acquire desirable attitudes, knowledge and skill**
- Seeks to create a climate conducive to learning.
 - Assists learners using problem-solving techniques.
 - Uses varied and appropriate teaching methods effectively.
 - Uses incidental and planned opportunities for teaching.
 - Encourages learners to assume increasing responsibility for own development.
- (iv) **Evaluating learning progress**
- Recognize individual differences in appraising the learner's progress.
 - Uses appropriate devices for evaluation.
 - Measures and describes quality of performance objectively.
 - Helps learners for self-evaluation.
 - Participates in staff evaluation of learner's progress.
- (v) **Recording and reporting**
- Maintains, uses adequate and accurate records.
 - Prepares channels for clear and concise reports.
 - Shares information about learner's needs and achievement with others concerned with instruction and guidance.
 - Participates in the formulation and maintenance of comprehensive record system.
- (vi) **Investigating ways improving teaching**
- Measures effectiveness of instruction by use of appropriate devices.
 - Increases knowledge and skill in own curriculum area.
 - Analyzes and evaluates resource material.
 - Devices teaching methods appropriate to objectives and contents.
- (vii) **Guidance**
- Co-operating in guidance program.
 - Shares in planning, developing and using guidance program.
 - Gives guidance within own field of competence.
 - Helps the learners with special problems to seek and use additional help, as indicated.
- (viii) **Counselling**
- Helps the learner to grow in self-understanding.
 - Promotes continuous growth and development towards maturity.
- (ix) **Assisting in selection and promotion of learners**
- Participates in development of criteria for selection and promotion of learners.
- (x) **Research**
- Imitates and participates in studies for the improvement of educational programs.
 - Identifies problems in which research is indicated or potentially desirable.
 - Continues to develop competence in problem-solving process.
 - Co-operates in and/or initiates group activity in development and evaluation of studies.

- Utilizes findings of research.
- Makes data available concerning learners and concerning methods of teaching and evaluation.

6. Lecturer

He/she works under the direction of the department head and assists him/her in administration, instruction and guidance activities.

Educational Qualification and Experience

M.Sc. Nursing with 3 years of experience.

Registration

Registered in any State Nursing Council.

Duties and Responsibilities of Lecturer

(i) Instruction

- Identifies the needs of the learners in terms of the program by utilizing the records of previous experience, personal interviews, tests and observation.
- Assists the learners in identifying their needs.
- Participates in formulation and implementation of the philosophies and objectives of the post.
- Selects and organizes learning experiences which are in accordance with these objectives.
- Plans with the educational unit with nursing service and allied groups.
- Ascertains, selects and organizes facilities equipment and materials necessary for learning.
- Assists the learners in using problem-solving process.
- Measures and describes quality of performance objectively.

- Prepares clear and concise reports.
- Share information about learner's needs and achievements with others concerned.
- Measures effectiveness of instruction by use of appropriate devices.
- Increases knowledge and skill in own curriculum area.
- Devices teaching methods appropriate to objectives and contents.

(ii) Guidance and counselling

- Gives guidance with own field of competence.
- Helps the learner to grow in self-understanding.

(iii) Research

- Assists in initiating and participating in studies for the improvement of educational program.
- Identifies the problems in which research is indicated or potentially desirable.
- Make data available concerning learners and concerning methods of teaching and evaluation.
- Continues to develop competence in problem-solving process.
- Co-operate in and/or initiates group activity in development and evaluation of studies.
- Utilizes the findings of research.

7. Senior Tutor

Educational Qualification and Experience

M.Sc. Nursing or B.Sc. Nursing/Post-Basic B.Sc. Nursing with 3 years of experience.

Registration

Registered in any State Nursing Council.

Responsibilities of Senior Tutor

- Participates in teaching and supervising the courses of undergraduate students.
- Participates in curriculum development, evaluation and revision.
- Guide in research projects for undergraduate students.
- Acts as a counsellor for staff and students.
- Maintains various educational records.
- Conducting and participating in department meetings and attending various meetings.
- Participates in administration activities of department.

8. Tutor

Educational Qualification and Experience

M.Sc. Nursing or B.Sc. Nursing/Post-Basic B.Sc. Nursing with 1 year of experience.

Registration

Registered in any State Nursing Council.

Responsibilities of Tutor

- Participates in teaching and supervising the courses of undergraduate students.
- Co-ordinates with the external lecturer for various courses, as assigned.
- Participate in the evaluation of students.
- Guide the students in conducting seminars, discussions and presentations *etc.*
- Maintain students' records.
- Participate in student counselling programmes.

9. Clinical Instructor

Educational Qualification and Experience

B.Sc. Nursing/Post-Basic B.Sc. Nursing.

Registration

Registered in any State Nursing Council.

Responsibilities of Clinical Instructor

- Demonstrate standards for nursing practice.
- Supervise and teach the students in the clinical fields.
- Participate in evaluation of students.
- Assist the students in conducting health education programme.
- Maintain students' records.
- Participate in the student counseling programmes.
- Participate and promote student welfare activities.

SYSTEM OF MEDICINES

AYUSH—The Indian System of Medicine

The medical systems that are truly Indian in origin and development are Ayurveda and Siddha.

AYUSH comes under the heading of Indigenous System of Medicine.

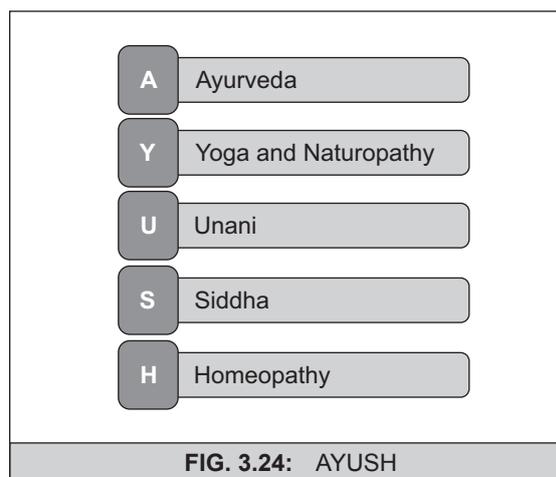


FIG. 3.24: AYUSH

1. Ayurveda (A)

Implies science of life. Around 1000 BC comprehensive documentation of the knowledge of ayurveda was done by Charaka (Father of Medicine) in Charaka Samhita and Sushruta (Father of Surgery) in Sushruta Samhita:

- The National Institute of Ayurveda was established in 1976.
- A 5 year degree programme (BAMS) is planned, organized and administered with an additional 6 months of compulsory internship.
- The uniformity and standards of Under Graduates and Post-Graduates education are maintained by the Central Council of Indian Medicine (CCIM) established in 1971, under Indian Medicine Central Council Act, 1970.
- Health is considered as pre-requisite for achieving goal of life for Dharmas, Artha, Kama and Moksha.
- Body of knowledge of ayurveda is derived from darshanas (Science) which encompass physically, biologically and spiritual sciences.
- Practice of ayurveda is based on theory of Pancha Mahabhutas (5 elements).
- They are classified in form of Tridosha.

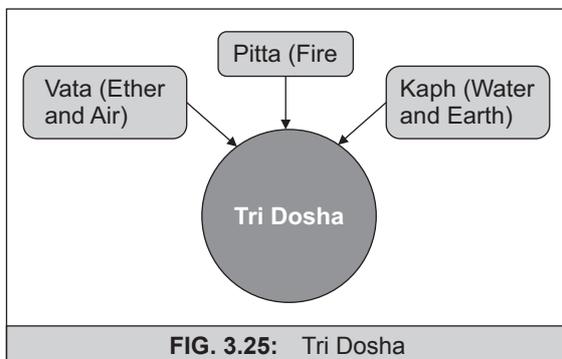


FIG. 3.25: Tri Doshha

- The treatment of ayurveda involves:
 - **Preventive measures:** Include personal hygiene, daily routing, rejuvenating materials/food, drugs and rasayanas.
 - **Curative measures:** Includes 3 major measures: Aushadhi means Drugs, Anna means Diets and Vihara means exercises and general mode of life.
- Ayurveda deals with problems related to Nervous system, Respiratory system, Gastrointestinal system, Integumentary system and Musculoskeletal system.
- Ayurveda is most popular in Kerala, Himachal Pradesh, Gujarat, Karnataka, Madhya Pradesh, Rajasthan, Uttar Pradesh and Odisha.

Eight Specialities in Ayurveda

- (i) **Kayachikitsa:** Internal Medicine.
- (ii) **Kumar Bhartiya:** Paediatrics.
- (iii) **Graha Chikitsa:** Psychiatry.
- (iv) **Shalakya:** Eye and ENT.
- (v) **Shalya Tantra:** Surgery.
- (vi) **Vishwa Tantra:** Toxicology.
- (vii) **Rasayana:** Geriatrics.
- (viii) **Vagi Karna:** Science of Virility.

2. Yoga and Naturopathy (Y)

Yoga is a science which helps to co-ordinate body and mind more effectively:

- It helps in prevention and cure of various psychosomatic disorders, psychic and physical disorders.
- National Institute of Naturopathy (NIN) was established in Pune (1984).

- Every year 21st June is celebrated as International Yoga Day.
- It was propounded by Patanjali.
- Components of Yoga.
- Ministry of Human Resource Department plans to introduce yoga in schools, hospitals or short term course for stress management by leading yoga institutions.

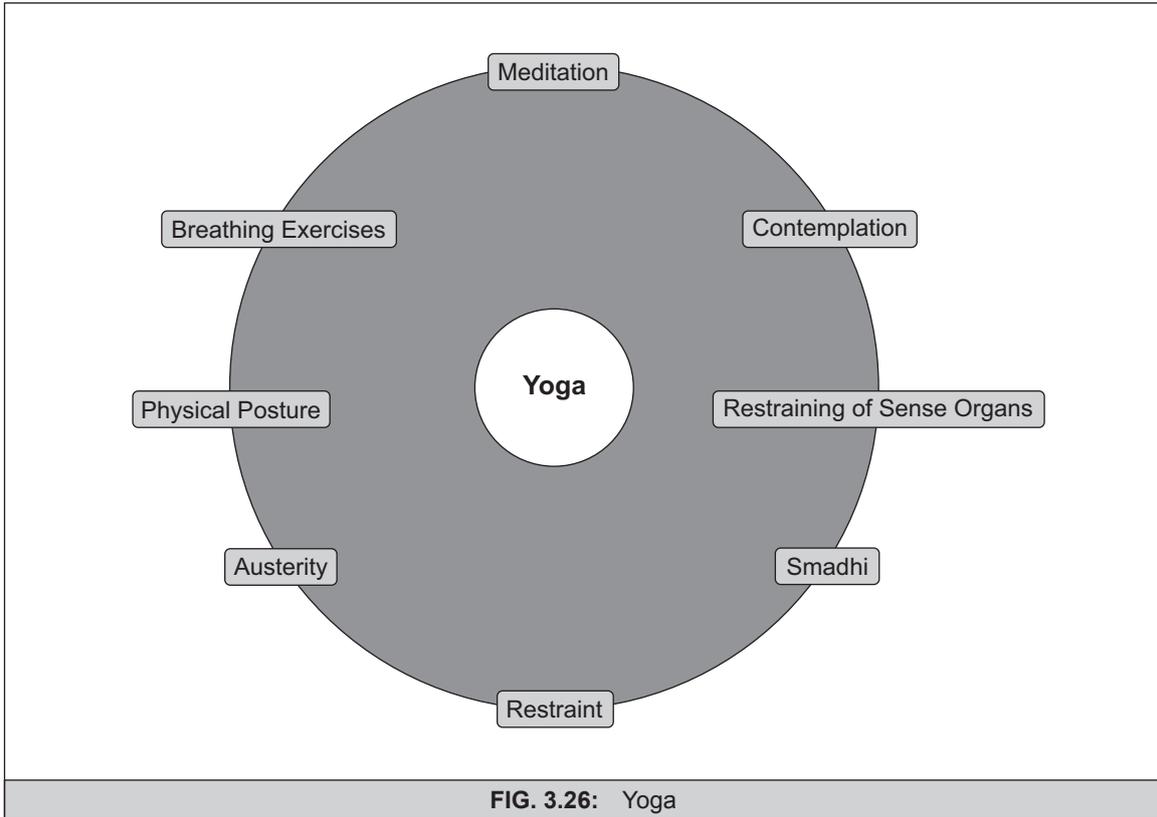


FIG. 3.26: Yoga

Naturopathy

- It is holistic system, which helps to promote physical, mental/emotional, social and spiritual health.
- It is based mainly on application of simple laws of nature.

3. Unani System of Medicine (U)

The National Institute of Unani Medicine was established jointly by Government of Karnataka in 1984, at Bangalore:

- A 5 years degree programme (BUMS) is planned, organized and administered

with an additional 6 months of compulsory internship.

- It is based on 4 humour theory of Hippocrates *i.e.* blood, phlegm, yellow bile and black bile.
- It uses ingredients of animal and marine origin.
- The diagnosis of a disease is done by feeling pulse, observation of urine, stool, colour of skin and gait *etc.*
- Treatment is carried out in 4 forms:

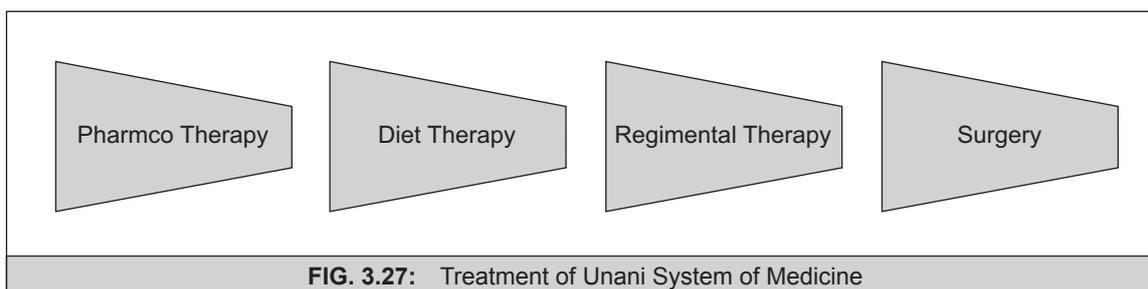


FIG. 3.27: Treatment of Unani System of Medicine

- Unani system of medicine specializes on rheumatic arthritis, jaundice, filariasis, eczema, sinusitis and bronchial asthma.
- It emphasizes on developing defence mechanism of the body.

4. Siddha System of Medicine (S)

It is one of the oldest systems of medicine:

- A 5 years degree programme is planned, organized and administered with an additional 6 months of compulsory internship.
- National Institute of Siddha (NIS) was proposed and approved during 9th Five year plan.
- The researches in Siddha are done by Central Council for Research in Ayurveda and Siddha set up in 1970.
- *Philosophy:* There is an intimate link between man and environment.
- Food is the basic building material in the body, which gets processed into 3 Doshas, 7 Dhatus and 3 Malas. Equilibrium between 3 is considered to be 'Health' and disequilibrium results in disease or sickness.
- Causative factors are identified by examination of pulse, eyes, body colour, tongue, digestive system, urine and study of voice.
- *Consider patient as a whole:* Age, sex, race, habits, mental frame, diet, appetite, physical condition, physiological constitution, habitat, environment and meteorological conditions.
- Siddha medicine makes use of mercury, silver, arsenic, lead, sulphur *etc.* minerals, plants and animal parts.
- It is effective in treating chronic cases of rheumatic problems, anaemia, peptic ulcer, bleeding piles, liver and skin diseases.
- Siddha system of medicine is most popular in South India, especially in Tamil Nadu.

5. Homeopathic System of Medicine (H)

A 5 year degree programme (BHMS) is planned, organized and administered with an additional 6 months of compulsory internship registered by Central Council of Health:

- It is based on theory “Similia Similibus Curentur” means any substance capable of producing artificial symptoms on healthy individuals can cure the same symptoms in a natural disease.
- Basic laws, diagnosis and treatment methods in Homeopathy:
 - *Law of direction of cure:* During curative process, the symptoms disappear in the reverse direction from centre to periphery.
 - *Law of single remedy:* Uses only a single medicine based on individualization. The physician adopts a detailed case study by exploring the physical, psychological, biomedical constitution of the individual.
 - *Law of minimum doses:* Minimum possible doses to correct diseased state.
 - *Theory of chronic diseases:* Homeopathy is highly individualizing process.
- Homeopathy system of medicine deals with chronic diseases, such as diabetes, arthritis, bronchial asthma, skin allergic, immunological disorders, behavioural disorders and mental diseases.

CENTRALLY SPONSORED HEALTH SCHEMES

Employees State Insurance (ESI) Act, 1948

- The ESI scheme is administered by an autonomous body called Employees State Insurance Corporation (ESIC), which meets at least twice a year.
- The 1975 amendment extended the Act to the following:
 - Non-power using factories employing 20 or more persons.
 - Power using factories employing 10 or more persons.
 - Road transport establishments.
 - Newspaper establishments.
 - Cinemas and theatres
 - Hotels and restaurants
 - Shops
- At present, the employees drawing wages upto ₹ 15000/- per month purview of the ESI Act.

Benefits to Employee

- **Medical benefit:** Includes ambulance services, domiciliary treatment facility and provisions of drugs, dressings and some appliances.
- **Sickness benefits:** Include paid in cash (50 per cent of the wages) to the insured persons (admissible to 91 days in a year) to compensate their loss of wages in the event of sickness certified by an authorized medical officer.

- **Maternity benefit:** It is payable (equal to wage) to insured women in case of confinement for 12 weeks and 6 weeks in case of miscarriage.
- **Disablement benefit:** Payable (72 per cent of the wages) for temporary or permanent, partial or total disablement as a result of employment injury (including occupational diseases)
- **Dependents benefit:** It is payable to dependents of insured person dying as a result of employment injury. Widow of the deceased gets the benefit throughout her life or until remarriage and legitimate or adopted children are paid till 18 years of age.
- **Funeral expenses:** On the death of an insured person, a sum of a maximum ₹ 2500 is payable to the family member to meet the funeral expense from local offices.
- **Rehabilitation benefit:** Workers entitled to receive an artificial limb are awarded a rehabilitation allowance, for each day of their admission at the artificial limb centre, for provision or replacement of an artificial limb.
- **Other benefits:** Involves free supply of physical aids and appliances, preventive health care services *etc.*

Benefits to Employers

Compliance under the Act brings about healthy work force and augmentation in production:

- Discharge the employer from liability under other labour enactments, such as Workmen's Compensation Act, Maternity Benefit Act, *etc.*
- Saves from the imposition of interest/damages/compensation/prosecution.
- Employers get rebate under Income Tax Act on contribution to ESIC.
- Exempted from liability of organizing health care services for employees.

2. Central Government Health Scheme (CGHS)

Central Government Health Scheme (CGHS) was started in 1954.

Objectives of the Scheme

- (i) To give extensive medical facilities to central government employees and their family members.
- (ii) To save government from heavy expenses on medical refund.

Coverage Under the Scheme

Scheme was started in Delhi and at present, it is functioning in 25 cities: Nagpur, Hyderabad, Bengaluru, Kolkata, Jaipur, Lucknow, Mumbai, Chandigarh *etc.*

Beneficiaries of Scheme

- (i) Central Government employees and their family members.
- (ii) Member of Parliament.
- (iii) Judges of Supreme Court and High Court.
- (iv) Freedom fighters.
- (v) Pensioners of Central Government, semi, autonomous units and employees of Semi-Government Organization.
- (vi) Journalists
- (vii) Governors and Ex-Vice Presidents.

Facilities Under the Scheme

- (i) Outdoor treatment facilities in all medical systems.
- (ii) Emergency services in Allopathy system.
- (iii) Free medicines.
- (iv) Facilities for laboratory tests and radiological investigations.
- (v) Treatment for serious patients at their homes.
- (vi) Specialist consultation.
- (vii) Family welfare services.
- (viii) Facilities for 90 per cent advanced payment in case of need.
- (ix) According to 2009 report, 9.34 lakhs are card holder and 31.81 lakhs beneficiaries. Under CGHS, there are 247 allopathic hospitals, 82 dispensaries of AYUSH, 19 polyclinics, 65 laboratories, 21 dental units and 4 yoga centres.

ROLE OF VOLUNTARY HEALTH ORGANIZATIONS AND INTERNATIONAL AGENCIES

1. World Health Organization

The world health organization (WHO) is a specialized, non-political, health agency of the United Nations, with headquarters at Geneva. The constitution came into force on 7th April, 1948, which is celebrated every year as “World Health Day”. A World Health Day theme is chosen each year to focus attention on a specific aspect of public health.

Objective

The objective of the WHO is “the attainment by all people’s of the highest level of health”

i.e. attainment by all people of the world by the year 2000 AD of a level of health that will permit them to lead a productive life—also known as Health for All by 2000 AD.

Membership

Open to all countries

WHO Work

WHO’s first Constitutional function is to act as the directing and co-ordinating authority on all international health work. The WHO also has specific responsibilities for establishing and promoting international standards in the field of health, which comprise the following broad areas:

- (i) Prevention and control of specific diseases.
- (ii) Development of comprehensive health services.
- (iii) Family health.
- (iv) Environmental health.
- (v) Health statistics.
- (vi) Biomedical research.
- (vii) Health literature and information.
- (viii) Co-operation with other organizations.

Structure

The WHO consists of three principal organs:

- (i) The World Health Assembly
- (ii) The Executive Board
- (iii) The Secretariat

(i) The World Health Assembly

It is the supreme governing body of the organization. It meets annually at Geneva. The main functions of the Health Assembly are:

- To determine international health policy and programmes.

- To review the work of the past year.
- To approve the budget needed for the following year.
- To elect Member States to designate a person to serve for three years on the Executive Board and to replace the retiring members.

(ii) The Executive Board

The executive board has 30–31 members:

- Minimum 3 member from each WHO region.
- Meet twice a year.
- The main work of the Board is to give effect to the decisions and policies of the Assembly.
- The Board also has power to take action itself in an emergency, such as epidemics, earthquakes and floods, where immediate action is needed.

(iii) The Secretariat

The Secretariat headed by the Director General:

- The primary function of the WHO secretariat is to provide Member States with technical and managerial support for their national health development programmes.
- The WHO Secretariat comprised of the following divisions:
 - Division of epidemiological surveillance and health situation and trend assessment.
 - Division of communicable diseases.
 - Division of vector biology and control.
 - Division of environmental health.

- Division of public information and education for health.
- Division of mental health.
- Division of diagnostic, therapeutic and rehabilitative technology.
- Division of strengthening of health services.
- Division of family health.
- Division of non-communicable diseases.
- Division of health manpower development.
- Division of information systems support.
- Division of personnel and general services.
- Division of budget and finance.

WHO Regional Organizations

S. No.	Region	Headquarters
1.	South-East Asia	New Delhi (India)
2.	Africa	Brazzaville Congo
3.	The Americas	Washington DC (USA)
4.	Europe	Copenhagen (Denmark)
5.	Eastern Mediterranean	Alexandria (Egypt)
6.	Western Pacific	Manila (Philippines)

2. United Nations International Children's Emergency Fund

- (i) Established in 1946 by the United Nations General Assembly to deal with rehabilitation of children in war ravaged countries.
- (ii) The headquarters of the United Nations International Children's Emergency Fund (UNICEF) is at United Nations,

- New York. UNICEF's regional office is in New Delhi, the region is known as the South Central Asian Region, which covers Afghanistan, Sri Lanka, India, The Maldives, Mongolia and Nepal.
- (iii) UNICEF works in close collaboration with WHO and the other specialized agencies of the United Nations like UNDP, FAO and UNESCO.

Contents of Services:

- (a) *Child health:* UNICEF is focussing attention on providing primary health care to mothers and children. Emphasis is placed on immunization, infant and young child care, family planning aspects of family health, safe water and adequate sanitation.
- (b) *Child nutrition:* UNICEF gives high priority to improving child nutrition. Specific aid given for intervention against nutritional deficiency diseases through provision of large doses of vitamin A in areas, where xerophthalmia is prevalent, enrichment of salt with iodine in areas of endemic goiter, provision of iron and folate supplements to combat anemia's and enrichment of foods.
- (c) *Family and child welfare:* To improve the care of children, both within and outside their homes through such means as parent education, day care centres, child welfare and youth agencies and women's clubs.
- (d) **Education:** Emphasis is placed on the kind of schooling relevant to the environment and future life of the children.
- Currently, UNICEF is promoting a campaign known as GOBI campaign to encourage 4 strategies for a "child health revolution":
- G** : For growth charts to better monitor child development.
- O** : For oral rehydration to treat all mild and moderate dehydration.
- B** : For breast feeding.
- I** : For immunization against measles, diphtheria, polio, pertussis, tetanus and tuberculosis.
- (iv) Since 1976, UNICEF has been participating in Urban Basic Services (UBS). The aim of the UBS projects is to upgrade basic services (*e.g.*, health, nutrition, water supply, sanitation and education) especially for women and children. The overall objective is to improve the degree and quality of survival and development of the children of urban low-income families.

3. United Nations Educational, Scientific and Cultural Organization (UNESCO)

- (i) It is a specialized agency of United Nations established on 16th November, 1945.
- (ii) It has 193 member states and 7 associate members.

- (iii) This organization is based in Paris with over 50 field offices and many institutes throughout the world.

Objectives of UNESCO

- (a) To maintain peace and security by promoting international collaboration through education and sciences.
- (b) To protect human rights, universal respect for justice.
- (c) To improve educational, social and human sciences with better communication and information.

4. International Labour Organization (ILO)

- (i) It was established in 1919 to improve the working and living conditions of the working population all over the world. WHO and ILO are co-partners in the field of health and labour.
- (ii) *Head quarters:* Geneva, Switzerland.

Objectives

- (a) To improve the working and living conditions of workers/labourers through international efforts.
 - (b) To co-operate in maintaining peace in establishment by promoting special justice.
 - (c) To promote economic and social stability.
- (iii) The International Labour Code is a collection of international minimum standards related to health, welfare and

living and working conditions of workers all over the world.

- (iv) The ILO also provides assistance to organizations interested in the betterment of living and employment standards.

5. United Nations Development Programme (UNDP)

- (i) Established in 1966.
- (ii) It is the main source of funds for technical assistance.
- (iii) The basic objective of the UNDP is to help poorer nations to develop their human and natural resources more fully.
- (iv) The UNDP projects cover virtually every economic and social sector: agriculture, industry, education and science, health, social welfare, *etc.*

6. United Nations for Population Activities (UNFPA)

- (i) UNFPA has been providing assistance to India since 1974. In addition to funding national level schemes, area projects for intensive development of health and family welfare infrastructure and improvement in the availability of services in the rural areas have been under implementation in 11 districts of Bihar and 4 districts of Rajasthan.
- (ii) The UNFPA inputs are designed:
 - (a) To develop national capability for the manufacture of contraceptives.
 - (b) To develop population education programmes.

- (c) To undertake organized sector projects.
- (d) To strengthen programme management as well as to improve output of grass-root level health workers.
- (e) Introduction of innovative approaches to family planning and MCH care.
- (vi) The main object of the Campaign is to combat malnutrition and to disseminate information and education.
- (vii) The joint WHO/FAO expert committees have provided the basis for many co-operative activities: nutritional surveys, training courses, seminars and the co-ordination of research programmes on brucellosis and other zoonoses.

7. Food and Agriculture Organization (FAO)

- (i) FAO was formed in 1945 with Headquarters in Rome.
- (ii) Chief aims of FAO are:
 - (a) To help nations to raise living standards.
 - (b) To improve nutrition of the people of all countries.
 - (c) To increase the efficiency of farming, forestry and fisheries.
 - (d) To better the condition of rural people.
 - (e) To widen the opportunity of all people for productive work.
- (iii) FAO's prime concern is the increased production of food to keep pace with the ever-growing world population.
- (iv) The most important aspect of FAO's work is towards ensuring that the food is consumed by the people, who need it, in sufficient quantities and in right proportions, to develop and maintain a better state of nutrition throughout the world.
- (v) FAO has organized a World Freedom from Hunger Campaign (FFHC) in 1960.

8. World Bank (WB)

World Bank is a specialized agency of the United Nations:

- (i) It was established in 1944 with the purpose of helping less developed countries to raise their living standards.
- (ii) The powers of the bank are vested in a Board of Governors.
- (iii) The Bank gives loans for projects that will lead to economic growth.
- (iv) The projects are usually concerned with electric power, roads, railways, agriculture, water supply, education, family planning *etc.*
- (v) Health and environmental components have been added to many projects.
- (vi) Co-operative programmes exist between WHO and the Bank *e.g.* projects for Water Supply, World Food Programme, Population Control *etc.*

9. United States Agency for International Development

- (i) The US Government presently extends aid to India through three agencies:
 - (a) United States Agency for International Development (USAID).

- (b) The Public Law, 480 (Food for Peace) Programme.
- (c) The US Export-Import Bank.
- (ii) It was created in 1961. A USAID mission functions in New Delhi.
- (iii) It is in-charge of activities previously administered by the Technical Co-operation Mission (TCM).
- (iv) The US has been assisting in a number of projects designed to improve the health of India's people. These are:
 - (a) Malaria eradication
 - (b) Medical education
 - (c) Nursing education
 - (d) Health education
 - (e) Water supply and sanitation
 - (f) Control of communicable diseases
 - (g) Nutrition
 - (h) Family planning
- (v) The recent trend in assistance from the USA is increasingly in the support of agricultural and family planning programmes, with some reduction in aid in the general public health field.
- (iv) The plan provides for visits to countries by experts, who can offer advice on local problems and train the local people.
- (v) The contribution of Canada in supplying Cobalt Therapy Units to medical institutions in India was an important item of aid under the Colombo Plan.
- (vi) Colombo Plan seeks to improve living standards of the people of the area by reviewing developmental plans and co-ordinating development assistance.

10. The Colombo Plan

- (i) Established in 1950 for co-operative economic development in South and South-East Asia.
- (ii) Membership comprises 20 developing countries within the region and 6 non-regional members: Australia, Canada, Japan, New Zealand, UK and USA.
- (iii) The bulk of Colombo plan assistance goes into industrial and agricultural development.

11. Swedish International Development Agency (SIDA)

- (i) The Swedish International Development Agency is assisting the National Tuberculosis Control Programme since 1979.
- (ii) The SIDA assistance is usually spent on procurement of supplies like X-ray units, microscopes and anti-tuberculosis drugs.
- (iii) SIDA authorities are also supporting the Short Course Chemotherapy Drug Regimens under Pilot study, which were introduced in 18 districts of the country during 1983–84 and pilot phase I of the revised strategy of NTP in 5 sites namely Delhi, Bengaluru, Mumbai, Kolkata and Mehsana (Gujarat) since 1993.

12. Danish International Development Agency (DANIDA)

- (i) Denmark is one of the 5 countries in the world that meets the United

- Nation's target of granting 0.7 per cent of gross national income (GNI) in development assistance.
- (ii) The Danish International Development Agency is the section of the Danish Ministry of Foreign Affairs dedicated to providing aid and financing pro-development activities in developing countries.
 - (iii) The Government of Denmark is providing assistance for the development of services under National Blindness Control Programme since 1978.
 - (iv) The new strategy for Denmark's development co-operation, "The Right to a better life" creates the foundation for an effective Danish Development Co-operation, which aims to combat poverty and promote human rights.
 - (v) Economic growth is central to the strategy, but growth should be green and promote social progress in order to contribute to improve the lives of poor people and their ability to create a better life for themselves.
- (ii) It was established by **Henry Dunant in 1919**.
 - (iii) International Committee of the Red Cross (ICRC), an independent, neutral institution, the founder organization of the Red Cross.
 - (iv) The work of the Red Cross was extended to other programmes, which comprise services to armed forces, service to war veterans, disaster service, first-aid and nursing, health education and maternity and child welfare services, which would prevent human suffering.

NON-GOVERNMENTAL VOLUNTARY AGENCIES

1. International Red Cross

Red Cross is Non-Governmental, Non-Political, International Humanitarian Voluntary Organization devoted to the service of mankind in peace and war:

- (i) The headquarters of International Red Cross Society is in Geneva.

2. Rockefeller Foundation

- (i) Rockefeller foundation was established in 1913 by John D Rockefeller.
- (ii) The purpose to promote it is the well being of mankind throughout the world.
- (iii) The activities of the foundation, where more in the field of community health and medicine.
- (iv) The work of Rockefeller foundation started from 1920 in India with the scheme for the control of hookworm disease in the Madras Presidency.
- (v) Established of the All India Institute of Hygiene and Public Health at Kolkata was in large measure due to the co-operation of the Rockefeller Foundation.
- (vi) The foundation's programmes included:
 - (a) The training of competent teachers and research workers.
 - (b) Training abroad of candidates from India through fellowships and travel grants.

- (c) Sponsoring of visit of a large number of medical specialist from the USA.
- (d) Providing grants in aid to some selective institutions.
- (e) Development of medical college libraries.
- (f) Population studies.
- (g) Assistance to research projects and institutions (*for example*: National Institute of Virology at Pune).
- (h) Helps in the development of agriculture.
- (i) Helps in the development of family planning.
- (j) Provides rural training and medical education.

3. Ford Foundation

- (i) Ford foundation is an organization which is dedicated to the field of rural health services and family planning.
 - (ii) The Ford Foundation has helped India in the following projects:
 - (a) **Orientation training centres:** At Singur, Poonamallee and Najafgarh to provide training courses in public health for medical and paramedical personnel from all over India.
 - (b) **Research-cum-action projects:** Were aimed at solving some of the basic problems in environmental sanitation *e.g.* designing and construction of hand-flushed acceptable sanitary latrines in the rural areas.
 - (c) **Pilot project in rural health services:** At Gandhigram, Tamil Nadu to develop and operate a co-ordinated type of health service, which will provide a useful model for health administrators in the country.
 - (d) **Establishment of NIHAE:** The Ford Foundation has supported the establishment of the National Institute of Health Administration and Education at Delhi. The Institute provides senior staff-college type training for health administrators.
 - (e) **Calcutta water supply and drainage system:** The Foundation has helped in the preparation of a master plan for water supply, sewerage and drainage for the city of kolkata in collaboration with other international agencies.
 - (f) **Family planning programme:** The Foundation is supporting research in reproductive biology and in the family planning fellowship programmes.
- (iii) In India, the foundation provides help in short-term training programmes in community health, pilot projects of health services, RCA projects and research programmes in family planning.
 - (iv) The Ford Foundation has provided help in the water supply and drainage of sewage systems in Kolkata and the establishment of National Health and Family Welfare Institute in Delhi.

4. Co-Operative for Assistance and Relief Everywhere

- (i) It was founded in North America in 1945.
- (ii) It is one of the world's largest independent, non-profit, non-sectarian international relief and developmental organization.
- (iii) CARE provides:
 - (a) Emergency aid
 - (b) Health education
 - (c) Co-operation in agriculture
 - (d) Professional training
 - (e) Long-term developmental assistance
- (iv) CARE begins its operation in India in 1950.
- (v) **1971:** CARE is assisting in Mid-Meal Scheme.
- (vi) **Till the end of 1980's, the primary objective of CARE:** To provide food for children in the age group of 6–11 years.
- (vii) CARE also supports the ICDS Programme and developmental programmes in the area of health and income supplementation.
- (viii) CARE helped in the following projects:
 - (a) Integrated nutrition and health project.
 - (b) Better health and nutrition project.
 - (c) Anaemia control project.
 - (d) Improving women's health project.
 - (e) Improved health care for adolescent girls project.
 - (f) Child survival project.
 - (g) Improving women's reproductive health and family spacing project.
 - (h) Konkan integrated development project.
- (ix) CARE India works in partnership with the Government of India, State Governments and NGO's.
- (x) It undertakes projects in Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Uttar Pradesh and West Bengal.

5. Asian Development Bank

- (i) Asian Development Bank established on 19 December, 1966 to promote social and economic development in Asia.
- (ii) Social development organization dedicated to reduce poverty in Asia and Pacific through inclusive economic growth, environmental sustainable growth and regional integration.
- (iii) Asian Development Bank assistance supports the Government of India's evolving priorities.
- (iv) Asian Development Bank's country partnership strategy, 2013–2017 for India aims to support the government's Twelfth Five-year plan priorities of "faster, more inclusive and sustainable growth".

NATIONAL VOLUNTARY HEALTH AGENCIES IN INDIA

1. Indian Red Cross Society

- (i) The Red Cross Society of India was established by an Act of the Indian Legislature in 1920.

- (ii) The National headquarters of Indian Red Cross Society (IRCS) is at Delhi.
- (iii) Objectives of Indian Red Cross Society:
 - (a) Improvement of health.
 - (b) Disaster relief.
 - (c) Prevention of disease.
 - (d) Promotion of voluntary blood donation.
 - (e) Collection of blood for transfusion.
 - (f) Hospital services.
 - (g) Maternal and child welfare.
 - (h) Family planning.
 - (i) Community services.
 - (j) Ambulance services.
 - (k) Nursing services.
 - (l) Mitigation of suffering.
- (iv) The Red Cross Home at Bengaluru for disabled ex-servicemen is one of the pioneer institutions of its kind in Asia.
- (v) Indian Red Cross has work in the direction of reducing human suffering by providing health services like disaster services, maternity and child welfare services *etc.*
- (vi) Indian Red Cross Society is a national organization with more than 655 branches, which are spread throughout the state, district and sub-division of the country.
- (vii) The Junior Red Cross is one of the most active sections of the Society. It gives an opportunity to lakhs of boys and girls all over India to be associated with activities like the village uplift, first aid, anti-epidemic work and building up of an international friendliness, understanding and co-operation.
- (viii) Non-governmental organizations constitute a valuable resource in promoting

health care. Some of the non-governmental organizations are: Voluntary Health Association of India, Trained Nurses Association of India, World Federation of Medical Education and International Union against Cancer *etc.*

2. Kasturba Memorial Fund

- (i) The Kasturba Memorial Fund was established in the memory of Kasturba Gandhi after her death in 1944.
- (ii) Attempt is made to raise the standard of Indian women.

3. Tuberculosis Association of India

- (i) The Tuberculosis Association of India was established in 1939.
- (ii) *Headquarters:* Delhi
- (iii) The association conducts a drive for fund collection every year.
- (iv) It helps in training health professionals in anti-tuberculosis programmes and health education.
- (v) Some institutions run by the association:
 - (a) Lady Linlithgow Sanatorium, Kasauli.
 - (b) King Edward VII Sanatorium, Dharampur.
 - (c) Tuberculosis Centre, New Delhi.
 - (d) TB Hospital, Mehrauli.

4. Bharat Sevak Samaj (BSS)

- (i) Bharat Sevak Samaj was formed in 1952.
- (ii) It is non-political, non-governmental and non-voluntary organization.

- (iii) The main objective of BSS is to help people to achieve health through their efforts.
 - (iv) The main activity of the organization—improvement in environmental sanitation in rural area is included.
 - (v) The branches of BSS are functioning in almost all districts of all states.
- (iv) Functions of the Board:
 - (a) Serving the need and importance of voluntary welfare agencies.
 - (b) Setting up voluntary social welfare agencies and to promote their growth.
 - (c) Providing financial aid to deserving agencies and organizations.

