Textbook of

Community Health Nursing–I

for GNM Nursing Students

(As per the New Syllabus of INC for GNM)

2nd Edition

What's **New** in this Edition?

- Thoroughly revised and updated edition conforming to the INC syllabus
- **100+** Images, Line Arts, Flowcharts and Tables
- **200+** Subjective and Objective Questions
- Authored by a senior subject expert and reviewed by highly experienced faculties
- Includes recent updates on Health Programs and Policies
- Perfect amalgamation of theoretical and clinical practices

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Lt. Col. KK Gill

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Community Health Nursing–I

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Nursing Knowledge Tree

Second Edition

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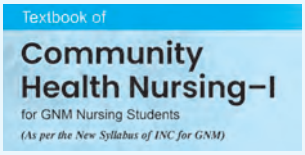

ISBN: 978-81-977500-0-7

Second Edition: 2025

First Edition: 2018

Published by **Satish Kumar Jain** and produced by **Varun Jain** for

CBS Publishers and Distributors Pvt Ltd

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Printed at:

CBS Nursing Knowledge Tree

Extends its Tribute to

Florence Nightingale

For glorifying the role of women as nurses,
For holding the title of " The Lady with the Lamp,"
For working tirelessly for humanity–
Florence Nightingale will always be
remembered for her
selfless and memorable services to the
human race.

Florence Nightingale
(May 1820 – August 1910)

Dedicated to

My family for their unconventional support and constant encouragement throughout the venture.

Preface to the Second Edition

Community Health Nursing is a rapidly growing field. According to Global Commitment of Health for All and to achieve **Millennium Development Goals** (MDGs), the Comprehensive Primary Health Care (CPHC) has been implemented through health and wellness centers (HWCs) by transforming existing Sub Centers (SCs), and Primary Health Centers (PHCs) into the basic pillars of Ayushman Bharat as a foundation of India's Health System.

The role of Accredited Social Health Activist (ASHA) has expanded. ASHA's roles now include educating and promoting health, facilitating access to health services, providing first aid, keeping records and improving sanitation. A Community Health Officer (CHO) is appointed to coordinate and accelerate the services of community health nursing team at HWC-SC and HWC-PHC.

COVID-19 has been added under the epidemiology of communicable diseases. The book is updated according to the changes made in the delivery of comprehensive primary healthcare. I hope that this edition will be useful for nursing students, teachers and other healthcare professionals to meet their requirements.

Lt. Col. KK Gill (Retd.)

Preface to the First Edition

Nurses are the frontline fighters in the battle for health and wellness of society. They are the backbone of the healthcare delivery system at all levels, be it rural or urban community, hospitals, clinics or industries. Community Health Nursing is a multidisciplinary, rapidly growing subject. The primary objective of community health nursing is to help people attain an optimal level of health through healthy lifestyle. Sound basic knowledge of community health nursing will help nursing students to assess health problems of community and take appropriate action at grass root level.

The community health nurse needs to know about the community, its social and cultural patterns, principles of community health nursing, community diagnosis, community development, expanded health programs and roles and responsibilities of community health nurse in shaping the health-seeking behavior of the community.

It gives me immense pleasure to present this book titled *Textbook of Community Health Nursing–I for GNM Nursing Students*. This book is not only useful for students but also for the educators.

It is written in simple language according to new syllabus of GNM prescribed by the Indian Nursing Council for Community Health Nursing-I.

This book will meet the requirements of the students and will help in strengthening their basic knowledge of the subject so that they can become better equipped to provide primary healthcare to the community, thus keeping the commitment of the country to achieve "Health for All".

I invite constructive comments and suggestions from students, teachers and experts for the improvement of this book in future editions.

Lt. Col. KK Gill (Retd.)

Acknowledgments

First of all, I must bow my head before the Almighty God for bestowing upon me the strength, courage and wisdom to sustain myself through this endeavor. Writing a book is like undertaking a long journey of ardor and self-discovery, and without a guiding light that constantly shows the way, an author is bound to get lost in the vast sea of knowledge.

I extend my deep sense of gratitude to my children, **Dr Navneet Gill** and **Er. Kamalpreet Singh Gill.** Without their constant presence by my side, the completion of this herculean endeavor would not have been possible.

I would like to thank **Mr Satish Kumar Jain** (Chairman) and **Mr Varun Jain** (Managing Director), M/s CBS Publishers and Distributors Pvt Ltd for providing me the platform in bringing out the book. I have no words to describe the role, efforts, inputs and initiatives undertaken by **Mr Bhupesh Aarora**, Sr. Vice President – Publishing and Marketing (Health Sciences Division) for helping and motivating me.

Last but not least, I sincerely thank the entire CBS team for bringing out the book with utmost care and attractive presentation. I would like to thank Ms Nitasha Arora (Assistant General Manager Publishing – Medical and Nursing), Ms Daljeet Kaur (Assistant Publishing Manager), Dr Anju Dhir (Sr. Product Manager and Medical Development Editor) for their publishing support. I would also extend my thanks to Mr Shivendu Bhushan Pandey (Sr. Manager and Team Lead), Ms Surbhi Gupta (Sr. English Editor), Mr Ashutosh Pathak (Sr. Proofreader cum Team Coordinator) and all the production team members for devoting laborious hours in designing and typesetting the book.

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From the Publisher's Desk

Dear Reader,

Nursing Education has a rich history, often characterized by traditional teaching techniques that have evolved over time. Primarily, teaching took place within classroom settings. Lectures, textbooks, and clinical rotations were the core teaching tools; and students majorly relied on textbooks by local or foreign publishers for quality education. However, today, technology has completely transformed the field of nursing education, making it an integral part of the curriculum. It has evolved to include a range of technological tools that enhance the learning experience and better prepare students for clinical practice.

As publishers, we've been contributing to the field of Medical Science, Nursing and Allied Sciences and earned the trust of many. By supporting **Indian authors**, coupled with **nursing webinars and conferences**, we have paved an easier path for aspiring nurses, empowering them to excel in national and state level exams. With this, we're not only enhancing the quality of patient care but also enabling future nurses to adapt to new challenges and innovations in the rapidly evolving world of healthcare. Following the ideology of **Bringing learning to people instead of people going for learning**, so far, we've been doing our part by:

- Developing quality content by qualified and well-versed authors
- Building a strong community of faculty and students
- Introducing a smart approach with Digital/Hybrid Books, and
- Offering simulation Nursing Procedures, etc.

Innovative teaching methodologies, such as modern-age Phygital Books, have sparked the interest of the Next-Gen students in pursuing advanced education. The enhancement of educational standards through **Omnipresent Knowledge Sharing Platforms** has further facilitated learning, bridging the gap between doctors and nurses.

At Nursing Next Live, a sister concern of CBS Publishers & Distributors, we have long recognized the immense potential within the nursing field. Our journey in innovating nursing education has allowed us to make substantial and meaningful contributions. With the vision of strengthening learning at every stage, we have introduced several plans that cater to the specific needs of the students, including but not limited to **Plan UG** for undergraduates, **Plan MSc** for postgraduate aspirants, **Plan FDP** for upskilling faculties, **SDL** for integrated learning and **Plan NP** for bridging the gap between theoretical & practical learning. Additionally, we have successfully completed seven series of our **Target High** Book in a very short period, setting a milestone in the education industry. We have been able to achieve all this just with the sole vision of laying the foundation of

diversified knowledge for all. With the rise of a new generation of educated, tech-savvy individuals, we anticipate even more remarkable advancements in the coming years.

We take immense pride in our achievements and eagerly look forward to the future, brimming with new opportunities for innovation, growth and collaborations with experienced minds such as yourself who can contribute to our mission as Authors, Reviewers and/or Faculties. Together, let's foster a generation of nurses who are confident, competent, and prepared to succeed in a technology-driven healthcare system.

Mr Bhupesh Aarora
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Special Features of the Book

LEARNING OBJECTIVES

After the completion of the unit, the readers will be able to:

- Discuss the concepts, goals and objectives of family health nursing care.
- Demonstrate skills in providing comprehensive nursing care to the family.
- Identify the family healthcare plan and the nursing process.
- Appreciate the roles and functions of community health nurses in family health service.

Learning Objectives given in all the units focus on the areas that a student shall gain after completing the unit.

Every unit starts with a **Unit Outline** that gives the glimpse of the content covered in the unit.

UNIT OUTLINE

- Introduction
- Family
- Concept of Family Health
- Family Healthcare Services
- Family Healthcare Plan
- Family Health Nursing Process
- Family Health Services
- Role of Community Health Nurse in Family Health Services

KEY TERMS

Family health: Health of the members of family; a state in which the family is a resource for the day-to-day living and health of its members.

Family health nursing: Nursing services provided to the family; generalized, well-balanced and integrated, comprehensive and continuous are requiring planning to accomplish its goal.

Family planning: Limiting the size of the family; the consideration of the number of children a person wishes to have, including the choice to have no children, and the age at which they wish to have them.