5. Hind Kusht Nivaran Sangh

- (i) The Hind Kusht Nivaran Sangh was founded in 1950.
- (ii) **Headquarters:** New Delhi and the Sangh has branches throughout India, which are active in Leprosy Eradication Programme in India with the help of voluntary and government agencies.
- (iii) The main activities of Sangh are:
 - (a) To help leprosy homes and clinics.
 - (b) Health education through publication and publicity.
 - (c) Training of health personnel.
 - (d) Field diagnosis and research.
 - (e) Arranging leprosy worker's conference and publication of quarterly "Leprosy India".

6. Central Social Welfare Board

- (i) This organization is semi-government, autonomous organization, which was formed by Government of India in 1953.
- (ii) The board has started the family and child welfare services since 1968.
- (iii) It plays an important role in social education, craft training, maternity, milk distribution, establishment and running of Balwadi and play centres.

7. Family Planning Association of India

- (i) It was formed in 1949 with Headquarters in Mumbai.
- (ii) The association promotes activities related to family planning throughout the country with aid from Government of India.
- (iii) The activities include:
 - (a) Conducting family planning clinics.
 - (b) Training of health professionals.
 - (c) Providing information related to family planning.

8. All India Blind Relief Society

- (i) It was established in 1946 with objective of co-ordinating the various organizations working for the blind people.
- (ii) It also conducts eye camps, works for social and economic help to the blind.
- (iii) It helps in prevention and control of blindness.

9. All India Women's Conference

- (i) It is voluntary organization of women, which was formed in 1926.
- (ii) Its branches are functioning all over the country.

- (iii) It gives special contribution in running of maternal, child health clinics, health centres and family planning clinics.
- (iv) It also arranges for adult education.

10. Indian Council For Child Welfare (ICCW)

- (i) Indian Council for Child Welfare was formed in 1952.
- (ii) This organization is concerned with International Children's Welfare Council.
- (iii) The main objective was to promote the opportunities and facilities for development of children through legal or any other means.
- (iv) It also helps in promotion of physical, social and mental health of children.

11. Saint John Ambulance Association

- (i) **Headquarters:** Delhi.
- (ii) The objective of Saint John Ambulance Association is:
 - (a) To create an army like organization:
 - for delivering first-aid.
 - to take care of the sick and injured.
 - (b) To give better home nursing.
 - (c) To train publics for first-aid services.
- (iii) Saint John Ambulance Association has more than 52000 trained workers.
- (iv) It comprises 2470 divisions, 680 regional/district/local centres, apart from 28 brigade districts, 17 state centres, 8 railway centres and 2 Union Territories centres.

- (v) In the Brigade wing trained workers perform field duties.
- (vi) Apart from emergencies, the association provides first-aid services in public functions, festivals, games, factories, Mines and other public places.
- (vii) It also involves training to teachers, students, factory and mine workers, NCC, Scouts and guide girls, aviation stuff and general public.
- (viii) It has trained approximately 10 million people.

Composition: The President of India is the President of Saint John Ambulance Association.

- (ix) The Chairman of Saint John Ambulance Association is nominated by the President.
- (x) The National Executive Committee is headed by the Union Minister for Health and Family Welfare.
- (xi) The Secretary General of the Indian Red Cross Society is also the Secretary General of this association.
- (xii) The organization functions through its association and brigade wings.

PUBLIC HEALTH LEGISLATION

Definition

It is a study of legal powers and duties of the state to assure the conditions for people to be healthy and limitations on the power of the state to constraint the autonomy, privacy, liberty, propriety or other legally protected interests on the individual for the protection of promotion of community health.

Public Health Act, 2010, commenced on 1st September, 2012. The objectives of the Public Health Act are to:

- (i) Protect and promote public health.
- (ii) Control the risk to public health.
- (iii) Promote the control of infectious disease.
- (iv) Prevent the spread of infectious disease.
- (v) Recognize the role of local governments in protecting public health.

Categories of Public Health legislation

- (i) To protect the rights of health and improve the health of nation in comprehensive manner:
 - National Health Bill, 2009.
- (ii) To improve and maintain high standards in the medical education and services:
 - The Indian Medical Council Act, 1956 and Regulation, 2002.
 - The Indian Nursing Council Act, 1947.
 - The Consumer Protection Act, 1986.
- (iii) Public registration to assess mortality and enumeration of population:
 - The Census Act, 1948.
 - The Registration of Births and Deaths Act, 1969.
- (iv) To prevent public health problems:
 - The International Health Regulation, 2005.
 - The Transplantation of Human Organ Act, 1994.
 - The Prevention of Food Adulteration Act, 1954.
 - The Epidemic Diseases Act, 1897.
- (v) To achieve maternal health and to empower the women:
 - The Pre-conception and Prenatal Diagnostic Technique Act, 1994.
 - Domestic Violence Act, 2005.
 - Indecent Representation of Women (Prohibition) Act, 1986.
 - The Medical Termination of Pregnancy Act, 1971.
 - The Maternity Benefit Act, 1961.
 - The Dowry Prohibition Act, 1961.
 - The Immoral Traffic (Prevention) Act, 1956.
- (vi) To safeguard the children and young:
 - The Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992.
 - The Child Labour (Prohibition and Regulation) Act, 1986.
 - The Child Marriage Restraint Act, 1929.
- (vii) To rehabilitate and provide equal opportunity to disabled and disadvantaged groups:
 - The Persons with Disabilities (Equal Opportunity, Protection of Rights and Full Participation) Act, 1995.
 - The Mental Health Act, 1987.
- (viii) To prevent drug addiction and substance abuse and safe manufacturing of drugs, distribution and storage:
 - The Narcotic Drugs and Psychotropic Substances Act, 1985.

- The Cigarettes and Other Tobacco Products Act, 2003.
 - The Drugs and Cosmetics Act, 1940.
 - The Drugs and Magic Remedies Act, 1948.
- (ix) To protect workers and to provide social security:
- The Minimum Wages Act, 1948.
 - The Factories Act, 1948.
 - The Mines Act, 1952.
 - The Employees State Insurance Act, 1948.
 - The Workmen's Compensation Act, 1923.
- (x) Environmental legislations:
- The Environment (Protection) Act, 1986.
 - The Biomedical Waste (Management and Handling) Rules, 1998.
 - The Municipal Solid Waste (Management and Handling) Rules, 2000.
 - The Hazardous Waste (Management and Handling) Rules, 1989.
 - The Air (Prevention and Control of Pollution) Act, 1974.
 - The Motor Vehicle Act, 1988.
- (xi) To promote voluntary work:
- The Red Cross Society Act, 1936.

HEALTH EDUCATION

CHAPTER

4

INTRODUCTION TO HEALTH EDUCATION

Health Education is one of the most cost effective intervention. A large number of diseases to be prevented with little or no medical intervention, if people were adequately informed about them and if they were encouraged to take necessary precautions in time. World Health Organization Constitution states that “Extension to all people of the benefits of medical, psychological and related knowledge is essential to the fullest attainment of health.” Health Education is a part of health care that is concerned with promoting healthy behaviour.

Definition

1. According to John M Last, “The process by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of health”.
2. According to National Conference on Preventive Medicine in United States, “It is a process that informs, motivates

and helps people to adopt and maintain healthy practices and lifestyle, advocates environmental changes”.

Aims and Objectives

1. To ensure the belief that “Health is Wealth”.
2. To encourage people to adopt and sustain health promoting lifestyle and practices.
3. To promote the proper use of health services.
4. To arouse interest and provide new knowledge, improve skills and change attitudes in making rationale decisions to solve their own problems.
5. To make awareness regarding health and health issues in people, groups and communities.

Concepts

Following the Alma-Ata Declaration adopted in 1978, the concept of health education are as follows:

1. Prevention of disease to promote healthy lifestyle.

2. The modification of individual behaviour to modification of “social environment”, in which the individual lives.
3. Community participation to community involvement.
4. Promotion of individual and community “self-reliance”.

Scopes

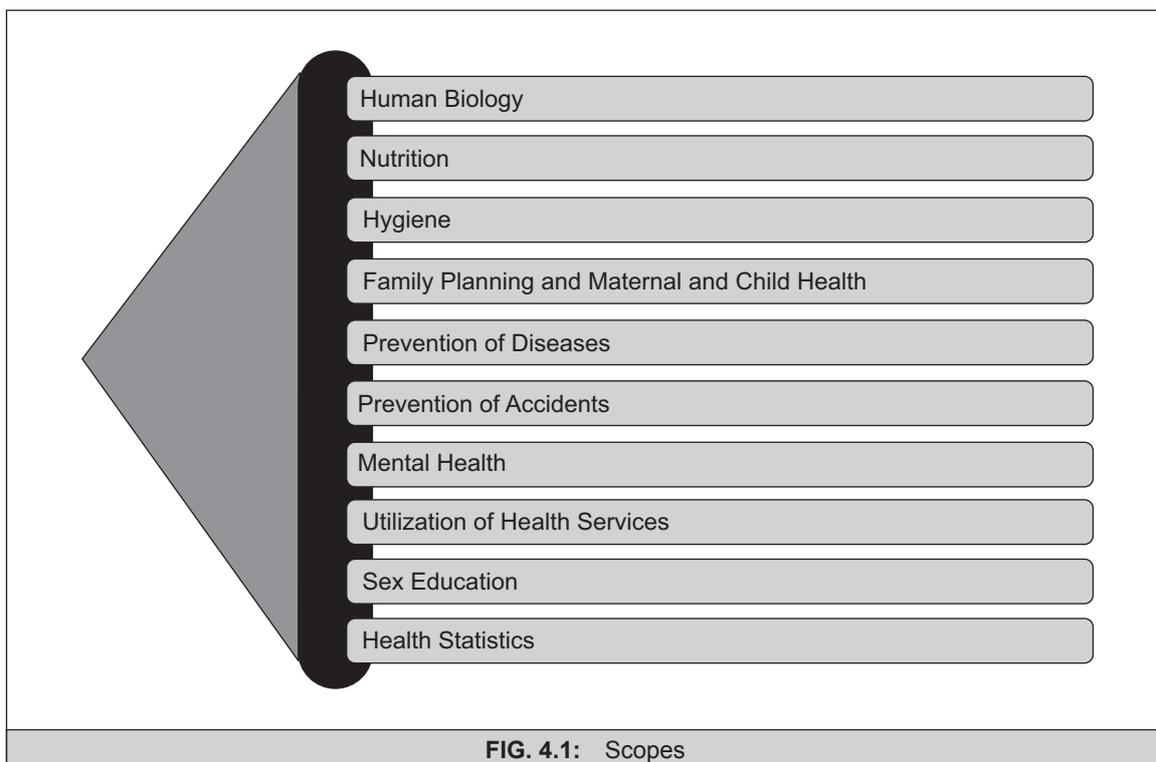


FIG. 4.1: Scopes

National Plan for Health Education

Government has a responsibility for assisting and guiding the health education of general public:

1. At National level, the Government of India, in 1956, established a Central Health Education Bureau in Ministry of Health, New Delhi to promote and co-ordinate health education work in country.
2. Many state governments in India have now health education bureau in their health directorates.
3. Some other official agencies, DAVP (Directorate of Advertising and Visual Publicity), Press information bureau, Doordarshan and All India Radio are active in health education work.

4. Some voluntary agencies, such as Indian Red Cross are also engaged in health education.
5. South East Asia Regional Bureau (SEARB) of International Union for

health education was established in 1983 with headquarters at Bengaluru.

Communication Techniques

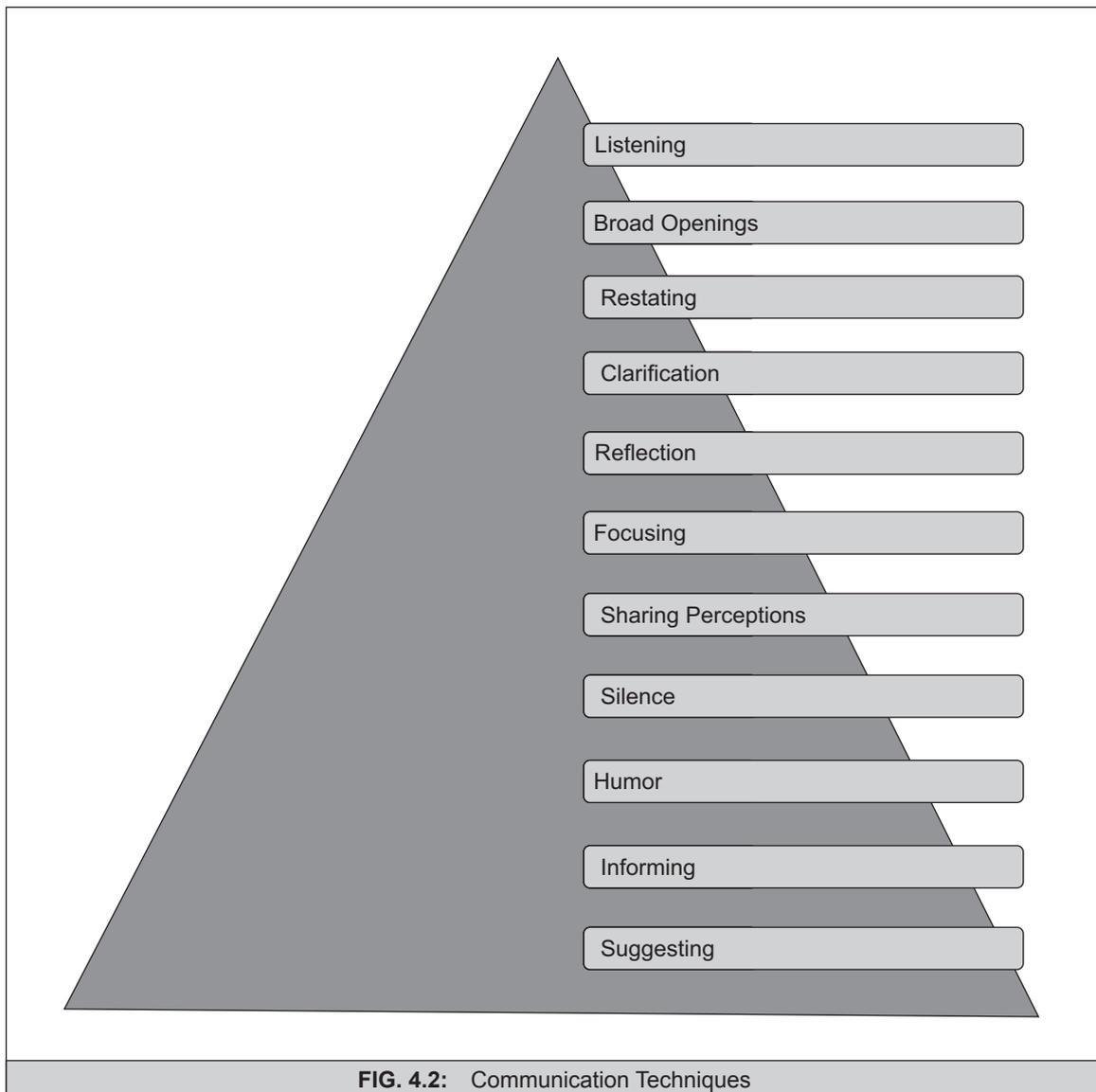


FIG. 4.2: Communication Techniques

Methods and Media for Health Education Programmes

1. Individual Approach

It is given in personal interviews by Health professionals to clients. A Community Health Nurse uses individual approach through home visits, personal contact and personal letters.

2. Group Approach

It is an effective way of educating the community. It involves the following:

(i) Lecture Method/Chalk and Talk Method

Special form of communication with proper voice, gesture, movement, facial expression and eye contact:

- Most frequently used method of teaching.

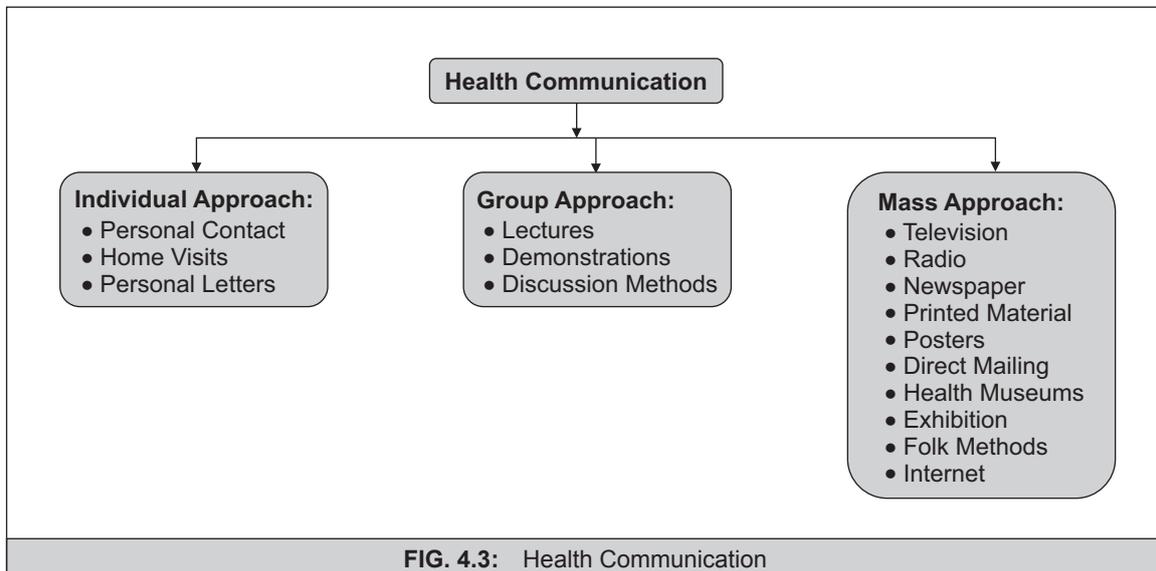


FIG. 4.3: Health Communication

Advantages

- Factual material is presented in a directed and logical manner.
- May provide experience that inspire.
- Useful for large groups.

Disadvantages

- Proficient oral skills are required.
- Audience is often passive.
- Communication is one way.
- Learning is difficult to gauge.

(ii) Demonstration

Demonstration is an instance of somebody showing and explaining how something work or done.

— *Oxford Advanced Learner's Dictionary*

Advantages

- It provides an opportunity for observational learning.
- The demonstration method is adaptable to both, group and individual teaching.

- It correlates theory with practice.
- It clarifies the underlying principle by demonstrating the 'why' of the procedure.

Disadvantages

- It provides no scope for 'learning by doing' for students, as students just observe what the teacher is performing.
- If method is not student-centred, it makes no provision for individual differences.
- Since, the teacher performs, the experiment in his own pace, many students cannot comprehend the concept being clarified.
- It is time consuming process/method.

(iii) Discussion Methods

Involves the following methods:

(a) Group discussion

Provides a wider interaction among members than is possible with other methods. For effective group discussion, there should be 6–12 members in a group. The participants are all seated in a circle and there should be a group leader to initiate the subject.

Advantages

- It helps in changing the attitude and health behaviour of people.
- Decision taken by group more easily than decision taken by solitary one.
- It is very effective in reaching decisions, based on ideas of all people.

Disadvantages

- All members are not equal in group, some may be dominant in group.
- Many irrelevant discussions may be there.
- Not suitable for all topics.

(b) Panel discussion

It is a method in which 4–8 qualified persons talk about the topic and discuss a given problem in front of a large group of audience. Panel comprises a chairperson/moderator, who opens the meeting, welcomes the group and introduces the panel members.

Advantages

- Different points of views in the subject are presented by experts.
- Quick exchange of facts, opinions and plans.
- Students learn to discuss a topic in conversational form in a small group in front of a large group.

Disadvantages

- Panel method requires more time in planning, organizing and presentation for teaching selected topics.
- Discussion may be superficial, if presenters lack mastery on their subject.

(c) Symposium

It consists of a series of lectures on a selected topic. Experts present their views on a subject in brief, but no discussion among experts. In the end, the audience can contribute in the symposium by asking questions. Towards the end of the session, the chairperson presents the gist of the symposium.

Advantages

- Coverage of topic by several experts in depth and broader sense.
- It provides a broader scope for general discussion.
- Greater feedback and contribution from the audience because the topic is presented from several points of views.

Disadvantages

- Limited time (15–20 minutes) to present the topic.
- Audience participation is also limited.
- Time consuming.

(d) Workshop

A novel experiment in education is called as workshop. It consists series of meetings, usually 4 or more than 4 with emphasis on individual work. The total workshop may be divided into small groups and each group will choose a chairperson and a recorder. One group is allotted one topic only. Each individual has important role. Education is carried out in the guidance of experts and at last, small groups combine to study the subject in detail and find out the solution of the problem and conclusions are presented at the end of the workshop.

Advantages

- Comprehensive knowledge
- Certification
- Updation
- Development of inter-personal relationship

Disadvantages

- Time consuming
- Expensive
- Unable to cover large topics

(e) Conference

This method is similar to class discussion but number of students is limited. Usually, the teacher assign large class into small conference groups in order to provide opportunity for discussion usually after formal lecture that deals with a selected problem.

Advantages

- It supplements the lecture by asking the questions, clarifying doubts.
- It provides the opportunity to direct and guide the individual student, assist slow learner.

Disadvantages

- Time consuming.
- Require multiple skills.

(f) Seminar

It is a method of group discussion, is similar to symposium in many ways. It is usually used in colleges and university students. It is usually held on regional, state or national level. It ranges from 1 day to 1 week in length and may cover a single topic in depth.

Advantages

- It gives training in self-learning.
- It promote independent thinking.
- It promotes team spirits and co-operative attitude.

Disadvantages

- Time consuming
- Expensive

(g) Role play

The spontaneous acting of role in context of clean defined social situation by 2 or more persons for subsequent discussion. It is a medium to express one's opinion and about certain social situations.

Advantages

- Develop leadership skill, interviewing and social interaction.
- Provide an opportunity for the student to put herself in another's place and to become more sensitive to another's feeling.

- Develop skills in group in problem-solving.
- Develop the ability to observe and analyze the situation.

Disadvantages

- Time consuming
- Language barrier
- Lack of active participation

3. Mass Approach

It is “Education of the General Public”. No health worker or health team can mount an effective health education programme for the whole community, except through mass media of communication. Mass media are a “one-way” communication. They are useful in transmitting messages to people even in the remotest places. The power of mass media in creating a political will in favour of health, raising the health consciousness of the people,

setting norms, delivering technical messages, popularizing health knowledge and fostering community involvement are well-recognized. Public health methodologies should be culturally appropriate; they should be carefully thought-out before use. The commonly used mass media are:

- (i) Television
- (ii) Radio
- (iii) Newspaper
- (iv) Printed Material
- (v) Posters
- (vi) Direct Mailing
- (vii) Health Museums
- (viii) Exhibition
- (ix) Folk Methods
- (x) Internet

Principles of Health Education

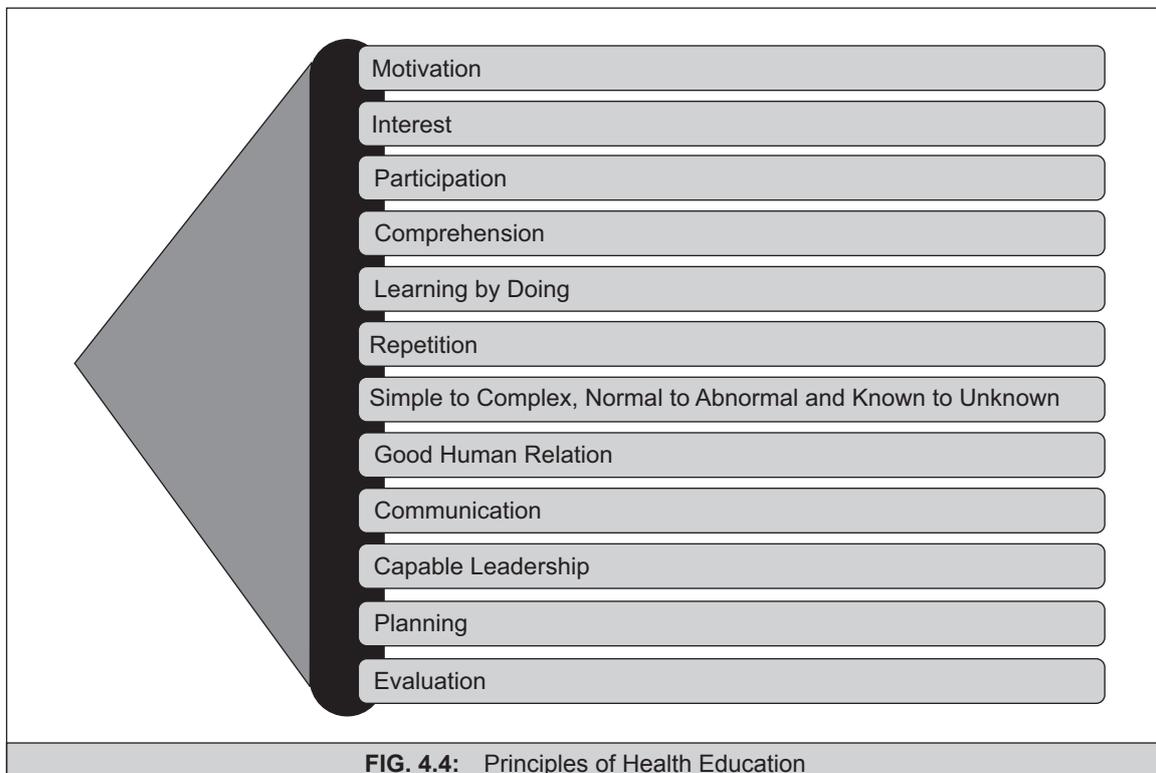


FIG. 4.4: Principles of Health Education

Planning for Health Education

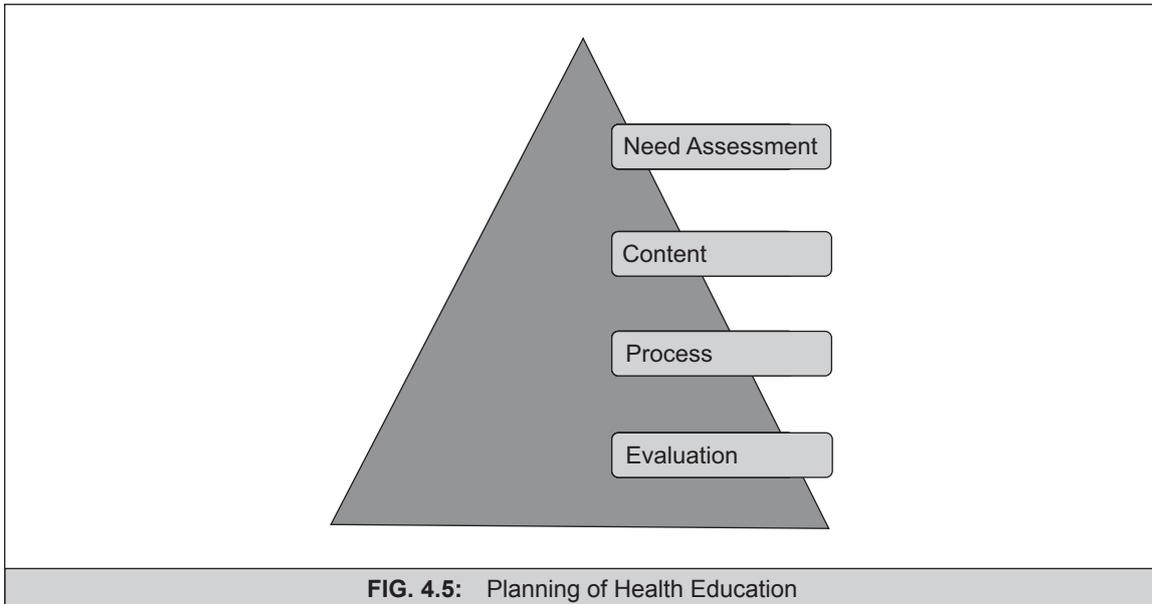


FIG. 4.5: Planning of Health Education

1. Need Assessment

It is the most important step in planning that may be quiet complex or as simple as asking a question. Different techniques are used for assessment:

- (i) **Questionnaire:** The most commonly used tool for assessment.
- (ii) **Delphi technique:** Opinion is achieved from a pool of experts.
- (iii) **Salient belief assessment:** Usually we have 5–8 salient beliefs about any subject. These beliefs are so influential on behaviour; health teaching should be based on awareness of the patient salient belief.

2. Content

Content should be emphasis in things concerned to the patient:

- (i) Look at the result of the need assessment.
- (ii) Seek the resources like literature, audio-visual aids and educational material.

3. Process

It involves a series of skills that need to be practiced just as any other nursing skill. The techniques used for health education process:

- (i) Content to be taught
- (ii) Need of the client
- (iii) Skills of the professional nurse

Some other techniques are also used:

- (a) Giving information/Questionnaire.
- (b) Contracting
- (c) Demonstration and returned demonstration.
- (d) Environmental cueing
- (e) Group norms
- (f) System change

planning and to increase efficiency and also, used to assess the goals and objectives of health education.

ROLES AND RESPONSIBILITIES OF COMMUNITY HEALTH NURSE IN HEALTH EDUCATION

Roles

4. Evaluation

It is the last step of health education in which process evaluation is used for further programme

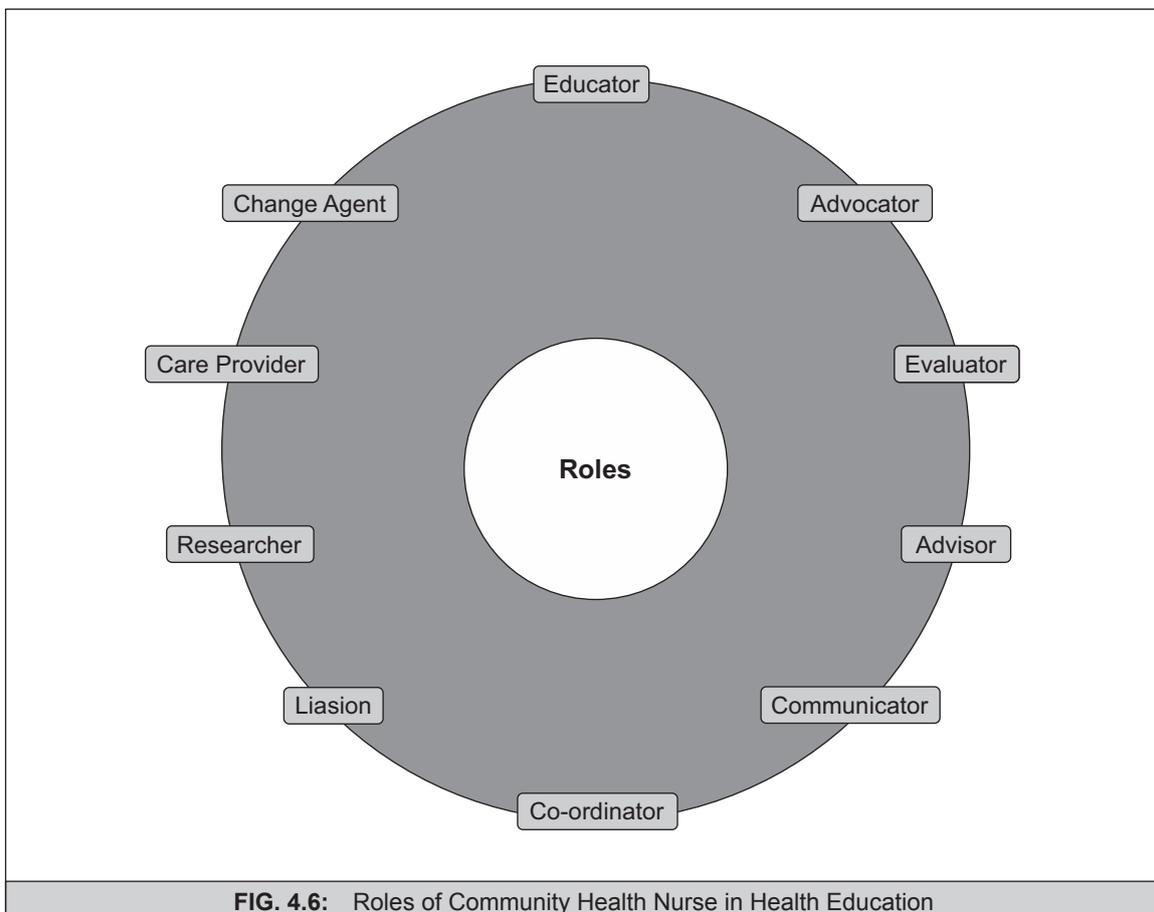


FIG. 4.6: Roles of Community Health Nurse in Health Education

Responsibilities



FIG. 4.7: Responsibilities of Community Health Nurse in Health Education

ROLES OF COMMUNITY HEALTH NURSE

INTRODUCTION TO ROLE OF COMMUNITY HEALTH NURSE

There are enumerable roles which are performed by community health nurses working in various community health settings. Considering the conceptual aspects and nature of community health nursing practice, the community health

nurse is expected to perform the following roles:

1. Care Provider

- (i) The Community Health Nurse provides comprehensive and continuous care *i.e.* care along the entire range of health and disease continuum to entire family,

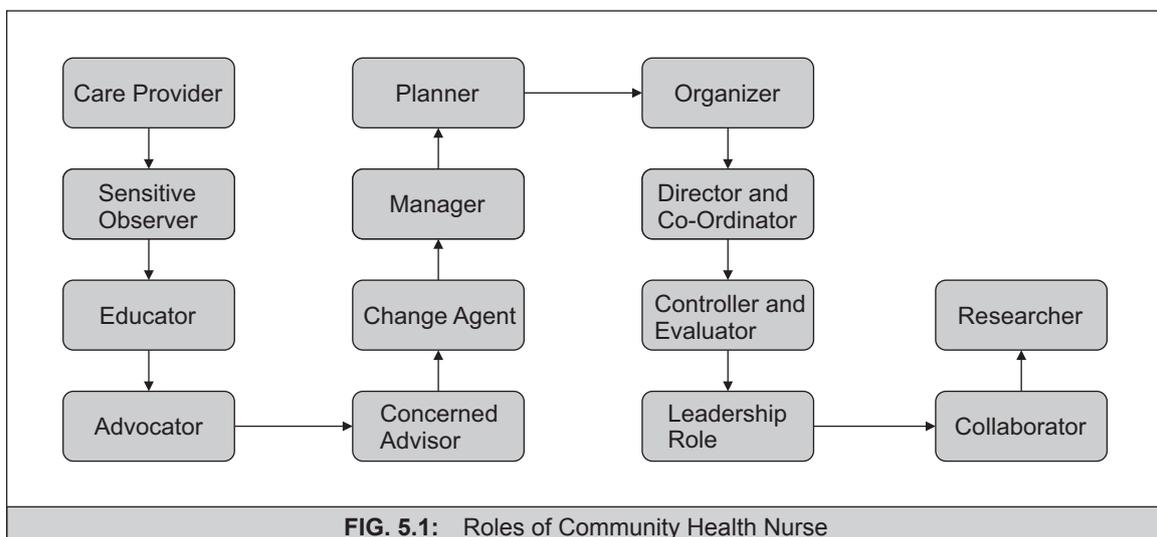


FIG. 5.1: Roles of Community Health Nurse

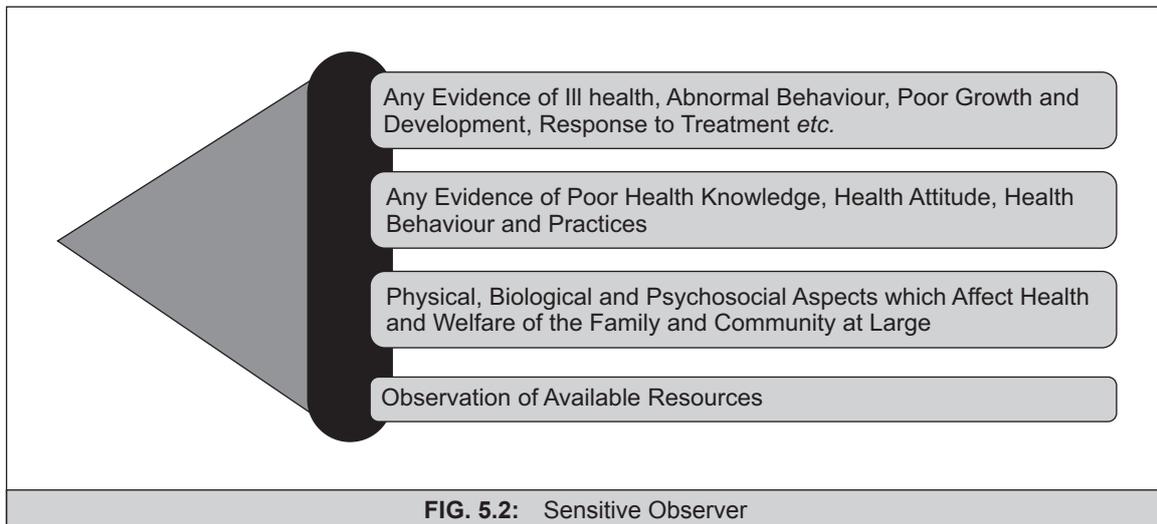
group of people and even the community at large:

- (ii) The Community Health Nurse approaches the client for providing promotive and preventive services.
- (iii) The care encompasses all the dimensions of health with efficient and effective professional skills, adequate knowledge and positive attitude of community health nurse.
- (iv) The care is provided in the clinic, home, school and at work place depending upon

health problems/medical conditions, medical prescription, nursing needs/nursing problems, competence of individual, family member *etc.*

2. Sensitive Observer

- (i) It is very essential for a community health nurse to observe, react and take action with respect to determinants of health of individual, family and community at large:



- (ii) It includes observation of people, their lifestyle and environmental conditions with respect to:
 - (a) The observation can be planned and incidental but must be recorded.
 - (b) Making skillful observation is integral to the care provider role of community health nurse.

3. Educator

- (i) The ultimate aim of community health nursing is to help people to gain health knowledge, modify health attitude, health behaviour and develop competence to become self-dependent, self-reliant in dealing their health matters, *etc.*

- (ii) The major emphasis is on health promotion and disease prevention.

4. Advocate

- (i) As an advocate, the community health nurse stands between the individual/family/community and various specialized health services.
- (ii) As an effective advocate, the community health nurse needs to possess various qualities:
 - (a) Risk taking behaviour
 - (b) Assertiveness
 - (c) Communicability
 - (d) Resourcefulness

5. Concerned Advisor

The community health nurse acts as an advisor while giving suggestions and advises on practical situations which require immediate actions and where there is no scope of health education.

6. Change Agent

The community health nurse acts as a change agent *i.e.* she serves as a potentiater or catalyst to develop individuals/families/communities capabilities and to effect change in their attitude and health behaviour.

7. Manager

- (i) Community health nurses are expected to function as a manager of family health care, school health care, community health care, any specific programme or project, *etc.*

- (ii) As a manager, the community health nurse plans, organizes, co-ordinates, supervises, guides, directs, reports and evaluates.

8. Planner

- (i) Planning is the foremost function of community health nurse.
- (ii) The community health nurse involves in overall planning of community health care or in planning of any specific programme for any particular group or for the whole community.

9. Organizer

- (i) Organizing is the second function of management.
- (ii) As an organizer, the community health nurse tries to provide infrastructure for people to function to achieve the desired objectives *i.e.* she/he has to decide who will do what, who will report to whom, where and how decisions will be made.

10. Director and Co-ordinator

- (i) The Director and Co-ordinator role are the part of community health nurse's manager role which will help in getting the work done and achieving the goals and objectives.
- (ii) She/he ensures effective byway communication between her/his as a manager and the personnel and also among the personnel themselves about their job responsibilities to be performed, direct, motivate, supervise and guide them to reach the desired objectives.

11. Controller and Evaluator

- (i) Once any service programme is planned and implemented, it is essential for the community health nurse to monitor the service programme to make sure, whether it is proceeding in its direction or not.
- (ii) The community health nurse acts as an evaluator and judge the outcome of performance against the intended goals and objectives.

12. Leadership Role

The community health nurse takes leadership role in persuading people to solve their health problems and become self-reliant in their health matters by persuasion.

13. Collaborator

- (i) The community health nurse collaborates with other health team members, voluntary organization, outside the agency and community people to meet their health needs.
- (ii) The community health nurse needs to be assertive while collaborating with the health team.

14. Researcher

- (i) The community health nurse helps in generation and collection of data by maintaining accurate and legible data about individual, family, specific community groups and community at large.

- (ii) The community health nurse makes use of investigate approach in giving care to individual, family and people at large.
- (iii) The practice of community health implies involving epidemiologic approach to deal with health problems. It may range from the simplest inquiry to most complex epidemiological studies. Therefore, community health nurse does perform a researcher role in community health nursing practice.

NATIONAL HEALTH PROGRAMMES

National health programmes emphasize to primary, secondary and tertiary health care services to people all over the country.

Following measures are important in effective implementation of national health programmes:

1. Identifying the shortcomings of programmes and removing the same.
2. Filling the gap between infrastructure and the health personnel.
3. Improving the quality of services.
4. Proper implementation of integrated disease surveillance project (IDSP).
5. Increasing the utility of programmes for clients.
6. Arranging appropriate training for the workers to increase their capabilities and skill.
7. Ensuring the supply of required resources for the implementation of programme.

8. Increasing the awareness about national health programmes through information, education and communication (IEC) and behaviour change communication (BCC).
9. Procuring the international co-operation for the programmes and strengthening the monitoring system.

National Aids Control Programme

Human Immunodeficiency Virus (HIV) is a lentivirus (member of slowly replicating retrovirus family) that causes Acquired Immunodeficiency Syndrome (AIDS), a condition in humans in which progressive failure of the immune system life threatening opportunistic infections to thrive. HIV that causes AIDS has precipitated a global pandemic. It is a global problem that requires a global response.

History

AIDS was 1st recognized in 1981 among homosexual men in the United States of America and rapidly established itself throughout the world. In India, HIV was first reported in 1986 among commercial sex workers in Tamil Nadu and AIDS in Mumbai in the year 1987.

— Facilitators guide by NACO and Indian Nursing Council

Demographically, the second largest country in the world, India has also the third largest number of people living with HIV/AIDS. According to the INTERNATIONAL STATISTICS (HIV), more than 35 million people now live with HIV/AIDS. In 2012, it

was estimated to 2.3 million people were newly infected with HIV and 1.6 million people died from AIDS. There are about 2.4 million people living with HIV/AIDS in India. Most infections occur through heterosexual route of transmission. However, in North-East region, Injecting Drug Use (IDU) is the major cause for the epidemic spread.

The World AIDS Day is celebrated on 1st December and voluntary Blood Donation Day on 1st of October every year. In Haryana, 1st case of HIV was reported in Rohtak in 1986. According to Haryana State AIDS Control Society (registered in 1998), the total estimated HIV positive cases in Haryana (upto February, 2013) were 42000 and the highest number of AIDS cases (590) were reported from District Rohtak. It is transmissible and so far no curative drug/immunization has been discovered. HIV infection, nearly always progresses to AIDS over a course of 5–20 years. AIDS does not itself cause death but instead extensively damages the immune system because of which the body cannot protect itself from infection and become the cause of death. As there is no known cure for AIDS, the entire burden of prevention has to be done by the program of education which would limit the spread of the disease.

National Aids Control Programme (NACP) launched in India, in the year 1987. The Ministry of Health and Family Welfare has set up National AIDS Control Organization (NACO) as a separate wing to implement and closely monitor the various components of the programme.

Aims

- (i) To prevent further transmission of HIV.
- (ii) To decrease morbidity and mortality associated with HIV infection.
- (iii) To minimize the socio-economic impact, resulting from HIV infection.

Milestones of the Programme

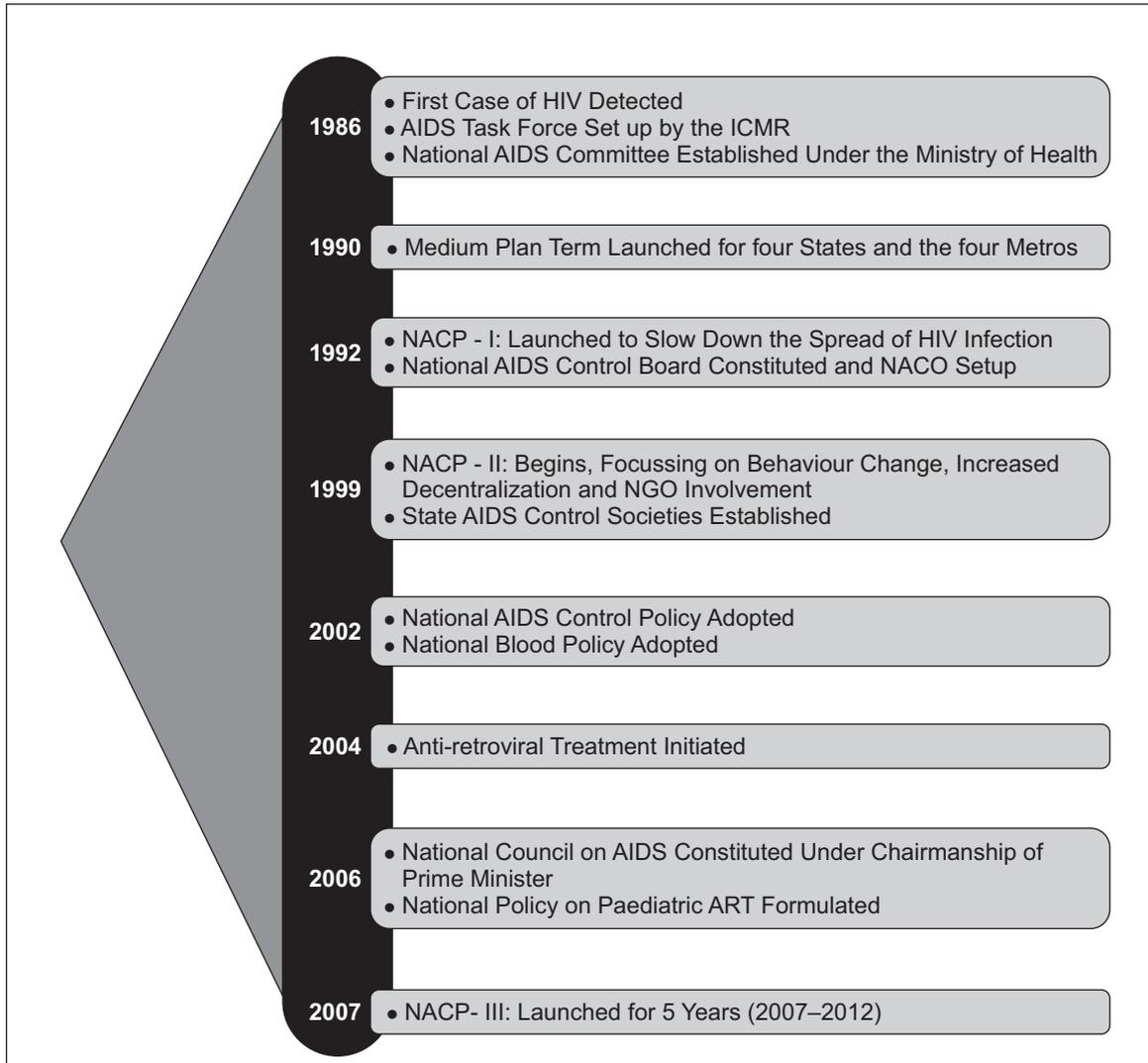
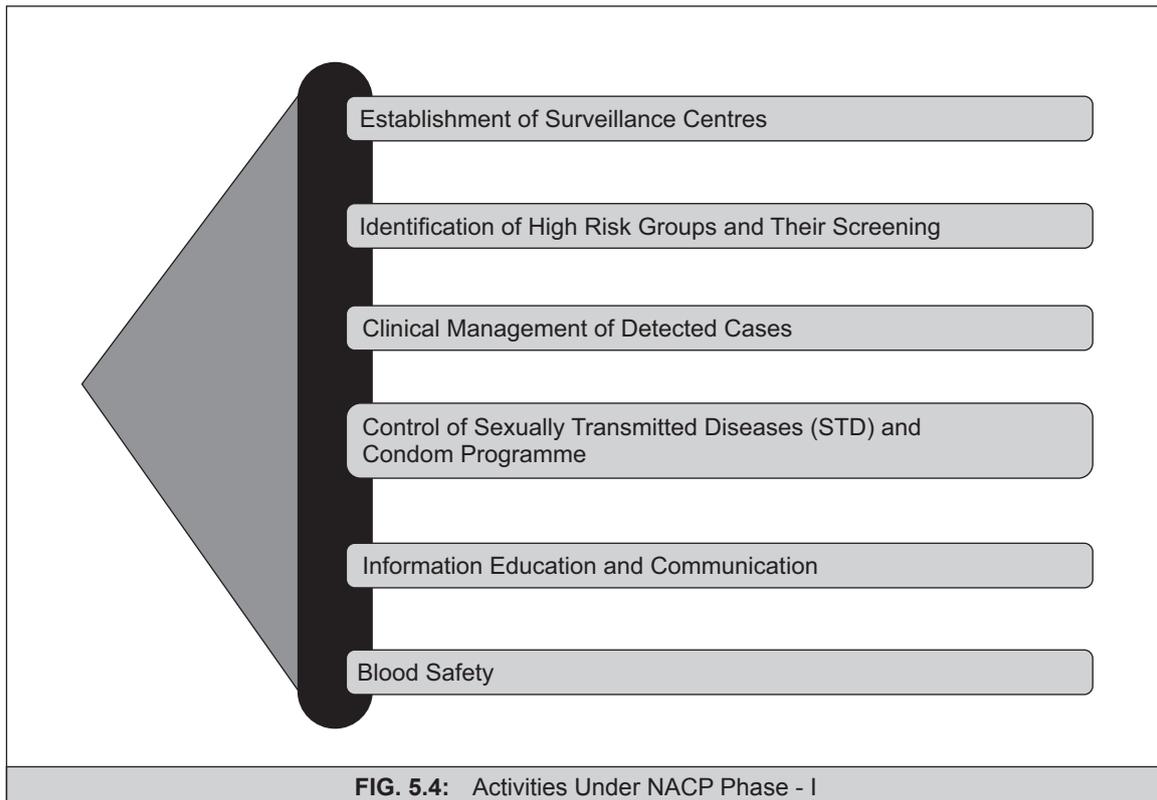


FIG. 5.3: Milestones of the Programme

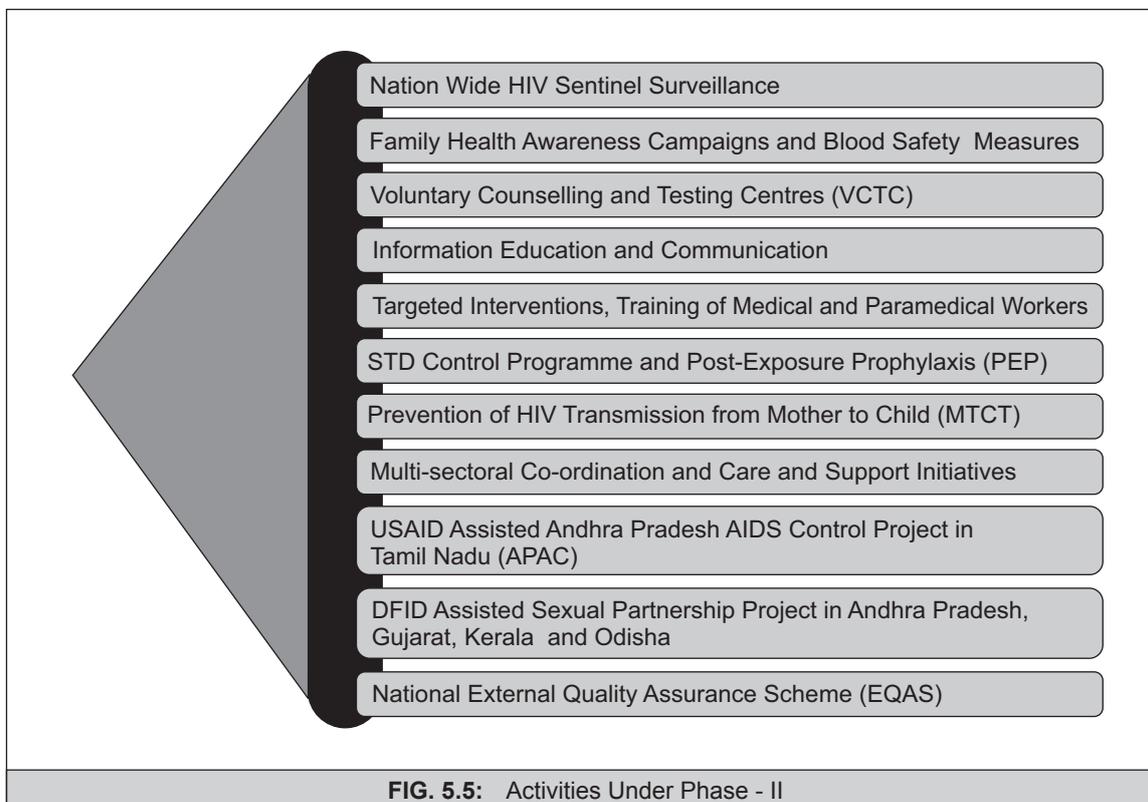
Activities Under NACP Phase - I (September, 1992 To March, 1999)

100 per cent centrally sponsored project for all the States and UTs.



Activities Under Phase - II

- (i) Adequate infrastructure has been provided to the societies for implementation of the programme components.
- (ii) Computerized Management System has been developed to monitor the programme.
- (iii) United States Agency for International Development (USAID).
- (iv) Department for International Development (DFID).

**Goal of NACP - III**

To halt and reverse the epidemic in India over the 5 years (2007–2012) by integrating

programmes for prevention, care, support and treatment.

Programme components of NACP - III

Prevention	Care, Support and Treatment	Capacity Building	Strategic Information Management
Targeted interventions among High Risk Groups (IDUs, FSW and MSW).	ART	Establishment support and capacity strengthening.	Monitoring and evaluation.
Other interventions (Truckers, migrants etc.)	Paediatric ART	Training	Surveillance
Integrated counselling and testing centres.	Centre of excellence	Managing programme implementation and contracts.	Research
Blood safety (including mobile blood banks).	Care and support (Community care centres and impact mitigation)	Mainstreaming/private sector partnerships.	
Communication, advocacy and social mobilization.			

- AIDS surveillance centre was established in the department of Microbiology at Pt. B.D. Sharma PGIMS, Rohtak, in September, 1986. Also, ART Centre and ICTC were established by the State Government at PGIMS, Rohtak.
- Suraksha Clinics are associated with dermatology department.
- “Suraksha Clinic” Formation, 1992 (Ministry of Health and Family Welfare):
 - Are a chain of STI/RTI clinics, established by NACO for better health services and for prevention of HIV/ AIDS in India.
 - Provide syndromic case management to STI/RTI patients which is comprehensive approach consisting of history, examination, treatment, counseling, follow-up and referral.

National Programme for Control of Blindness

The National Programme for Control of Blindness was launched in the year 1976 as a 100 per cent centrally sponsored programme with the goal to reduce the prevalence of blindness from 1–0.3 per cent.

Objectives

1. To reduce the backlog of blindness through identification and treatment of blind.
2. To develop eye care facilities in every district.
3. To develop human resources for providing eye care services.
4. To improve quality of service delivery.
5. To secure participation of voluntary organizations in eye care.

Strategies

1. To make National Programme for Control of Blindness more comprehensive by strengthening services for other causes of blindness like corneal blindness, refractive errors in school going children, improving follow-up services of cataract operated persons *etc.*
2. To shift from the eye camp approach to a fixed facility surgical approach.
3. To expand the World Bank project activities like construction of dedicated eye operation theatres, eye wards at district level.
4. To strengthen participation of voluntary organization in the programme and to earmark geographic areas to NGOs and government hospitals to avoid duplication of effort and improve the performance of government units.
5. To enhance the coverage of eye care services in tribal and other under-served areas.

Administration

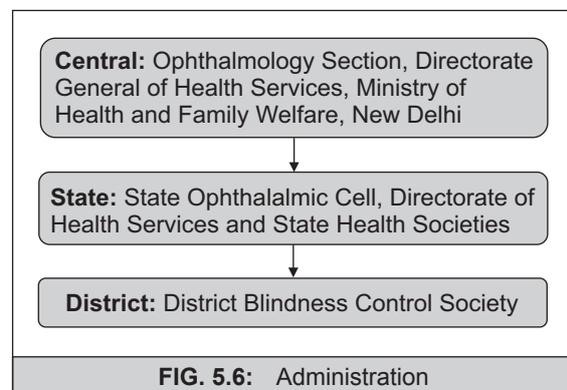


FIG. 5.6: Administration

Service Delivery and Referral System/ Organizational Structure

1. Community health education is a built-in component at all levels of

implementation of National Blindness Control Programme.

2. The programme also includes regular eye check-up and provision of vitamin A prophylaxis and service facilities in rural areas.

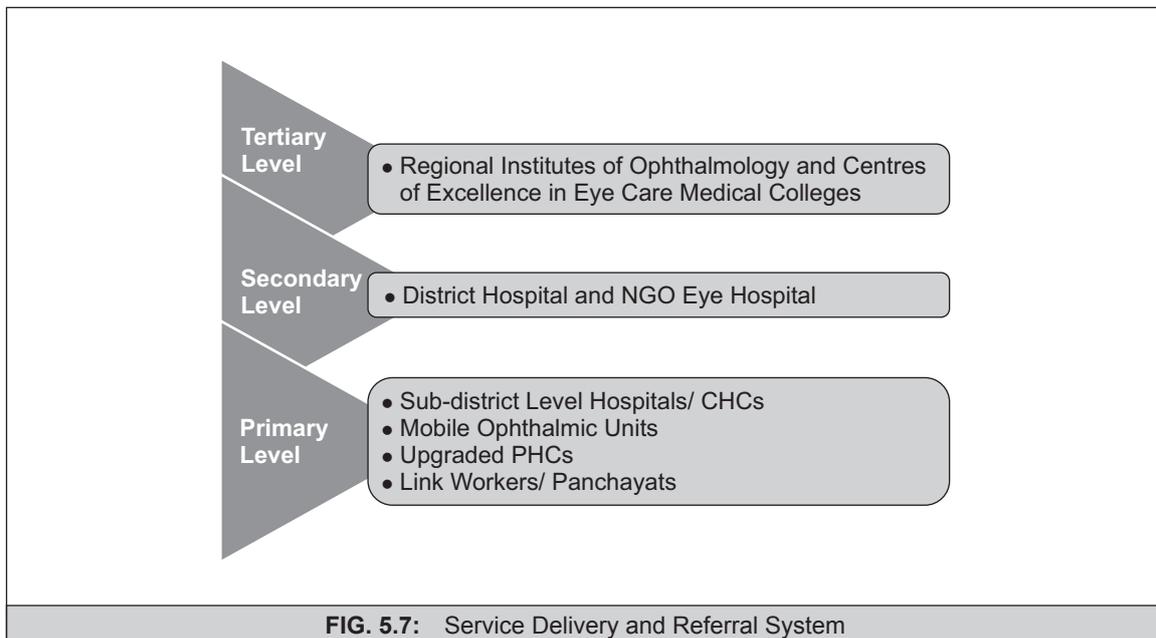
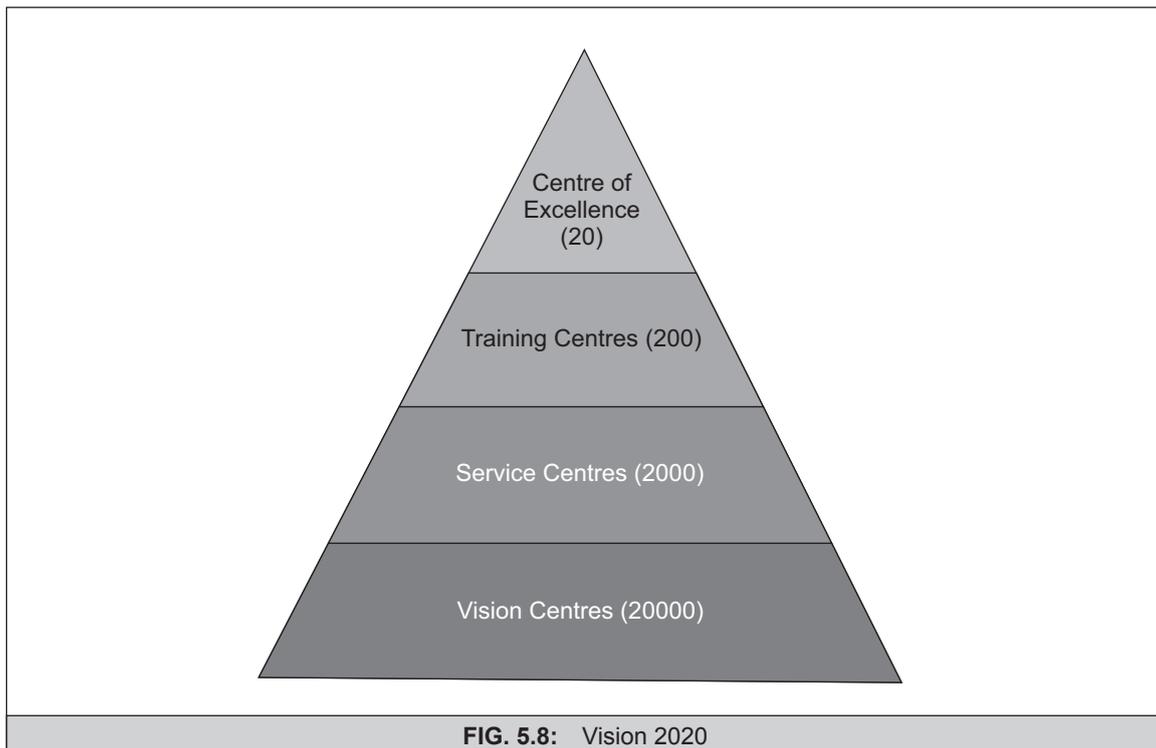


FIG. 5.7: Service Delivery and Referral System

Vision 2020: The Right-To-Sight

1. It is a global initiative launched by WHO on 18th February, 1999 to reduce avoidable (preventable and curable) blindness by the year 2020.
2. The plan of action for the country has been developed with the following main features:
 - (i) Target diseases are cataract and refractive errors, childhood blindness, corneal blindness, glaucoma and diabetic retinopathy.
 - (ii) Human resource development as well as infrastructure and technology development at various levels of health system.
 - (iii) The proposed four tier structure includes:
 - (a) *Centre of excellence (20)*:
 - Professional leadership.
 - Strategy development.
 - Continued medical education.

- Laying of standards and quality assurance.
 - Research
- (b) *Training Centres (200)*:
- Tertiary eye care including retinal surgery, corneal transplantation, glaucoma surgery *etc.*
 - Training and continued medical education.
- (c) *Services Centres (2000)*:
- Cataract surgery
 - Other common eye surgeries
- Facilities for refraction
 - Referral services
- (d) *Vision Centres (20000)*
- Refraction and prescription of glasses.
 - Primary eye care.
 - School eye screening programme.
 - Screening and referral services.
3. *Centre of Excellence and Training Centres*: Tertiary Level.
4. *Service Centres*: Secondary Level.
5. *Vision Centres*: Primary Level.



National Cancer Control Programme

The Cancer Control Programme was started in 1975–76 as a central sector project. The programme was renamed to National Cancer Control Programme (NCCP) in 1985 and revised in 2004.

Cancer Epidemiology

History

First cancer statistics was collected in the mid 19th century. Genetic explanation of cancer was put forward in early 20th century by Professor of Zoology Theodor Boveri of Germany. National Cancer Institute Act was passed in 1937. Chemotherapy, radiotherapy and surgery became an integral part of anticancer therapy. Preventive aspects gained prime position *i.e.* 1993–1997 *e.g.* educating people on lifestyle factors like nutrition and cancer, regular exercises, *etc.* Screening the susceptible groups with respect to the age, nature of job, family history of cancer, controlling environment *etc.*

Burden of Cancer

1. According to International Agency for Research on Cancer (IARC), 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer-related deaths occurred in 2012, compared with 12.7 million and 7.6 million respectively in 2008.

Nearly 7 lakh Indians die of cancer every year. Lung cancer (1.8 million, 13 per cent of the total) is the most commonly diagnosed cancer worldwide followed by breast (1.7 million, 11.9 per cent).

2. According to the latest World Cancer Report from the WHO, more women in India are being newly diagnosed with cancer annually. As against 4.77 lakh men, 5.37 lakh women were diagnosed with cancer in India, in 2012. Cancer of lip and oral cavity has emerged as the deadliest among Indian men while for women, it is breast cancer. The top 5 cancers in men are lip/oral cavity, lung, stomach, colorectal and pharynx while among women they are breast, cervix, colorectal, ovary and lip/oral cavity.

—A report by Kounteya Sinha,
Times of India, 2013

3. According to National Cancer Registries and Atlas of Cancer in India, current projections suggest that the total cancer burden in India for all sites will double by 2026 because of increase longevity, greater exposure to environmental carcinogens due to wide variety of chemical agents in industry and agriculture and the continued use of tobacco.

Objectives

1. **Primary prevention:** Health education on prevention of cancer.
2. **Secondary prevention:** Early detection and diagnosis of common cancer, such as cancer of cervix, mouth breast and tobacco related cancer by screening and self-examination methods.
3. **Tertiary prevention:** Strengthening of the existing institution for comprehensive therapy including palliative care.

Strategies

1. Prevention and early detection of cancers through district cancer control activities and strengthened IEC campaign.
2. To promote 'centres of excellence' in the field of cancer management with support to existing RCC of 20 years of proven track record by providing financial assistance.
3. To augment comprehensive cancer care facilities across the country through institutional capacity building in new, existing regional cancer centres and through new and existing oncology wings.
4. Development of early diagnostic capabilities in district hospitals.
5. Encouraging public private partnership.
6. Increase capacity for palliative care in cancer.
7. Promote research in cancer that would be relevant to control cancer in India.
8. Capacity building and training of all personnel in cancer prevention and early detection to be done for all categories in phased manner.
9. Health education of the general public through use of audio, video and print media regarding prevention and early detection of cancers.
10. Promote innovations in cancers care and indigenization of cancer treatment equipments.

Schemes Under the Program

1. **Recognition of New Regional Cancer and Strengthening of Existing Regional Cancer Centres. Main functions:**
 - (i) Cancer detection and diagnosis.
 - (ii) Provision of therapy.
 - (iii) After care and rehabilitation.
 - (iv) Preventive measures with emphasis on health education, especially for tobacco related cancers.
 - (v) Training of paramedical and medical staff.
 - (vi) Research
 - (vii) Co-ordination with the medical colleges and the general health structure is the essential feature.
2. **Oncology Wings in Medical Colleges:**
 - (i) Main target of NCCP—to develop oncology wings in all medical colleges.
 - (ii) Medical colleges would form an important link between the regional centres on one hand and the more peripheral health infrastructure (District hospitals, Tehsil hospitals, PHCs) on the other hand.
3. **District Cancer Control Program:**
 - (i) *The District program has five elements:*
 - (a) Health education
 - (b) Early detection

- (c) Training of medical and para-medical personnel's.
- (d) Palliative treatment and pain relief.
- (e) Co-ordination and monitoring.
- (ii) The District programs are linked with Regional Cancer Centres/ Government Hospitals/Medical Colleges.
- (iii) Pt. B.D. Sharma PGIMS, Rohtak, Haryana is one of the Regional Cancer Centre out of the 19 Regional Cancer Research and Treatment Centres recognized by Government of India. A grant of ₹ 75 lakh every year is being given to these 19 Regional Cancer Centres by the Government of India.
- (iv) For effective functioning, each district, where program is started has 1 District Cancer Society that is chaired by Local Collector/ Chief Medical Officer.
- (v) *Other members:* Dean/Principal of Medical College, Zila Parishad representative, NGO representative *etc.*
 - **Research and Training:** Training Manuals for health professionals, cytology, palliative care and tobacco cessation have been developed under the program for capacity building in cancer control at the district level.

4. Voluntary Organization:

- (i) Financial assistance has been provided to NGOs for the purpose of undertaking IEC and early detection activities in cancer.
- (ii) NGOs will implement IEC and early detection activities under the co-ordination of the nodal agency, which will be regional centre or oncology wing.

Implementation

1. The pilot project was started in the states of Bihar, Tamil Nadu, Uttar Pradesh and West Bengal under the direct supervision of the state Regional Cancer Centres.
2. 20 rural blocks in each of the states of Bihar and Uttar Pradesh and 10 rural blocks in each of the states of Tamil Nadu and West Bengal were selected to implement the pilot project.
3. For each block, 20 female non-communicable diseases (NCD) workers have been selected to play a pivotal role in the success of the project.
4. The workers had cleared their secondary level of education and are mostly from the villages or the localities, where the project is being implemented.
5. The survey questionnaire was designed and translated into the respective regional languages to obtain demographic data, knowledge, attitude and practice about cancer and information about the

- accessibility of the population to primary health care and quality of services rendered by the centres.
6. For every 10 blocks, 5 medical officers and 1 consultant doctor have been recruited to guide and supervise the NCD workers.
 7. The charitable and private sector has been mobilized to participate in cancer control activities through recognition of NGOs or private health care facilities in cancer care.
 8. However, National Integrated Surveillance Program has included the risks of cancer for surveillance. NCCP now comes under NRHM.

New Initiatives

1. India has become the member of International Agency for Research on Cancer (IARC).
2. Onconet India: Telemedicine project to connect 27 RCCs and each RCC with 4–5 peripheral centres is being operationalized.
3. Participation in Health Melas and distribution of health education material.
4. National Cancer Awareness Day is celebrated on the birth anniversary of Nobel Laureate Madam Curie, 7th November.
5. International Childhood Cancer Day is held annually on 15th February to raise awareness about childhood cancer to express support for children, adolescents with cancer, survivors and their families.
6. Telecast of a health magazine 'KALYANI' in the current year with cancer and anti-tobacco items under the agreement with Prasar Bharati and MOHFW.
7. Broadcast of health education audio material developed by CNCI, Kolkata, through FM Radio.
8. Community Based Cancer Control Program carried out with the help of WHO:
 - (i) Training of health care personnel at district level in early detection and awareness of cancer.
 - (ii) Telemedicine in cancer.

National Cancer Registry Program

Cancer registration is the process of systematically and continuously collecting information on malignant neoplasm.

Two types of cancer registries:

1. **Hospital based registries:** At Chandigarh, Dibrugarh, Thiruvananthapuram, Bengaluru, Mumbai and Chennai, 6 hospital based registries are maintained.
2. **Population based registries:** Five in urban areas (Delhi, Bhopal, Mumbai, Bengaluru and Chennai) and one in rural area (Barshi in Maharashtra).

National Cancer Registry Program was launched in 1982, by Indian Council of Medical Research (ICMR) to provide true information on cancer prevalence and incidence.

Objectives

1. To generate authentic data on the magnitude of cancer problem in India.
2. To undertake epidemiological investigations and advise control measures.
3. Promote human resource development in cancer epidemiology.

Cancer Vaccine

Cancer vaccines have the potential to reduce the burden of cancer. Cancer vaccines are intended either to treat existing cancers (therapeutic vaccines) or to prevent the development of cancer (prophylactic vaccines).

1. Treatment or therapeutic vaccines:

- (i) Are administered to cancer patients.
- (ii) Are designed to strengthen the body's natural defenses against cancers that have already developed.
- (iii) Prevent further growth of existing cancers.
- (iv) Prevent the recurrence of treated cancers.
- (v) Eliminate cancer cells not killed by prior treatments.

2. Prevention or prophylactic vaccines:

- (i) Administered to healthy individuals.
- (ii) Are designed to target cancer-causing viruses.
- (iii) Prevent viral infection.

The vaccine possesses the vast and strong anti-tumoral properties due to a unique combination of telomerase antigen imitators together with more than 40 other tumour specific antigen imitators in its composition.

The chances of the complete destruction of a tumour depend on:

- (a) Number of tumour cells (size of a tumour) and their mitotic activities.
- (b) Type of tumour histological structures, antigen structures, the number of HLA-A class molecules on tumour cells.
- (c) Initial state of the immune system.

The main components of the vaccine are glycoproteins, which imitate particular fragments of tumour antigens. *Example:* Resan Vaccine.

Resan vaccine

Anti-tumoral agent.

Indications

1. Preventing the formation of tumours in healthy people.
2. For preventing relapses of malignant tumours after radical operation.
3. Usage as anti-metastatic drug.
4. Usage as an immunotherapy of benign tumours.

National Program for Prevention, Control of Diabetes, Cardiovascular Diseases and Stroke (NPDCS)

Magnitude of the Problem

1. During the year 2005, NCD accounted for 53 per cent of all the deaths in the age group of 30–59 years in India. Of these, 29 per cent were due to cardiovascular (CV) diseases. It is estimated that by the year 2020, CV diseases will be the largest cause for disability and death, as a proportion of all deaths in India.
2. According to Diabetes Atlas, 2006, published by International Diabetes Federation, the number of diabetics in India is currently around 40.9 million and is expected to rise to 69.9 million by 2025, unless preventive steps are taken.

3. Similarly, 118 million people were estimated to have high BP during 2000, which is expected to go upto 213 million by 2025.
4. Not only this, Indians succumb to diabetes, high BP and heart attacks 5–10 years earlier than their western counterparts, during their most productive years. This leads to considerable loss of productive years to country, leading to huge economic loss as high as 237 billion dollars by the year 2015.
5. The pilot program was launched on 4th January, 2008 in 7 states with 1 district each from Assam (Kamrup), Punjab (Jalandhar), Rajasthan (Bhilwara), Karnataka (Shimoga), Tamil Nadu (Kancheepuram), Kerala (Thiruvananthapuram), Andhra Pradesh (Nellore) with objective of providing integrated action plan for prevention and control of these chronic diseases. Financial outlay for the pilot phase was ₹ 5 crore.
5. To train human resource within the public health set up, *viz.* doctors, paramedics and nursing staff to cope up with the increasing burden of NCDs.
6. To establish and develop capacity for palliative and rehabilitative care.

Components

The following components are envisaged in the program:

1. District NPCDCS program (626 districts).
2. NCD focal centres at medical colleges (54 medical colleges).
3. State/UT NCD cell (35).
4. National NCD cell at centre.
5. IEC/BCC.
6. Capacity building and research.
7. Inter sectoral convergence.
8. Monitoring (including MIS) and evaluation.

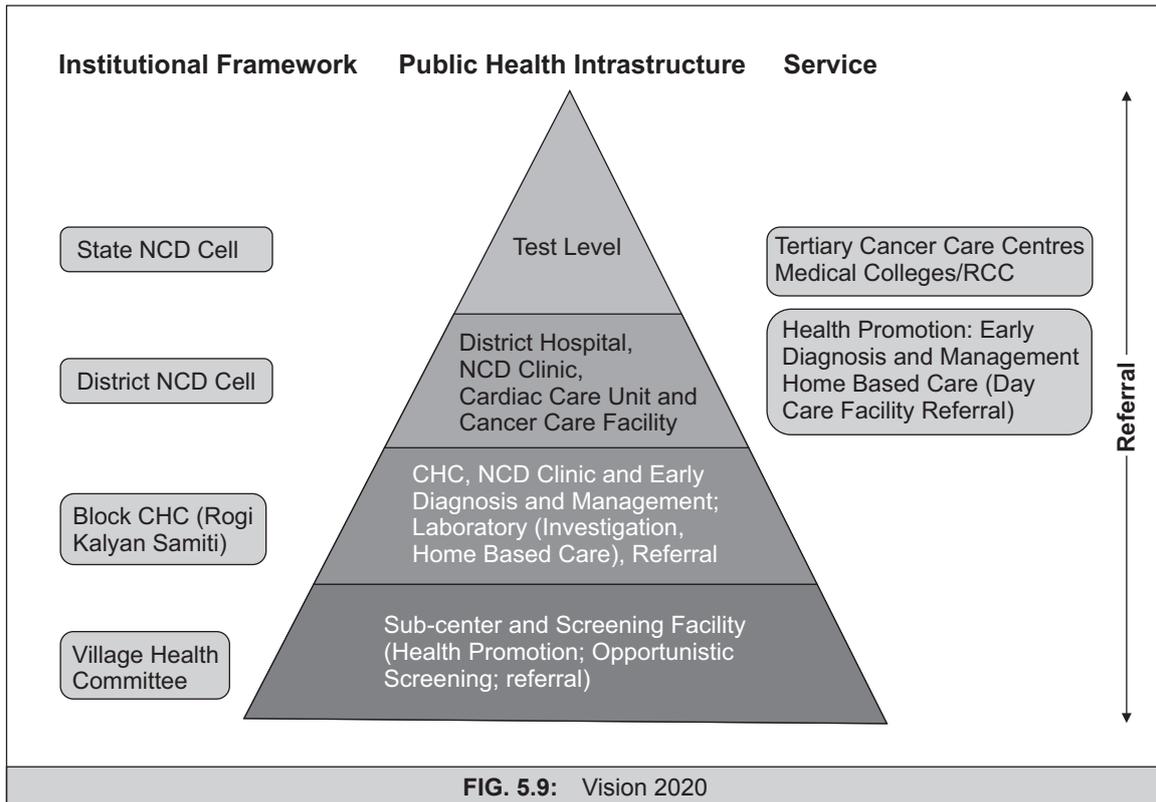
In the program, it is envisaged is providing preventive, promotive, curative and supportive services (core and integrated) for Cancer, Diabetes, CV diseases and Stroke at various government health facilities with provision for expanding the diseases covered under the program to chronic lungs diseases, geriatric diseases *etc.* The program interventions have been grouped into the following three components:

- (i) Health promotion for general population.
- (ii) Disease prevention for the high risk group.
- (iii) Assessment of prevalence of risk factors.

Objectives

1. To prevent and control common NCDs through behaviour and lifestyle changes.
2. To generate awareness on lifestyle changes.
3. To provide early diagnosis and management of common NCDs.
4. To build capacity at various levels of health care for prevention, diagnosis and treatment of common NCDs.