Important terms used in the unit are enlisted under **Key Terms**.

TABLE 20.1: List of food adulterants

Food stuffs	Adulterants
Milk	Removal of fat, addition of water, extraction of cream, mixing arrowroot, urea, etc.
Ghee	Pure ghee is adulterated with dalda and animal fat, such as pig's fat
Vegetable oil	Mineral oil, inedible oil
Cereals	Mixing with soil, pieces of stones, powder, infested cereal and broken food grains

Numerous Tables are used in the text to provide students with necessary data and information to supplement the text.

Several **images and diagrams** have been used at relevant places to simplify the concepts for the students.

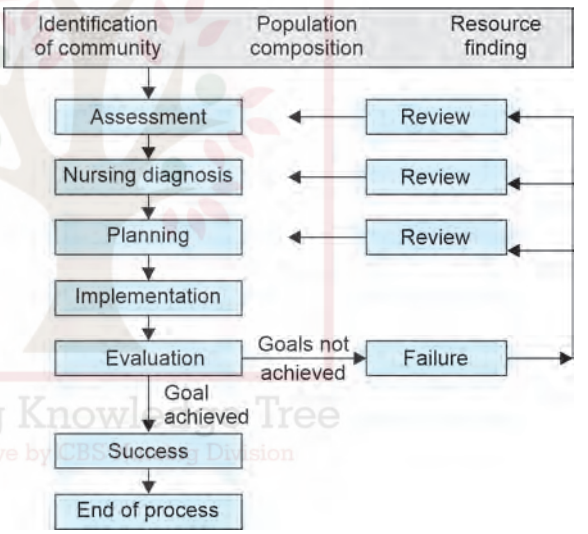

Fig. 2.4: Steps of community health nursing process

Nursing Considerations

Important Points to Remember while Immunizing

- Only disposable syringes should be used.
- Hepatitis B dose is given only within 24 hours after birth as it helps to prevent prenatal transmission of hepatitis B.
- OPV-O dose is given within 15 days after birth. OPV can be given up to 5 years of age.
- Pentavalent vaccines contain a combination of DPT, hepatitis B and Hib. Hepatitis B birth dose and booster dose of DPT will continue as before.

Nursing Considerations boxes are covered throughout the book for implementation of better clinical practices.

Recent Updates

New Stroke Prevention Guidelines (American Heart Association 2014)

Individualized Approach to Lifestyle Modifications

- Physical activity
- Diet and nutrition
- Smoking cessation
- Obesity and dyslipidemia

Prevention and Control

- Early detection and treatment of transient ischemic attack to prevent the stroke.
- **Modification of lifestyle:** Alteration in lifestyle to manage the risk factors like hypertension, diabetes and coronary heart disease, etc.
- **Healthcare facilities:** People should be made aware about the available healthcare facilities and how to make use of them.
- **Health education:** People should be educated about the prevention and control of strokes.

Recent Updates keep students aware of all the latest advances and developments in the field.

Must Know boxes covering valuable facts are strategically placed to highlight critical information, ensuring readers are well-informed of key concepts and important details.

MUST KNOW

Relation between Records and Reports

Records and reports are interdependent. Reports are written based on records. Reports can also be presented as record. Records are always in written form, whereas report can be written as well as verbal. Records can be preserved, whereas verbal reports can be forgotten. In spite of being different, both seem synonymous and are interdependent. Both are important tools of communication and management in hospitals and community health centers and nursing.

Summary

- The philosophy of community health nursing is that nursing services should be provided to all irrespective of race, religion, caste, creed and sex.
- Community health nursing is influenced by attitude of family, religion, culture, education, value, norms and beliefs of the family.
- The main goal of community health nursing is to promote the health of the individuals, families and community.
- The main principles of community health nursing include planned services according to the need and requirement of the community, maintaining good interpersonal relationship with the community, and providing services irrespective of caste, creed, color, religion, etc.

Each and every unit ends with **Summarized one-liner** for quick revision of the chapter.

Student Assignment in the form of comprehensive exercises in each and every unit will facilitate structured learning and revision of the material provided in the respective units.

STUDENT ASSIGNMENT

LONG ANSWER TYPE QUESTIONS

1. Describe the factors affecting environmental health.
2. Explain the environmental problems affecting human health.

SHORT ANSWER TYPE QUESTIONS

1. Define environment.
2. Enlist the components of environment.

MULTIPLE CHOICE QUESTIONS

1. **Which one of the following is not the component of physical environment?**
   a. Air b. Water
   c. Soil d. Microorganisms
2. **Which of the following is not the main component of our environment?**
   a. Physical b. Biological
   c. Spiritual d. Social

Syllabus for GNM Students

COMMUNITY HEALTH NURSING-I

Placement: First Year **Total Hours – 80**

Unit	Learning Objectives	Content	Hours	Teaching Learning Activities	Methods of Assessment
I.	Describe the concept of health and disease and community health.	**Introduction to Community Health** • Definitions: Community, Community Health, community health nursing • Concept of Health and disease, dimensions and indicators of health, Health determinants • History and development of Community Health in India and its present concept • Primary health care, Millennium Development Goals • Promotion and maintenance of Health	10	Lecture cum discussions	Short answers
II.	• Explain various aspects of Community Health Nursing. • Demonstrate skills in applying nursing process in Community Health Nursing settings.	**Community Health Nursing** • Philosophy, goals, objectives and principles, Concept and importance of Community Health Nursing, - Qualities and functions of Community Health Nurse • Steps of nursing process; community identification, population composition, health and allied resources, community assessment, planning and conducting community nursing care services	14	Lecture cum discussions	• Short answers • Essay type
III.	Demonstrate skill in assessing the health status and identify deviations from normal parameters in different age groups.	**Health Assessment** • Characteristics of a healthy individual • Health assessment of infant, preschool, school going, adolescent, adult, antenatal woman, postnatal woman, adult and elderly	10	• Lecture cum discussions • Demonstration • Role Play • Videos	• Short answers • Objective type • Essay type • Return demonstration

Contd...

Unit	Learning Objectives	Content	Hours	Teaching Learning Activities	Methods of Assessment
IV.	Describe the principles of epidemiology and epidemiological methods in community health nursing practice.	**Principles of Epidemiology and Epidemiological methods** • Definition and aims of epidemiology, communicable and noncommunicable diseases • Basic tools of measurement in epidemiology • Uses of epidemiology • Disease cycle • Spectrum of disease • Levels of prevention of disease • Disease transmission—direct and indirect • Immunizing agents, immunization and national immunization schedule • Control of infectious diseases • Disinfection	10	• Lecture cum discussions • Non-communicable disease module of government of India • Field visit	• Essay type • Short answers • Objective type
V.	Demonstrate skill in providing comprehensive nursing care to the family.	**Family Health Nursing Care** • Family as a unit of health • Concept, goals, objectives • Family health care services • Family health care plan and nursing process • Family health services—Maternal, child care and family welfare services • Roles and function of a community health nurse in family health service • Family health records	12	• Lecture cum discussions • Role play Family visit	• Essay type • Short answers
VI.	Describe the principles and techniques of family health care services at home and in clinics.	**Family Health Care Settings** Home visit: • Purposes, principles • Planning and evaluation • Bag technique Clinic Purposes, type of clinics and their functions • Function of Health personnel in clinics	10	• Lecture cum discussions • Demonstration • Visits—Home, health center	• Short answer • Return demonstration
VII.	Describe the referral system and community resources for referral.	**Referral System** • Levels of health care and health care settings • Referral services available—Steps in referral • Role of a nurse in referral	6	• Lecture cum discussions • Mock drill	• Short answer • Objective type

Contd...

Unit	Learning Objectives	Content	Hours	Teaching Learning Activities	Methods of Assessment
VIII.	List the records and reports used in community health nursing practice.	**Records and Reports** • Types and uses • Essential requirements of records and reports • Preparation and Maintenance	3	• Lecture cum discussions • Exhibit the records	• Short answer • Objective type
IX.	Explain the management of minor ailments.	**Minor Ailments** • Principles of management • Management as per standing instructions/orders	3	Lecture cum discussions	• Short answer • Objective type

ENVIRONMENTAL HYGIENE

Total Hours – 30

Unit	Learning Objectives	Content	Hours	Teaching Learning Activities	Methods of Assessment
I.	Explain the importance of healthy environment and its relation to health and disease.	**Introduction** • Components of environment • Importance of healthy environment	2	Lecture cum discussions	Short answer
II.	Describe the environmental factors contributing to health and illness.	**Environmental Factors Contributing to Health** • **Water:** ▪ Sources and characteristics of safe and wholesome water ▪ Uses of water ▪ Rain water harvesting ▪ Water pollution—natural and acquired impurities ▪ Water borne diseases ▪ Water purification-small and large scale • **Air:** ▪ Composition of air ▪ Airborne diseases ▪ Air pollution and its effect on health ▪ Control of air pollution and use of safety measures	22	• Lecture cum discussions • Demonstration Exhibits • Visit to water purification plant, sewage treatment plant	• Short answers • Objective type • Essay type

Contd...

Unit	Learning Objectives	Content	Hours	Teaching Learning Activities	Methods of Assessment
		• **Waste:** ▪ Refuse—garbage, excreta and sewage ▪ Health hazards ▪ Waste management: collection, transportation and disposal • **Housing:** ▪ Location ▪ Type ▪ Characteristics of good housing ▪ Basic amenities ▪ Town planning • **Ventilation:** Types and standards of ventilation • **Lighting:** ▪ Requirements of good lighting ▪ Natural and artificial lighting ▪ Use of solar energy • **Noise:** ▪ Sources of noise ▪ Community noise levels ▪ Effects of noise pollution ▪ Noise Control measures • **Arthropods:** ▪ Mosquitoes, housefly, sand fly, human louse, rat fleas, rodents, ticks etc. ▪ Control measures			
III.	Describe the community organization to promote environmental health.	**Community organizations to promote environmental health** • Levels and types of agencies: ▪ National, state, local ▪ Government, voluntary and social agencies • Legislations and acts regulating the environmental hygiene	6	Lecture cum discussions	• Short answer • Objective type

HEALTH EDUCATION AND COMMUNICATION SKILLS

Total Hours – 40

Unit	Learning Objectives	Content	Hours	Method of Teaching	Assessment Methods
I.	Describe the concept and different aspects of communication.	**Communication Skills** • Definition, process, purposes, principles, types and importance of communication • Barriers in communication • Establishment of successful communication • Observing and listening skills	8	• Lecture cum discussions • Demonstration Role play	• Short answers • Objective type • Return demonstration
II.	Describe the aims and objectives, scope, levels, approaches and principles of health education.	**Health Education** • Concept, definition, aims and objectives of health education • Principles of health education • Process of change/modification of health behavior • Levels and approaches of health education • Methods of health education • Scope and opportunities for health education in hospital and community • Nurse's role in health education	6	Lecture cum discussions	• Short answers • Objective type
III.	Demonstrate the skills of counseling.	**Counseling** • Definition, purpose, principles, scope and types • Counseling process: steps and techniques • Qualities of a good counselor • Difference between health education and counseling • Role of nurse in counseling	8	• Lecture cum discussion • Role play	• Short answer • Essay type
IV.	• Describe the types of A-V aids. • Demonstrate skill in preparing and using different kinds of audio-visual aids.	**Methods and Media of Health Education** • Definition, purpose and types of audio-visual aids and media • Selection, preparation and use of audio-visual aids: graphic aids, printed aids, three dimensional aids and projected aids • Advantages and limitations of different media • Preparation of health education plan	18	• Lecture cum discussions • Exhibits charts • Demonstration	• Evaluation of prepared audio visual aids • Written test

NUTRITION

Total Hours – 30

Unit	Learning Objectives	Content	Hours	Method of Teaching	Methods of Assessment
I.	Describe the relationship between nutrition and health.	**Introduction** • Meaning of food, nutrition, nutrients etc. • Food Habits and customs • Factors affecting nutrition • Changing concepts in food and nutrition • Relation of Nutrition to Health	2	• Lecture cum discussions • Explain using charts	• Short answer types • Objective type
II.	Describe the classification of food.	**Classification of food** • Classification by origin: ▪ Food and animal origin ▪ Food of plant origin • Classification by chemical composition and sources ▪ Carbohydrates ▪ Proteins ▪ Fats ▪ Minerals ▪ Vitamins ▪ Water • Classification by predominant functions ▪ Body building food ▪ Energy giving food ▪ Protective food • Classification by nutritive value ▪ Cereals and millets ▪ Pulses and legumes ▪ Vegetables ▪ Nuts and oil seeds ▪ Fruits ▪ Animal food ▪ Fats and oils ▪ Sugar and jaggery ▪ Condiments and spices ▪ Miscellaneous food	2	• Lecture cum discussions • Real food items • Exhibits charts	• Short answers • Objective type • Essay type
III.	• Explain normal dietary requirements • Demonstrate skill in calculating normal food requirements.	**Normal Dietary Requirements** • Energy: Calorie, Measurement, Body Mass Index, Basal Metabolic Rate—determination and factors affecting	4	• Lecture cum discussions • Charts exhibits Real food • Practical exercise	• Short answer • Objective type • Essay type

Contd...

Unit	Learning Objectives	Content	Hours	Method of Teaching	Methods of Assessment
		• Balanced Diet—nutritive value of foods, calculation for different categories of people, normal food requirement calculation. Menu plan. Combination of food affecting and enhancing the nutritive value of the diet. Budgeting for food, low cost meals, food substitutes • Diseases and disorders caused by the imbalance of nutrients • Food allergy—causes, types, diet modifications in glutein, lactose and protein intolerance, etc. • Food intolerance—inborn errors of metabolism			
IV.	Describe the principles and various methods of preparation, preservation and storage of food.	**Food Preparation, Preservation & Storage** • Principles of cooking, methods of cooking and the effect of cooking on food and various nutrients Safe food handling, health of food handlers • Methods of food preservation– household and commercial, precautions • Food storage—cooked and raw, household and commercial, ill effects of poorly stored food • Food adulteration and Acts related to it	2	• Lecture cum discussions • Field visit to food processing unit • Demonstration exhibits	• Short answer type • Objective type • Evaluation of exhibit preparation
V.	Describe about therapeutic diet.	**Therapeutic Diet** • Diet modification in relation to medical and surgical condition of the individual such as Protein Energy Malnutrition (PEM), Diabetes, Cardiovascular disease, Hepatitis, Renal, Gouts, Irritable Bowel Syndrome (IBS), Obesity, cholecystectomy, partial gastrectomy, gastrostomy, bariatric surgery and colostomy, etc. • Special diet—low sodium diet, fat free diet, diabetic diet, bland diet, high protein diet, low protein diet, low calorie diet, geriatric diet, iron rich diet, liquid diet, semi-solid diet, soft diet and high fiber diet, etc.	8	• Lecture cum discussions • Practical of planning Therapeutic diet • Demonstration Charts Exhibits	• Short answers • Objective type • Essay type

Contd...

Unit	Learning Objectives	Content	Hours	Method of Teaching	Methods of Assessment
		• Factors affecting diet acceptance, feeding the helpless patient • Health education on nutrition needs and methods in diet modification			
VI.	Describe the concept of community nutrition.	**Community Nutrition** • Nutritional problems and programs in India • Community food supply, food hygiene and commercially prepared and grown food available locally • National and international food agencies—Central Food Training Research Institute (CFTRI), Food and Agriculture Organization (FAO), National Institute of Nutrition (NIN), Food Safety and Standards Authority of India (FSSAI), Cooperative for Assistance and Relief Everywhere (CARE), National Institute of Public Cooperation and Child Development (NIPCCD), etc.	4	• Lecture cum discussions • Videos Government of India nutrition manuals • Visit to the local food preparation/ processing agency	• Short answer • Objective type
VII.	Demonstrate skill in preparation of common food items.	**Preparation of diet/practical** • Beverages: Hot and cold, juice, shakes, soups, lassi, barley water • Egg preparation: Egg flip, scramble, omlet, poached egg • Light diet: Porridges, gruel, khichari, dahlia, kanji, boiled vegetables, salads, custards • Low cost high nutrition diets—chikki, multigrain roti	8	• Lecture cum discussions • Cookery practical	Practical evaluation

Contents

Section II Environmental Hygiene

Section III Health Education and Communication Skills

7

Referral System

LEARNING OBJECTIVES

After the completion of the unit, the readers will be able to:

- Define referral system.
- Describe the levels of healthcare.
- Explain the steps in referral system.
- Enlist the duties and responsibilities of nursing personnel at various levels of referring unit.
- State the staffing patterns at various levels of healthcare.
- Understand the importance of referral services.

UNIT OUTLINE

- Introduction
- Healthcare
- Healthcare Settings
- National Health Programs

KEY TERMS

Fatal condition: In this condition, a life cannot be saved even with treatment.
Referral: Sending the patient from one place to another.
Serious condition: In this condition, life can be saved but only with immediate treatment.

INTRODUCTION

A referral system in healthcare is a process that helps patients get access to specialized care when needed, while also making efficient use of resources. It's a key part of the health system, and it connects different levels of care.

HEALTHCARE

The dictionary meaning of healthcare is to protect health, to be concerned about health or to take care of health. World Health Organization (WHO) definition of health states, "Health is a state of complete physical, mental, and social well-being and not merely an absence of disease or infirmity".

So, in the light of the above definition, health can be understood as the "multiple services rendered to the individuals, families, and community by the health agency for the purpose of promoting, preventing, maintaining, monitoring and restoring the health".