Services Available under NPCDCS at Different Levels



National Iodine Deficiency Disorder Control Programme (NIDDCP)

The Problem of Iodine Deficiency Disorder (IDD)

Surveys, conducted by the central goitre survey teams of the Directorate General of Health Services and also reassessment surveys by ICMR during the period from 1959–1982 revealed that no country is free from goitre. It was estimated that 140 million people were living in goitre endemic areas and nearly 45 million

of them were suffered from goitre *i.e.* about 32 per cent.

The National Goitre Control Programme came into existence during second five year plan (1956–1962), iodized salt was used in Kangra valley for mass prophylaxis of Goitre. The success of this experiment leads to initiation of centrally sponsored national programme.

National Goitre Control Programme was launched in 1962 *i.e.* towards the end of second five year plan with the following objectives:

1. Identification of the goitre endemic regions.

2. To supply iodized salt in place of ordinary common salt to the goitre endemic areas.
3. To assess the impact of goitre control measures over a period of time.

In order to control the problem of Goitre the supply of iodized salt was co-ordinated to be available to the people living in the goitre endemic areas of the Himalayan region. The Ministry of Health provides extra cost of iodination of salt to remove financial burden on the consumers. Only 30 per cent of people could be covered due to inadequate production of iodized salt, but the requirement is about 60 per cent. However, there was some reduction in the prevalence rate of goitre as a result of distribution of iodized salt in goitre endemic areas.

National Iodine Deficiency Disorder Control Programme (NIDDCP)

It was realized that iodine is an essential micro-nutrient for normal growth and development. Its deficiency not only causes goitre but also other disorders, such as abortions, stillbirths, mental retardation, deafness, mutism, squint and neuromotor defects. Considering these various factors, the National Goitre Control Programme was renamed to National Iodine Deficiency Disorder Control Programme in 1992 to have a wide coverage.

Aims

To reduce the prevalence of IDD:

1. To less than 10 per cent among adults by 2010.
2. To less than 5 per cent among children of 10–14 years.

3. To 0 per cent of cretins among the newborns by the year 2000.

Objectives

1. To undertake surveys to assess the magnitude of iodine deficiency disorders (IDDs).
2. To supply iodized salt in place of common salt.
3. To conduct re-surveys to assess the impact of control measures after every 5 years.
4. To undertake monitoring of the quality of iodized salt and urinary iodine excretion.
5. To conduct health education and publicity.

Administrative Set-up

1. Salt Commissioner, central office of Government of India, supervises universal iodization. He issues license to salt manufacturers to produce iodized salt liberally containing 15 ppm of iodine.
2. A national reference laboratory for monitoring IDD has been set-up at the biochemistry division of national institute of communicable diseases (NICD), Delhi for training medical and paramedical personnel.
3. About 100 IDD control cells and IDD monitoring laboratories have been established in the states to monitor the quality of iodinated salt and urinary iodine excretion pattern.
4. UNICEF has donated testing kits to district officers to test the quality of iodized salt at the consumer level.

5. To encourage the consumption of iodized salt and directorate of field publicity, Doordarshan, All India Radio have conducted IEC program.

Achievements

1. Consequent upon liberalization of iodized salt production, the salt commissioner has issued license to 930 salt manufacturers, out of which 552 units have commenced production. These units have an annual production of 130 lakh metric tons of iodized salt.
2. An all time high production of iodinated salt of 46 lakh MT was recorded in 2000–01 and it increase 50 lakh by 2007–08 banning on non-iodized salt production by ministry of health and family welfare on 17th May, 2006 for effective implementation of NIDDCP at state level.
3. IDD control cells were established for effective implementation.
4. IDD monitoring laboratories have been set-up.

Pilot Project NIDDCP

Objectives

- To assess and improve the iron and vitamin A deficiency status of school children, adolescent girls and boys, non-pregnant ladies and elderly population who suffered, by supplementing iron and folic acid tablets and vitamin A.
- To assess zinc, zinc deficiency at some level specially soil and different foods.

- To assess the magnitude of dental carries and to prevent and control the same.
- To launch the extensive IEC campaign through mass media in order to improve the dietary habits.
- To co-ordinate with similar on-going programmes being implemented in the country.

Information Education Communication (IEC)

- Activities through song and drama division.
- Activities through Directorate field publicity.
- Activities through Doordarshan.
- Activities through All India Radio.
- Activities through the Directorate of advertisement and visual publicity.
- Activities through the state health Directorate.

Future Plans

- The states to complete surveys in the remaining districts to assess the exact magnitude of IDD.
- To further strengthen the IEC activities with focus on remote rural, backward tribal areas as well as urban slums using appropriate channels of communication to promote consumption of iodinated salt.
- To strengthen existing system of IDD monitoring to ensure supply of good quality iodized salt at reasonable rate preferably through the public distribution system.

- To control the problem of IDD through sustained reduction in its prevalence.

Integrated Management of Neonatal and Child Illness (IMNCI)

Every year more than 9 million children die in developing countries before they reach their fifth birthday, many of them during the first year of life. More than 70 per cent of these child deaths are due to 5 diseases, namely pneumonia, diarrhoea, measles, malaria and malnutrition, and often to a combination of these illnesses. These diseases are also the reasons for seeking care for at least three out of four children who come to health facilities. Child health programmes need to move beyond single diseases to addressing the overall health and well-being of the child. Because many children present with overlapping signs and symptoms of diseases, a single diagnosis can be difficult, and may not be feasible or appropriate. This is especially true for first level health facilities, where examinations involve few instruments, negligible laboratory tests, and no X-ray.

According to SRS Bulletin, 2011, in India, Children (0–6 years) consist of 13.12 per cent of the total population.

Indicators	India	Sources
Neonatal Mortality Rate	33	SRS Bulletin 2012
IMR	44	SRS Bulletin 2012
Under-5 Mortality Rate	59	SRS Bulletin 2012

During the mid-1990s, the World Health Organization (WHO), in collaboration with

UNICEF and many other agencies, institutions and individuals, responded to this challenge by developing a strategy known as the Integrated Management of Childhood Illness (IMCI). An integrated approach is needed to manage sick children to achieve better outcomes. Child health programmes need to move beyond tackling single diseases in order to address the overall health and well-being of the child. Improvements in child health are not necessarily dependent on the use of sophisticated and expensive technologies. Although the major reason for developing the IMCI strategy stemmed from the needs of curative care, the strategy also addresses aspects of nutrition, immunization, and other important elements of disease prevention and health promotion. The objectives of the strategy are to reduce death and the frequency and severity of illness and disability, and to contribute to improved growth and development. This strategy has been expanded in India to include all neonates and renamed as 'Integrated Management of Neonatal and Childhood Illness (IMNCI).

Definition

It is an integrated approach to child health that focusses on the well-being of the whole child. It focussed primarily on the most common causes of child mortality: diarrhoea, pneumonia, measles, malaria and malnutrition, illness affecting child from birth to 2 months, 2 months to 5 years including both, preventive and curative elements to be implemented by families and communities as well as by health facilities.

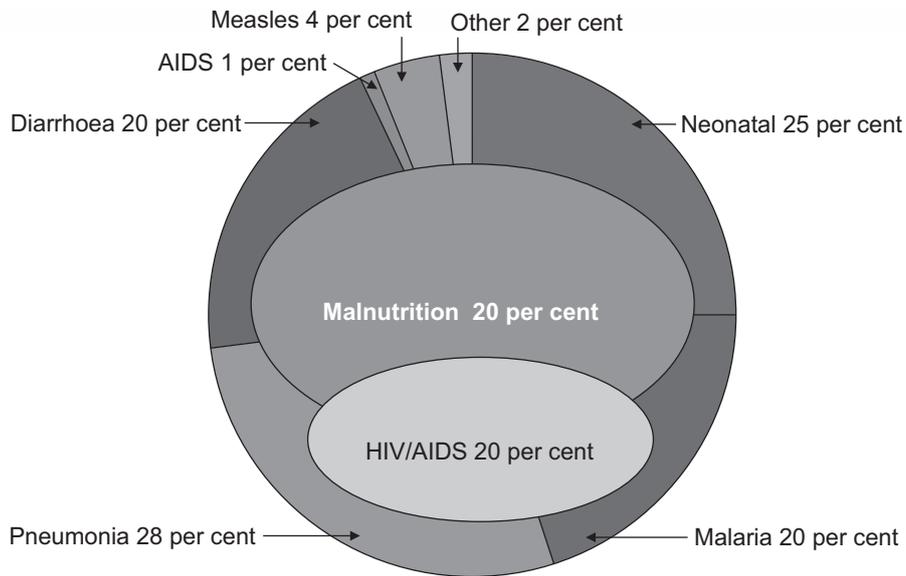


FIG. 5.10: Child Health in Ethiopia, Background Document for the National Child Survival Conference, April, 2004, Family Health Department, Ministry of Health.

The Integrated Management of Neonatal and Childhood Illness (IMNCI) is the Indian adaptation of the WHO—UNICEF generic Integrated Management of Childhood Illness (IMCI) strategy and is the centre piece of newborn and child health strategy under Reproductive Child Health II and National Rural Health Mission. Implementation of IMNCI was started in India, in the year 2003.

Strategy

Its is a strategy that integrates all available measures for health promotion, prevention and integrated management of childhood diseases through their early detection and effective treatment and promotion of healthy habits

within the family and community. It mainly includes 3 components:

1. Improving case management skills of healthcare staff.
2. Improving health systems.
3. Improving family and community health practices.

Aims

To reduce death, illness and disability and to promote improved growth and development among children under five years of age.

Goals

To assess current status of child survival indicators and process indicators for existing programme activities in intervention and compassion districts.

Objectives

1. To determine baseline mortality among children under 5 years of age (NMR, IMR and U5MR).
2. To determine prevalence of diseases (morbidity density) among children under 5 years of age.
3. To assess effective programme coverage for specified disease condition.
4. Causes of under 5 mortality and pathway analysis of events prior to death and recovery of sick under 5 children.
5. Sickness management practices at household, community level and health facility level.
6. Sickness and care providing competencies of health care provider.
7. Health system support for manpower, logistics, referral mechanism, intersectoral co-ordination, social mobilization, monitoring and supervision.

Components

1. **Health Worker Component:** Case management skills.
2. **Health Service Component:** Improvement in overall health.
3. **Community Component:** Improvements in family and community health care practices.

Principles

1. All sick young infant upto 2 months must be assessed for bacterial infection/jaundice and major symptoms of diarrhoea.
2. All sick children 2 months to 5 years must examine for general danger signs

which indicate the need for referral or admission to a hospital.

3. All young infants and child 2 months to 5 years of age must be routinely assessed for nutritional and immunization status, feeding problems and other potential problems.
4. Only a limited number of carefully selected clinical signs are used, based on evidence of drugs sensitivity and specificity to detect disease.
5. A combination of individual signs leads to an infant or child classification rather than diagnosis.

The IMNCI Case Management Process

1. Assessment

Assess a child by checking first for danger signs (or possible bacterial infection in a young infant), asking questions about the common conditions, examining the child and checking nutrition and immunization status. Assessment includes checking the child for other health problems.

2. Classification

Classify a child's illnesses using a colour-coded triage system. Because many children have more than one condition, each illness is classified according to whether it requires:

Classification According to Colour Code

Colour	Classification
Pink	Urgent Pre-Referral Treatment and Referral (Hospital Referral or Admission).
Yellow	Specific Medical Treatment and Advice (Initiation of Special Treatment).
Green	Simple Advice on Home Management.

3. Identification

Identify specific treatments for the child. If the child requires urgent referral, give essential treatment before the patient is transferred. If a child needs treatment at home, develop an integrated treatment plan for the child and give the first dose of drugs in the clinic. If a child should be immunized, give immunizations.

4. Treatment

Provide practical treatment instructions, including teaching the caretaker how to give oral drugs, how to feed and give fluids during illness and how to treat local infections at home. Ask the caretaker to return for follow-up on

a specific date and teach her how to recognize signs that indicate the child should return immediately to the health facility.

5. Counselling

Assess feeding, including assessment of breast feeding practices and counsel to solve any feeding problems found. Then, counsel the mother about her own health.

6. Follow-up Care

When a child is brought back to the clinic as requested, give follow up care and if necessary, re-assess the child for new problems.

Outpatient Health Facility

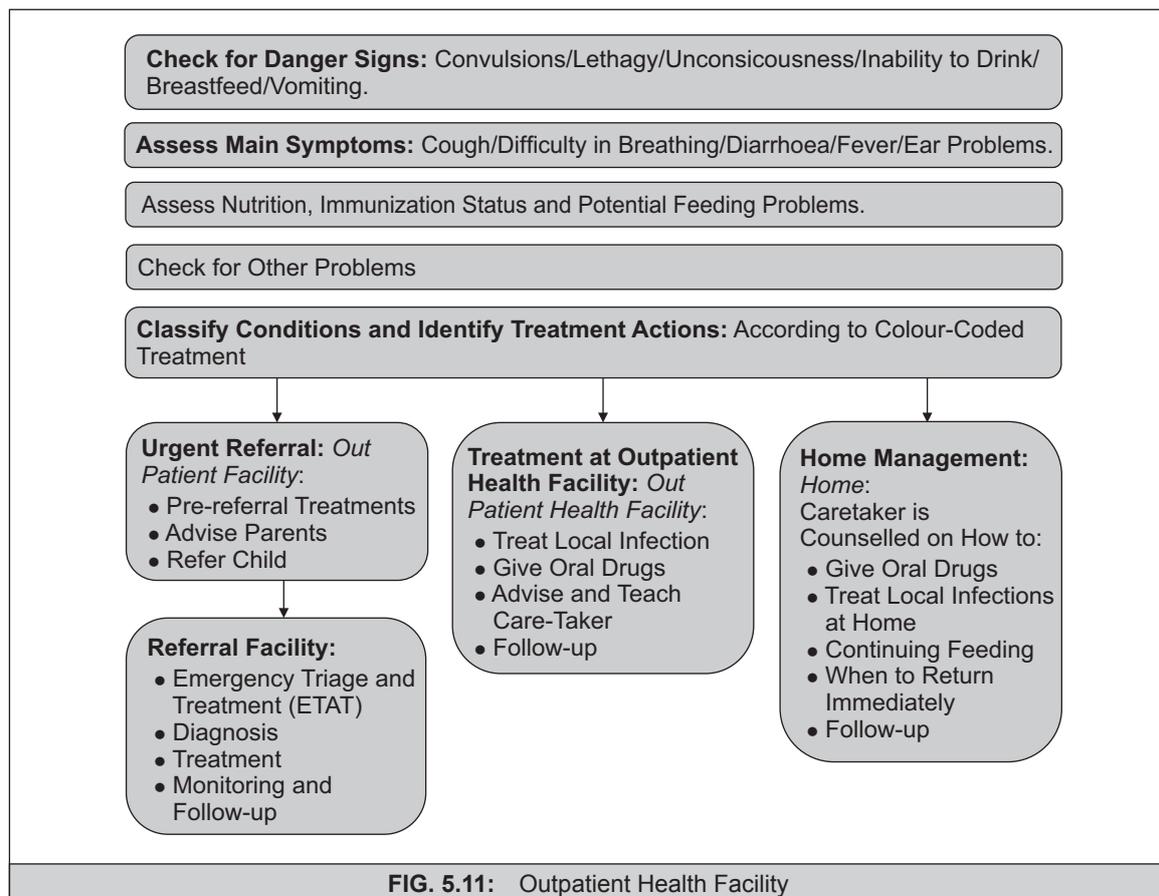


FIG. 5.11: Outpatient Health Facility

Care of Children According to IMNCI

0–2 Months

- Keeping the child warm.
- Initiation of breast feeding.
- Counselling for exclusive breast feeding.
- Cord, skin and eye care.
- Recognition of illness in newborn and management and/referral.
- Immunization.
- Home visit in the post-natal period.

2 Months to 5 Years

- Management of diarrhoea, ARI, malaria, measles, acute ear infection, malnutrition and anaemia.
- Recognition of illness and risk.
- Prevention and management of iron and vitamin A deficiency.
- Counselling on feeding for all children below 2 years.
- Counselling on feeding for malnourished.
- Immunization

National Leprosy Eradication Program (NLEP)

The government started the National Leprosy Control Program in 1955. The objective was to “to control the spread of disease and to render modern treatment facilities to patients”. In 1983, the program was re-designed as National Leprosy Eradication Program and the goal set was “to achieve arrest of disease activity in all the known leprosy cases in the country by the year 2000”.

After the World Health Assembly resolution in 1991, the objective of the program was redefined as “to achieve the elimination

of leprosy in the country by the year 2000, thereby reducing the case load to 1 in 10,000 populations or less”.

At the outset, the objective of NLEP was to achieve elimination of leprosy in the country by the year 2000, by reducing the case load of the disease to 1 or less per 10,000 populations with following strategies:

1. Intensification of early case detection by population survey, school survey, contact survey *etc.*
2. Multidrug chemotherapy (MTD).
3. Health education.
4. Rehabilitation services.

Components

The components of program are as follows:

1. Decentralized integrated leprosy services through general health care system.
2. Capacity building of all general health services functionaries.
3. Intensified information, education and communication.
4. Prevention of disability and medical rehabilitation.
5. Intensified monitoring and supervision.

Multidrug Treatment

MDT used to be initiated only after confirmation of the disease and classified as multibacillary (infectious) and paucibacillary (non-infectious) categories. The treatment used to be given in a phased manner as follows:

1. Multibacillary Leprosy

- (i) Intensive phase (lasting for 14 days):
 - (a) Rifampicin 600 mg daily (supervised).

- (b) Clofazimine 300 mg daily (supervised).
 - (c) Dapsone 100 mg daily (supervised).
- (ii) **Continuation phase (lasting for 2 or more years):**
- (a) Rifampicin 600 mg once a month (supervised) (pulse dose).
 - (b) Clofazimine 50 mg daily and 300 mg (supervised) once a month.
 - (c) Dapsone 100 mg daily (unsupervised).

Duration of treatment used to be for a minimum of 2 years or until 2 consecutive skin smears taken at monthly interval become negative, whichever is later.

The follow-up was done once in 6 months for 5 years.

2. Paucibacillary Leprosy

- (i) Rifampicin 600 mg once a month (supervised).
- (ii) Dapsone 100 mg daily (unsupervised).

MDT is very effective with high cure rate and zero relapses. It prevents deformities and lepra reactions. Duration of treatment was for one year and follow-up was once in 6 months for 2 years.

Infrastructure

NPLS was implemented through the establishment of following infrastructures:

- (i) **Leprosy Control Unit (LCU):**
 - (a) This is established in leprosy endemic areas with the prevalence rate of 5 or more per 1000

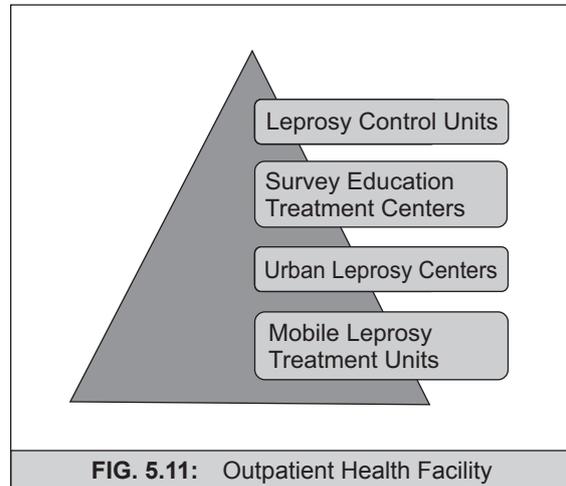


FIG. 5.11: Outpatient Health Facility

population, each unit serving a population of 4.5 lakh.

- (b) Each unit had a staff pattern of: 1 MO, 2 Non-medical Supervisors and 20 Paramedical workers (PMW), each PMW covering a population of 15,000–20,000 and is expected to examine 8000 persons per year by house-to-house survey in his areas of jurisdiction.
 - (c) Each PMW was specially trained to institute domiciliary treatment. Thus, it was a 'vertical program'.
- (ii) **Survey Education Treatment Centres**
- (a) One Survey education treatment (SET) centre is established for a population of 25,000 in those endemic areas, where the prevalence rate of leprosy is less than 5 per 1000 population. They are attached to PHC.
 - (b) Each centre is manned by one PMW, 1 Non-medical supervisor

- for every 4–5 PMWs and the MO of the attached PHC is the administrative, controlling officer.
- (c) Only one PMW is attached to a SET centre. Thus, 'Horizontal Program' is recommended for low endemic districts.

Activities Under SET:

- **Survey:** The whole population is surveyed by the PMW to detect cases of leprosy. The school children also surveyed. During the survey, the investigator (PMW) looks for hypo pigmented patches for loss of sensation over the body, in good daylight, with minimum clothes and palpates peripheral nerves for thickening. Such cases are then referred to MO for further confirmation.
 - **Education:** The PMW gives health education to the patient that leprosy is curable and he should take treatment correctly and completely. He educates the family that not all cases are infectious, it is caused by bacteria, there is a treatment and that the patient should be shown sympathy and should not be thrown out of the family.
 - **Treatment:** All paucibacillary cases are treated with combination of dapsone (DDS) and rifampicin and all multibacillary cases with dapsone, rifampicin and clofazimine. This is called MDT.
- (iii) **Urban Leprosy Centres:** Such ULC were established in urban endemic areas, one for every 50,000 population. It is manned by a non-medical supervisor, who functions under the supervision of MO.
- (iv) **Mobile Leprosy Treatment Unit:** Such unit provides services to leprosy patients in non-endemic areas. Each such unit consists of 1 MO, 1 Non-MO, 1 non-medical supervisor, 2 PMWs and a driver:
- All these organizations work under the administrative control of the State Program Officer (SPO), placed in the Directorate of Health Services. The SPO is chief co-ordinator and technical advisor to the concerned state government.
 - At centre level, the Leprosy Division of the DGHS, New Delhi is responsible for planning, supervision and monitoring of the program. The division is under the control of a Deputy Director General, who advises the Government on all anti-leprosy activities.

Progress of NLEP

1. With the introduction of MDT, it opened a new avenue in the control of leprosy in the country. With MDT services under the NLEP, a large number of leprosy cases are being discharged as 'Disease cured'.

2. For the first time in 1987, the number of MDT cured cases are 10 per cent more than the number of new cases detected and this percentage of cured cases gradually increased subsequently. It became 25 in 1988, 38 per cent in 1989 and over 90 per cent in 1991–92.
3. The annual case load, which was 4.29 lakh during 1994, was reduced to 2.2 lakh during 2004. The prevalence rate which was 57.6 per 10,000 populations during 1981, brought down to 2.3 per 10,000 populations by 2004.

Program Assistance

NGOs also have contributed on functioning of the program. More than 290 NGOs are working in the field of leprosy throughout the country.

Besides the NGOs, several international agencies contribute to the leprosy, elimination effort in the country. Among these, WHO extends money, man-power and material assistance to NLEP. It supplies drugs in the form of blister packs separately for multi-bacillary and paucibacillary leprosy cases and made available free of cost in all the PHCs.

World Bank has offered financial assistance to the program. Support also comes from Danish International Development Agency (DANIDA) and International Federation of Leprosy Elimination (IFLE).

Modified Leprosy Elimination Campaign (MLEC)

The NLEP was appraised in April, 1997 and observed that even though there was good

progress at national level, it was uneven in some states. So, it was decided to launch leprosy elimination campaign.

The multi-drug treatment (MDT) regimen for leprosy was modified under elimination campaign with effect from November 1, 1997, as recommended by WHO Leprosy Elimination Advisory Group of Expert Committee.

The MDT is given free of cost in all the Government Hospitals, PHCs and CHCs. The drugs are available in blister packs. Each blister pack contains drug required for 1 month. The blister packs are different for Paucibacillary, multi-bacillary leprosy and for adults and children.

Regimen for Paucibacillary Cases

- (i) **Single skin lesion—single dose:**

Adults: Rifampicin 600 mg
Ofloxacin 400 mg
Minocycline 100 mg

Children: Half the adult dose

Follow-up: Once in a year for 2 years

Note: If there is no improvement, treatment to be extended for 6 months, with Dapsone daily and Rifampicin once a month, as below.

2. **Single Nerve Lesion with 2–5 Skin Lesions.**

Adults: Dapsone 100 mg daily self-administered.
Rifampicin 600 mg once a month, supervised.

Children: Proportionately less.

Duration of treatment: 6 months.

Follow-up: Once a year for 2 years.

Regimen for Multi-bacillary Cases

- **Adults:**
 - *Dapsone 100 mg* daily. Self-administered.
 - *Clofazimine 50 mg* daily or 100 mg on alternate days. Self-administered.
 - *Clofazimine 300 mg* monthly (pulse) dose supervised.
 - *Rifampicin 600 mg* monthly (pulse) dose supervised.
- **Children:** Proportionately less.
- **Duration of treatment:** 12 months.
- **Follow-up:** Once a year for 5 years.

Campaign Comprises a Package of Activities

This campaign comprises a package of four activities, namely:

- Teaching and training to all health staff.
- Intensified IEC activities.
- Case detection by house-to-house visits to detect new leprosy case.
- Correct and complete treatment.

Goals

The goal was to eliminate leprosy by the year 2005. Several such rounds of campaigns have been executed:

- First round of campaign lead to detection of 4.63 lakh cases.
- Second campaign was carried out from January to March, 2000 with detection of 2.13 lakh cases.
- Third campaign was carried out from October, 2001 to February, 2002 with detection of 1.65 lakh cases.
- Fourth campaign carried out from August, 2002 to March, 2003 leading to detection of 1.04 lakh cases. The

fourth campaign was different from first three campaigns in that states are divided into three categories:

- **Category I:** Eight states were taken up. In the areas with prevalence rate of more than 5/10,000 populations, active search by house-to-house visit was taken.
 - **Category II:** This includes 14 moderate to low endemic states, where extensive IEC activities were taken up alongwith training of health personnel and active search for new cases.
 - **Category III:** This includes 13 very low endemic states, where extensive IEC activities and passive detection of leprosy cases in health centres were carried out.
- The fifth campaign was carried out during December, 2003 to March, 2004 in 6 high priority areas namely Bihar, Chhattisgarh, UP and Maharashtra, Andhra Pradesh and West Bengal states. The activities carried out in these areas, as follows:
 - Four Urban Areas.
 - Four Rural Areas.

Leprosy Elimination Monitoring (LEM)

LEM consists of assessing the performance of elimination campaign on various issues like case detection, quality of services like treatment, IEC activities, drug supply, management, etc. This is carried out by National Institute of Health and Family Welfare (NIHFW), New Delhi, every year in 12 endemic states, for 3 years since June, 2002.

So far 15 states have reached the goal of elimination of leprosy, *i.e.* prevalence rate is reduced to less than 1 per 10,000 populations. In March, 2014, NLEP in Haryana eradicated Leprosy by 0.27/10,000 populations.

National Mental Health Programme

The Government of India has launched the National Mental Health Program in 1982, with a view to ensure availability of Mental Health Care Services for all, especially the community at risk and under privileged section of the population, to encourage application of mental health knowledge in general health care and social development:

1. A National Advisory Group on mental health was constituted under the Chairmanship of the Secretary, Ministry of Health and Family Welfare for the effective implementation of the NMHP.
2. Eleven institutions have been identified for imparting training in basic knowledge and skills in the field of mental health to PHC physicians and paramedical personnel.

Aims

- (a) Prevention, treatment of mental, neurological disorders and their associated disabilities.
- (b) Use of mental health technology to improve general health services.
- (c) Application of mental health principles in total national development to improve quality of life.

Objectives

- To ensure availability and accessibility of minimum mental care for all in the foreseeable future, particularly to the most vulnerable and under privileged sections of population.
- To encourage application of mental health knowledge in general health care and in social development.
- To promote community participation in the mental health services development and to stimulate efforts towards self-help in the community.

Components

- Treatment of mentally ill patients.
- Rehabilitation of disabled mental patients.
- Prevention and promotion of positive mental health.

Personnel Involved in the Program

- The health guides at village level will participate in case identification and referral of patients and will help to supervise the follow-up of patients in need of long term maintenance therapy.
- The health workers at sub-centres level provide first-aid care and follow-up services.
- The health assistants are entrusted the task of early recognition and management of priority psychiatric conditions, carried out under the supervision of medical officer.

- The PHC medical officer is vested with overall responsibility of organizing and supervising the primary level mental health care for population under PHC jurisdiction.

Services

The service component includes three activities:

1. Treatment

The focus is on the following morbidity conditions:

- Acute psychoses of schizophrenia, affective or unknown etiology, paranoid reactions and psychosis, resulting from cerebral involvement (*e.g.* Alcoholic, malaria and epileptic psychosis).
- Chronic or frequently recurring mental illness, such as some cases of schizophrenia, cyclic affective psychosis, epileptic psychosis, dementia and encephalopathy associated with intoxication and chronic organic diseases.
- Emotional illness like anxiety, hysteria and neurotic depression.

2. Rehabilitation

Maintenance treatment of epileptics and psychotics at community level is an important rehabilitative activity. Wherever practical, the rehabilitation centres would be developed at the district level as well as at higher referral centres.

3. Prevention

In the initial phase, the main focus will be upon prevention and control of alcohol related

problems. Later on, addictions, juvenile delinquency and acute adjustment problems will be brought into the ambit. Community leaders and PHC MOs would be actively involved in this activity.

District Mental Health Program (DMHP)

The Government of India launched DMHP as per 100 per cent centrally sponsored scheme for the first five years at the national level in 1996–97, during ninth five year plan as a pilot project.

Objectives of DMHP

- To provide sustainable basic mental health services to the community and to integrate these services with other health services.
- Early detection and treatment of these patients within the community itself.
- To provide mental health care at primary level only.
- To reduce stigma attached towards mental illness through public awareness.
- To treat and rehabilitate mental patients within the community after their discharge from the hospital.

Components of DMHP

- Training programs of all workers in the mental health team at the identified Nodal institute in the state.
- Education of the public regarding mental health to increase the awareness and reduce stigma.

- (iii) For early detection and treatment, out-patient services and in-patient services are provided.
- (iv) Providing valuable data and experience at the level of community to the state and centre for future planning, improvement in service and research.

Thrust Areas

- DMHP will be covering the entire country in phased manner.
- Modernization of mental hospitals to modify their present custodian role.
- Upgrading the department of psychiatry in medical colleges and enhancing the curriculum of psychiatry at both, undergraduate and post-graduate level.
- Strengthening the Central and State Mental Health authorities with a permanent secretariat to make their monitoring role more effective.
- Research and training in the field of community mental health, substance abuse and child/adolescent psychiatric.

Reproductive and Child Health Programme

Definition

The Reproductive and Child health approach has been defined as “people have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancies is successful in terms of maternal and infant survival and well being, and couples are able to have sexual relations, free of fear of pregnancy and of contracting disease”.

Components of RCH - I

1. **Family Planning:** Child Survival and Safe Motherhood (CSSM) component.
2. **Client Approach to Health Care:** Prevention/Management of RTI/STDS/AIDS.

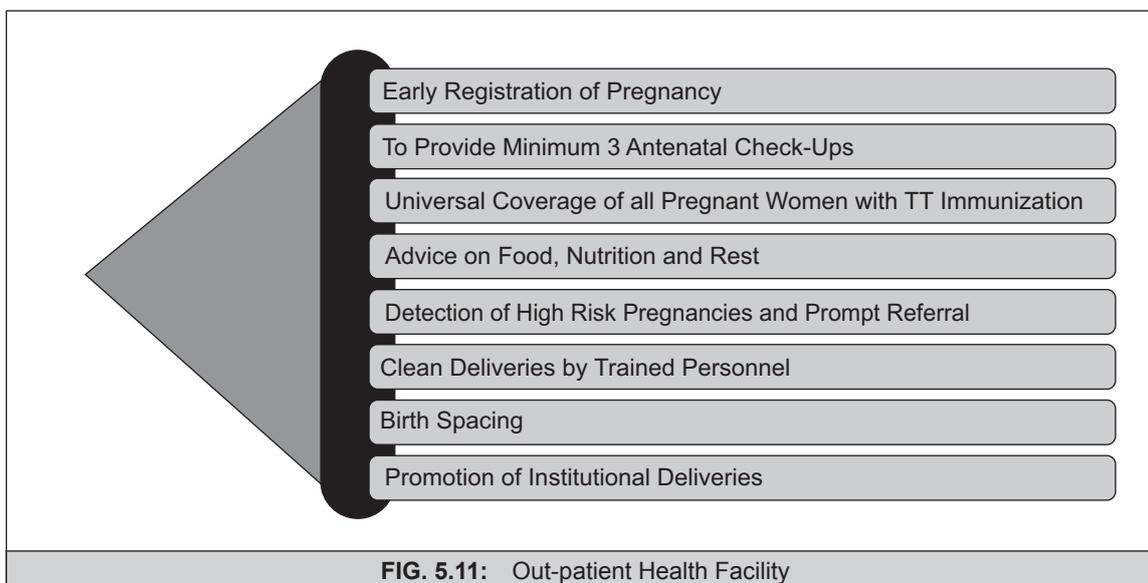
Highlights of RCH Programme

1. The programme integrates all interventions of fertility regulation, maternal and child health with reproductive health for both, men and women.
2. The services to be provided are client oriented, demand driven, high quality and based on needs of community through decentralized participatory planning and target free approach.
3. The programme envisages upgradation of the level of facilities for providing quality of care by setting up First Referral Units (FRUs) at sub-centre level to provide comprehensive emergency obstetric and newborn care.
4. Facilities of obstetric care, MTP and IUD insertion in the PHCs level are improved.
5. Specialist facilities for STD and RTI are available in all district hospitals.
6. The programme aims at improving the outreach services primarily for the vulnerable group of population.

Child Survival and Safe Motherhood Programme

In 1992, the Child Survival and Safe Motherhood Programme component of RCH - I

programme was implemented with the following components:



Services Under RCH - I Programme

1. Essential Obstetric Care.
2. Emergency Obstetric Care.
3. 24 hours delivery services at PHCs/CHCs.
4. Medical Termination of Pregnancy.
5. Control of Reproductive Tract Infections (RTI) and Sexually Transmitted Diseases (STD).
6. Immunization
7. Drug and equipment kits.
8. Essential newborn care.
9. Diarrhoeal disease control.
10. Acute respiratory disease control.
11. Prevention and control of Vitamin A deficiency in children.
12. Prevention and control of anaemia in children.
13. RCH camps.

14. RCH Out-reach scheme.
15. Border District Cluster Strategy.
16. Introduction of Hepatitis B vaccination project.
17. Training of Dais.

Empowered Action Group (EAG)

1. An Empowered Action Group has been constituted in the Ministry of Health and Family Welfare, with Union Minister for Health and Family Welfare as Chairman on 20th March, 2001.
2. As 55 per cent of the increase in the population of India is anticipated in the states of Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Odisha, Chhattisgarh, Jharkhand and Uttaranchal, these states are perceived to be more deficient in critical socio-demographic indices.

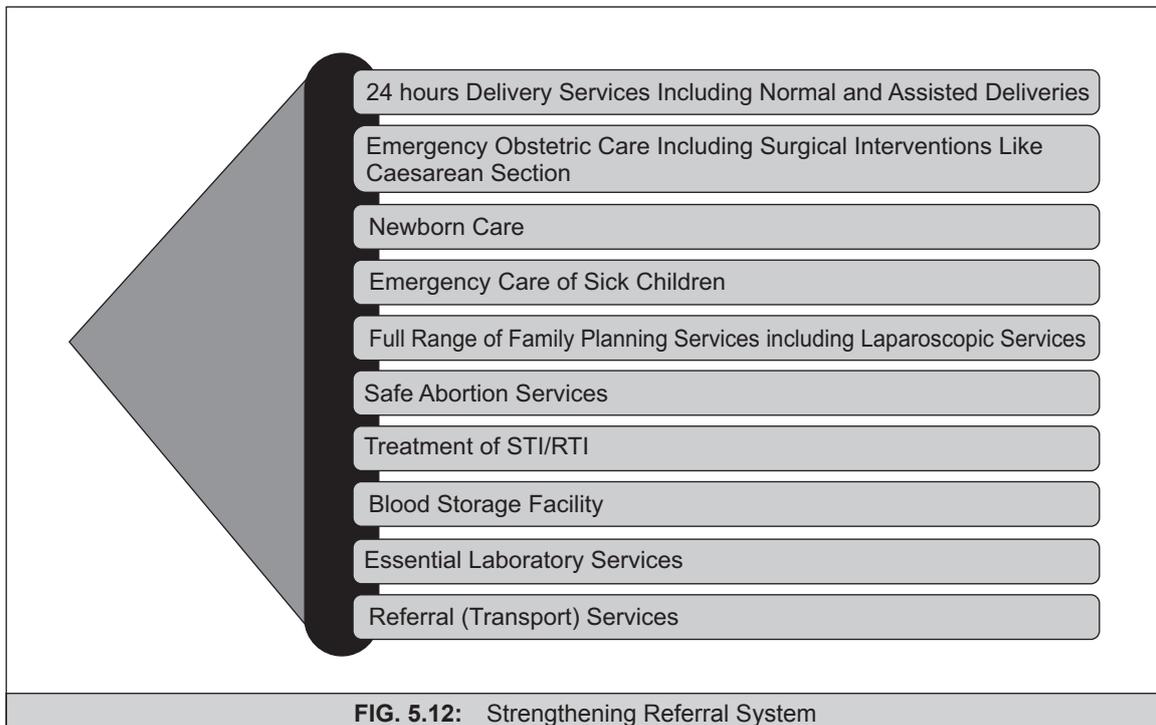
3. Through EAG, these states will get focused attention for different health and family welfare programmes.
4. The RCH programme conducts district based rapid household survey to assess the reproductive health status of women.

RCH Phase - II

RCH phase II began from 1st April, 2005 with the focus on reducing maternal and child morbidity and mortality with emphasis on rural health care.

Strategies

1. **Essential Obstetric Care:**
 - (a) Institutional delivery
 - (b) Skilled attendance at delivery
2. **Emergency Obstetric Care:**
 - (a) Operationalizing 1st Referral Units.
 - (b) Operationalizing PHCs and CHCs for round the clock deliver services.
3. **Strengthening referral system:** The minimum services to be provided by a fully functional FRU are:



New Initiatives

- Training of MBBS doctors in life saving anaesthetic skills for emergency obstetric care.
- Setting up of blood storage centres at FRUs according to Government of India guidelines.

- **Janani Suraksha Yojana:** The National Maternity Benefit scheme has been modified into a new scheme called Janani Suraksha Yojana (JSY) launched on 12th April, 2005.

- **Objectives of JSY:** Reducing maternal mortality and infant mortality through encouraging delivery at health institutions and focussing at institutional care among women in below poverty line families.

- **Features of JSY:**

- It is a 100 per cent centrally sponsored scheme.
- Under National Rural Health Mission, it integrates the benefit of cash assistance with institutional care during ante-natal, delivery and immediate post-partum care. This benefit will be given to all women, both rural and urban, belonging to below poverty line household and aged 19 years or above, upto first two live births.
- The ASHA would work as a link health worker between the poor pregnant women and public sector health institution in the 10 low performing states (Uttar Pradesh, Uttaranchal, Madhya Pradesh, Jharkhand, Bihar, Rajasthan, Chhattisgarh, Odisha, Assam and Jammu & Kashmir).