Considering it, Government of India is committed to achieve the goal of "Health for All" through primary healthcare approach, the national health policy was reviewed in 2001 to achieve acceptable standard of health by strengthening the existing infrastructure and emphasizing the need to strengthen primary healthcare infrastructure making basic health services available to the people at grassroots level.

Characteristics of Healthcare

- Should be accessible to all within a specified geographical area taking care of their social and cultural values.
- Should be appropriate and adequate to satisfy the needs of the people.
- Comprehensive in nature.
- Within the capacity of available resources, like money, material and manpower.
- According to the priorities of the needs and policies of the government.

Purposes of Healthcare

- To reduce the morbidity and mortality rate.
- To improve basic environmental sanitation.
- To improve nutritional status.
- To increase the life expectancy of individuals.
- To investigate the new emerging health problems and take appropriate steps to deal with.
- To develop manpower and other resources.
- To explore the potentials of the people toward "Progressive India".

Levels of Healthcare

Healthcare in India is based on 3-tier system of services provided at three levels of care. These are Primary Level, Secondary Level and Tertiary Level.

Primary Level of Healthcare

It is the first level of contact between the community and healthcare providers at the grassroots level. At this stage many health problems are solved by the people themselves with some guidance, education and assistance provided by the health team (Fig. 7.1). The health agencies that provide primary healthcare are subcenters, primary health centers. These services are comprehensive in nature and provide basic healthcare by the team of health professionals. Health professionals include medical officer, health supervisors, multipurpose health workers male and female, sanitarian and extension health educator. At village level, the Anganwadi worker, trained dais and accredited social health activists (ASHA) and other leaders are active in contributing their services at primary level of healthcare.

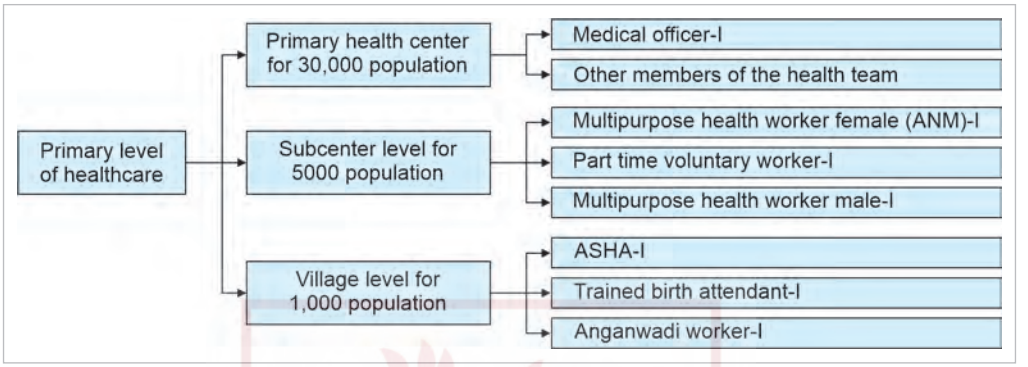

Fig. 7.1: Model of primary level of healthcare

Secondary Level of Healthcare

As per the policies of primary healthcare, the primary levels of healthcare settings are not equipped with the facilities and manpower to deal with all complex problems. So, the cases which require secondary level of preventive services, i.e., diagnostic, curative services and specialists' consultations are referred to as secondary level care (Fig. 7.2). The secondary level services are provided at community health center, district hospital, and district health center.

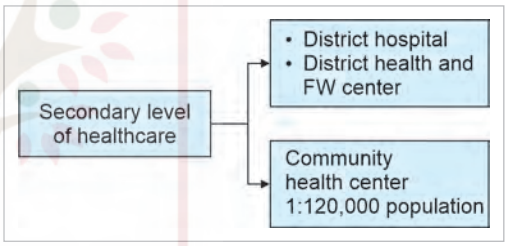

Fig. 7.2: Model of secondary level of healthcare

Tertiary Level of Healthcare

The health problems which cannot be treated at secondary level care setting are transferred to tertiary level care setting. The tertiary level care is provided at state level, regional level or central level. Institutions include specialist hospitals, medical college hospital and super specialiality hospital. These institutions serve as referral units for primary and secondary levels of care. In these institutions, the latest technology, facilities and super specialists, are available.

These institutions, in addition to provide tertiary level care, also serve as teaching institutions. The training and medical education is provided to the various categories of health workers. The planning, management and research work is also executed at this level.

HEALTHCARE SETTINGS

In the past, the health services were the privilege of the urban and allied community. The hospitals and dispensaries were available in the cities. In India 75% of the population belong to rural area where the facilities were very few and unevenly placed. People of rural area could not avail the health facilities due to poverty, illiteracy and ignorance; it resulted in high morbidity and mortality among the rural population.

The current commitment of all the countries to remove the inequalities in the distribution of healthcare services and resources and attainment of "Health for All" (HFA) by 2000 AD. That means minimum healthcare must be accessible and affordable to each individual of the society so as to maintain optimum level of health. To meet the global commitment of "HFA" the healthcare settings are restructured through primary healthcare approach to provide universal comprehensive healthcare to the people who can accept and afford it.

Factors Affecting Healthcare Settings

The following factors affect the healthcare settings:

- **Funds:** Funds are generated by the government through general taxes. It is up to the government how much funds are made available for healthcare services. Funds are also generated through private agencies and volunteers, and contribution from people.
- **Technical manpower:** It is the most expensive factor. How much trained manpower is employed by the government, depends upon government policies and decisions.
- **Consumers of healthcare:** These are the people to whom healthcare services are to be provided. The extent and nature of services depend upon the size, demographic characteristics, health status of the people, their health attitude, behavior, lifestyle, education, standard of living, sociocultural practices, physical surroundings of the people and health demands of the geographical area.
- **Other factors:** Constitutional obligation, political system, health policies, agenda and judiciary obligations.

Classes of Healthcare Settings

Keeping in view the abovementioned factors the health settings are classified as:

- Public sector
- Private sectors
- Voluntary health agencies
- National health programs
- Indigenous system of medicine

Public Sector

Public sector is a government-sponsored system. It is financed by public funds generated through taxes. Services are provided to rural and urban area by three-tier system at block level, district level and state level.

Health Services at Rural Areas

Health services in the rural area are provided through infrastructure, developed right form village to the block level.

Block Level

Organizational structure at block level is developed as under:

- Village level
- Subcenter level

- Primary health center level
- Community health center level

Village Level

To provide basic health facilities at village level, there are four categories of workers who provide healthcare to 1,000 population after getting training at subcenter and primary health center under the supervision of auxiliary nurse and midwife (ANM) and male health worker. They are:

- Traditional birth attendants (TBA)/trained DAIS
- Anganwadi worker
- Accredited social health activist (ASHA)

Trained dais

They are also known as traditional birth attendants. The national objective is to have one trained *dai* in each village. These *dais* have vital role in providing domiciliary midwifery services in rural areas. They are given training for 30 working days at primary health center and subcenter 2 days in a week and remaining four days, they accompany the auxiliary nursing and midwife (ANM) to the village. *Dais* are required to conduct two deliveries under the guidance and supervision of female health worker. Each dai is paid ₹300/- during the training. After completion of training, each dai is provided with a delivery kit and certificate. She is entitled to receive ₹150/- per delivery, provided the case is registered with subcenter or primary health center.

Functions:

- Contact every pregnant woman and get her registered.
- Attend every prenatal clinic.
- Ensure immunization of pregnant woman and newborn babies.
- Motivate eligible couples.
- Report about birth and death in the area to the authorities.
- Provide essential newborn care.
- Postnatal care to the delivery cases.

Anganwadi Workers

Under the Integrated Child Development Services (ICDS) scheme, one Anganwadi worker is appointed for 1,000 population. She is selected from the local community and undergoes training for 4 months. After training, she is paid an honorarium of ₹8000/- per month and if varies, with each state. She is a part-time worker.

Duties of Anganwadi worker include:

- Providing health checkups
- Providing supplementary food
- Taking care of immunization
- Providing informal education
- Taking care of lactating mother, adolescent girls, women of reproductive age (15–40 years) and children under 6 years.

Accredited Social Health Activist (ASHA)

The post of ASHA was created under national rural health service (NRHS) also known as National Rural Health Mission (NRHM). There is one ASHA for 1000 population. She is selected from the same community.

- **Selection of ASHA:** She should be married/divorcee or widow between age group of 25 and 45 years. Minimum education should be up to 10th standard. She should have good knowledge and art of communication and leadership qualities. She is a volunteer worker. The salary of ASHA is incentive based and provided by the state government according to the task performed. The Central Government pays ₹3000/- per month under the Rural Health Mission Scheme. ASHA also is provided travelling allowance for taking patients to health centers.
- **Incentive in ASHA**

The student can see the Unit 2 of Textbook of Community Health Nursing-II to refer the list of ASHA incentives.

- **Duties of ASHAs:**
  - To create awareness and provide instruction to the community about health, nutrition, personal hygiene and sanitation.
  - To counsel the women on safe pregnancy, delivery, breastfeeding and complementary feeds.
  - To motivate people for adopting small family norms.
  - To work as depot holder for essential medicines, like ORS, iron, folic acid, tablets, chloroquine, oral pills, and disposable delivery kit.
  - To mobilize the community in accessing health services at subcenter and primary health centers.
  - To escort pregnant women requiring treatment.
  - To provide primary medical care for minor ailments.
  - To inform about births and deaths in the village and outbreak of unusual health problems to subcenter and primary health center.
  - To promote constructions of household toilets.

  So, three volunteer workers provide basic healthcare and referral services, at the village level.

Subcenter Level

It is the first peripheral health unit between the community and health services in rural area. It covers a population of 5,000 in plains and 3,000 in hilly area, tribal and backward area. Subcenter is managed by one multipurpose female health worker (ANM) and one multipurpose health worker male and one voluntary worker part time paid ₹100/- per month

Functions:

- Field visits
- Mother and child health (MCH) care and family welfare services
- Immunization of pregnant women and children under 1 year
- Training and supervision of Dais
- IUD insertion
- Simple laboratory investigations
- Health education
- Birth and death registration
- Record maintenance
- School health services

- Information, education and communication activities
- Attending review meetings and submission of reports to PHC medical officer
- Involvement in National Health Program
- Joined health activities with Anganwadi and Balwadi workers
- Coordinating with other agencies and sectors

Primary Health Center Level

Primary Health Center (PHC) is the first contact point between the village community and medical officer. It is the first structural and functional unit of public health services for rendering primary health services and healthcare in peripheral area. PHCs are established and maintained by the state government under the minimum need program. A PHC acts as a referral unit for 6 subcenters and covers a population of 30,000 in plains and 20,000 in hilly, tribal and backward area.

Staffing pattern:

- Medical Officer – 1
- Nurse midwife – 1
- Health worker female ANM – 1
- Pharmacist – 1
- Health educator – 1
- Health assistant male/health supervisor – 1
- Health assistant female/LHV – 1
- Upper division clerk/store keeper – 1
- Lower division clerk, Junior assistant – 1
- Laboratory technician – 1
- Driver (if vehicle is available) – 1
- Class IV workers – 4

  Total – 15

  There are 4–6 beds in some of the primary health centers.

Functions:

- Medical care
- Mother and child healthcare (MCH) and family planning services
- Prevention and control of communicable diseases
- Basic laboratory services
- Training of health workers, local dais and health assistants
- School health services
- Collection and reporting of vital statistics
- Safe water supply and basic sanitation
- Health education
- Referral services
- Prevention of food adulteration practices

Community Health Centers (CHC) Level

Community health centers are maintained by the state government under the Minimum Need Program (MNP). Each CHC has 30 sanctioned beds. It covers a population of 1,20,000 in plain and 80,000 in hilly, tribal and backward area. It acts as a referral unit for four primary health centers.

From community health centers patients are referred to district hospital/health centers if required for consultation and treatment. The specialist services provided at CHC are:

- Surgery
- Medicine
- Obstetrics and gynecology
- Pediatrics
- Dental and ENT

Staffing pattern:

- Medical Officer – 4
- Nurse Midwives – 7
- Dresser – 1
- Pharmacist – 1
- Lab technician – 1
- Radiographer – 1
- Ward boys – 2
- Sweepers – 3
- Aya – 1
- Peon – 1
- Dhobi – 1
- Mali – 1
- Chowkidar – 1

Total = 25

Functions:

- Routine and emergency surgery
- Routine and emergency medical care
- 24-hours delivery services including surgical intervention, like cesarean section
- Essential and emergency obstetric care
- Newborn care
- Routine and emergency care of sick children
- Blood storage facilities
- Essential laboratory services
- Safe abortion center
- Full range of family planning services including laparoscopic services
- All national health programs
- Other emergency measures, like tracheostomy foreign body removal and nasal packing, etc.
- Referral services

District hospitals, state level hospitals and medical college hospitals: The services to the urban community are provided through these hospitals. These hospitals are also referral units for the rural communities.

Central government hospitals: They provide general as well as referral services.

Defense hospital: These hospitals are financed by central government and provide services only to the defense employees and their families. Defense hospitals have their own medical college, nursing college and nursing schools.

Railway hospital: Railway hospitals are managed by central government and provide services to the railway employees and their families.

Autonomous institutes: Under this category, some institutions receive aid from central government but except few important matters, all other decisions are made by the institutions itself. All India Institute of Medical Sciences (AIIMS) New Delhi, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru and Postgraduate Institute (PGI) Chandigarh are the hospitals which provide referral services to the rural and urban communities.

MUST KNOW

Various schemes introduced by government

Employees State Insurance Scheme (ESI): It was introduced in India on the principles of contribution by the employer and employee. It was started under the Parliament Act in 1948 to provide medical benefits in kind and cash during sickness, employment injury, maternity and pension for dependents on the death of worker because of injury. The Act covers employees drawing wages not exceeding ₹21,000/- per month.

Central Government Health Scheme (CGHS): It was introduced in 1954 to start at New Delhi to provide comprehensive healthcare to the central government employees. Later on, it was extended to other cities not only to the employees but also to their family members. It was implemented to the autonomous organization employees, members of the parliament, retired central government servants, widows receiving family pensions governors and retired judges. The scheme is based on the principle of cooperative effort by the employee and employer for the mutual advantages.

The facilities at CGHS are:

- Outpatient care
- Supply of necessary drugs
- Lab and X-ray investigation
- Domiciliary visits
- Hospitalization at government as well as private hospitals
- Referral services
- Pediatric services
- Obstetric services
- Family welfare services
- Emergency treatment
- Supply of optical and dental aids

Private Sectors

In private sectors, there are specialty hospitals, super specialist hospitals, medical colleges hospitals, dispensaries and health clinics. The people who can afford heavy expenses are taking the facilities of healthcare. But these hospitals provide only curative services. Poor and weaker section cannot avail the facilities of private sector clinics.

Mission/religious hospitals: This type of institutions is charitable and run by trust or mission. They provide medical services either free of cost or at minimum rate. They are present in urban areas but provide care to rural area also through camps.

Voluntary Health Agencies

These agencies are nongovernment and nonprofit making. They are initiated, established and administered by private citizens. They are financed by voluntary contributions and donations. These agencies are complementary to the government health agencies. The members of the agencies hold meetings, collect funds for its functioning from the private sources.

Functions

- **Supplementing the work of government agencies:** Government cannot provide complete health services because of financial and statutory restrictions.
- **Education:** Government alone cannot cope with the health education in India unless supplemented by voluntary efforts.
- **Pioneering:** Voluntary health agencies are in a position to find out ways and means of solving problems and getting the solutions of doing things in a fruitful way. Family planning program in India is an example of pioneering by the voluntary agencies.
- **Demonstrations:** By putting up experimental projects, the voluntary health agencies succeeded in its contributions toward healthcare services.
- **Guarding the work of government agencies:** Through their experimental approach, voluntary health agencies are capable of guarding and criticizing the work of government agencies.
- **Advancing health legislation:** It can mobilize public opinions and advance legislation on health matters for the future benefit of the community and country.

Types of Voluntary Health Agencies

Indian Red Cross Society

It was established in 1920 and has 400 branches all over India. It has been executing programs for promotion of health, prevention of disease and mitigation of suffering among the people. It performs the following functions:

- **Relief work:** The Red Cross Society mobilizes its resources immediately to rescue the people during natural calamities, like earthquake, floods, epidemics and drought.
- **Milk and medicine supplies:** Many orphanage homes, schools, maternal and child welfare centers, dispensaries and hospitals, etc. receive milk powder, medicines, vitamins and other supplies.
- **Armed forces:** Care of the sick and wounded in armed forces is the primary obligation of Red Cross. It has got the red cross home in Bangalore for permanently disabled ex-servicemen.
- **Maternal and Child Welfare Services:** There is a bureau of maternity and child welfare which provides technical advice and financial aid to its branches and other interested in improving maternity and child welfare scheme.
- **Family planning:** Several states in India are running family planning clinics under the auspices of Indian Red Cross.
- **Blood bank and first aid:** Some of the branches started blood banks, St. John Ambulance Association of India which is a part of Red Cross, trained lacs of men and women in first aid, home nursing and allied subjects.

Hind Kusht Nivaran Sangh

It was established in 1950 with its headquarter in New Delhi. It provides financial assistance to various leprosy homes and clinics. It also provides health education through publication and posters. Training to the medical workers and physiotherapists is also imparted by this agency. It conducts research and field investigations on leprosy. It has got branches all over India and works in close association with government and other agencies.

Indian Council for Child Welfare

It was started in 1952 and affiliated with international union for child welfare. It has branches in all states and districts all over India. The services are devoted to secure Indian children. These opportunities and facilities by law and other means, "helps enabling the children to develop physically, mentally, socially and spiritually in a healthy and normal manner and in conditions of freedom and dignity".