ASHA Package in Low Performing States (LPS) and High Performance States (HPS)

Package	ASHA (Urban)	Mother (Urban)	ASHA (Rural)	Mother (Rural)
HPS	200	800	200	1000
LPS	200	800	600	1400

The eligibility of cash assistance is as follows:

- **In Low Performance States (LPS):** All women, including those from SC and ST families, delivering in government health centres like sub-centre, PHC, CHC, FRU, District and State hospitals or accredited private institutions.
- **In High Performance States (HPS):** Below poverty line women, aged 19 years and above and the SC and ST pregnant women.

The limitation of cash assistance for institutional delivery is as follows:

- **In Low Performance States (LPS):** All births, delivered in health centre government or accredited private health institutions will get the benefit.
- **In High Performance States (HPS):** The benefit is only upto 2 live births:
 - Vande Mataram Scheme is a voluntary scheme, wherein any obstetric and Gynae specialist, maternity home, nursing home, lady doctor/MBBS doctor can volunteer themselves for providing safe motherhood services. Iron, folic acid tablets, oral pills, TT

injections *etc.* will be provided by the respective District medical officers to the 'Vande Mataram clinics' for free distribution to beneficiaries.

- **Safe abortion services:** Under RCH phase II, following facilities are provided:
 - **Medical method of abortion:** Termination of early pregnancy with two drugs: Mifepristone (RU 486) followed by Misoprostol. They are considered safe under supervision, with appropriate counseling and recommended upto 7 weeks

(49 days) of amenorrhoea in a facility with provision for safe abortion services and blood transfusion.

- **Manual Vacuum Aspiration (MVA)** is a safe and simple technique for termination of early pregnancy, makes it feasible to be used in PHCs or comparable facilities, thereby increasing access to safe abortion services.
- The quality indicators used to monitor and evaluate RCH programme through monthly reports are:

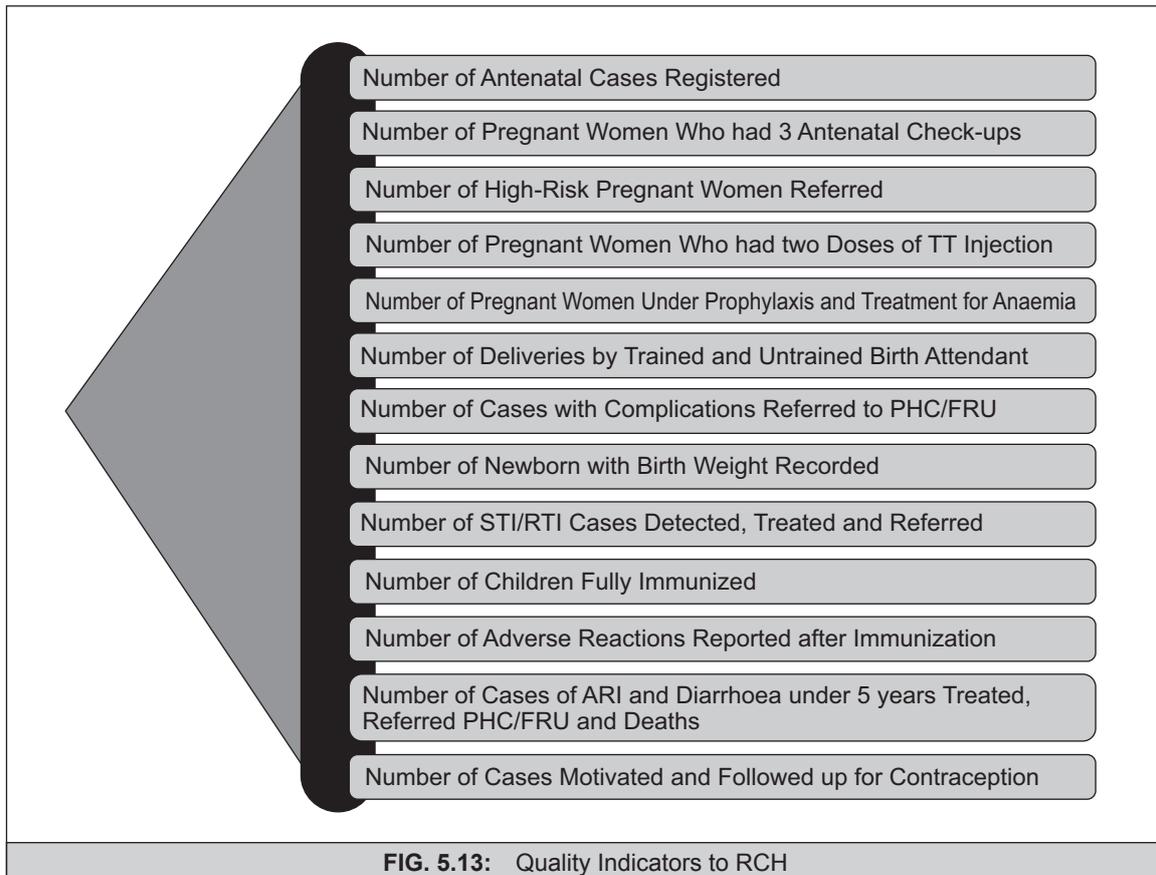


FIG. 5.13: Quality Indicators to RCH

Revised National Tuberculosis Control Programme

The Government of India, WHO and World Bank together reviewed the National Tuberculosis Programme (1962) in the year 1992. Based on the findings of a revised strategy for National Tuberculosis Programme was evolved. The salient features of the strategy are:

1. Achievement of 85 per cent cure rate of infectious cases through supervised Short Course Chemotherapy involving peripheral health functionaries.
2. Augmentation of case finding activities through quality sputum microscopy to detect at least 70 per cent estimated cases.
3. Involvement of NGOs, Information, Education and Communication and Improved Operational Research.

The revised strategy was introduced in the country as a Pilot Project since 1993 in a phased manner as Pilot Project I, Pilot Project II, Pilot Project III.

Organization

1. The profile of RNTCP in a state is as follows:
 - (i) **State Tuberculosis Office:** State Tuberculosis Officer.
 - (ii) **State Tuberculosis Training and Demonstration Centre:** Director.
 - (iii) **District Tuberculosis Centre:** District Tuberculosis Officer.
 - (iv) **Tuberculosis Unit:**
 - (a) Medical Officer TB Control
 - (b) Senior Treatment Supervisor
 - (c) Senior TB Laboratory Supervisor

- (v) Microscopy centres and treatment centres.
 - (vi) DOTS providers.
2. Direct Observation Therapy Short term (DOTS) is a community based tuberculosis treatment and care strategy which combines the benefits of supervised treatment and the benefits of community based care and support.
3. DOTS ensures high cure rates through its three components:
 - (i) Appropriate medical treatment.
 - (ii) Supervision and motivation.
 - (iii) Monitoring of disease status by health services.
4. The success of DOTS depends on five components:
 - (i) Political commitment
 - (ii) Good quality sputum microscopy
 - (iii) Directly observed treatment
 - (iv) Uninterrupted supply of good quality drugs
 - (v) Accountability
5. DOTS plus is a strategy currently under development for the management of multi-drug resistant TB (MDR-TB).
6. The RNTCP views the treatment of MDR-TB patients as a 'standard of care' issue.
7. A nation-wide network of RNTCP quality assured designated sputum smear microscopy laboratories has been set up, providing appropriate, available, affordable and accessible diagnostic services for TB suspects and cases.

8. In view of the new and focussed activities, institutional strengthening at national, state and district level is being taken up by RNTCP.
9. The positions of TB-HIV co-ordinator, urban co-ordinator and communication facilitator have been introduced at state, district and sub-district levels.
10. A major recommendation was that the drugs for paediatric TB cases under RNTCP should be supplied in patient-wise boxes (PWBs), treatment will be based on the child's body weight and there will be 2 generic paediatric PWBs: one for the 6–10 kg weight band and second for the 11–17 kg weight band. Children, weighing less than 6 kg, will be treated with loose anti-TB drugs.

Diagnostic Method of TB

Tuberculin Test or Mantoux Test:

1. It detects whether the person is infected with tubercle bacilli.
2. One Tuberculin Unit (TU) of Purified Protein Derivative (PPD) 0.1 ml, route intradermal and site is flexor aspect of left arm.
3. Mantoux test is read 72 hours (3rd day) and marks the induration (never redness) with pen on 2 sites, take median of 2 reading.
4. Interpretations:
 - (i) If induration > 10 mm is positive.
 - (ii) If induration < 6 mm is negative.
 - (iii) If induration 6–10 mm test is doubtful.

TABLE 5.1: DOTS Medicine Treatment Categorization

Category	Types of TB Patients	Drugs
I	<ul style="list-style-type: none"> • Seriously ill new sputum smear negative. • Seriously ill new extra pulmonary. • New sputum smear positive. 	2 (HRZE) 3 + 4 (HR) 3
II	<ul style="list-style-type: none"> • Sputum smear positive relapse. • Sputum smear positive failure. • Sputum smear positive treatment after default. • Others. 	2 (HRZEs) 3 + 1 (HRZE) 3 + 5 (HRE) 3
III	<ul style="list-style-type: none"> • New sputum smear negative not seriously ill. • New extra pulmonary not seriously ill. 	2 (HRZ) 3 + 4 (HR) 3

1. 2 (HRZE) 3, here 2 indicates time duration of intensive phase *i.e.* 2 months and 3 indicates frequency of TB medicines to be taken by the patient *i.e.* 3 alternate days in a week.
2. 4 (HR) 3, here 4 indicates time duration of continuous phase *i.e.* 4 months.
3. Drugs are supplied in patient wise boxes (PWBs) containing the full course of

treatment and packaged in blister pack. PWBs have colour code indicating category as:

- (i) **Red:** Category 1
- (ii) **Blue:** Category 2
- (iii) **Green:** Category 3

Dosage Strength

Isoniazid (H)	600 mg	2 pills
Rifampicin (R)	450 mg	1 pills
Pyrazinamide (Z)	1500 mg	2 pills
Ethambutol (E)	1200 mg	2 pills
Streptomycin (S)	750 mg	

Diagnosis of Tuberculosis in RNTCP

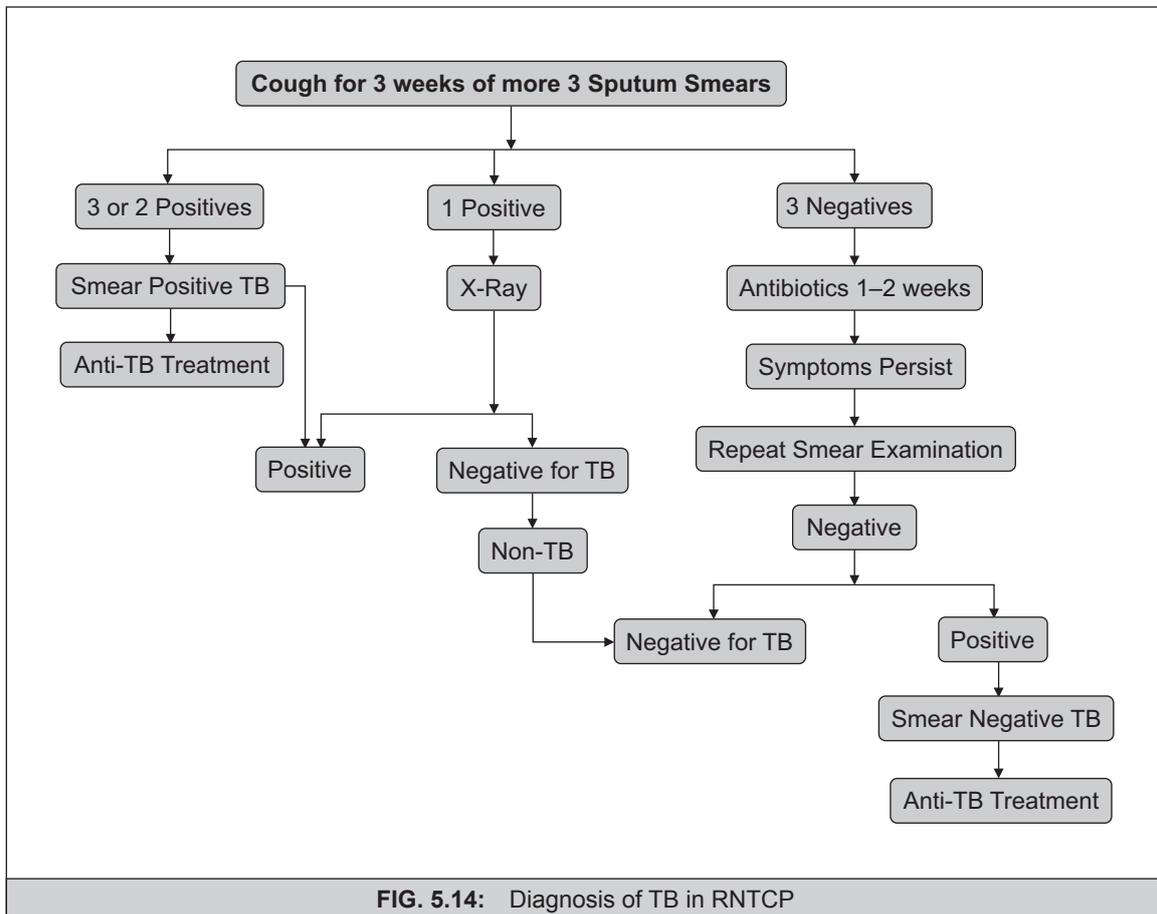


FIG. 5.14: Diagnosis of TB in RNTCP

Universal Immunization Programme

1. In 1974, the WHO launched its 'Expanded Programme on Immunization' against six killer, most common, preventable and childhood diseases *i.e.* diphtheria, pertussis (whooping cough), tetanus, polio, tuberculosis and measles.
2. "Expanded" in the WHO definition meant adding more disease controlling antigens of vaccination schedules, extending coverage to all corners of a country and spreading services to reach the less privileged sectors of the society.
3. The Government of India launched its Expanded Programme on Immunization (EPI) in 1978, with the objective of reducing the mortality and morbidity resulting from vaccine-preventable diseases of childhood and to achieve self-sufficiency in the production of vaccines.
4. "Universal" immunization is best interpreted as implying the ideal that no child should be denied immunization against tuberculosis, diphtheria, pertussis (whooping cough), tetanus, polio and measles.
5. Universal Immunization Programme was started in India, in 1985 and has two vital components:
 - (i) Immunization of pregnant women against tetanus.
 - (ii) Immunization of children in their first year of life against the six EPI target diseases.

Aims

1. To achieve 100 per cent coverage of pregnant women, with 2 doses of tetanus toxoid and at least 85 per cent coverage of infants with 3 doses each of DPT, OPV, 1 dose of BCG and 1 dose of measles vaccine by 1990.
2. To strengthen routine immunization, the Government of India has planned the State Programme Implementation Plan (PIP). It consists of:
 - (i) Support for alternate vaccine delivery from PHC to sub-centre and outreach sessions.
 - (ii) Developing retired manpower to carry out immunization activities in urban slums and underserved areas, where services are deficient.
 - (iii) Mobility support to district immunization officer, as per state plan for monitoring and supportive supervision.
 - (iv) Review meeting at the state level with the districts at 6 monthly intervals.
 - (v) Training of ANM, cold chain handlers, mid-level managers, refrigerator mechanics *etc.*
 - (vi) Support for mobilization of children to immunization session sites by ASHA, women self-help groups *etc.*
 - (vii) Printing of immunization cards, monitoring sheet, cold chain chart, vaccine inventory charts *etc.*

TABLE 5.2: Vaccine Under UIP

Age	Vaccines	Route	Dosage
FOR INFANTS			
At Birth	BCG, OPV	ID, Oral	0.05 ml, 2 drops
1.5 months	OPV, Pentavalent (DPT, Hepatitis B, HiB) – I	Oral, IM	2 drops, 0.5 ml
2.5 months	OPV, Pentavalent (DPT, Hepatitis B, HiB) – II	Oral, IM	2 drops, 0.5 ml
3.5 months	OPV, Pentavalent (DPT, Hepatitis B, HiB) – III	Oral, IM	2 drops, 0.5 ml
9 months	Measles, Vitamin A	S/c, Oral	0.5 ml, 2 Lakh IU
16–24 months	DPT (Booster), OPV, Measles – II, Vitamin A	IM, Oral, SC and Oral	0.5 ml, 2 drops, SC, 1 Lakh IU
5 years	DPT	IM	0.5 ml
10 years	TT	IM	0.5 ml
16 years	TT	IM	0.5 ml
FOR PREGNANT WOMEN			
Early in Pregnancy	TT-1	IM	0.5 ml
1 month after TT-1	TT-2	IM	0.5 ml

National Vector Borne Disease Control Program

- The Directorate of National Vector Borne Disease Control (NVBDC) Program is the national nodal agency for prevention and control of major vector borne diseases of public health importance, namely:
 - Malaria
 - Filaria
 - Japanese Encephalitis (JE)
 - Kala Azar
 - Dengue/Dengue Haemorrhagic Fever (DHF)
 - Chikungunya Fever
- This program now comes under the umbrella of National Rural Health Mission (NHRM).
- The NVBDC is one of the most comprehensive and multifaceted public health activities in the country.
- Factors increasing the risk of vector borne disease outbreaks:
 - (i) Increasing urban population.
 - (ii) Shortage of water supply.
 - (iii) Traditional water storage.
 - (iv) Poor garbage collection.
 - (v) Changing lifestyle (use of water coolers *etc.*)
 - (vi) Rapid transportation.
- According to the Ninth Five year plan, following has been set up for NVBDCP:
 - (i) **Vision:** A well-informed and self-sustained, healthy India free from vector borne diseases with equitable access to quality health care.

- (ii) **Mission:** An integrated and accelerated action towards reducing mortality on account of Malaria, Dengue and Japanese Encephalitis by half, elimination of Kala-Azar by 2010 and elimination of Lymphatic Filariasis by 2015.

Objectives

1. To prevent mortality due to vector borne diseases.
2. To reduce morbidity due to vector borne diseases.
3. Elimination of Kala-Azar and Lymphatic Filariasis.
4. Involvement of NGOs/Private Sector/Community/Local self-government.
5. Quality assurance on laboratory diagnosis.
6. Long lasting insecticide treated nets.
7. Supportive interventions including behaviour change communication (BCC), Public private partnership and inter-sectoral convergence, human resource development through capacity building, operational research including studies on drug resistance and insecticide susceptibility, monitoring and evaluation through periodic reviews/field visits and web based management information system.

Goals

1. To reduce the case incidence including morbidity on account of Malaria and Dengue, Chikungunya and Japanese Encephalitis by 50 per cent by 2017.
2. To achieve elimination of Kala-Azar and Lymphatic Filariasis by 2015.

Strategies

1. **Disease Management:**
 - (i) Early case detection and complete treatment.
 - (ii) Strengthening of referral services.
 - (iii) Epidemic preparedness and rapid response.
2. **Insecticide resistance in vector:** More research will be supported to understand the causes of resistance and its management.
3. **Legislative measures:** Civics bye-laws and building bye-laws will be enforced.

Burden of Vector Borne Diseases in India

1. Malaria

Malaria cases have consistently declined from 2.8 million to 1.31 million during the year 2001 to 2011. Similarly, Pf cases have declined from 1 to 0.6 million cases during the same period. This indicates declining trend of overall endemicity of malaria in the country. The analysis of the state wise data of year 2011 shows that 90 per cent of malaria cases in the country are reported in 12 states, namely Odisha, Jharkhand, Chhattisgarh, Maharashtra, Madhya Pradesh, Gujarat, West Bengal, Uttar Pradesh, Assam, Rajasthan, Andhra Pradesh and Haryana. A total of 1221008 cases of Lymphatic Filariasis were reported during the year 2011.

S. No.	Vector Borne Diseases	Year	Cases	Deaths
1.	Dengue	2011	18860	169
2.	Chikungunya	2011	20402	-
3.	Japanese Encephalitis	2011	8247	1169
4.	Kala- Azar	2011	33043	80

According to Annual Report on Implementation of NVBCDP in Haryana (2010), during the year 2010, 18,921 cases with 763 Pf cases

have been reported in the State, showing the declining position as compare to the 32,272 cases reported during the year 2009:

Year/VBD	Malaria			Dengue		Chikungunya		Japanese Encephalitis	
	Total Cases	Pf cases	Deaths	Conf. Cases	Deaths	Conf. Cases	Deaths	Conf. Cases	Deaths
State (Haryana)	18921	763	-	866	21	1	-	1	1
District (Rohtak)	Cases		Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
2010	825		-	20	2	1	-	-	-

CHC Wise Epidemiological Data of Malaria in District Rohtak for the Year 2010:

Name of District	Name of CHC	Population	Total +Ve Cases
Rohtak	Rohtak (U)	383563	124
	Kiloi	151100	206
	Chiri	103971	64
	Kalanaur	163291	210
	Meham	167184	211
	Sampla	110909	11
Total		1080018	825

Malaria began originally as National Malaria Control Programme in 1953. The Control Programme converted into Eradication

Programme in 1958. Milestones of Malaria Control Activities in India:

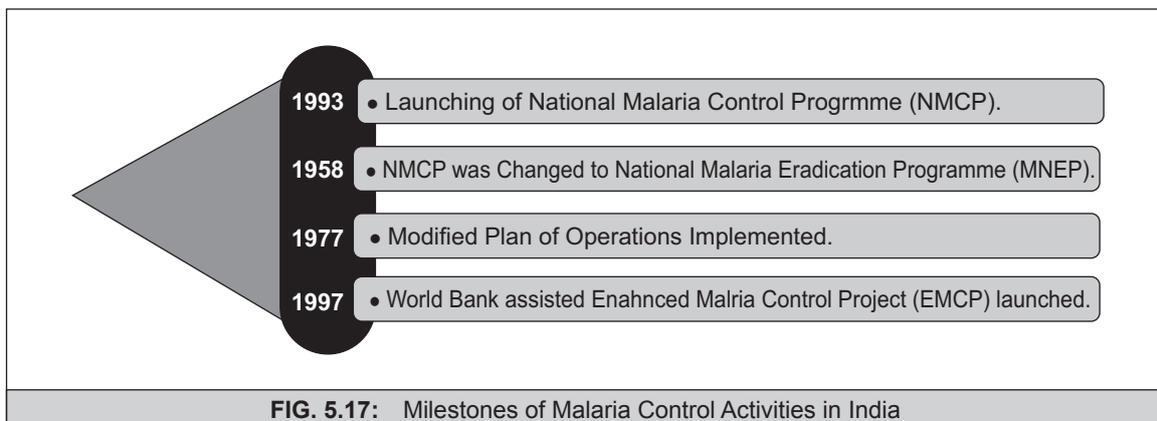


FIG. 5.17: Milestones of Malaria Control Activities in India

Fig. 5.17 Contd.....

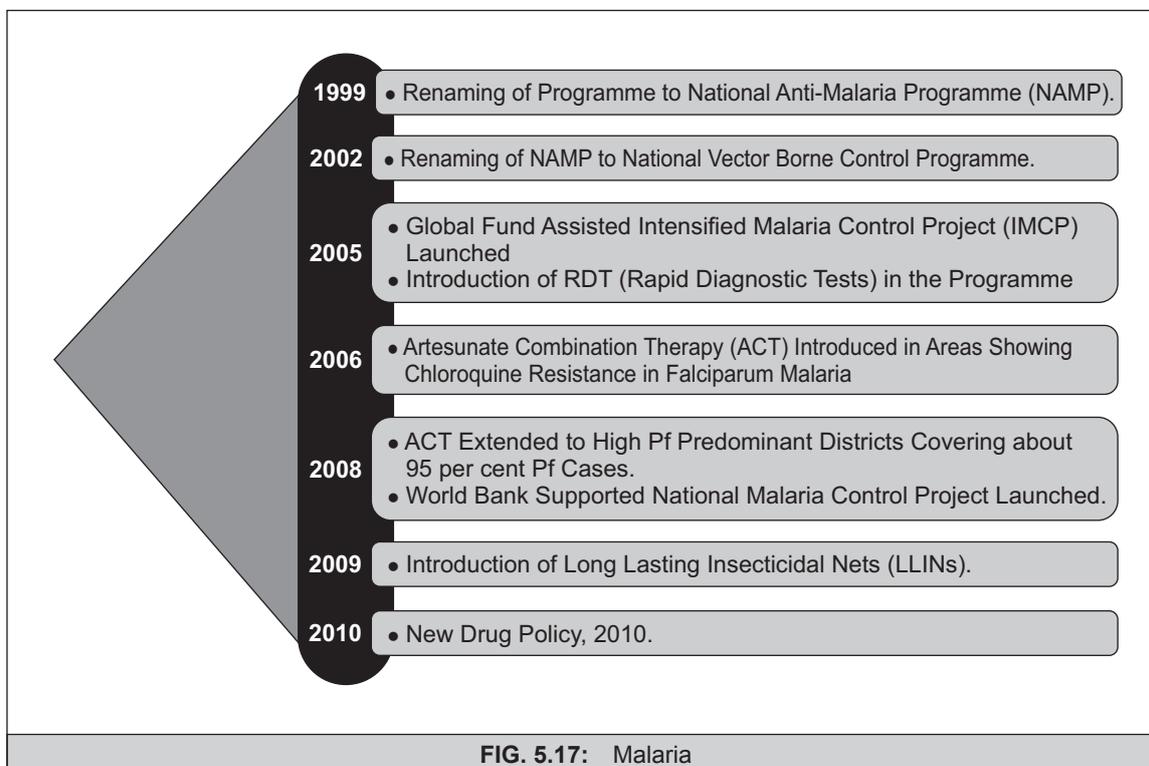


FIG. 5.17: Malaria

Activities

The main activities of the programme are:

- Formulating policies and guidelines
- Technical guidance
- Planning
- Logistics
- Monitoring and evaluation
- Co-ordination of activities through the States/Union Territories and in consultation with national organizations, such as National Centre for Disease Control (NCDC), National Institute of Malaria Research (NIMR).
- Collaboration with international organizations like the WHO, World Bank, GFATM and other donor agencies.

- Training
- Facilitating research through NCDC, NIMR and Regional Medical Research Centres, *etc.*
- Co-ordinating control activities in the inter-state and inter-country border areas.

Organization

- There are 19 regional offices for Health and Family Welfare under Directorate General of Health Services, Ministry of Health and Family Welfare, located in 19 states, which play a crucial role in monitoring the activities under NVBDCP.

- Every state has a Vector Borne Disease Control Division under its Department of Health and Family Welfare. It is headed by State Programme Officer (SPO), who is responsible for supervision, guidance and effective implementation of the programme and for co-ordination of the activities with the neighbouring States/UTs.
- States are responsible for the procurement certain insecticides for indoor residual spray (IRS), Spray equipment and certain anti-malarias, the central government supplies DDT and larvicides.
- At the divisional level, zonal officers have technical and administrative responsibilities of the programme in their areas under the overall supervision of Senior Divisional Officers (SDOs).
- At the district level, the Chief Medical Officer (CMO)/District Health Officer

(DHO) has the overall responsibility of the programme.

- Spray operations are the direct responsibility of DMO/DVBDC officer in the entire district under overall supervision of CMO and collaborative supervision/monitoring by PHC's Medical Officer. There is one Assistant Malaria Officer (AMO) and Malaria Inspectors (MIs) to assist him.
- The laboratories have been decentralized and positioned at PHCs. The medical officer—PHC has the overall responsibility for surveillance and laboratory services and also supervises the spray.
- Case detection management and community outreach services are carried out by MPWs as well as ASHAs and other community health volunteers.

Classification of endemic areas

The classification of areas, according to Annual Parasite Incidence:

S. No.	Components	Areas with API more than 2	Areas with API Less than 2
1.	Spraying	<ul style="list-style-type: none"> ● Regular Insecticidal Spray with 2 rounds of DDT, unless the vector is refractory. ● Where the vector is refractory to DDT, 3 rounds of malathion are recommended. ● Areas refractory both to DDT and malathion are to be treated with 2 rounds of synthetic pyrethroids spray at intervals of 6 weeks. ● DDT, malathion and pyrethroids dosage applied are 1, 2 and 0.25g per sq. metre surface area respectively. 	Focal Spraying is to be undertaken only around P. falciparum cases detected during surveillance.
2.	Entomological Assessment	<ul style="list-style-type: none"> ● Done by entomological teams ● Carry out susceptibility tests and suggest appropriate insecticide to be used in particular areas. 	
3.	Surveillance	<ul style="list-style-type: none"> ● Collection and examination of blood smears. ● Active and passive surveillance activities are carried out fortnightly 	Active and passive surveillance operations will have to be carried out vigorously every fortnight.

Contd.....

S. No.	Components	Areas with API more than 2	Areas with API Less than 2
4.	Treatment	• DDT Radical treatment	Radical treatment
5.	Follow-Up		Follow-up blood smears are to be collected from all positive cases on completion of the radical treatment and thereafter at monthly intervals for 12 months.
6.	Epidemiological Investigation		All malaria cases are to be investigated. This may be including mass surveys.

Urban malaria scheme

- Launched in 1971 to reduce or interrupt malaria transmission in town and cities.
- The methodology comprises vector control by intensive anti-larval measures and drug treatment.
- About 7.4 per cent of the total cases of malaria and 10.95 of deaths due to malaria are reported from urban areas.
- Control of urban malaria lies primarily in the implementation of civil bye laws to prevent mosquito breeding in the domestic and peridomestic areas.
- The urban malaria scheme under national vector borne disease control programme is presently protecting 115.5 million population from malaria and other mosquito borne diseases in 131 towns in 19 states and Union Territories.
- The civil bye laws are enacted and implemented in Delhi, Mumbai, Kolkata, Chandigarh, bengaluru Chennai, Ahmedabad and Goa *etc.*

- The Expert Committee on Malaria had recommended under the Urban Malaria Scheme:

- Inclusion of all urban areas with more than 50,000 population.
- Reporting slides positivity rate of 5 per cent and above.
- Introduction of active surveillance.

Goals for the strategic plan, 2007–2012

The main national goals for malaria control are:

- At least 50 per cent reduction in mortality due to malaria by the year 2010, as per National Health policy document 2002.
- At least 80 per cent of those suffering from malaria get correct, affordable and appropriate treatment within 244 hours of reporting to the health system, by the year 2012.
- At least 80 per cent of those at high risk of malaria get protected by effective preventive measures, such as ITNs/LLINs or IRS by 2012.

Strategic action plan for malaria control in India (2007–2012)

- (a) **Surveillance and case management:**
- Case detection (active and passive).
 - Early diagnosis and complete treatment.
 - Sentinel surveillance.
- (b) **Integrated vector management (IVM):**
- Indoor residual spray (IRS).
 - Insecticide treated bed nets (ITNs)/Long Lasting Insecticidal Nets (LLINs).
 - Anti-larval measures including source reduction.
- (c) Epidemic preparedness and early response.
- (d) Supportive interventions:
- Capacity building.
 - Behaviour change communication (BCC).
 - Inter-sectoral collaboration.
 - Monitoring and evaluation.
 - Operational research and applied field research.

The major externally supported projects

- **Global Fund supported Intensified Malaria Control Project (IMCP):**
 - Implemented in 106 districts in 10 states, namely 7 North Eastern states and in selected high risk areas of Odisha, Jharkhand and West Bengal covering a population of about 100 million.
 - For a period of 5 years starting from July, 2005 to June, 2010.

- The total financial outlay ₹ 277.20 crores.
- New project supported by Global Fund IMCP-II has started since October, 2010 in 7 North-East states (except Sikkim) for a period of 5 years (2010–2015).

- **World Bank supported Project on Malaria Control and Kala-Azar Elimination:**

- Approved for 5 years effective from March, 2009 to December, 2013.
- Total financial outlay ₹1000 crores.
- Initiated in 93 malarious districts of eight states, namely Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Karnataka and 46 kala-azar districts in three states, namely Bihar, Jharkhand and West Bengal.

2. Lymphatic Filariasis

- The National Filaria Control Programme has been in operation since 1955.
- In June, 1978, the operational component of the NFCP was merged with the urban malaria scheme for maximum utilization of available resources.
- The training and research components, however, continue to be with the Director, National Institute of Communicable Diseases, Delhi.
- Training in filariology under National Institute of Communicable Diseases, Delhi is being given at three regional

Filaria training and research centres situated at:

- Calicut (Kerala).
 - Rajahmundry (Andhra Pradesh).
 - Varanasi (Uttar Pradesh).
- Filaria control strategy includes:
 - Vector control through anti-larval operations.
 - Source reduction.
 - Detection and treatment of micro-filaria carriers.
 - Morbidity treatment.
 - IEC
 - National Filaria Control Programme is being implemented through 206 Filaria control units, 199 Filaria clinics and 27 survey units primarily in endemic urban towns.
 - In rural areas, anti-Filaria medicines and morbidity management services are provided through primary health care system.
 - In India, the National Health Policy, 2002 envisages elimination of Lymphatic Filariasis by 2015.
 - The elimination is defined as “lymphatic filariasis ceases to be public health problem, when the number of micro-filaria carriers is less than 1 per cent and the children born after initiation of ELF are free from circulating anti-genaemia (presence of adult Filarial worm in human body).
 - During 2010, 18 States/UTs except Tamil Nadu and West Bengal were

covered with co-administration of single dose of DEC+ albendazole.

- The Mass Drug Administration (MDA) coverage was 86 per cent in 2009 and 85 per cent in 2010.

Mass drug administration

DEC single dose is given to everyone in community except children under 2 years, pregnant women and very sick persons.

Advantages of single dose mass therapy

- Cost-effective.
- Enhance compliance for persons, who receive treatment.
- Doesn't require complex management infrastructure.
- Integrated with existing primary health care system.

Age (in Years)	Dose of DEC	Number of Tablets
<2	Nil	Nil
2-5	100Mg	1
6-14	200Mg	2
15 and above	300Mg	3

- DEC is now supplied to all MDA districts as 100 mg tablets.

Drug delivery strategies

- House to House administration.
- Booth administration (within 1 km area).
- Special population groups in places like schools, hospitals, industries, prisons *etc.*
- Community aggregations like market places, bus stand, railway stations, fairs *etc.*

Drug requirement

Drug requirement is estimated as follows:

- DEC = 100 mg tablets, multiply the total population by 2.5.
- Albendazole = 400 mg tabs. Multiply the total population by 1:
 - NGO's, community based organizations, faith based organizations and Panchayats should also be involved in the elimination of lymphatic filariasis programme.
 - *Low compliance:* Coverage 40–46 per cent is due to fear of side reaction.

New strategy to achieve lymphatic filariasis elimination

- Lowering the dose of DEC tabs, may help to reduce the side reactions.
- Increasing the dose of Albendazole 800 mg tabs.

3. Kala-Azar

- A centrally sponsored programme was launched in 1990–91.
- The active case searches are carried out during a fortnight, designated as “Kala-Azar Fortnight”, during which the peripheral health workers and volunteers are engaged to make door-to-door search and refer the cases conforming to the case definition of Kala-Azar and PKDL to the treatment centres for definitive diagnosis and treatment.
- National Health Policy (2002) envisaged Kala-Azar elimination by the year 2010.
- An incentive of an amount of ₹ 100 is being provided to the health worker/ASHA for referring a suspected case

of Kala-Azar and to ensure complete treatment after confirmation.

- World Bank is providing assistance in 46 districts in 3 states, namely Bihar, Jharkhand and West Bengal.

4. Japanese Encephalitis

- Japanese Encephalitis is the leading cause of viral encephalitis.
- It mainly attacks children younger than 15 years of age.
- The first evidence of JE transmission in India in 1952, in district Vellore (Tamil Nadu).
- The role of *Culex tritaeniorhynchus* as a vector and the involvement of wading ardeidae and pigs as reservoirs hosts were demonstrated in 1938.
- The major endemic states affected due to Acute Encephalitis Syndrome (AES)/JE were Andhra Pradesh, Assam, Bihar, Delhi, Goa, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Nagaland, Tamil Nadu, Uttar Pradesh and West Bengal.

5. Dengue/Dengue Haemorrhagic Fever

- Dengue is an outbreak prone seasonal viral disease caused by any one of 4 strains of Dengue virus (DEN-1, DEN-2, DEN-3 and DEN-4).
- The virus is transmitted to humans by the bite of an infected Aedes Mosquito.
- Dengue is a self-limiting acute disease characterized by fever, headache, muscle, joint pains, rash, nausea and vomiting.
- Dengue was first isolated in Kolkata, in 1945 and dengue fever was reported 1st time in 1956 from Vellore town of Tamil Nadu.

6. Chikungunya

- Chikungunya is a debilitating non-fatal viral illness.
- It resembles Dengue fever and is characterized by severe, sometimes persistent, joint pain (arthralgia), as well as fever and rash.
- Chikungunya is transmitted by the *Aedes albopictus* and *Aedes aegypti* mosquitoes.
- Humans are considered to be the major source or reservoir of Chikungunya virus.

Strategies

The strategies for prevention and control of vector borne diseases are:

1. Malaria

- Focussed interventions in high malaria endemic areas.
- Early diagnosis and treatment by:
 - Strengthening of human resources for surveillance and laboratory support.
 - Use and scale up of rapid diagnostic test (RDT).
 - Introduction, scale of artemisinin-based combination therapy (ACT) for Pf cases.
- Up-scaling use of long lasting insecticidal nets (LLINs).
- Indoor Residual Spray (IRS).
- Intensive monitoring and supervision.
- Intensified Information, Education and Communication (IEC) and Behaviour Change Communication (BCC) activities involving community.

2. Dengue and Chikungunya

- Strengthening of monitoring and vector surveillance.
- Strengthening of Apex Referral laboratories and sentinel surveillance hospitals.
- Training/re-orientation of medical officers on dengue/DHF case management.
- Intensive IEC/BCC activities by involving community and village health and sanitation committee/local municipal bodies.
- Follow-up with States and municipal bodies for enactment and implementation of legislative measures against breeding of vector (mosquitoes).
- Inter-sectoral convergence for preventing vector mosquito breeding.
- Periodic reviews, focussed and intensive supervision.

3. Japanese Encephalitis

- Strengthening of referral services, diagnostic facilities, monitoring and surveillance activities.
- Capacity building for proper case management at PHC/CHC/District Hospitals.
- Targeted vaccination, with single dose live attenuated SA-14-14-2 vaccine, for children between 1–15 years of age, under Universal Immunization Programme (UIP) in a phased manner and inclusion of JE vaccine in routine immunization in affected districts.
- BCC for personal hygiene and sanitation in affected communities.

- Strengthening of PHCs/CHCs for early case management.
- Involvement of ASHAs in early case referrals and dissemination of information to general public on prevention and control of AES/JE.