Tuberculosis Association of India

It was established in 1939. It has got branches in all the states of India. Its activities are organizing TB Seal Campaign every year to raise funds, training of doctors, health visitors and social workers in antituberculosis work, promotion of consultations and conferences. The institutions under the management of Association are: The New Delhi Tuberculosis Center, The Lady Linlithgow Sanatorium at Kasauli, The King Edward VII Sanatorium at Dharampur and the Tuberculosis Hospital at Mehrauli.

Bharat Sevak Samaj

The Bharat Sevak Samaj was formed in 1952. It is nonpolitical and nonofficial organization. It helps people to achieve health by their own action and efforts. Its branches are in all states and districts. Its important activity is to improve sanitation in villages.

Central Social Welfare Board

It was set up by the Government of India in 1953. It is an autonomous organization under the general administrative control of Ministry of Education.

Functions:

- Surveying the needs and requirements of voluntary welfare organization in the country
- Promoting and setting up of social welfare organizations on a voluntary basis
- Rendering of financial assistance to deserving existing organization and institutions

Kasturba Memorial Fund

This fund was created in 1944 after the death of Kasturba Gandhi. The main objective of this fund is to raise the standard of women, especially in the villages through *gram sevikas*. The trust is actively engaged in the various projects in the country.

Family Planning Association of India

It was started in 1949 with its headquarter at Mumbai. Association has branches all over the country and clinics with grants-in-aid from the government. Hundreds of doctors, health visitors and social workers have been trained on the aspects of family planning. Association has done commendable work in propagating family planning in India. Headquarter is answerable to enquiries on family planning.

All India Women's Conference

It was originated in 1926 and runs branches all over the country. It is the only women's voluntary welfare organization in India. Most of the branches are running MCH clinics, medical centers, adult education centers, milk centers and family planning clinics.

The All India Blind Relief Society

It was formed in 1946 with a view to coordinate different institutions working for the blind. It organizes eye relief camps and other means for the relief of the blind.

Professional Bodies

The Indian Medical Association, All India Licentiates Association, All India Dental Association and Trained Nurses Association of India are the voluntary agencies of men and women who are qualified in their respective fields of specialties and possess registrable qualification. These professional bodies conduct annual conferences, publish journals and arrange specific scientific sessions and exhibition, poster, research and set up standards of professional education. They also organize relief camps during periods of natural calamities.

International Agencies

There are international health agencies which provide technical and material assistance in planning and implementation of various health programs. These agencies include WHO, UNICEF, World Bank, United Nations Fund for Population Activities (UNPFA), United States Agency for International Development (USAID), Cooperative for Assistance and Relief Everywhere (CARE).

NATIONAL HEALTH PROGRAMS

In addition to various levels of healthcare settings, the Government of India has put up lots of efforts to deal with various health problems at national level. These problems include communicable and noncommunicable diseases, environmental sanitation, nutrition problems, population problems, etc.

Indigenous System of Medicine

During the last few years constructive efforts have been made to strengthen the indigenous system of medicine in the public sector of healthcare in both rural and urban areas. The services of indigenous system are provided through outdoor patient departments, dispensaries and hospital. The system includes—Ayurveda, Siddha, Unani, Homeopathy, Naturopathy and Yoga (AYUSH).

Referral Services

In India, health services are provided at three levels considering the three levels of prevention (Fig. 7.3). At each level, the facilities for health services are organized as per the planning to cater to the specific type of health needs of the client. No one level is equipped to meet all the health needs of the client and it is not possible to make each level functioning efficiently for providing comprehensive healthcare, WHO has identified the provision of referral system as one of the major supportive activities for primary healthcare, so the referral system has been established in such a way that cases can be referred from primary level of care to the secondary level of care to the tertiary level of care according to the clients health needs. This type of link between the healthcare settings is known as referral chain.

Primary health center is the first medical reference point in the health system chain. Each system performs its function for which it is established.

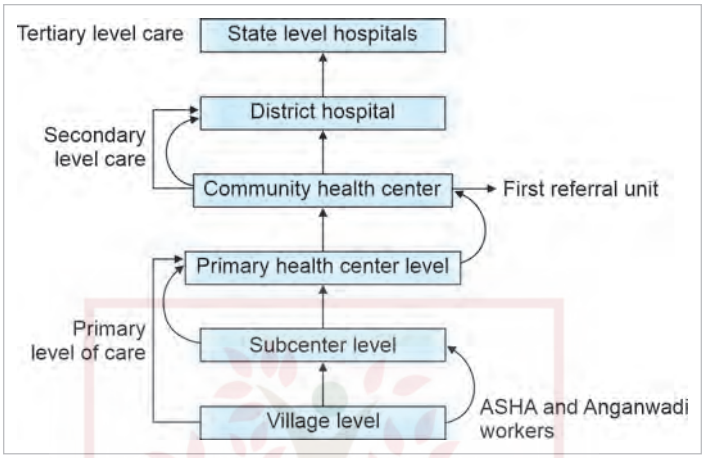

Fig. 7.3: Referral system

Purposes

- Helps in early diagnosis and treatment of the case under the specialist care
- Cost effective system
- Reduces the duration of stay of the patient in hospital
- Limits the progress of the disease
- Prevents complications by starting appropriate timely care
- Teaches the nursing personnel for reviewing of patients sent for referral

In the referral system chain, the patients can be referred from the village level by ASHA, trained dais and Anganwadi worker to the subcenter level. From subcenter, they are referred by health worker to the primary health centers, which is the first medical reference point. From primary health center, the doctor refers the cases which require specialist care to the community health center. The community health center is the first referral unit. Any unit which has got round the clock (24 × 7) services for emergency obstetric and newborn care in addition to all routine emergency care and blood storage facility for 24 hours is called first referral unit (FRU).

Functions of First Referral Unit

- Surgical function
- Medical treatment function
- Blood transfusion function
- Manual functioning
- Anesthetic function
- Obstetric and neonatal care function.

Steps in Referral

The steps to be taken are as follows:

1. Selection of Cases

It depends upon the condition of the patient and the facilities available in the health center. Patients to be referred are categorized under three groups.

i. **First group or fatal cases:** When it is known that prognosis of the case is poor and patient cannot survive in spite of best treatment made available to him/her. Referring such cases is simply wastage of time and money. Such patients are treated at the health center where they are admitted with the available resources. The relatives of the patients are made to understand about the condition of the patient and the reason for not referring.
ii. **Second group or serious patients:** This type of cases where the condition of the patient is serious but immediate treatment can save the lives of the patients. Such patients are immediately referred and shifted after giving emergency life-saving support.
iii. **Third group or common patients:** In this type of cases, the disease of the patient is serious but the condition of the patient is normal. Such patients are referred to as routine cases for diagnosis and treatment and consultation of the specialist.

2. Types of Cases to be Referred Urgently

- Any life-threatening conditions, like severe hemorrhage, shock, cyanosis, head injury, multiple fractures
- Severe chest pain
- Coma due to any cause
- Acute abdomen, intestinal obstruction hemoptysis, hematemesis, black-colored stool
- Convulsions more than one attack
- Severe pain in any part of the body that is continuous for >3 days
- Hyperpyrexia not responding to the treatment.
- Frequent vomiting, absence of bowel sound, severe diarrhea and dehydration, not responding to the treatment.
- Obstructed labor, complicated deliveries
- Suspected cases of tetanus
- Severe burns
- Poisonous cases
- Any other fatal or life-threatening condition

3. Preparation of the Case to be Referred

The patient and his/her family members are explained about the condition of the patient and need for referring to the next unit. Once the doctor has written the orders for referring, the referring form is filled and signed by the referring doctor. Patient's valuable and other belongings are handed over to the relatives. No dues are cleared by the patient. All medical documents, investigation reports, X-ray, ECG, etc., are kept ready to send along with the patient.

4. Shifting of Cases to the Next Referral Unit

After getting all the documents ready, the next referral unit is informed telephonically briefing about the condition of the patient, reason for referring so that before the patient could reach, bed is made ready with all the emergency equipment and drugs made available at the bedside and the concerned specialist to be informed about the time of arrival of the patient.

The referral unit will arrange an ambulance. The nursing staff collects all the patient's documents, the referral documents, the referral form and other emergency drugs or oxygen, IV drip, etc. required on the way according to the condition of the patient and doctor's advice in cases required,

to be collected. If not used should be brought back and handed over to the head nurse. Staff nurse accompanying the patient should hand over the patient to the concerned staff in the referring unit with his/her vital parameters, treatment chart and case file with referral form and take the signature of the person.

5. Referral Form

All the units have printed referral forms which is filled by the referring doctors with patients' particular brief history of case treatment given and reasons for referring. A sample of Referral Form is as under:

Referral Form

Name of the health center/hospital:
Referral Registration No.: ..... Date: .....
Name of the patient: ..... Date and time of Admission: .....
Father's/Husband's/Guardian's Name: .....
Age: ..... Sex: ..... Religion: ..... Occupation: .....
Permanent Address: .....
Telephone of next of kin: .....
Present diagnosis: .....
Case history in brief: .....
Description of treatment: .....
Reason for referring: .....
Enclosure and papers like:

- Case File
- X-ray, ECG
- Investigation reports, etc.

Sign of the Referring Doctor
(Name in Capital Letter)
Designation

Seal of the Health Center

6. Feedback

Referral system is usually two-way process and the retention of the patient in referral unit should be as brief as possible. As soon as the required investigations are over, the proper diagnosis made on the basis of clinical findings and the specialists' consultation, the line of treatment is decided which can be carried out at the parent health center. Patients should be returned to the parent center once the patient is responding to the new line of treatment. In this way, other serious patients will also get their chance for the consultation.

Role of Nurse in Referral Service

- Inform the referring unit telephonically before shifting about the condition of the case and treatment so that bed is readily available with all emergency equipment at bed side and specialist is available to see the case.

- Nurse should explain the patient and family for reasons of referring to secondary and tertiary level of healthcare.
- Nurse should check the condition of the patient whether he/she is fit to be shifted immediately or some emergency treatment is required till the condition is stable. In such cases, inform the doctor about the condition of the patient.
- Collect all the documents of the patient, like case file, investigation reports, X-rays, ECG treatment chart, vital chart, intake output chart, etc., which are to be sent along with patient.
- Check the referral form whether filled completely and signed by the referring doctor with brief history of the case.
- Patient's belonging and valuable to be handed over to his/her relatives.
- If the patient is to be shifted with life support treatment, like oxygen, IV life line drip, nurse should accompany the patient along with another attendant to the referring unit.
- Nurse should take clear instructions in writing from the treating physicians about the treatment to be given on the way if need arises in cases of emergency.
- Nurse should hand over the patient, his document and take signature of the person who has taken over the patient in the presence of some witness.
- All nursing personnel working in subcenters primary health center, community health center and district hospital should have knowledge of referrals system.

Interdisciplinary Referral System

Sometimes patients cannot be treated or diagnosed properly with the system of medicine and may not get satisfied with one type of therapy. They can be referred to another therapy. This type of referral system is called interdisciplinary referral system. In India, patients are shifted from allopathy to AYUSH. Government of India has made provision in some of the centers to avail such facilities. There is a plan to have all therapies under one roof.

Summary

- In public system of healthcare, the healthcare services are provided at three levels.
- Primary level of healthcare is the setting of healthcare which provides first level of contact between the community and healthcare provider at the grassroots level. At this level, most of the health problems are solved with some guidance, education and assistance and treatment by the team of health professionals.
- Primary healthcare is provided at subcenter and primary health center, secondary level of healthcare is provided at community health center and district hospitals, where the specialist services are available and tertiary level of care is provided at state level, regional level and central level institutions.
- Referral system is the system in which the patients are transferred from primary level healthcare to the secondary level of healthcare from secondary level to the tertiary level of healthcare.
- No one level is equipped to meet all the health needs of the client. The cases which cannot be managed at primary level of care are referred to secondary level and cases which cannot be managed at secondary level are referred to tertiary level of care. At each level, nurses should know the need of referral and type of cases to be referred.
- All documents should be collected and completed before sending the patient to referral unit. A feedback should also be taken about the patient from the referral unit.

STUDENT ASSIGNMENT

LONG ANSWER TYPE QUESTIONS

1. Define referral system and explain the purposes of referring the client from one unit to another.
2. Describe the levels of healthcare.
3. Enlist the staffing pattern at each level of healthcare.
4. Explain the type of services provided at secondary level of healthcare.

SHORT ANSWER TYPE QUESTIONS

1. Write short notes on:
   a. Need for urgent referral
   b. Role of nurse in referral system
2. What do you understand by referral system?

MULTIPLE CHOICE QUESTIONS

1. A patient at subcenter can be referred to:
a. Primary health center
b. Community health canter
c. District hospital
d. Any of these

2. The criteria for referring a patient:
a. Condition of the patient
b. Availability of resources in referring unit
c. Availability of specialist's services and advanced technology
d. All of the above

3. The functions of Indian Red Cross Society:
a. Blood bank and first aid
b. Milk and medicine supply
c. Maternal and child welfare series
d. All of these

4. The referral chain is:
a. Village → subcenter → PHC → CHC → state level
b. CHC → subcenter → Village → PHC → state level
c. Subcenter → PHC → village → CHC → state level
d. PHC → CHC → subcenter → state level → village

ANSWER KEY

1. a **2.** d **3.** d **4.** a

12

Community Organization to Promote Environmental Health

LEARNING OBJECTIVES

After the completion of the unit, the readers will be able to:

- Describe the community organization that promotes environmental health.
- Describe the levels and types of agencies involved to protect the environment.
- Enumerate the legislation and acts regulating the environment.
- State the major areas of activities for pollution control.

UNIT OUTLINE

- Introduction
- Environmental Health Risk
- Protection of Environment
- Environmental Protection and Laws in India
- Major Areas of Activities for Pollution Control
- The Air (Prevention and Control of Pollution) Act, 1981
- The Water (Prevention and Control of Pollution) Act, 1974
- Noise Pollution and Legislative Measures

KEY TERMS

BOD: Biomedical oxygen demand.
Emission: To release or discharge.
Penalty: It refers to the punishment decided by law for a criminal offence or illegal act.
Violation: Contrary to the rules.

INTRODUCTION

Environmental health is a global concern. Environmental health problems play important role in the health status of man, family and community. There is a growing awareness about these problems in the minds of people. Environmental factors such as lack of safe water supply, inadequate sanitation, indoor pollution resulting from the use of biomass fuels, air pollution and noise pollution are responsible for many diseases which can be prevented by controlling these environmental pollutant factors. The greater portion of environmental burden of ill health is born by the rural population in rural areas due to lack of facilities of safe water supply, proper disposal of refuse and waste and

unavailability of commercial fuel. By improving environmental sanitation inside and outside the house such as safe water supply, sanitation, smokeless vehicles and clean cooking fuels can reduce mortality and morbidity rates. Premature death and illness due to major environmental health risks account for 20% of the total burden of the disease in India.

ENVIRONMENTAL HEALTH RISK

Environmental health risks fall into two categories:

1. **Traditional hazards:** These are related to poverty and lack of development such as lack of safe water, inadequate sanitation and waste disposal of indoor air pollution and vector-borne diseases.
2. **Modern hazards:** These are caused by development that lacks environmental safeguards such as urban air pollution and exposure to agro-industrial chemicals and waste.

PROTECTION OF ENVIRONMENT

Environmental pollution is protected at national, state and local levels. Voluntary and social agencies also participate to reduce the environmental pollution.

National Level Organizations

Ministry of Environment and Forest

As there is a strong need for the conservation of environment and forest. Due to the cutting of forests for housing constructions, setting up of industries and for the developments of urbanization and widening of the roads for the purpose of fuel, lacs of trees and forests are axed and new implantation of the trees is very less as compared to the destruction. As a result, not only the wild life is being distinguished but the environment is also getting polluted day by day so to conserve the environment and forests, central government has set up a separate Ministry of Environment and Forest in 1985, to conserve the environmental health and forests. The departments working under this ministry are environment, forest and wildlife.

Department of Environment

This department has central authority to plan, encourage and coordinate environmental programs. The success of environmental conservation depends on environmental programs to create awareness and make people conscious of environmental hazards. A national environmental awareness campaign has been launched to sensitize people to the environmental problems through audio-visual programs, seminars, symposia and training program, etc. "*Paryavaran Vahini*" has been constituted in 184 districts, involving the local people to play an active role in preventing *poaching*, deforestation and environmental pollution. An environmental information system network has been set up to disseminate information on environmental issues. India has a large network of NGOs which are involved in spreading message of sustainable development to the public.

Institutions involved in environmental activities are:

- **Environmental training institute:** It was established in 1994. Over the years, the institute has conducted 124 technical programs involving 1965 participants and 36 special environmental awareness programs have been conducted for NGOs, Government officials, professionals,

universities and educational institutions. The similar environmental training institutes have been established by the government in various states.

- **Tata Research Institute:** This has launched the "Growth with Resource Enhancement of Environment and Nature" (GREEN India 2047) project. The major cause of indoor pollution is that the weaker section of society is dependent on low-grade biomass energy sources. This emits harmful gases which pollute the atmosphere as well as the residents of the houses, especially the women, children and old population who stay at the house are exposed to the smoke. This causes various respiratory problems, heart diseases, pregnancy-related problems and eye diseases. These problems can be solved by making good quality of fuel available. Currently, efforts to produce methane gas or other gases from organic matter are emphasized so that they can lead to clean combustion for cooking purposes.