4. Kala-Azar

- Expansion of new tools *i.e.* Rapid, Diagnostic Kits (RDK) and oral drug Miltefosine to increase acceptable and compliance of treatment.
- Free diet to all the Kala-Azar patients (including old, new) and one attendant and incentive to patient towards loss of wages during the full period of treatment.
- Incentive to ASHA/Volunteer for referring suspected cases of Kala-Azar and ensuring complete treatment after confirmation by Rapid Diagnostic Kit (RDK) for Kala-Azar.
- Two rounds of focused indoor residual spraying (IRS) under strict supervision and monitoring, using NRHM institutions.

5. Lymphatic Filariasis

- Implementation of Mass Drug Administration with two drug combination (DEC+ Albendazole) in Filaria endemic districts (Mf rate > 1 per cent) for interruption of transmission.
- Specific intensive Behaviour Change Communication (BCC) Campaign for mass drug administration
- Training/re-orientation for mass drug administration for health personnel at different levels, including drug distributors, medical officers and paramedical staff.

- Hydrocele operations for relief of the patients.
- Training on home based care for morbidity management.

NATIONAL HEALTH MISSION

The Union Cabinet vide its decision dated 1st May, 2013 has approved the launch of National Urban Health Mission (NUHM) as a Sub-mission of an over-arching National Health Mission (NHM), with National Rural Health Mission (NHRM) being the other Sub-mission of National Health Mission.

The National Health Mission encompasses its two sub-missions:

1. National Rural Health Mission (NHRM).
2. National Urban Health Mission (NUHM).

The NHM envisages achievement of universal access to equitable, affordable and quality health care services that are accountable

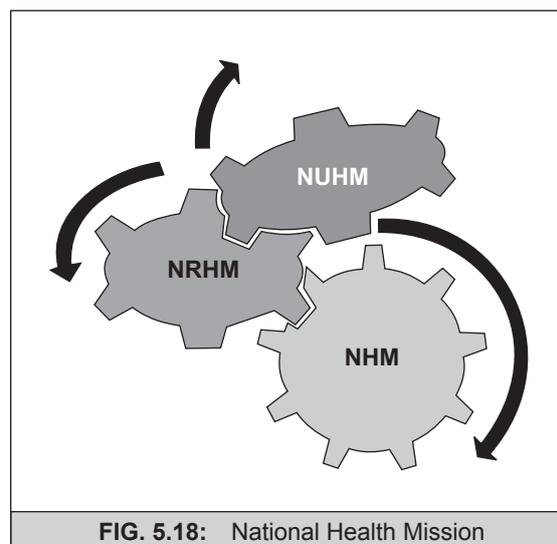


FIG. 5.18: National Health Mission

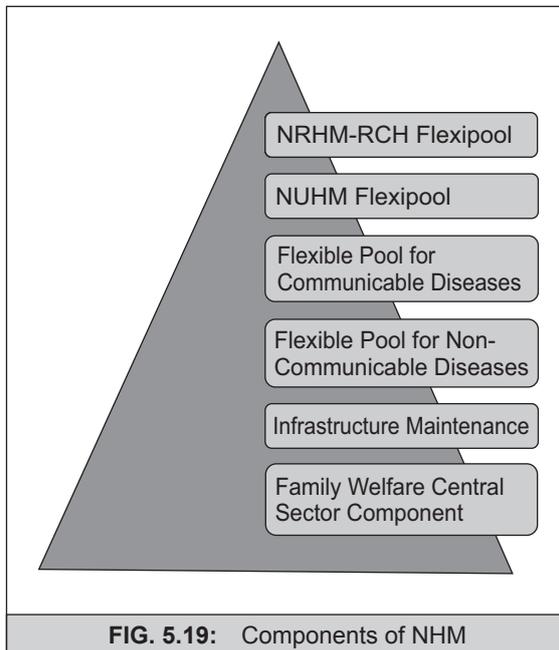
and responsive to people's needs. Outcomes for NHM in the 12th plan are synonymous with those of the 12th plan and are part of the overall vision.

Components

The main programmatic components include Health System Strengthening in rural and urban areas:

1. Reproductive, Maternal, Neonatal, Child Health and Adolescent Health (RMNCH + A)
2. Communicable and Non-Communicable Diseases

NHM has six financing components:



Targets of NHM

- Reduce IMR to 30/1000 live births.

- Reduce MMR to 100/100000 live births
- Reduce TFR to 2.1.
- Annual Malaria Incidence to be <1/1000.
- Kala-Azar Elimination by 2015, <1 case per 10000 population in all blocks.
- Reduce prevalence of Leprosy to <1/10000 population and incidence to zero in all districts.
- Prevention and reduction of anaemia in women aged 15–49 years.
- Prevent, reduce mortality and morbidity from communicable, non-communicable, injuries and emerging diseases.
- Reduce household out-of-pocket expenditure on total health care expenditure.
- Reduce annual incidence and mortality from Tuberculosis by half.
- Less than 1 per cent micro-filaria prevalence in all districts.

NRHM

The Government of India launched National Rural Health Mission (NRHM) on 5th April, 2005 for a period of 7 years (2005–2012). The mission seeks to improve rural health care delivery system. The thrust of the mission is on establishing a fully functional, community owned, decentralized health delivery system with inter-sectoral convergence at all levels, to ensure simultaneous action on a wide range of determinants of health, such as water, sanitation, education, nutrition social and gender equality.

Main Aim

The main aim of NRHM is to provide equitable, accessible, affordable, accountable, effective and

reliable primary health care and bridging the gap in rural health care through ASHA.

Targets of NHRM

- IMR reduced to 30/1000 live births by 2012.
- MMR reduced to 100/100000 live births by 2012
- TFR reduced to 2.1 by 2012.
- Malaria mortality reduction rate is 100 per cent by 2010.
- Kala-Azar reduction rate is 50 per cent by 2010.

- Filaria reduction rate is 70 per cent by 2010 and elimination by 2015.
- Dengue mortality reduction rate is 50 per cent by 2010.
- Cataract operation increases up to 45 lacs per annum.
- Leprosy prevalence rate reduce from 1.8/10000 in 2005.
- TB DOTS series maintain 85 per cent cure through mission period.

NHRM—Health Systems Strengthening

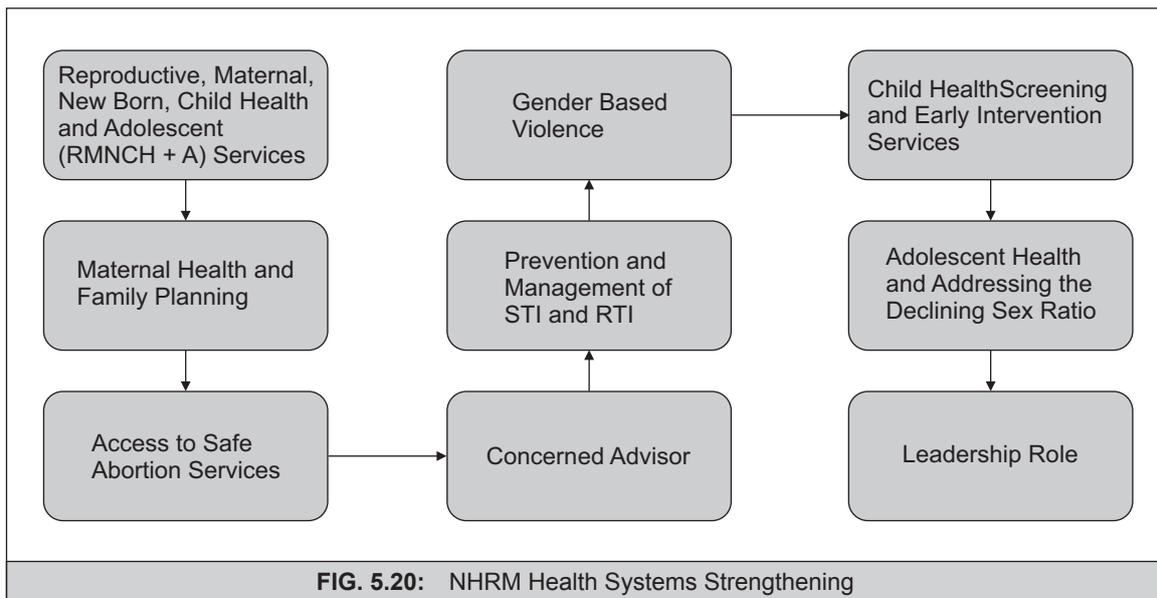


FIG. 5.20: NHRM Health Systems Strengthening

NUHM

The Union Cabinet vide its decision dated 1st May, 2013 has approved the launch of National Urban Health Mission (NUHM) as a sub-mission of an over-arching National Health Mission (NHM).

NUHM seeks to improve the health status of the urban population (50,000 and above) particularly slum dwellers and other vulnerable sections by facilitating their access to quality primary health care.

Flexible Pool for Control of Communicable Diseases:

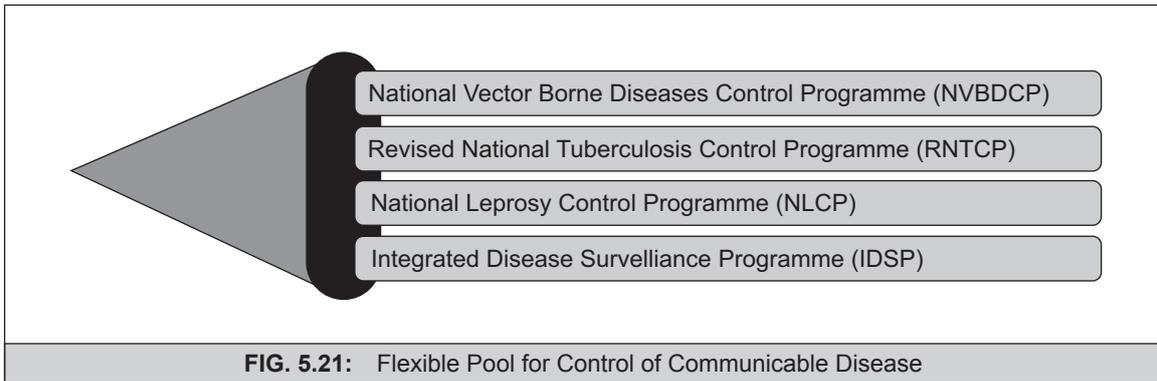


FIG. 5.21: Flexible Pool for Control of Communicable Disease

Flexible Pool for Control of Non-Communicable Diseases:

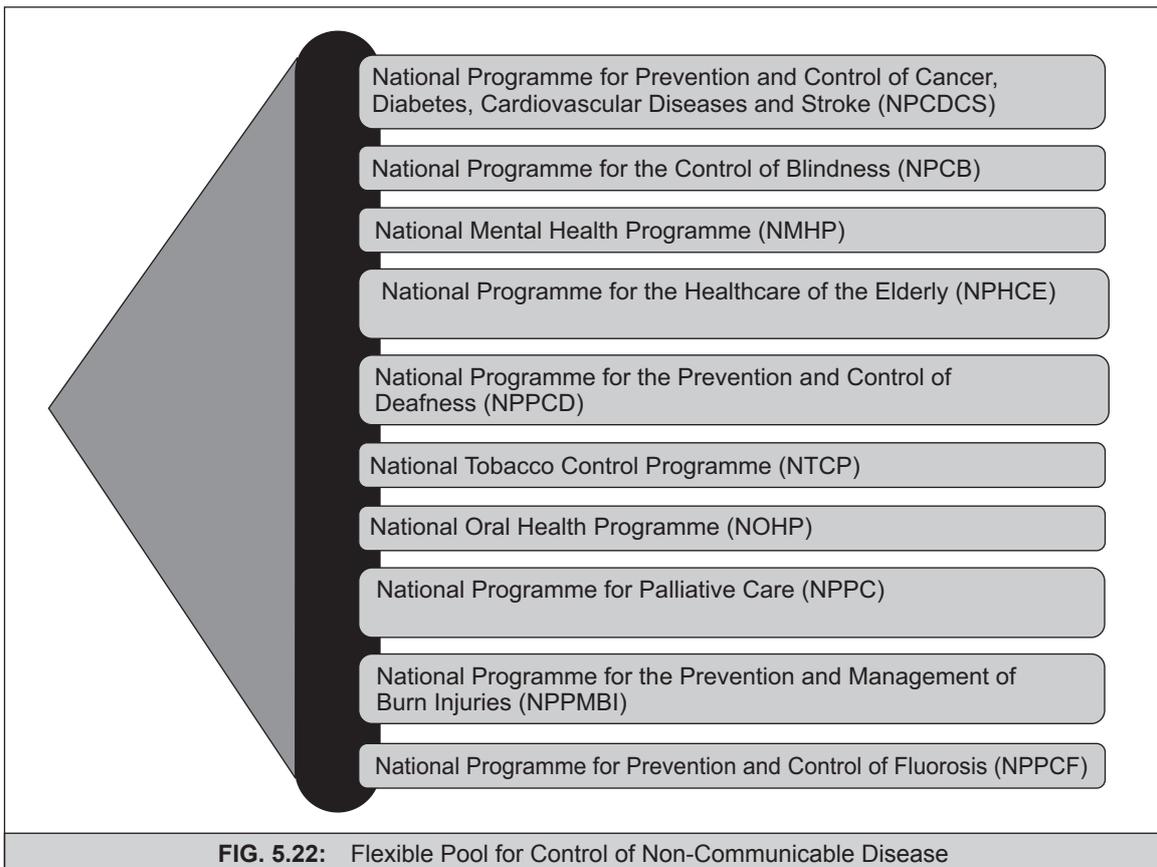


FIG. 5.22: Flexible Pool for Control of Non-Communicable Disease

Critical Areas for Concerted Action Towards Health Systems Strengthening

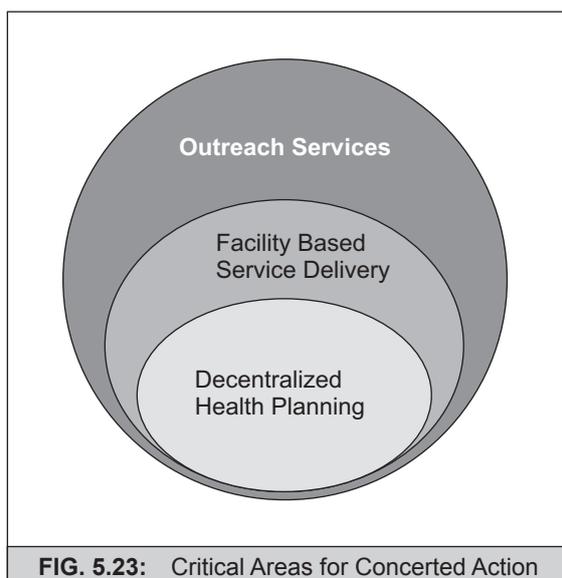


FIG. 5.23: Critical Areas for Concerted Action

1. Decentralized Health Planning

- The District Health Plan is an important institutional structure for enabling decentralization, convergence and integration and is also the vehicle for promoting equity and prioritizing the needs of the most socially and economically vulnerable groups in a district.
- The District Health Action Plan will be developed as an instrument of progress towards the provision of universal health care in a phased manner.

2. Facility Based Service Delivery

- A Facility Development Plan has the following components:
 - Infrastructure

- Equipment
- Human resources
- Drugs and supplies
- Quality assurance systems
- Service provisioning

- With the launch of NUHM, primary health care in urban areas would be strengthened, and district hospitals would be enabled to provide multi speciality referral care.
- All district hospitals would have a quality management system that would be certified against set standards.
- An approach to quality certification would be developed, based on learning from the pilots in quality management systems undertaken in the XI plan period.

3. Outreach Services

- Sub-centres are the hub for delivering effective outreach services in rural areas.
- Most outreach activities will take place at the village level, with the Anganwadi Centre being the usual platform for service delivery.
- For facilitating access to the community and for the safety of the providers, new construction of sub-centres must be located in well-populated and frequented parts of the village.
- Health care delivery facilities should be within 30 minutes of walking distance, from habitation, implying that additional sub-centres population is dispersed, would need to be created.

- The drugs and supplies provided to the sub-centres would be integrated with the state drug procurement and logistics system.
- The pattern of Medical Mobile Units (MMUs) will depend on the geography and could provide package of services equivalent to a primary health centre, and have the necessary HR, equipment and supplies.

National Family Welfare Programme

Historical Developments

1. The concerns about fertility levels and population growth were initially voiced during the second decade of 20th century in India.
2. An excess of population was considered as the major factor interfering with combating and overcoming evils of ill health, illiteracy and ignorance, death and poverty from the society.
3. The First Family Planning Clinic was opened at Poona by Prof. R.D. Karve in 1923.
4. In 1946, a Health Survey and Development Committee chaired by Sir Joseph Bhore, advised for deliberate limitation of family size and recommended the provision of integrated preventive, promotive and curative primary health care services with high priority for improving nutritional and health status of mother and child.

Five Year Plans (1951–2002)

1. First Five Year Plan (1951–56)

- The National Family Planning Programme was launched in 1952.
- The services were rendered through clinic approach.
- Contraceptive supplies and educational material were distributed.
- Training and research was conducted.

2. Second Five Year Plan (1956–61)

Suggested to integrate family planning and health education activities with community development to systematize the programme.

3. Third Five Year Plan (1961–66)

- The Family planning programme was considered as the centre of planned approach for overall development.
- There was a shift from clinic approach to extension education approach.
- The services were extended to community level in the villages and urban areas, both through extension educators to motivate people for small family norm and provide contraceptives.
- In 1965, Lippes loop was introduced.
- A separate department of family planning was set up in 1966 in the Ministry of Health.

Period (1966–69)

- Family planning programmes although voluntary in nature but became time bound and target oriented.
- The family planning infrastructure, which included urban family planning

centres, district and state bureaus, was strengthened.

4. Fourth Five Year Plan (1969–74)

- Family planning programme was given top priority by the Government of India.
- The family planning services were rendered through sub-centres, primary health centres and MCH and family welfare centres as integral part of MCH services.
- All India Hospital Post Partum Programme was started in 1970 to motivate mother for family planning soon after delivery.
- In 1972, Medical Termination of Pregnancy Act, 71 was implemented.

5. Fifth Five Year Plan (1974–79)

- The department of family planning was renamed as Department of Family Welfare.
- The population control and family planning were made as concurrent subject in January, 1977 by the 42nd amendment of the constitution.

6. Sixth Five Year Plan (1980–85)

- Through Primary health care approach the Government of India accepted a National Health Policy in 1983 which had laid down long term demographic goals to be achieved by year 2000 AD.
- *Goals:*
 - Net reproductive rate 1 (2 child norm).
 - Crude birth rate 21/1000 live births.
 - Crude death rate 9/1000 population.
 - Couple protection rate 60 per cent.

- The National health policy had also laid emphasis on reorganization and strengthening of health care delivery system.

7. Seventh Five Year Plan (1985–90)

Various maternal and child health related programmes were started and strengthened such as Universal Immunization Programme, Oral Rehydration Therapy and various other MCH programmes were brought together under Child Survival and Safe Motherhood Programme (CSSM) during this plan period for effectively tackling the issue of population stabilization.

8. Eighth Five Year Plan (1992–97)

- The major thrust areas included focus on delivery of quality services and integration with other sectors.
- In April, 1996 target approach was renounced and target free approach was adopted.
- The target free approach emphasized on providing quality services on demand based on needs of the people.
- The Reproductive Child Health (RCH) was launched and the scope of family welfare programme was widened.
- The RCH programme included:
 - All the components of the safe motherhood programme with the added component of Reproductive tract infection/Sexually transmitted infection (RTI/STI).
 - All the components of child survival.
 - Fertility regulation with a focus on quality care.

RCH Programme

- Aims to improve the management of services at the central, state, district and block level.
- Seeks to attain holistic approach in implementation of the programme.
- Focuses on neglected geographical areas. *Example:* area projects in poorly performing states and district integrated projects in remote/border districts.
- Also, focusses on previously neglected segments of population, such as urban slums, men, adolescents *etc.*

9. Ninth Five Year Plan (1997–2002)

- The target free approach has been renamed as Community Need Assessment Approach (CNAA) from 1997.
- According to this approach, Annual action plans are to be prepared in the beginning of each year by the concerned State Health and Family Welfare authorities at various levels, starting with the grass root level workers at periphery.
- A comprehensive National Population Policy, 2000 has been formulated to promote family welfare programme and achieve the set goals and objectives.

School Health Services**School Health**

According to American School Health Association, “All the strategies, activities and services offered by, in or in association with schools that are designed to promote student’s physical,

emotional and social development make up a school’s health program”.

School health is an important branch of community health. According to modern concepts, school health service is an economical and powerful means of raising community health. It is a personal health service. Also, it is a forum for the improvement of the health of the nation.

Health Problems of School Children

1. Malnutrition
2. Infectious diseases
3. Intestinal parasites
4. Diseases of skin, eye and ear
5. Dental caries

Objectives of School Health

1. **Health promotion:** The promotion of positive health.
2. **Health protection:** The prevention of diseases.
3. **Health restoration:** Early diagnosis, treatment and follow-up of defects.
4. **Health education:** Awakening health consciousness in children.
6. **Healthy living:** The provision of healthful environment

Role of Community Health Nurse in School Health

On the basis of the aspects of the school health services, the role of Community Health Nurse in School Health are as follows:

1. **Health appraisal of school children and school personnel:** Health appraisal

consists of periodic medical examinations and observation of children by class teacher:

- (i) **Periodical medical examination:** The School Health Committee (1961) in India, recommended medical examination of children at the time of entry and thereafter every 4 years.
 - (ii) **School personnel:** Medical examination should be given to teachers and other school personnel, as they form part of the environment to which the child is exposed.
 - (iii) **Daily morning inspection:** The teacher is a familiar with the children and can detect changes in the child's appearance or behaviour that suggest illness or improper growth and development.
2. **Remedial measures and follow up:** Special clinics should be conducted exclusively for school children at PHCs in the rural areas and in one of the selected schools or dispensaries for a group of about 5000 children in the urban areas.
 3. **Prevention of communicable diseases:** A well-planned immunization programme should be drawn up against the communicable diseases and a record of all immunizations should be maintained as part of the school health records.
 4. **Healthful school environment:** A healthful school environment is necessary for the best emotional and social and

personal health of the pupils. The following minimum standards for sanitation of the school and its environs in India are:

- (i) **Location:** The school premises should be properly fenced and kept free from all hazards.
- (ii) **Site:** The School Health Committee (1961) recommends that 10 acres of land be provided for higher elementary schools and 5 acres of land for primary schools.
- (iii) **Structure:** School should be single storied with minimum exterior wall thickness of 10 inches and should be heat resistant.
- (iv) **Classrooms:** No classroom should accommodate more than 40 students. Per capita space for students in a classroom should not be less than 10 sq. ft.
- (v) **Furniture:** Furniture should suit the age group of students. Desks should be of "minus" type and chairs should be provided with proper back rest with facilities for desk work.
- (vi) **Doors and windows:** The windows should be broad with the bottom sill, at a height of 2–6 inch from the floor level; combined door and window area should be atleast 25 per cent of the floor space.
- (vii) **Colour:** Inside colour of the classroom should be white and should be periodically white-washed.
- (viii) **Lighting:** Classrooms should have sufficient natural light.

- (ix) **Water supply:** There should be an independent source of safe and potable water supply, which should be continuous and distributed from the taps.
 - (x) **Eating facilities:** There should be a separate room provided for mid-day meals.
 - (xi) **Lavatory:** Privies and urinals should be provided—one urinal for 60 students and one latrine for 100 students. Arrangements should be separately made for boys and girls.
5. **Nutritional services:** The School Health Committee (1961) recommended that school children should be assured of at least one nourishing meal by the school through their own cafeteria on a 'no profit no loss' basis.
 6. **First aid and emergency care:** A fully equipped First-Aid post should be provided as per regulations of St. John Ambulance Association of India with the responsibility of giving first-aid and emergency care to pupils who become sick or injured on school premises.
 7. **Mental health:** The school is the most strategic place for shaping the child's behaviour and promoting mental health. Every effort should be made to relieve the tedium of the classroom and no distinction should be made between race, religion, caste or community *etc.*
 8. **Dental health:** A school health programme should have provision for dental examination, atleast once a year. Dental hygienists make preliminary inspection of the teeth and do prophylactic cleansing which is of great value in preventing gum troubles and in improving personal appearance.
 9. **Eye health:** Basic eye health services should be provided in schools for early detection and treatment of eye disorders and also, administration of Vitamin A to children at risk.
 10. **Health education:** The most important element of the school health programme is health education. The goal of health education should be to bring about desirable changes in health knowledge, in attitudes and in practice and not merely to teach the children a set of rules of hygiene.
 11. **Education of handicapped children:** The ultimate goal is to assist the handicapped child and his family so that the child will be able to reach his maximum potential, to lead as normal a life as possible, to become as independent as possible, and to become a productive and self-supporting member of society.
 12. **Proper maintenance and use of school health records:** The purpose of maintaining school health records is to have cumulative information on the health aspects of school children in order to give continuing intelligent health supervision. A cumulative school health record will be useful in analyzing and evaluating school health programmes

and providing a useful link between the home, school and the community.

Occupational Health Services

1. Occupational health is the health science which is related to human work, workplace and work environment.
2. The chief objective of occupational health is the safety of workers in all occupations from injuries and diseases and to improve their health status.
3. According to joint committee of WHO and ILO (1950), Occupational health in all occupations should be:
 - (i) Care and improve the physical, mental and social well-being of workers.
 - (ii) Prevent hindrances to health including those which occur due to workplace.
 - (iii) Protect the workers engaged in occupations.
 - (vi) Provide them a healthy environment.
4. Types of occupational hazards:
 - (i) **Ergonomic hazards:** Hazards related to job environment.
 - (ii) **Physical hazards:** Hazards related to physical environment (light, heat, noise, radiation *etc.*)
 - (iii) **Chemical hazards:** Hazards related to exposure to chemicals.
 - (iv) **Biological hazards:** Hazards related to exposure to infective and parasitic agents at the workplace.
 - (v) **Psychological hazards:** Hazards arise from the workers failure to adapt to an alien psychological environment.
5. Occupational diseases are usually defined as diseases arising out of or in the course of employment.
 - (i) *Diseases due to physical agents:* Cancer, occupational deafness, burns, frost bite, *etc.*
 - (ii) *Diseases due to chemical agents:* Dusts (Pneumoconiosis) due to inorganic dust:
 - Coal Dust—Anthracosis, Silica—Silicosis, Asbestos—Asbestosis and Iron—Siderosis.
 - Due to organic dust.
 - Cane fibre—Bagassosis, Cotton dust—Byssinosis, Tobacco—Tobacosis, Hay or Grain dust—Farmers lung.
 - *Diseases due to biological agents:* Brucellosis, anthrax, tetanus, fungal infections, *etc.*
 - *Occupational cancers:* Cancer of skin, lungs and bladder.
 - *Diseases of psychological origin:* Industrial neurosis, Hypertension, peptic ulcer, *etc.*

Health Problems Due to Industrialization

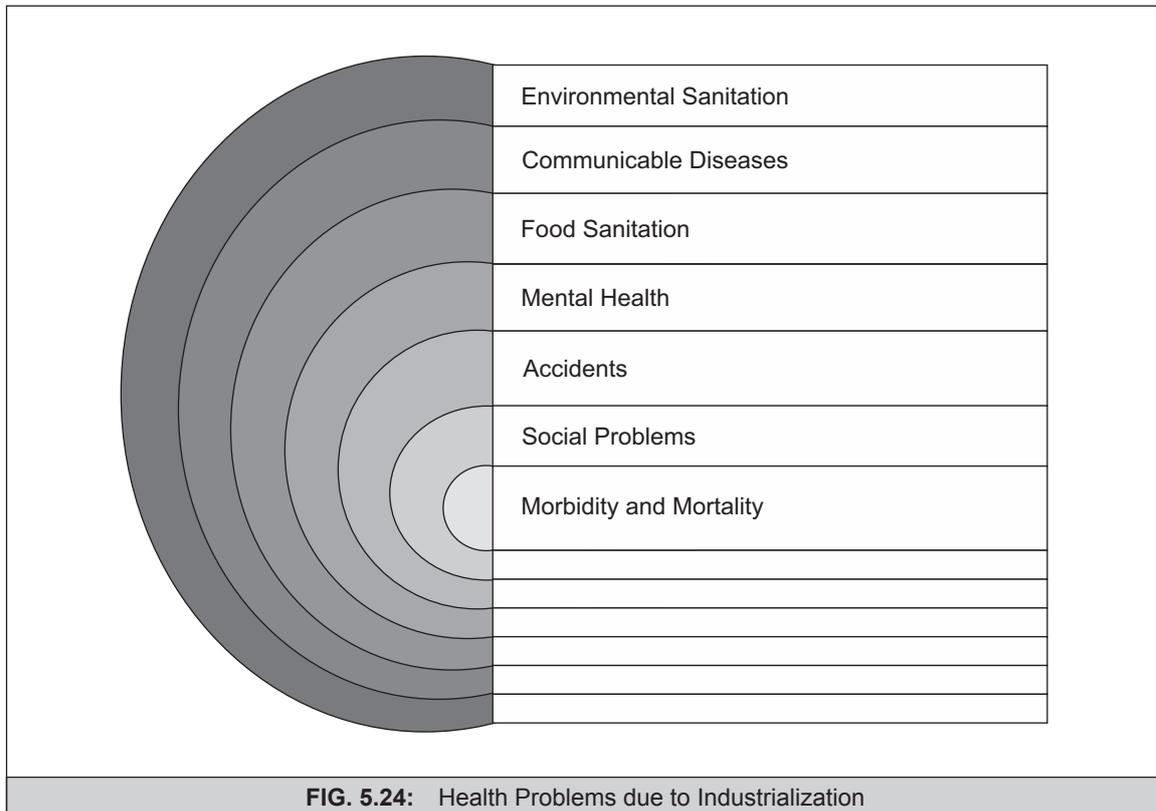
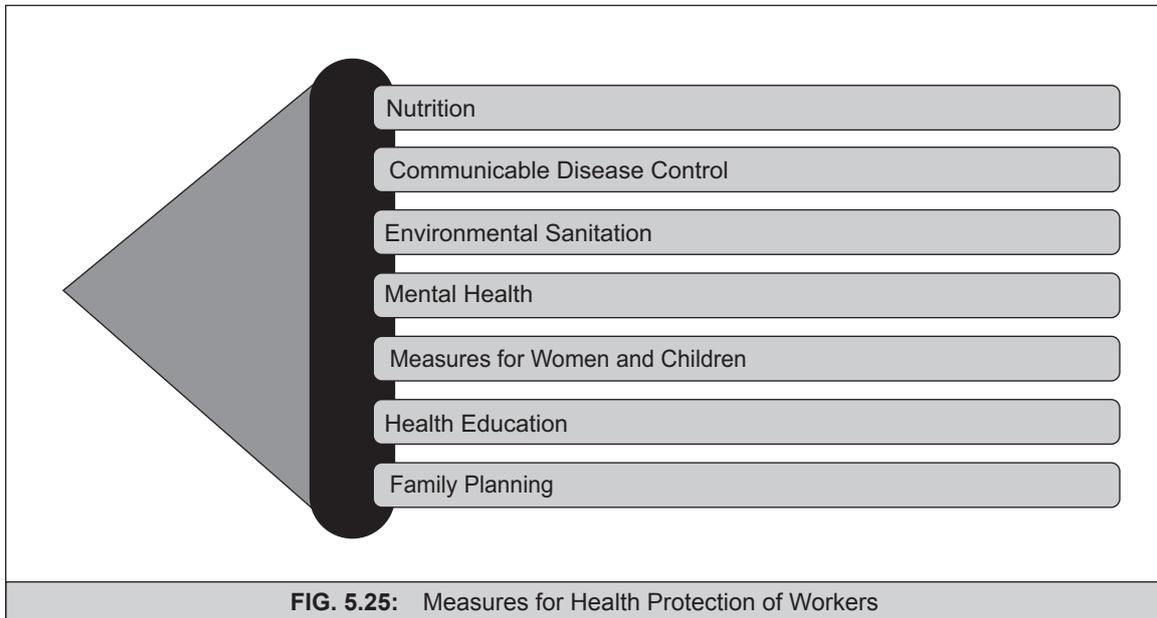


FIG. 5.24: Health Problems due to Industrialization

Measures for Health Protection of Workers

The measures for the general health protection of workers was the subject of discussion by the WHO/ILO Committee on Occupational Health in 1953:

- (i) **Nutrition:** The aim is to provide balanced diets or snacks at reasonable cost under sanitary control.
- (ii) **Communicable disease control:** There should be an adequate immunization programme against preventable communicable diseases.
- (iii) **Environmental sanitation:** It includes sufficient supply of wholesome water, proper sanitary preparation, storage and handling of food, sanitary convenience for every 25 employees, sufficient floor and cubic space, proper lightening, adequate ventilation with suitable temperature and adequate environmental controls against occupational hazards.
- (iv) **Mental health:** The goals of mental health in industry are:
 - (a) To promote the health and happiness of the workers.



- (b) To detect signs of emotional stress and strain and to secure relief of stress and strain where possible.
- (c) The treatment of employees suffering from mental illness.
- (d) The rehabilitation of those who become ill.
- (v) **Measures for women and children:** The following types of protection are available for women workers in India:
 - (a) Expectant mothers are given maternity leave for 12 weeks under the ESI Act, 1948.
 - (b) Provision of free antenatal, intra natal and postnatal services.
 - (c) The Factories Act prohibits night work between 7 PM and 6 AM.
 - (d) The Indian Mines Act prohibits work underground.
 - (e) The Factories Act, 1976 provides for crèches in factories, where more than 30 women workers are employed. Regarding protection of children, the Constitution of India declared: “No Child below the age of 14 shall be employed to work in any factory or mine or engaged in any other hazardous employment”.
 - (vi) **Health education:** The health content varies from matters of personal hygiene and protection to participation of the workers in the planning and operation of the total health service programme in industry.
 - (vii) **Family planning:** Family planning is recognized a decisive factor for the quality of life. The workers must adopt the small family norm.

Prevention of Occupational Diseases

The various measures for the prevention of occupational diseases may be grouped under three heads:

1. Medical Measures

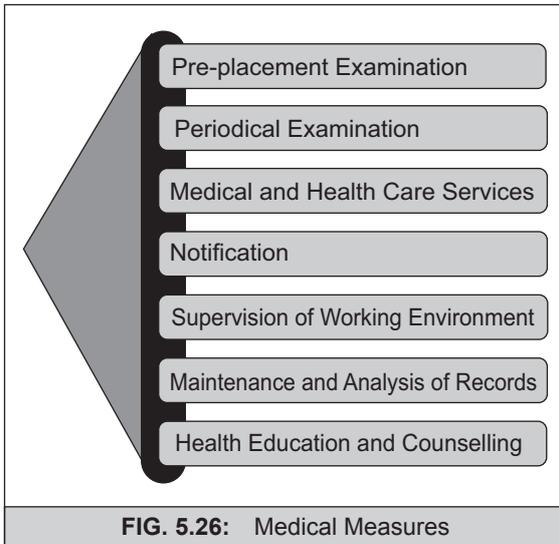


FIG. 5.26: Medical Measures

2. Engineering Measures

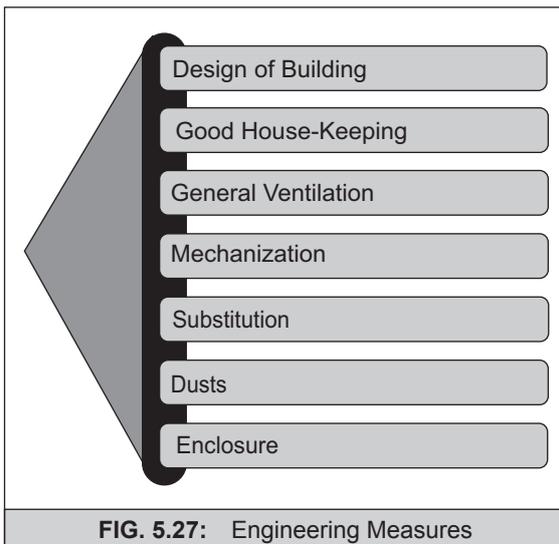


FIG. 5.27: Engineering Measures

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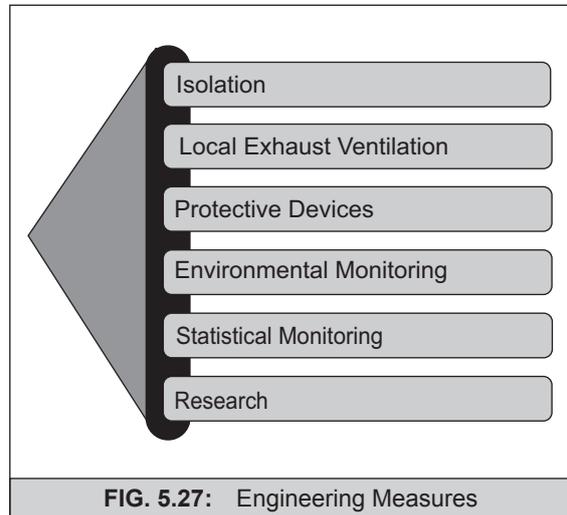


FIG. 5.27: Engineering Measures

3. Legislation

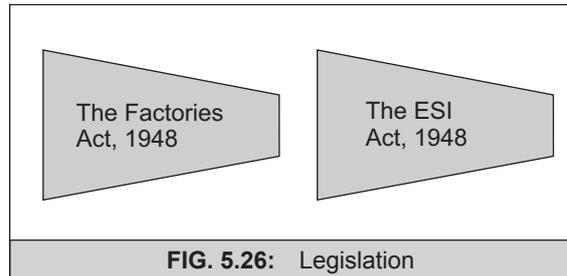


FIG. 5.26: Legislation

The factories Act, 1948

- **Scope:** The Act defines factory as an establishment employing 10 or more workers, where power is used and 20 or more workers, where power is not used.
- **Health, safety and welfare:** Elaborate provisions have been made in the Act with regard to health, safety and welfare of the workers.
- The 1976 amendment provides for the appointment of 'Safety Officers' in every factory, wherein 1000 or more workers are ordinarily employed.

- The 1976 amendment provides for crèches in every factory, wherein more than 30 women workers are ordinarily employed.
- **Employment of young persons:** The Act prohibits employment of children below the age of 14 years and adolescent employee (age between 15–18 and above) is allowed to work only between 6 AM to 7 PM.
- **Hours of work:** The Act has prescribed a maximum of 48 working hours per week, not exceeding 9 hours per day with rest for at least ½ hour after 5 hours of continuous work. The total number of hours of work in a week including overtime shall not exceed 60.
- **Leave with wages:** The Act lays down that besides weekly holidays, every worker will be entitled to leave with wages after 12 month's continuous service at the following rate: adult: 1 day for every 20 days of work, children: 1 day for every 15 days of work.
- **Occupational diseases:** Provision has also been made in the 1976 amendment for safety and occupational health surveys in factories and industries.
- **Employment in hazardous processes:** Specific responsibilities of the occupier in relation to hazardous processes were also made with workers' participation in safety management.

The Employees State Insurance Act, 1948

The Employees State Insurance (ESI) Act, 1948 refer Chapter 3, page no. 73.

AS A MEMBER OF THE HEALTH TEAM

Community Health Nurse as a member of health team is closely related with all national health programmes. She/he should know the aims of participation, needed equipment and resources, programme activities, actions and general instructions related to each national health programme.

Aims of Participation

- To understand and identify the feelings, attitude and adaptability of community towards specific health programmes.
- To implement the policies and programmes related to the health of the people and to get the co-operation of the community.
- To assist in changing the bad habits and adopting the good ones.
- To convert a local person into an effective health worker through good training and assisting the people in identifying and solving their problems.
- To motivate local people.
- To keep the relevant and latest information about national health programmes.

Resources Needed for Participating in the Programme

- To identify the problem:
 - It is essential to maintain morbidity register, clinical register, survey

- register, personal card and family card.
- Making arrangements for the laboratory tests.
- Temperature, pulse and respiration tray, weighing scale and immunization tray, blood pressure apparatus and other devices, as needed.
- Medicines (as per the requirement).
- Health education material (cards, film *etc.*)
- Availability of doctor/any other specialist/assistant worker/health workers/vaccinator *etc.* for the examination of patients.
- Try to change unhealthy religious faiths and superstitions, which are resisting the programme.
- Exchange knowledge and information, so that receptivity for the programme can increase.
- Health programmes should be beneficial to the majority of people.
- Time and implementation of the programme should be convenient for the community.
- Health education should be provided to public regarding the health programme.
- It is essential to get political support and help in implementation of national programmes.

Actions

- Quick identification of patients.
- Assisting in diagnosis and laboratory examination.
- Giving treatment to patients.
- Providing care to patients at home.
- Health education.
- Assisting in achieving the targets.
- Providing supervision and training.
- Preparation and maintenance of reports.
- Evaluation of health programmes.

General Instructions

Community health nurse should pay attention to the following facts, while implementing the health programmes:

- Ensuring participation of community and its leaders for the success of the programme.

TRAINING AND SUPERVISION OF HEALTH CARE WORKERS

Training of Health Care Workers

1. Lady Health Visitor/ Health Assistant/ Health Supervisor (*Refer page no. 53*).
2. Auxiliary Nurse Midwife/Multi-Purpose Health Worker (*Refer page no. 55*).

Supervision of Health Care Workers

All aspects like administration, management, education, guidance, organization and evaluation are included in supervisory responsibility of community health nurse.

It is necessary to delegate proper authorities to the community health nurse through decentralization of power.

The supervisory functions of community health nurse are:

1. **Examining the work of health assistant and health workers employed at the PHCs and sub-centres.**
 - (i) Ensuring and certifying their attendance at the sub-centre.
 - (ii) Looking after their job charts and roles.
 - (iii) Personal guidance and advice.
2. **Educational function:**
 - (i) Arranging for continuing nursing education (CNE) and in service training of nursing personnel employed at the health centres.
 - (ii) Arranging training of local dais (TBAs).
3. **Observation of records:**
 - (i) Observing the records collected and maintained at the sub-centres and PHCs. Making necessary correction and giving guidance.
 - (ii) Examining the reporting system.
4. **Supervision of field work:**
 - (i) Observation of actual home visits and the prescribed home visits of health workers and health assistants.
 - (ii) Observation of technique of home visit.
 - (iii) Supervising the nursing services provided through home visits.
 - (iv) Achievement of home visits.
 - (v) Giving guidance for home visiting.
5. **Personnel evaluation:**
 - (i) Comparing the job chart and actual work done.
 - (ii) Evaluating the achievement of workers employed at the health centres in the field of reproductive and child health (including family planning), control of communicable diseases and in other national programmes.
 - (iii) Preparing checklist for evaluation.
 - (iv) Sending reports or recommendations regarding achievements/ failures of health workers.

EPIDEMIOLOGY

CHAPTER

6

INTRODUCTION TO EPIDEMIOLOGY

Definition

According to World Health Organization, “Epidemiology is the study of the distribution and determinants of health-related states or events (including disease) in specified populations, and the application of this study to the control of diseases and other health problems”.

Concepts

1. Epidemiology is derived from the word “epidemic” (Epi = among; demos = people; logos = study).
2. In 1927, W.H. Frost became the first professor of epidemiology in US.
3. Epidemiology has now become firmly established in medical education.
4. Modern epidemiology has also taken within its scope, the study of health related states, events and “facts of life” occurring in human population.
5. It includes study of health services, used by the population and to measure their impact.

6. Epidemiology is more concerned with the well-being of society as a whole, than with the well-being of individuals.

Aims

According to the International Epidemiological Association (IEA):

1. To describe the distribution and magnitude of health and disease problems in human populations.
2. To identify etiological factors (risk factors) in the pathogenesis of disease.
3. To provide the data essential to the planning, implementation and evaluation of services for the prevention, control and treatment of disease and to the setting up of priorities among those services.

Objectives

1. To prevent, control, eradicate health and health-related problems.
2. To reduce/minimize the impact of health-related problems.

3. To promote health and quality of life of people at large.
4. To provide database for planning, providing and evaluating the health services.
5. To evaluate the trends in health sector.
6. To identify the problems for further analysis.

Tools and Methods

1. Tools

Data are organized, categorized to comparison and evaluation of study results. The most common basic tools are used in epidemiology:

Rate

It is defined as “specific event, condition or disease in a given population within a specific time period”. Rate demonstrates the quantitative characteristics like amount of disease or number of affected person in a particular population.

$$\text{Rate} = \frac{\text{Number Affected in a Time Period}}{\text{Total Population in Same Area}}$$

- Rate may be used for comparison between groups.
- Rate presents demographic data and morbidity data.

Demographic rates

It involves the following rates:

- **Crude Birth Rate (CBR):** Refers to number of live births per 1000 on estimated mid-year population in a defined area per year. It is the simplest indicator of fertility.
- **Crude Death Rate (CDR):** Number of deaths per 1000 estimated midyear population in a year, in a defined area.

It is used to measure the change in population size over a specified period. It is an indicator of community health in a particular place.

- **Infant Mortality Rate (IMR):** Infant mortality rate includes number of infant deaths under 1 year of age per 1000 live births.
- **Maternal Mortality Rate (MMR):** Refers to number of deaths of pregnant women due to any pregnancy related cause within 42 days of termination of pregnancy per 1,00,000 live births.
- **Neonatal Mortality Rate (NMR):** It is the number of neonatal deaths in a given year per 1000 live births in that year.
- **Total Fertility Rate (TFR):** Average number of children that would be born to a woman if she experiences the current fertility pattern throughout her reproductive period span (15–49 years). It is useful indicator for analyzing the prospects for population stabilization.
- **Age Specific Death Rate:** Number of deaths in a particular age group per 1000 mid-year population of that age group in a year in a particular area.

Morbidity rates

Morbidity are presented generally as incidence and prevalence rates:

- **Incidence rate:** Number of new cases of a disease during a given time period per 1000 population at risk during that period.
- **Prevalence rate:** Number of existing cases (new + old cases) of a disease in total population at a particular point of time.

Frequency Distribution

Demonstrates the qualitative characteristics such as height, weight or investigation values. It is another way of organizing the data.

2. Methods

- (i) Descriptive Method
- (ii) Analytical Method
- (iii) Experimental Method

(i) Descriptive Method

Concerned with the study of frequency and distribution of disease and health related events in population, in terms of person, place and time:

- Its purpose is to provide an overview of the extent of health problems and to give clue to possible etiological factors involved.
- The data is collected about:
 - (a) **Time:**
 - Year
 - Season
 - Month
 - Week
 - Day
 - Hour of onset of the disease
 - (b) **Place:**
 - Areas of high concentration
 - Areas of low concentration
 - Spotting of cases in the map
 - (c) **Person:**
 - Age
 - Sex
 - Race
 - Marital status
 - Occupation
 - Education

- Income
- Social class
- Dietary pattern
- Habits

- Provides data for describing the nature of diseases or problems and measuring their extent in terms of incidence/prevalence rate, ratios, mortality rates *etc.* by age, sex, occupation and social class *etc.* helps in making Community Diagnosis.
- Clues to the etiology of diseases for further rigorous investigation and confirmation of the causes.
- Background information for planning, organizing, implementation and evaluating preventive, curative services to deal with the health problems.

Designs in descriptive method

- **Cross-sectional studies:** Cross-sectional study is like a snapshot and provides information about the prevalence of a disease. It is also called as Prevalence Study. The data is collected from a cross-section of population at a one point in time. The result of the study is applied on the whole population. Useful for detailed community assessment, study of morbidity and underlying factors, especially chronic diseases are economical and comparatively quick to perform.
- **Longitudinal studies:** Data is collected from the same population repeatedly over a continuous period of time by follow up of contacts and their examination. Useful for studying the natural history

of diseases, finding out incidence rates of diseases and identifying risk factors of diseases. More expensive and time consuming.

(ii) Analytical Method

More specific in focus, test hypothesis and attempt to determine casual factors of disease.

Types of analytical methods:

- (a) **Case control study:** It has retrospective approach. It is also called as retrospective method/case comparison design. Group of people who have been diagnosed as having a particular problem (cases) are compared with a group of people, who are similar in characteristics to that cases but they are free from the problem (controls). Easy to organize and are less expensive. Very effective in determining the risk factors. Drawback—difficulty in selecting the control group.
- (b) **Cohort study:** A cohort is a specific group of people, at a certain time, sharing common characteristics or experience *e.g.* people born on the same day or the same year (birth cohort), people with same occupation (occupation cohort) *etc.* Cohort studies can be designed in 3 ways:
 1. **Prospective cohort:** Prospective in nature (the group under study is free from the disease but exposed to risk factor and epidemiologist study the development of a condition over time). It is expensive and time consuming. It helps in studying the natural history of disease,

estimating incidence rates and risk of developing disease. It also helps to identify the relationship of the risk factor under study to other diseases or problems.

2. **Retrospective cohort:** It is called as Historical Cohort Study. The event has already occurred and the investigator goes back in time 10–30 years and identifies the cases from existing record to be included in the study group. It is useful for determining the effect of occupational hazards. Hospital records can help in designing cohort studies. It can be done in short period and are economical.
3. A combination of retrospective and prospective cohort—Characteristics of both, retrospective and prospective studies. The investigator identifies the cohort from past record and traces forward till date. The same cohort is followed up further for assessment prospectively upto desired period.

(iii) Experimental Method

It is done to confirm the etiology of diseases, establish the efficacy of preventive or therapeutic measures and evaluate health care services. It is done under controlled conditions. It is very expensive. Community health nurse conduct experimental studies to determine the effectiveness of community health practices *e.g.* efficacy of different health education methods and motivation techniques, communication methods, self-help model *etc.*

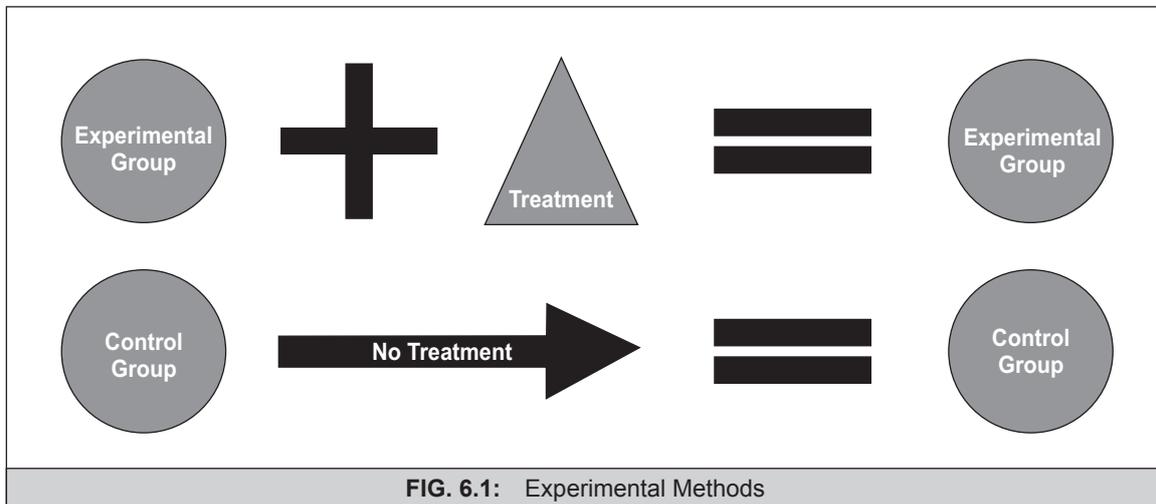


FIG. 6.1: Experimental Methods

Principles

Disease Frequency

The basic measure of disease frequency is a rate or ratio. It is a vital step in the development of strategies for prevention or control of health problems. Biostatistics is a basic tool of epidemiology.

Distribution of Disease

It occurs in patterns, in a community leading to generation of hypotheses about causative factors. The epidemiologist examines whether:

- (i) There has been an increase or decrease of disease over time span.
- (ii) There is a higher concentration of disease in one geographic area than in others.
- (iii) The disease occurs more often in males or in a particular age group.
- (iv) More characteristics or behaviour of those affected are different from those who are not affected.

- (v) An important outcome of this study is formulation of aetiological hypothesis known as “Descriptive Epidemiology”.

Determinants

Real substance of epidemiology known as “analytical epidemiology”. Analytical strategies help in developing scientifically sound health programmes, interventions and policies.

Theories and Models

1. Germ Theory of Disease

Referred as one-to-one relationship between casual agent and disease.

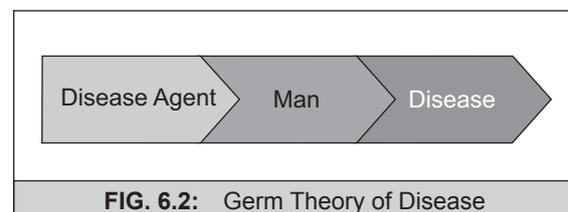
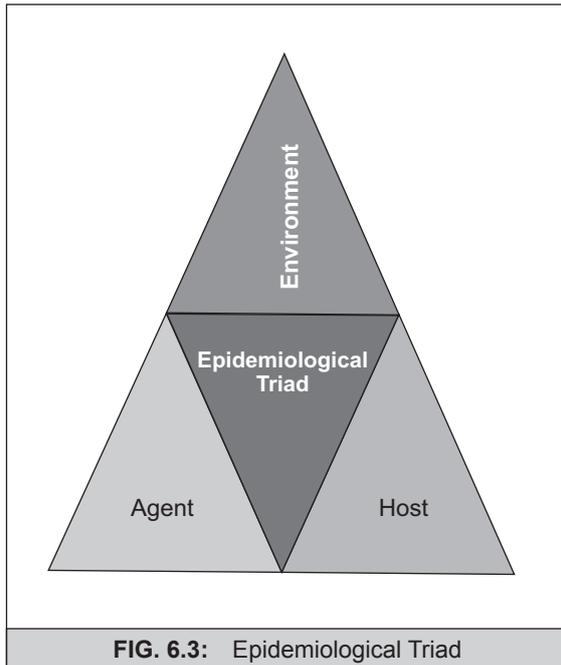


FIG. 6.2: Germ Theory of Disease

2. Epidemiological Triad

The causative factors of disease may be classified as Agent, Host and Environment referred to as Epidemiological Triad.



(i) Agent

Defined as a substance, living or a non-living or a force tangible or intangible, the excessive presence or relative lack of which may initiate, or perpetuate a disease process.

Disease agents may be classified broadly into the following groups:

- Biological agents
- Nutrient agents
- Physical agents
- Chemical agents
- Mechanical agents

- Absence or insufficiency or excess of a factor necessary to health
- Social agents

(ii) Host

Host factors play a major role in determining the outcome of an individual's exposure to infection (*e.g.* tuberculosis). The host factors may be classified as:

- Demographic characteristics
- Biological characteristics
- Social and economic characteristics

(iii) Environment

Defined as "all that which is external to the individual human host, living and non-living, and with which he is in constant interaction". For descriptive purposes, the environment of man has been divided into three components: physical, biological and psychosocial.

3. Multi-Factorial Causation

New models of disease causation have been developed (*e.g.* multifactorial causation, web of causation) which de-emphasize the concept of disease "agent" and stress multiplicity of interactions between host and environment. The purpose of knowing the multiple factors of disease is to quantify and arrange them in priority sequence (prioritization) for modification or amelioration to prevent or control disease. The multifactorial concept offers multiple approaches for the prevention/control of disease.

4. Web of Causation

The "web of causation" considers all the predisposing factors of any type and their complex

inter-relationship with each other. The basic tenet of epidemiology is to study the clusters of causes and combinations of effects and how they relate to each other. The web of causation does not imply that the disease cannot be controlled unless all the multiple causes or chains of causation or at least a number of them are appropriately controlled or removed. Sometimes removal or elimination of just only one link or chain may be sufficient to control

disease, provided that link is sufficiently important in the pathogenic process.

5. Natural History of Disease

It is the principle model in epidemiology. It is the key concept in epidemiology. It signifies the way in which a disease evolves over time from earliest stage of its pre-pathogenesis phase to termination as recovery, disability or death. It is best established by cohort study.

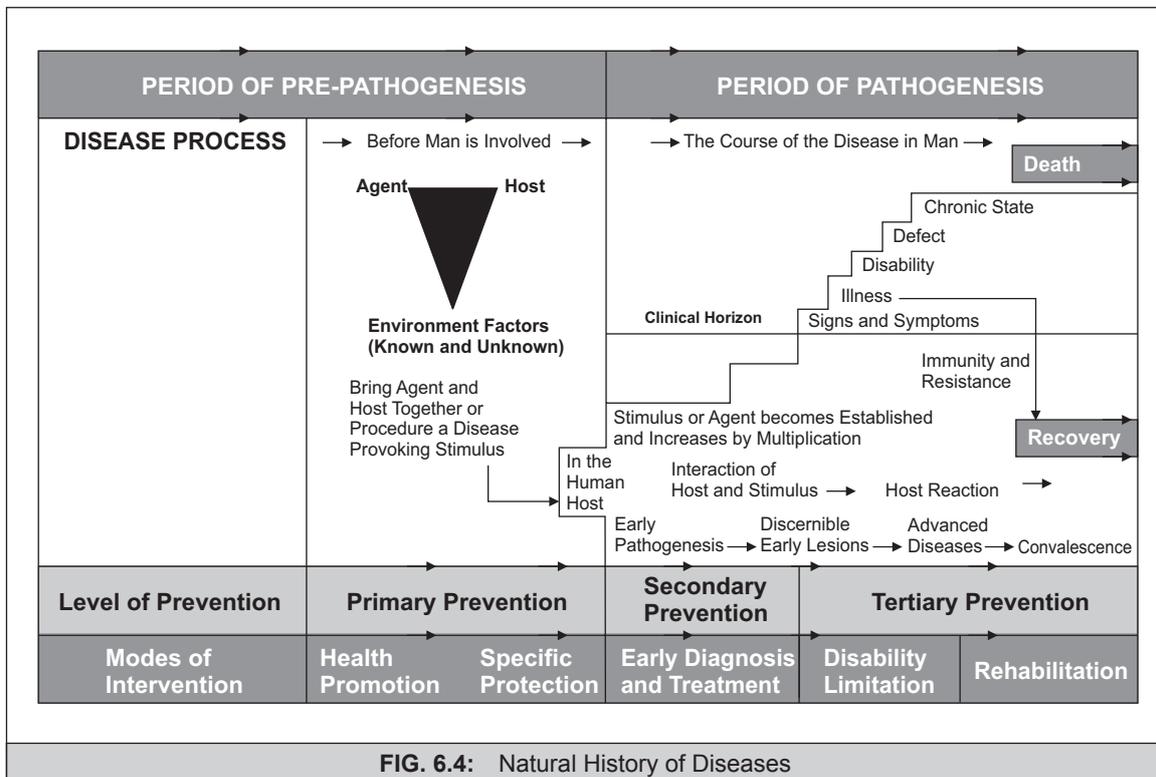


FIG. 6.4: Natural History of Diseases

(i) Pre-pathogenesis Phase

It is the period preliminary to the onset of disease, agent has not yet entered in man but the factors which favours its interaction with human host are already existing in the environment. This

is known as “Man in midst of disease”. The agent, host and environment operating in a combination determine not only the onset of disease which may range from a single case to epidemics. Primary prevention (health

promotion and specific protection) is very effective in period of pre-pathogenesis.

(ii) Pathogenesis Phase

It begins with entry of disease “agent” in susceptible host. Further, events in pathogenesis phase are clear in infectious/communicable diseases. This stage may be modified by intervention measures, such as immunization and chemotherapy. The infection may be clinical or subclinical, typical or atypical or host may become a carrier with or without having developed clinical diseases as in case of diphtheria or poliomyelitis. In chronic diseases, the early pathogenesis phase is less dramatic, that’s why disease is preferred as pre-symptomatic phase. It involves secondary prevention (early diagnosis and treatment) and

tertiary prevention (disability limitation and rehabilitation) as effective levels of prevention in period of pathogenesis phase.

6. Health Sickness Spectrum

Health and disease lie along a continuum, the lowest point on the health-disease spectrum is death and the highest point corresponds to the World Health Organization definition of positive health. The spectral concept of health emphasizes that the health of an individual is not static; it is dynamic phenomenon and a process of continuous change, subject to frequent subtle variations. It implies that health is a state not to be attained once and for all, but ever to be renewed.

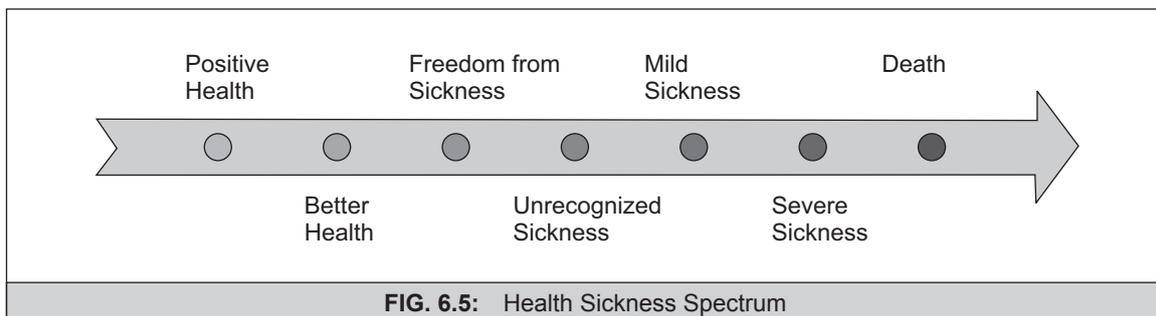


FIG. 6.5: Health Sickness Spectrum

7. Iceberg Phenomenon

According to Iceberg Phenomena, disease in a community may be compared to an iceberg. The floating tip of the iceberg represents what the physician sees in the community *i.e.* clinical cases, the vast submerged portion of the iceberg

represents the hidden mass of disease *i.e.* latent, inapparent, pre-symptomatic and undiagnosed cases and carriers in the community. The “water-line” represents the demarcation between apparent and inapparent disease.

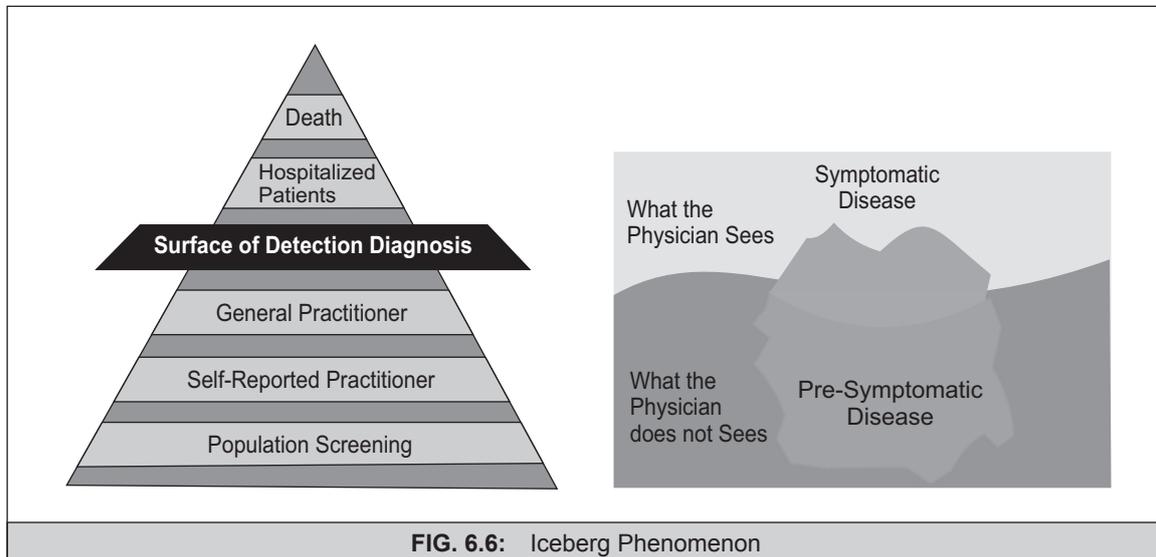


FIG. 6.6: Iceberg Phenomenon

APPLICATION OF EPIDEMIOLOGY IN COMMUNITY HEALTH NURSING

“Morris” identified seven distinct uses of epidemiology:

1. To study historically the rise and fall of disease in the population.
2. Community diagnosis.
3. Planning and evaluation.
4. Evaluation of individual’s risks and chances.
5. Syndrome identification.
6. Completing the natural history of disease.
7. Searching for causes and risk factors.

Epidemiology and Nursing

1. Epidemiology is one of the basic sciences applicable to nursing.
2. Epidemiology and nursing are not antagonistic but both are closely related,

mutually helpful, inseparable and have co-existence.

3. Community health nurse makes use of nursing process, which is comparable to epidemiological process in solving various health problems.
4. Nurses in the community have an important role in prevention and control of chronic and non-infectious diseases through health education and helping people to change their lifestyle.
5. Community health nurses help in restoring and maintaining optimum health.
6. Epidemiologic concepts and methods must be included as an integral part of both, theory and practical of nursing curriculum.
7. Nursing students must be given an opportunity to apply epidemiologic concepts during their clinical and field practice.

8. Epidemiology evaluates the outcome of preventive and therapeutic measures and provides feedback for effective health management. The evaluation is an on-going process in the field of

community health nursing, enabling the community health nurses to act as a key person in health information system as well as in health management.

DEMOGRAPHIC STUDIES

INTRODUCTION

Demographic studies have two parts:

1. **Population statistics:** It includes the indicators and measures of population size, sex ratio, density and dependency ratio.
2. **Vital statistics:** It is an important part of demographic studies.

It is quantitative data, concerning the population, such as birth rates, death rates, natural growth rates, mortality and fertility rates *etc.*

BIOSTATISTICS

Definition

Biostatistics is the application of statistical methods to health sciences.

Or

It includes statistical processes and methods applied to the collection, analysis and interpretation of biological data and especially data relating to human biology, health and medicine.

Importance of Biostatistics

1. To improve health status of population.
2. To clarify the relationship between factors and diseases.
3. To enumerate the occurrence of disease.
4. To explain the etiology of disease (causative factors).
5. To predict the number of disease occurrence.
6. To read, understand and criticize the medical literature.
7. To plan, conduct and interpretation of medical research.

VITAL STATISTICS

Definition

Branch of biometry which deals with data and law of human mortality, morbidity and demography.

It is the statistics, concerning human life or the conditions affecting human life and maintenance of population as birth rates, death rates, *etc.*

Scopes

1. To evaluate the impact of various national health programmes.
2. To plan for better future measures of disease control.
3. To plan, evaluate social and economical development
4. It acts as a primary tool in research activity.
5. To compare health status of one nation with other.
6. To promote health legislation.
7. To assess the attitude and degree of satisfaction of beneficiaries with the health system.

4. Making entries is a must for specific time period.

Report, Recording and Compiling of Vital Statistics at the Local, State, National and International Level

Civil registration and vital statistics system are considered the optimum source of mortality statistics and birth statistics because death rate and birth rate of any country are likely to be compared with the help of civil registration and vital statistics system.

Assessment of vital registration system should be based on a comprehensive framework that covers key aspect of their operation.

The assessment framework we used, explores administrative, technical and societal issues that influence civil registration system.

The World Population

According to the United States:

- World population reached 7 Billion on October 31, 2011.
- Population in the world is currently growing at a rate of around 1.14 per cent per year.
- The average population change is currently estimated at around 80 million per year.

National vital statistics system (NVSS) provides nation's official and vital statistics data, based on the collection and registration of birth and death events at state and local level.

It provides the most complete and continuous data available to public health officials at national, state and local level and in also, private sector.

Legislation

1. The most common way of collecting information on demographic events is through civil registration, an administrative system used by governments to record vital events, which occur in the populations.
2. Civil registration is the continuous, permanent, compulsory and universal recording of the occurrence and characteristics of vital events and other civil status events pertaining to the population as provided by decree, law or regulation, in accordance with the legal requirements in each country.
3. General legislation include compulsion of registration, collection of statistical items, confidentiality, privacy and safe keeping, storage and reservation of records.

Vital statistics are critical component of our national health information system, allowing us to monitor progress towards achieving important health goals.

Vital Statistics of India

According to Sample Registration System of India in the year 2011:

- Total Population 1210.19 Million
- Crude Birth Rate 21.4 (per thousand)
- Crude Death Rate 7 (per thousand).
- Males 623.12 Million (51.5 per cent).
- Females 587.45 Million (48.5 per cent).
- Total Sex Ratio 943.
- Urban Sex Ratio 929.
- Rural Sex Ratio 949.
- Highest Sex Ratio (Kerala) 1084.
- Lowest Sex Ratio (Daman & Diu) 618.
- Infant Mortality Rate (IMR) 44.
- Highest IMR (Madhya Pradesh) 59.
- Lowest IMR (Kerala) 12.
- Maternal Mortality Ratio 16.3.
- Maternal Mortality Rate (MMR) 178.
- Highest MMR (Assam) 390.
- Total Literacy Rate 74 per cent.
- Literacy Rate (Males) 80.9 per cent.
- Literacy Rate (Females) 64.6 per cent.
- Highest Literacy Rate (Kerala) 94 per cent.
- Highest Age Specific Fertility Rate 20–24 years age group.
- Total Fertility Rate 2.4.
- General Fertility Rate 81.2.
- Mortality Rate Across All Ages 6.3 for Females and 7.8 for Males.

- Age Specific Mortality Rate Lowest for Males and Females 10–14 years age group.
- Mean Age at Effective Marriage for Females 21.2 years.
- The workforce participation rate for females at national level stands at 25.51 per cent compared with 53.26 per cent for males.

State Level (Haryana)

According to Sample Registration System of India in the year 2011:

- Total Population 253.51 lakh.
- Crude Birth Rate 21.8 (per thousand).
- Crude Death Rate 6.5 (per thousand).
- Males 134.95 lakh.
- Females 118.56 lakh.
- Sex Ratio 877.
- Infant Mortality Rate (IMR) 44.
- Maternal Mortality Rate (MMR) 13.5.
- Maternal Mortality Ratio 146.
- Total Literacy Rate 76.64 per cent.
- Literacy Rate (Males) 84.1 per cent.
- Literacy Rate (Females) 65.9 per cent.
- 4,833 CHCs are functioning in the country (2013).
- There are 109 CHCs functioning in Haryana (2013).
- 24,049 PHCs are functioning in the country (2013).
- There were 447 PHCs functioning in Haryana (2013).
- 1,48,366 sub-centre are functioning in the country (2013).
- There were 2520 SCs are functioning in Haryana (2013).

Local Level (Rohtak)

According to Sample Registration System of India in the year 2011:

- Total Population 10.6 lakh.
- Crude Birth Rate 26.9 (per thousand).
- Crude Death Rate 7.5 (per thousand).
- Males 5.68 lakh.
- Females 4.92 lakh.
- Sex Ratio 868.
- Infant Mortality Rate (IMR) 67.
- Literacy Rate 80 per cent.

Definition of Computing Vital Statistics

A vital statistics system is defined by the United Nations as the total process of:

1. Collecting information by civil registration or enumeration on the frequency or occurrence of specified and defined vital events, as well as relevant characteristics of the events themselves and the person or persons concerned.
2. Compiling and processing, analyzing, evaluating, presenting and disseminating these data in statistical form.

Methods of Computing Vital Statistics

The methods of computing vital statistics are:

Civil Registration System

The civil registration method is the procedure employed to gather the basic observations on the incidence of vital events and their characteristics which occur to the population of a country within a specified time period and upon which

vital records with legal value are prepared and vital statistics are based.

Demographic Sample Surveys

Conducted by National Sample Surveys Organization (NSSO) attempted to provide reliable estimates of birth and death rates through its regular rates.

Sample Registration System

Based on a Dual Recording System. It provides reliable annual data on fertility and mortality at the state and national levels for rural and urban areas separately.

Health Surveys

National Family Health Surveys (NFHS) and the District Level Household Surveys (DLHS) conducted for the evaluation of reproductive and child health programmes. NFHS provide information on the availability of health and family planning services to pregnant mothers and other women in reproductive ages.

District Level Household Surveys (DLHS)

The DLHS provide information at the district level on a number of indicators relating to child health, reproductive health problems and quality of services available to them.

METHODS OF PRESENTING DATA**Frequency Distribution**

An appropriate presentation of data involves organization of data in such a manner that meaningful conclusions and inferences can be drawn to answer the research question. Quantitative

data are generally condensed and frequency distribution is presented through tables, charts, graphs and diagrams.

Tables

- A table presents data in a concise, systematic manner from masses of statistical data.
- Tabulation is the first step before data is used for further statistical analysis and interpretation.
- Tabulation means a systematic presentation of information contained in the data in rows and columns, in accordance with some features and characteristics.
- Rows are horizontal and columns are vertical arrangements.

1. General Principles of Tabulation

- A table should be precise, understandable and self-explanatory.
- Every table should have title, placed at the top of the table and must describe the content clearly and precisely.
- Items should be arranged alphabetically or according to size, importance or casual relationship to facilitate comparison.
- Rows and columns to be compared with one another should be brought together.
- The unit of measurement must be clearly stated.
- Also, figures can be in the form of percentage.
- Totals can be placed at the bottom of the columns.

- Reference symbols can be directly placed beneath the table for any explanatory footnotes.
- Two or three small tables should be preferred to one large one.

2. Parts of a Table

Depending upon the nature of the data and purpose of investigation:

- **Table number:** Table number should be placed at the top of the table.
- **Title:** Title should be brief, concise and describe the contents of the table.
- **Head notes:** It is given just below the title in a prominent type, usually enclosed in brackets for further description of the contents of the table.
- **Caption and stubs:** Captions are the headings designated for vertical columns and stubs are the headings for horizontal rows.
- **Body of table:** arrangement of the data according to description given in the form of captions and stubs form the body of the table.
- **Footnotes:** Used to explain the items which are not adequately explained.
- **Source note:** Used, when the table itself is retrieved.

3. Types of Tables

(i) *Frequency distribution table*

Present the frequency and percentage distribution of the information collected, where an attribute is grouped in number of classes.

The class or group intervals are kept constant. (ii) **Contingency table**

For example:

TABLE 7.1: Description of Sample Characteristics

S. No.	Demographic Data	Frequency	Percentage (per cent)
1.	Age	(N = 20)	
	25–30	11	55
	31–36	4	20
	37–42	1	5
	43–48	1	5
	49–54	3	15
2.	Qualification	(N = 20)	
	GNM	10	50
	B.Sc. Nursing	10	50

- Frequency distribution of two nominal variables simultaneously and include totals.
- The categories considered should be mutually exclusive as well as exhaustive (*i.e.* observations cannot be beyond these categories).
- Contingency tables are also known as cross tables, which present the frequency distribution of two or more variables to establish the relationship or association among them.
- The number of subjects in a cell is called the cell frequency.
- These tables are generally used in chi- (χ) square test. *For example:*

TABLE 7.2: Types of Ventilation and Daily Bowel Movements Among Patients

Bowel Movements	Mode of Ventilation		Total <i>f</i>	χ^2 Value
	Spontaneous Ventilation <i>f</i> (per cent)	Mechanical Ventilation <i>f</i> (per cent)		
Present	391 (64)	32 (29.4)	423	45.87 × Df = 1
Absent	220 (36)	77 (70.6)	297	
Total	611	109	720	

(iii) **Multiple-response table**

When classification of the cases is done into categories that are neither exclusive nor exhaustive.

The total number of subjects in case of multiple responses is given as base and from this, we calculate the percentages.

TABLE 7.3: Factors Contributing to Sleep Deprivation Among Patients

Factors*	Frequency <i>f</i> (%) (N = 60)
Blood Sampling	35 (58.3)
Diagnostic Tests	33 (55)
Medication	33 (55)
Vital Signs Monitoring	32 (53.3)
Noise	32 (53.3)
Bright Lights	30 (50)

*Each patient has more than one factor.

(iv) Miscellaneous table

Used present data other than frequency or percentage distributions, such as mean, median, mode, range or standard deviation and so on.

A table is called as miscellaneous, when presentation of data cannot be classified under the frequency distribution table, contingency table or multiple response tables.

TABLE 7.4: Mean, Median, Mode and Range of Scores of Nurses

Measures	Knowledge	Attitude	Skill
Mean	8.6	16.5	9.1
Median	9.1	17.3	9.8
Mode	9.6	17.6	10
Range of Obtained Scores	$12 - 4 = 8$	$21 - 10 = 11$	$11 - 6 = 5$
Range of Possible Scores	0–15	1–25	0–14

Graphical Presentation of Data

Main Reasons for using the Diagrammatic and Graphic Representation of Data

- They are the most convenient and appealing ways, in which statistical results may be presented.
- They give an overall view of entire data.
- They are visually more attractive than other ways of representing data.
- It is easier to understand and memorize data through graphical representation.
- They facilitate comparison of data relating to different periods of time of different origins.

Constructing Diagrams/Graphs

- They must have a title and index.
- The proportion between width and height should be balanced.
- The selection of scale must be appropriate.
- Footnotes may be included, wherever it is needed.
- Principle of simplicity must be kept in mind.
- Neatness and cleanliness in construction of graph must be ensured.

Types of Diagrams and Graphs

The commonly used diagrams and graphs in the presentation of data of the research studies are bar diagram, pie diagram, histogram, frequency polygon, line graphs, cumulative frequency curve, scattered diagrams, pictograms and map diagrams.

1. Bar Diagram

- Convenient graphical device is particularly useful for displaying nominal or ordinal data.
- Easy method adopted for visual comparison of the magnitude of different frequencies.
- Length of the bars drawn vertically or horizontally indicates the frequency of a character.
- The bar charts are called vertical bar charts (or column charts), if bar charts are placed vertically. When the bars are placed horizontally, called horizontal bar charts.

Constructing bar diagram

- The width of bars should be uniform throughout the diagram.
- The gap between the bars should be uniform throughout.
- Bars may be vertical or horizontal.

3. Proportion bar diagram

Types of bar diagram

(i) Simple bar diagram

(ii) Multiple bar diagram

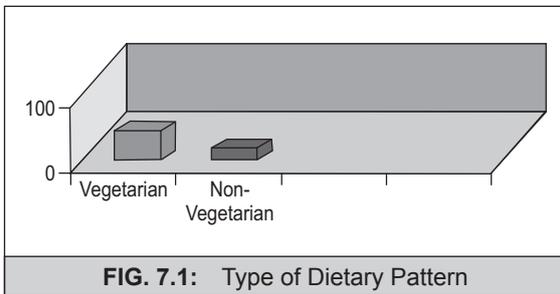


FIG. 7.1: Type of Dietary Pattern

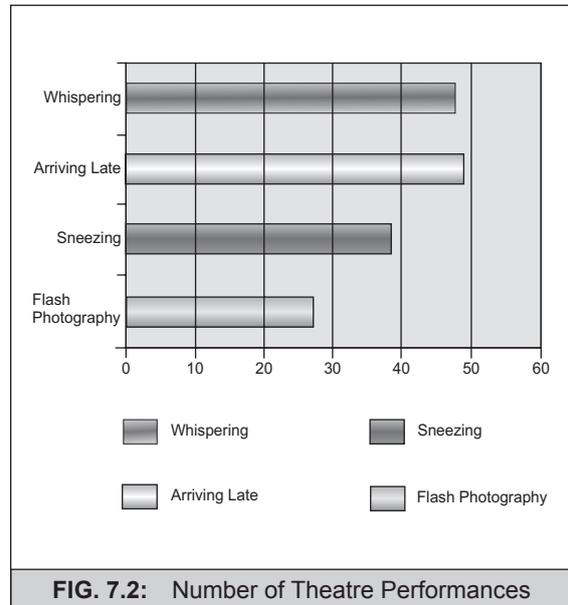


FIG. 7.2: Number of Theatre Performances

2. Pie Diagram

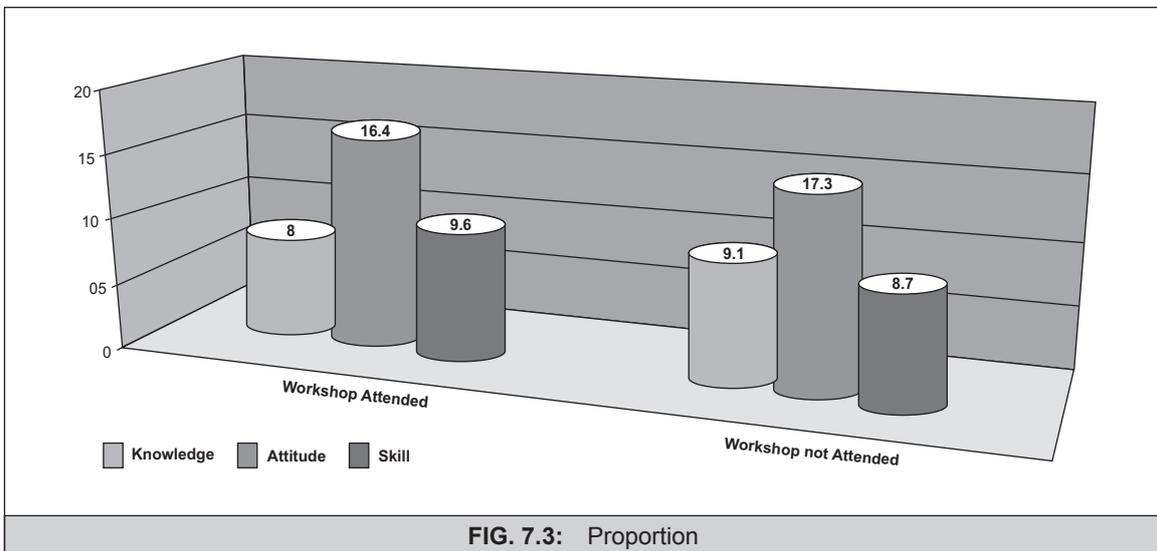


FIG. 7.3: Proportion

- Useful pictorial device for presenting discrete data of qualitative characteristics, such as age groups, genders and occupational groups in a population.
- The total area of the circle represents the entire data under consideration.
- It gives comparative at a glance.
- Size of each angle is calculated by multiple class percentages with 360
or
$$= \frac{\text{Class Frequency}}{\text{Total Observation}} \times 100$$

3. Histogram

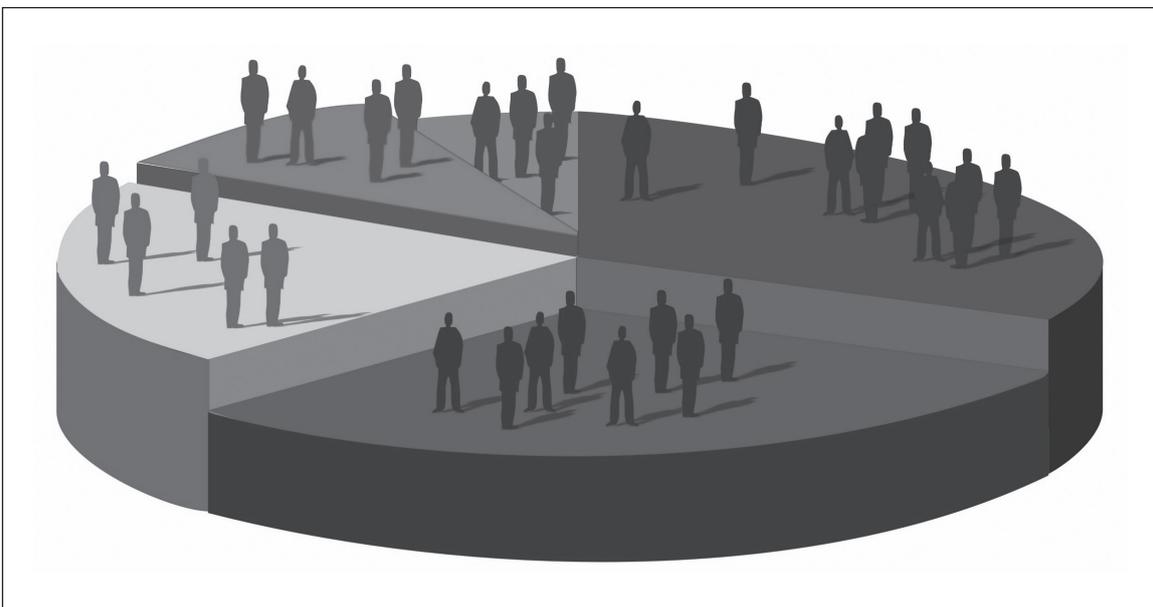


FIG. 7.4: Pie Diagram

- Most commonly used graphical representation of grouped frequency distribution.
- Frequency of each group forms a rectangle or column.
- The area of rectangle is proportional to the frequency of the correspondence class interval and the total area of the histogram, being proportional to the total frequency of all the class intervals.

Construction of Histogram

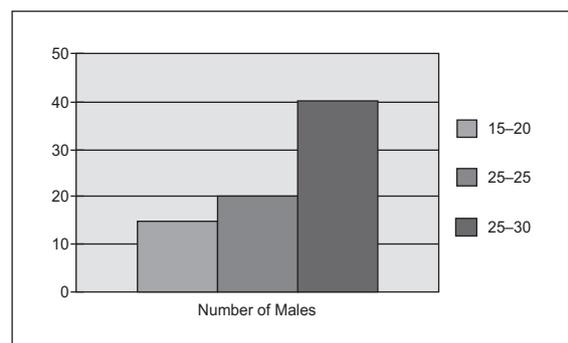


FIG. 7.5: Histogram

- Set of vertical bars, the areas of which are proportional to frequencies represented.
- The difference of histogram from bar diagram—bar diagram is one dimensional and only the length of the bar has its significance, while in histograms, both length and width matters.
- When class intervals are equal, frequency is taken on y-axis, the variables on x-axis and adjacent rectangles are constructed.
- When the class intervals are unequal, a correction for unequal class intervals must be made.

4. Frequency Polygon

- Curve obtained by joining the mid-points of the tops of the rectangles in a histogram by straight lines.
- The two end points of the line drawn are joined to the horizontal axis at the mid-point of the empty class-intervals at both ends of the frequency distribution.
- Frequency polygons are simple and sketch an outline of data pattern more clearly than histograms.

5. Line Graphs

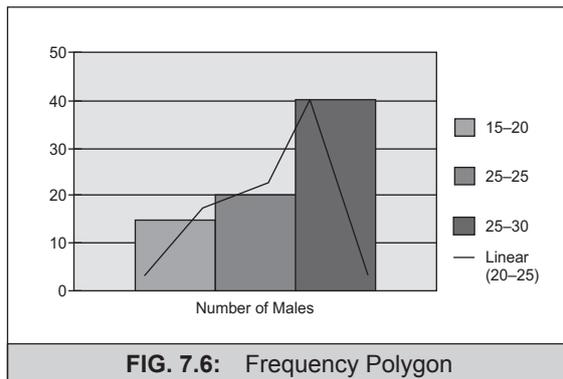


FIG. 7.6: Frequency Polygon

- Used, where data is collected over a long-period of time.
- On x-axis, values of independent variables are taken and values of dependent variables are taken on y-axis.

6. Cumulative Frequency Curve or Ogive

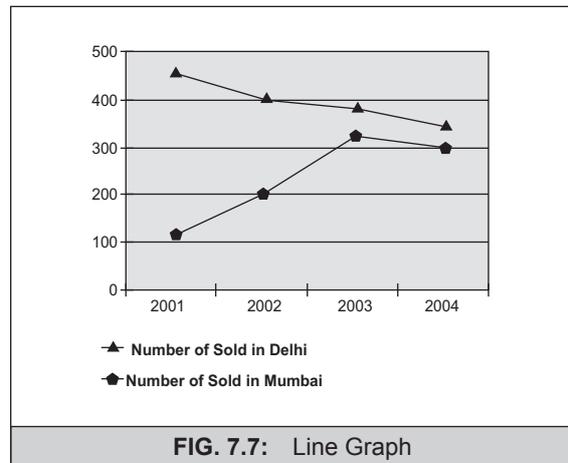


FIG. 7.7: Line Graph

- Represents the data of a cumulative frequency distribution.
- Plotted to the upper limits of the classes.
- The points corresponding to cumulative frequency at each upper limit of the classes are joined by a free-hand curve.

7. Map Diagram or Spot Map

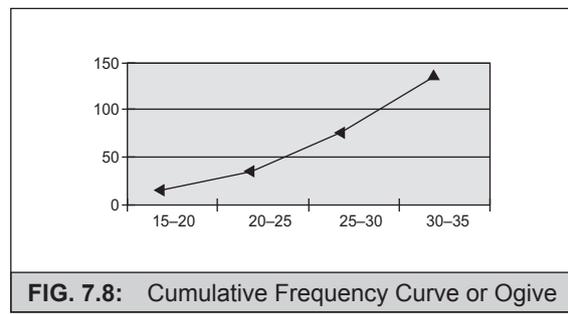
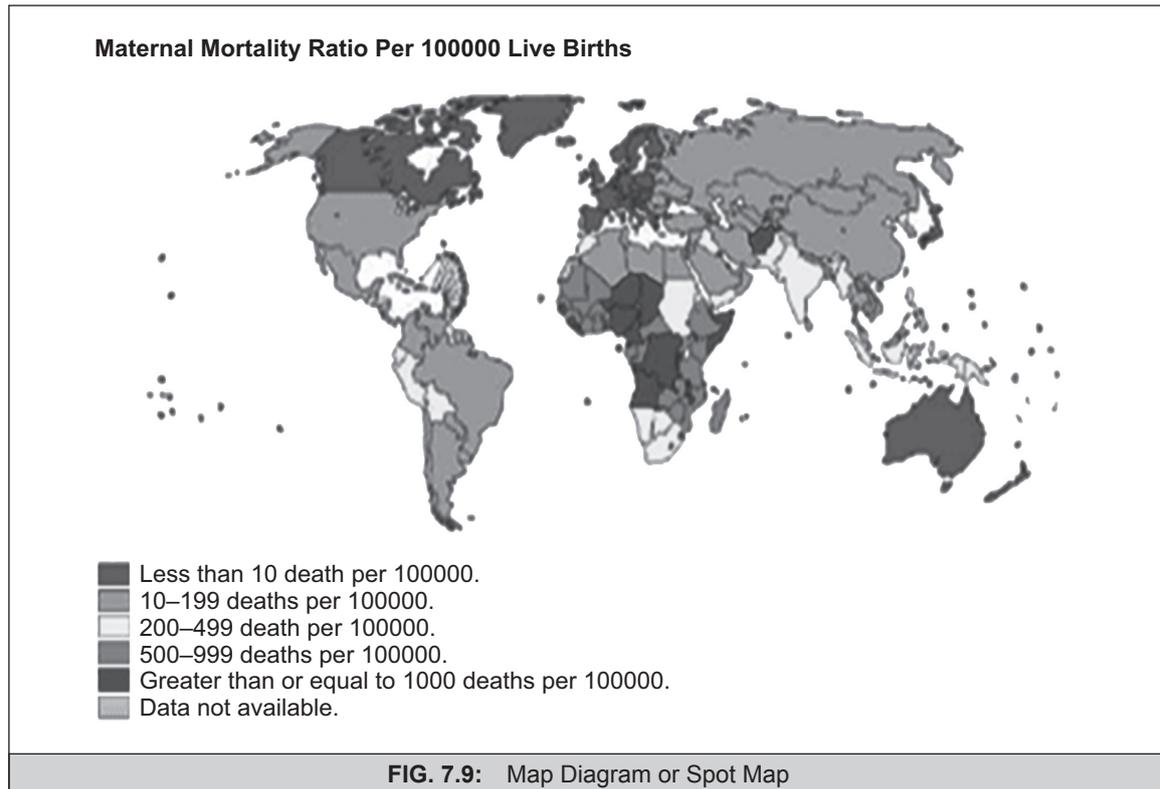


FIG. 7.8: Cumulative Frequency Curve or Ogive

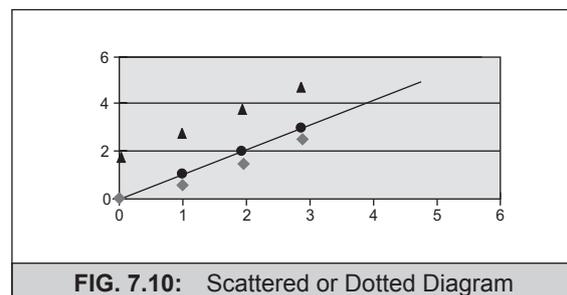
Prepared to show geographical distribution of frequencies of characteristics.

8. Scattered or Dotted Diagram



- Shows the nature of correlation between two variables characters x and y on the similar features or characteristics.
- It is also called correlation diagram.

9. Pictograms or Picture Diagram



Used to impress the frequency of the occurrence of events to common people, such as attacks, deaths, no of operations, admissions, accidents and discharges in a population.

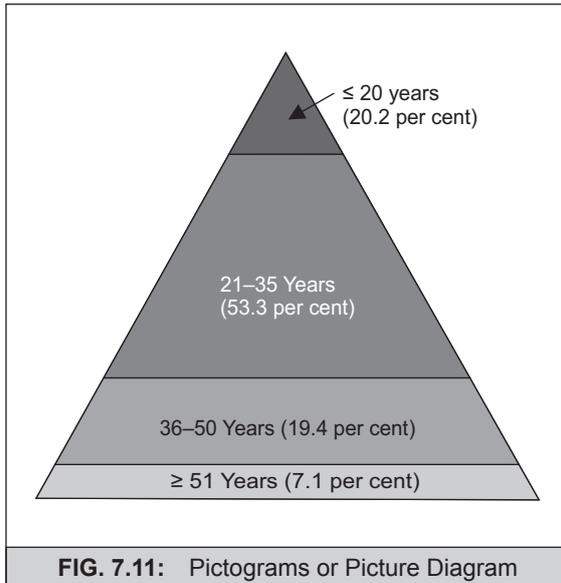


FIG. 7.11: Pictograms or Picture Diagram

Limitations of Graph

- Confusing (may be false or true).
- Present only quantitative aspect.
- Get information only on one aspect or on limited characteristics.
- They can present only approximate values.

MANAGEMENT INFORMATION SYSTEM (MIS)

Management requires complete reliable information to solve any problem and exercise effective control by taking a timely decision. The complete reliable information is received in time. The proper management information

system is not only to reduce the risk of wrong decisions but also to work as an effective controlling technique. Managers at every level require important information with speed, brevity and economy in order to discharge their functions effectively. Due to the complexity of business and industrial operations, the management information system (MIS) gets more importance. Government regulations are to also create the need of supply of more reliable information accurately within short span of time. This clearly shows that the management is entering into an “Information Age”.

Meaning

Management information system is a planned, organized and systematic collection of relevant, accurate, precise and timely information which are properly processed and supplied to required persons economically for the purpose of achieving organizational objectives.

Definition

1. **Hanson** defines a management information system as an array components designed to transform a collective set of data into knowledge that is directly useful and applicable in the process of directing and controlling resources and their application to the achievement of specific objectives.
2. **Walter J. Kennevan** defined management information system as, “a formal method of collecting timely information in a presentable form in order to carry out organizational operations for the purpose of achieving the organizational goals”.

Objectives of Management Information System

1. **Facilitates decision making:** Management executives at all levels are taking large number of decision by receiving the best possible current information. Accurate, reliable, precise and information facilitates the decision-making process very easy.
2. **Avoid duplication of work:** Major portion of the organizational operations are computerized and procedure are simplified.
3. **Saving of time:** Standard time is fixed for each work separately.
4. **Establish uniform procedures:** Uniform procedures ensure proper flow of data from concerned department of section.
5. **Fixing responsibility:** It is the responsibility of concerned executives to provide data.
6. **Improving service:** Improved service is rendered by the executive in an organization.

Elements of Management Information System (MIS)

The term 'management information system' consists of three words. They are management, information and system. If one understands the meaning and nature of these three words, properly, he/she can have thorough understanding the concept of MIS:

1. Management

Management is the process of planning, organizing and controlling of physical and human

resources in order to achieve the objective of organization. Managers can prepare the plan in order to achieve the objective by selecting best course of action. He can identify the task, which are emerged under the operation of an organization and organized into the homogeneous groups. The completion of task is to be controlled by the setting performance standard and avoid deviations from such standards. In this place, management facilitates the executives for taking number of valued decisions with regard to planning, organizing and controlling the performance task and function of business.

2. Information

Information can be defined as tangible or intangible facts, which are used to reduce or avoid uncertainty of future events. Information is necessary to every management to plan and control the business operation effectively. Information is derived from the data out of the available data, information is developed and used for decision making purpose. There must be proper transformation of data into information. The presentation of information is in such a way that is current and in a readily usable and easily understood format.

Types of Information

- (i) **Operating information:** It includes various operation of unit. Detail of production and sales, number of persons employed, overtime worked in terms of production and man hours, wastage in term of unit of measurement *etc.* are the examples of operation information.
- (ii) **Status information:** The status of certain work on a particular point of time is given. Work is the progress in

- the term of unit of measurement, stage of major project, stage of construction work *etc.* is the example of status information.
- (iii) **Resource information:** It includes the resources of an organization. Own capital, borrowed capital, skilled human resources, semi-skilled human resources, unskilled human resources, material power *etc.* are the examples of resources information.
- (iv) **Resource allocation information:** It includes allocation of available resources within organization own capital used for purchase of fixed assets and current assets, borrowed capital used for purchase of fixed assets and current assets or clean of old debts, employment of personnel in department wise *etc.* are the example of examples of resource allocation information.
- (v) **Planning and control information:** Top management can prepare the plan and control for each activity production and sales budget, cash budget production schedule, capital budgeting, zero base budgeting *etc.* are examples of planning and control information.
- (vi) **Government information:** It includes The Fiscal Policies of the Government. The Government presents the budget every year, which affect the business to some extent. The extent of affect and ways of affect are to be accessed and presented to the government information.
- (vii) **Social information:** It includes demographic details, population in urban area wise and rural area wise, sex wise, industrial workers wise, religion wise, community wise *etc.* are social information.
- (viii) **Economic information:** It includes economic condition of the nation. Rate of inflation, rate of interest, cost of inflation index, money value standard of living, per capita income, GNP, *etc.* are the economic information.
- (ix) **Technology information:** The technology adopted by the organization for each activity is kept in separate file. Besides, the technology available in the market, technology adopted by other similar units and the gap between latest technology available and technology adopted by the organization are included in technology information.
- (x) **Competition information:** Competition with regard to sales, labour force and raw material suppliers are included in competition information. The list of competitors and their strength and weaknesses are also collected as information for taking sound decisions.

3. System

System can be defined as a set of inter-related elements working towards for achieving general objectives of an organization. There may be sub-system in organization and all such systems are part of large systems. There is a need of application of principle of system in the business organization. If so, there is a possibility of integration of the sub-system through information inter proper change. The system concept of MIS is, therefore, one of the optimizing the output of the organization by connecting the operating sub-systems through the medium of information exchange.

Designing the Management Information System

Under management information system, a set of procedures is systematically followed to collect relevant data, processing the data and presented in a required format as information. A well-developed system should be designed in the following manner:

1. **Supplies complete, accurate and timely data:** Effective planning and decision making is possible by availing complete, accurate and timely data. The MIS would solve the problems connected with inconsistent, incomplete and inaccurate data.
2. **Identify and quantify inter-related operation:** Production and sales are independent variables, but these variables have close relationship within each other. Production is depending upon the demand for the product that is sales volume. So, the information of production develops a relationship with sales. This can be projected to forecast future trends.
3. **Measure and control the performance:** Production data can be presented in monetary terms. If so, production costs can be measured and control the performance, which can be closely monitored.
4. **Identify need of decentralized organization:** In large scale enterprise, there is a decentralization of authority and departmentation. The need of such decentralized units and departments can be properly noted to avoid duplication and waste of efforts. It means that a pool is created to collect the data from such units and department.
5. **Information in summarized form:** Information is presented in such manner that action can be initiated and or decision can be taken without further interpretation and analysis. It reduces the time, efforts and volume of information. Management by exception principle is followed here by the top management.
6. **Flexibility:** The MIS should be flexible as much as possible so that the system can be changed or revised whenever necessary.

Process of Management Information System

The transformation from data to information involves six stages:

1. **Assembling:** It means finding and collection of data and recorded in a set of files. The well-defined sources of information facilitate the collection of data.
2. **Processing:** It means that collected data has been summarized, edited and processed. During editing, the irrelevant and inaccurate data have been eliminated from the records.
3. **Analyzing:** It means that the data has been analyzed to develop or calculate percentages, ratios *etc.* Percentage and ratios are providing useful information to the decision-maker.

4. **Storage and retrieval:** Indexing, coding, filing and location of information are coming under the process of storage. Provisions have been made to quick relocation of such information and retrieval, when it is necessary.
5. **Evaluation:** It means determinations of usefulness of information in term of accuracy, precise and relevance. The degree of accuracy, precise and relevance is based upon the needs of the decision-maker.
6. **Dissemination:** It means supplying the required information in the specified format at the right time to the decision maker.

The following process for establishing any MIS:

1. State the management objective clearly.
2. Identify the actions required to meet the objective.
3. Identify the responsible position in the organization.
4. Identify the information required to meet the objective.
5. Determine the data required to produce the needed information.
6. Determine the system's requirement for processing the data.
7. Develop a flowchart.

Areas of Management Information System

1. **Decision-making:** MIS is designed to generate and free flow of information collected from internal and external source for sound decision-making in all

functional area of business. Management should have well-organized system to collect information and maintain upto date information to take prompt and timely decision.

2. **Planning:** Top management want information for planning purpose. Planning is the primary function of management. The primary function is effectively carried on by the managers under well-designed management information system. The MIS can be hooked upto various corporate models for planning. The uncertainty can be converted into a certainty through proper planning.
3. **Control:** The MIS informs the decision maker about the performance of work with standards set of them. If the information is better, more complete, more reliable and timely, it is easier for manager to exercise effective control.

Importance of Management Information System

1. **Complexity of business operations:** The business operations will be changed into complexity due to dynamics of the environment. The MIS helps the managers in this situation, to look upon the business operations without much difficulty.
2. **Size of business unit:** Most of the business units have grown in size. This results in management being removed from the scene of the operations. Now MIS plays a vital role to solve operational problems.

3. **Changes in economic structure:** Rate of inflation and unemployment, changes in interest rate GNP and the like are affecting the smooth functioning of a business unit. Hence, these types of information should be collected and help the manager to take a valid decision.
4. **Technological changes:** These include the changes in the operations of business unit. Whenever there is a change in technology, there is a problem to the management. This type of problem can be easily solved with the help of effective MIS.
5. **Social changes:** It includes higher level of education, changes in consumer tastes, usage of computer at home, preference of job *etc.* this type of information is maintained upto date. If so, running of business unit is very easy.
6. **Determination of training needs:** In large scale enterprise, the operations are decentralized so that more information is needed about the operations units. The performance of all units should be closely watched and steps must be taken, if there is a poor performance of units. It means that training needs can be found out in order to improve the performance of units. Here, MIS can be effectively used for measuring performance and decide the training needs for better performance and achieve organizational goals or plans.
7. **Wide use of computer:** The computers are widely used since the operation requires less expenses and have more

capacity to store and supply more information. This has made information handling easier.

Factors Affecting the Management Information System

There must be a free flow of information from one place to another place within organization. Even though, some factors affecting the free flow of information. They are listed below:

1. **Availability:** Availability of information refers more accurate and relevant information. All decisions are made out of available information, if the decisions are highly uncertain. But, there is no parameter available to access the information as accurate or inaccurate and adequate or inadequate. Hence, the managers are forced to take decisions out of available information.
2. **Quality:** Quality of information describes its compactness and accuracy. Sound decisions are taken only out of quality information. Accordingly, the information should be precise and highly reliable.
3. **Quantity:** Too much information cannot be processed very easily by the management within stipulated time and difficult to get accurate information. On the other hand, too little information may leave relevant, reliable and accurate information, which are necessary to take useful decisions.
4. **Timeliness:** Information must be available when needed. Sometimes, some important decision can be delayed

due to non-availability of necessary information properly in time and the results missed opportunities. At the same time, the time gap between the collection of data and the presentation of the proposed information should be reduced as much as possible. Besides, the information should be presented before the decision-maker, when needed and not on a periodic and cyclic basis.

HEALTH MANAGEMENT INFORMATION SYSTEM

Definition

Health Management Information System is a system in which collection, utilization, analysis and transmission of information is done for conducting health services, training and research to improve and protect population health.

Health Management Information System is a process, whereby health data (input) are recorded, stored, retrieved and processed for decision making (output). Decision-making broadly involves two aspects: managerial and clinical. Managerial aspects include planning, organizing and control of health care facilities at the national, state and district level. Clinical aspects, can be divided into:

1. Providing optional care.
2. Training of medical personnel to generate appropriate human resource and facilitate research and development activities in various fields of health/medicine.

Objectives of Health Management Information System

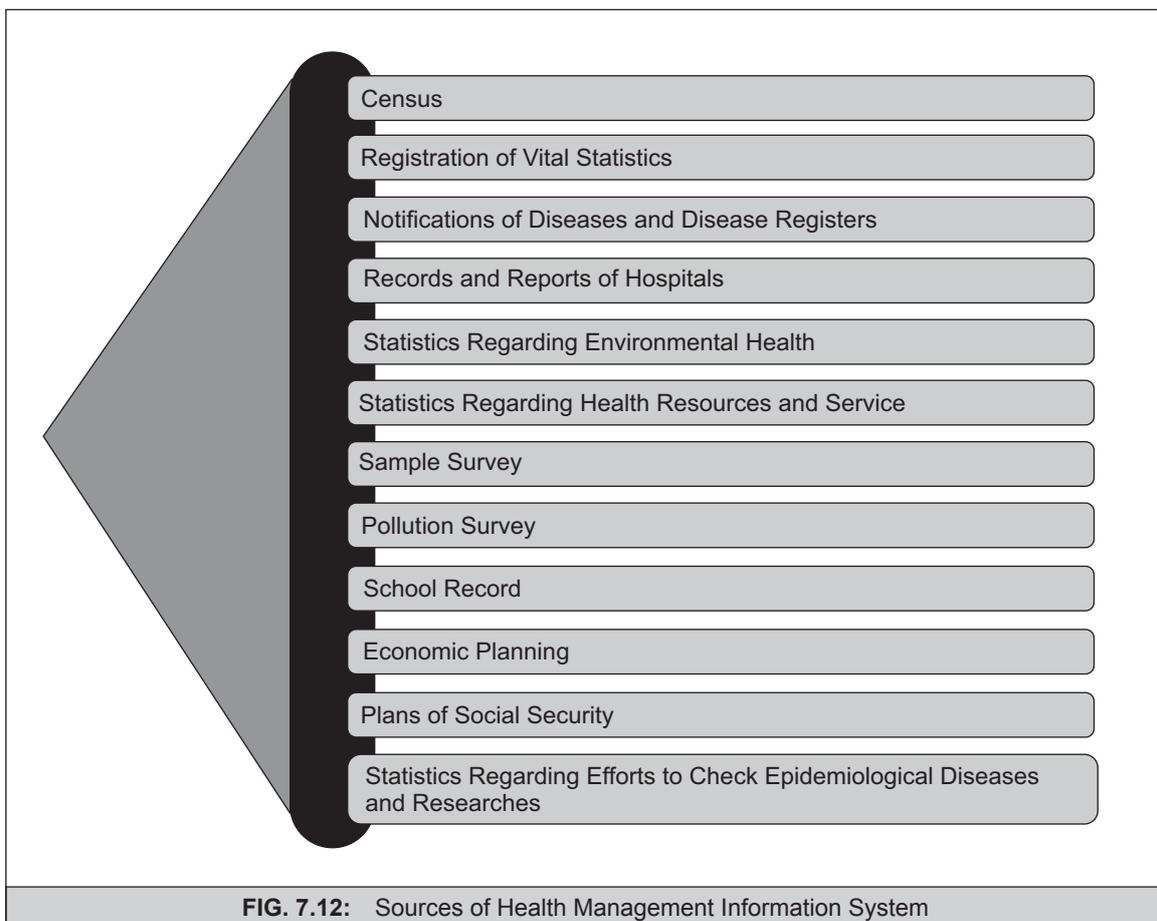
1. To provide reliable, latest and useful health information to all levels of health officers and administrators.
2. To amend health policies and working system on the basis of feedback, received from health management information system.
3. To provide information about periodically and time bound programmes and for midterm evaluation.
4. To contribute towards achievement of objectives of health policies and programmes.
5. To increase efficiency and quality in health management.

Characteristics of Health Management Information System (Recommended by WHO)

1. The information should be problem oriented.
2. Information should be population based.
3. Functional and directorial wording should be used.
4. Information should be expressed in short and in imaginative form (graph, chart, table *etc.*)
5. Facility for data feedback must be present in health management information system.

6. Advanced technology should be used in health management information system.
7. Unnecessary figures or data should not be present in health management information system.
8. For information management, organization structure must be present.

Sources of Health Management Information System



Problems of Health Management Information System in India

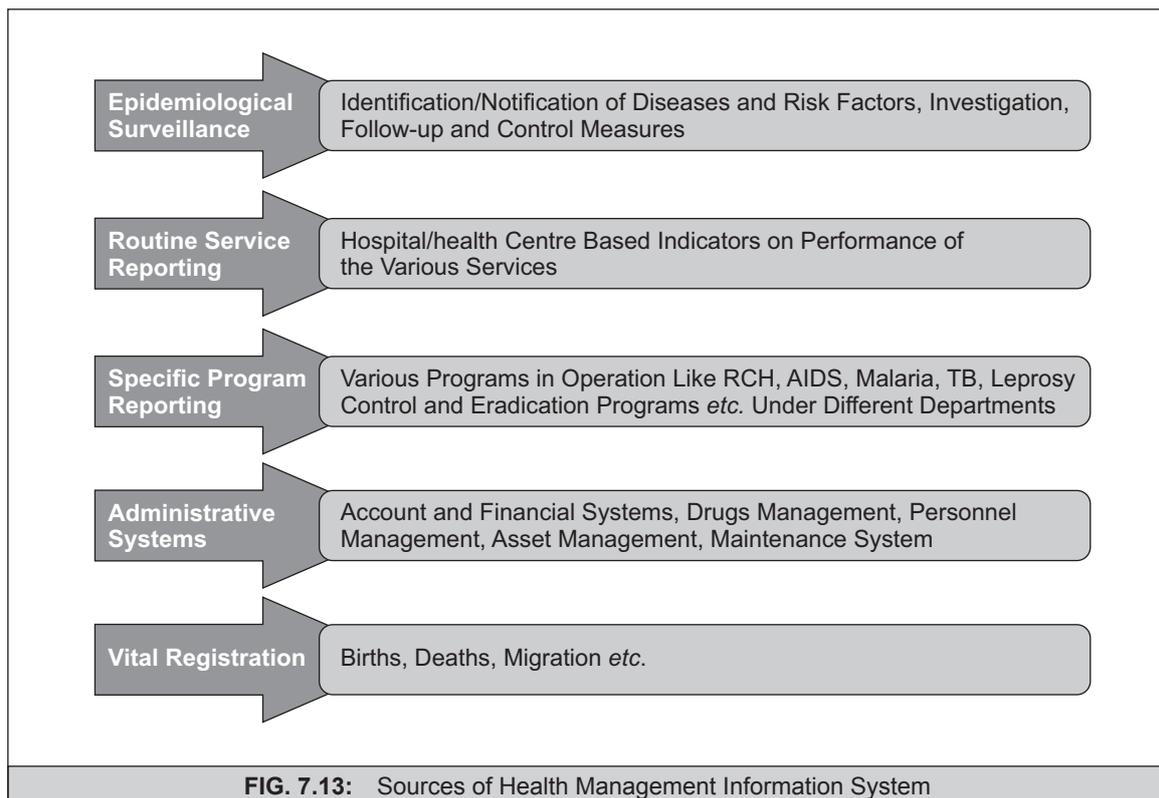
1. **Structural:** It includes multiplicity of institutions and departments, fragmentation of data, lack of infrastructural facilities for storage and maintenance of records.
2. **Procedural:** Involves excessive information, hidden issues, exhaustive information, overburden of collection and recording of data along with

General Health Care, incomplete, unreliable and intentionally managed information, inappropriate forms/cards/reports, less interest of users in information, time consuming procedure, confusing coding, long list, if indices, absence of feedback to information suppliers.

3. **Related to content:** Mostly service utilization statistics, only summarized information reaches at higher level, less emphasis on socio-economic information, no user friendly.

4. **Related to human resources:** It includes absence or skilled medical record professionals, lack of opportunity for in service training for the staff, health providers are collecting and preparing the data, lack of motivation.
5. **Technological:** It involves much manual paper based system, absence or lack of computerized data base system.

Sub-Components of Health Management Information System



Challenges of Health Management Information System

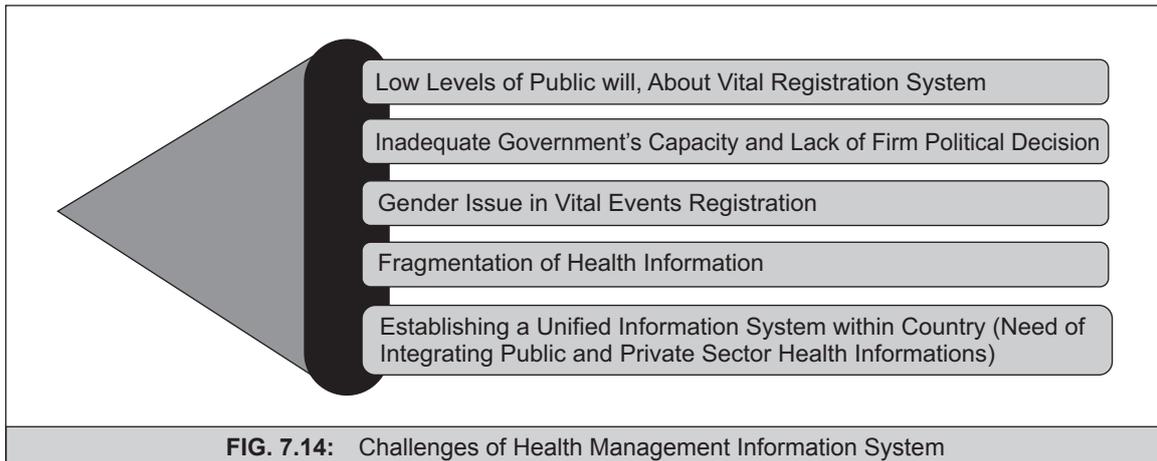


FIG. 7.14: Challenges of Health Management Information System

Benefits of Health Management Information System

According to WHO, the benefits of Management Information System are:

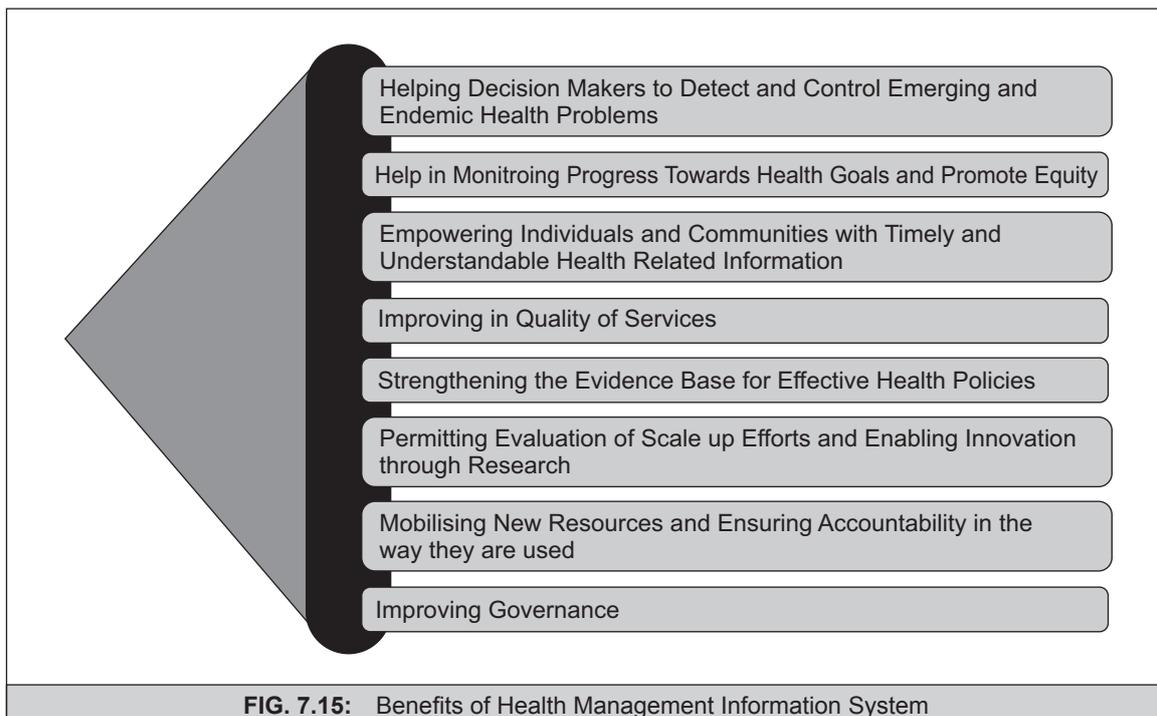


FIG. 7.15: Benefits of Health Management Information System

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