Central Pollution Control Board (CPCB)

It is an autonomous body affiliated with the Ministry of Environment and Forests. This was set up in September 1974 under water pollution prevention and control ordinance 1974. This is the highest national authority to control environmental pollution. Central pollution control board has responsibility to implement the laws, rules related to state pollution control board and societies. This board develops the rules, which describe the standard of pollution discharged in air and water and the degree of noise. It advises the central government on all issues related to prevention and control of air, water and noise pollution and it provides technical services to the ministry of environment and forest for the implementation of the environment (Conservation Act 1986).

Functions and Activities of CPCB

- Assessing and monitoring the quality of water and evaluating the quality of Ganga, Yamuna and Kaveri river water is included in this.
- Assessing and monitoring the quality of air.
- National Air Quality Monitoring Program.
- Assessing the quality of air in National Command Authority (NCA), Delhi.
- Assessing and monitoring the traffic pollution.
- Setting up authorized pollution checkup center.
- Assessment of carbon dioxide emanated from catalytic converter and noncatalytic converter vehicles and taking remedial steps for it.
- Discovering nontraditional sources of energy.
- Monitoring generation and disposal of solid waste.
- Providing technical advice, research publications, water testing kits, etc.
- Running public awareness programs.
- Providing help to nongovernmental organization, etc.

National Museum of Natural Science (New Delhi)

This museum was established to educate the public and make them aware of the environment-related issues.

Central Ganga Authority

It was set up in 1985 to make Ganga pollution free by implementing the Ganga work plan.

Ecological Department Board

This board encourages and creates awareness among students, youth and women for conservation of environment.

Indian National Human, Animal Kingdom and Environmental Research Society

This society encourages environment-related education and research. Central Public Health Engineering Research Institute is also working in these directions.

Environmental Protection Authority

This Authority looks after all the environment-related aspects of National Capital Region (NCR). It was established in 1998. Other than these many central government organizations and departments of family welfare, town planning, urban housing and transport departments are responsible for the health and conservation of the environment.

State Level Organizations

Forest and environment departments of state governments are conducting, coordinating and directing the programs related to conservation of the environment. State Pollution Control Board gives environment certificates to industries or factories. Departments of health, energy, mining, transport and housing, etc., also carry the responsibility of maintaining environmental health and its conservation. Formation of environmental corps or wings is also an important step.

Local Level Organizations

Panchayats, municipal corporations, town development authorities, urban improvement trust, municipal committees and other autonomous societies encourage the conservation of environment at the local level.

National Level Voluntary Organizations

- Bombay Natural History Society (BNHS)
- World Wide Fund (WWF) for Natural India
- Center for Science and Environment (CSE)
- Center for Environment Education (CEE)
- Bhartiya Vidhyapeeth Institute of Environmental Education and Research (BVIEER), Pune
- Wildlife Institute of India (WII), Dehradun
- Botanical Survey of India, Kolkata
- Uttarakhand Seva Nidhi, Almora
- Ranthambore Foundation—*Sawai Madhopur* (Rajasthan), etc.

ENVIRONMENTAL PROTECTION AND LAWS IN INDIA

The actual awareness about environmental protection was recognized at the global level at the UN Conference on Human Environment held in Stockholm (Sweden), in June 1972. The late prime minister Mrs Indira Gandhi took keen interest and initiative to take appropriate steps for

protection and improvement of the human environment and formulate the Indian laws to control environmental pollution in India. These are:

- Indian Forest Act, 1972
- Wildlife Protection Act, 1972
- Water Act, 1974
- Forest (Conservation) Act, 1980
- Air (Protection and Control of Pollution) Act, 1981
- Environment Protection Act, 1986
- The National Environmental Tribunal Act, 1995
- Public Liability Insurance Act, 1991.

Legislation Related to Environment

The legislation related to environment is given in Table 12.1 and the legislations and acts regulating environmental hygiene are shown in Box 12.1.

TABLE 12.1: Legislation related to environment

Legislation Act	Provisions
Forest Act, 1972	This act stipulates that no forest land or any portion there may be used for non-forest purpose. It provides for the constitution of an advisory committee to advise the government on cutting the trees.
Forest (Conservation) Act, 1980	This act has been passed to control deforestation which causes ecological imbalance and results in environmental degradation. It has provision to put restrictions on the use of forest land for nonforest purpose.
Wildlife Protection Act, 1972	This act provides the constitution of a wildlife advisory board, regulations of hunting of wild animals and birds, laying down procedures for declaring the areas of sanctuaries and national parks and regulations of trade in wild animals.
Water (Protection and Control of Pollution) Act, 1974	This act provides for the establishment of central and state pollution control boards for the prevention and control of water pollution. The act seeks to control pollution primarily through standards to be laid down by the boards and the consent orders issued by them. Stiff penalties are imposed for violation. The boards are given ample powers for investigations and inspections and to take samples and establish laboratories for analyzing the samples.
Air (Protection and Control of Pollution) Act, 1981	Air pollution is to be controlled primarily through standards laid down (1981) by the boards and the consent orders issued by them. For contravening the standards laid down by the boards and for violating the provision relating to consent by the board, stiff penalties have been provided.
Environment Protection Act, 1986	This act provides for: • Covering some of the major areas of environmental hazards not covered by the existing laws. • Linkages in handling matters of industrial and environmental safety and control mechanism to guard slow insidious buildup of hazardous substances especially of new chemicals in the environment. • An authority not only to coordinate the activities of the various regulatory agencies but to assume the role of studying, planning and implementing long-term requirements of environmental safety.

Contd...

Legislation Act	Provisions
National Environmental Tribunal Act, (1995)	The tribunal shall consist of a judicial as well as a technical member with appropriate knowledge and experience of legal administration, scientific and technical aspects of the problem related to environment and wildlife. In addition, to provide compensation to the people for death, injury or damage to the property or to the environment.
Public Liability Insurance Act, (1991)	This act provides liability insurance for individuals injured by accidents with hazardous materials. The measure mandates that business owners operating with hazardous will take out insurance policies. An environmental relief fund was established and is maintained by industry operators.
Forest Conservation (Amendment) Act, 2023	This act amends the Forest Conservation Act of 1980 to clarify the act's applicability, exempt certain types of land, and allow for infrastructure to support national security.

BOX 12.1: Legislations and Acts regulating environmental hygiene

The environmental conservation and control of pollution is about 150 years old in India. Some of the Indian laws on the environment are:

- Shore Bombay Nuisance Act, 1853
- Indian Panel Code, which gave some provisions to control Nuisance (Pollution), 1860
- Indian Fisheries Act, 1897
- Indian Ports Act, 1907
- Bengal Smoke Nuisance Act, 1905
- Motor Vehicle Act, 1938
- Factory Act, 1948
- Maharashtra Prevention of Water Pollution Act, 1953
- Orissa River Pollution and Prevention Act, 1954
- Prevention of Food Adulteration Act, 1954
- River Boards Act, 1960
- Atomic Energy Act, (Radiation Protection Rules) 1962
- Gujarat Smoke Nuisance Act, 1963
- Insecticides Act, 1968
- The Environment (Protection) Act, 1986
- The National Green Tribunal Act, 2010

The government of India has taken the following steps to control environmental pollution:

- **Formation of Ministry of Environment and Forest:** The Central Department of Environment was established in November 1980 under the control of Ministry of Environment on the recommendation of ND Tiwari committee. It was renamed Ministry of Environment and Forest on 4th April, 1985. This ministry handles the affairs of environment, forests and wildlife. Central pollution control Boards have been formed for this purpose.
- **National Environment Awareness Campaign:** Under this campaign, the important programs started by the government of India to create awareness among the people are:
  - **Environmental education:** The Supreme Court of India has directed University Grants Commission (UGC) to prescribe a course on "Man and Environment". UGC has insured circulars to various universities to introduce the course on "Environmental Education". The main focus of environmental education is the following:
    - Overpopulation and ways to check its rapid growth
    - Afforestation as a preventive measure against soil erosion and water pollution
    - Afforestation to prevent air pollution
    - Insisting on smokeless cooking
    - Discipline in playing radio and TV and a ban on the use of loudspeakers

- Elementary knowledge of the scientific and philosophical basis of man and the environment
- Rules regarding the disposal of household wastes
- General principles of sanitation

- **National Environmental Campaign:** This campaign was started in 1986 through the mass media of TV, various TV channels, National Geographic channels, Animal Planet, etc. Telecast of the regular programs on the environment, e.g., Ham Zameen, Earth file, wildlife, living on edge, etc.
- **Paryavaran Vahini:** The Ministry of Environment and Forests started a scheme called *Paryavaran Vahini* or Environment Brigade in 1992 to create awareness among common people. The people's program extends over 168 districts of India with the objective of involvement of people through active participation. Each *Vahini* has 20 members like students, teachers, doctors, engineers NGOs, etc. belonging to different fields.
- **Special drive for rural areas:** Special awareness programs regarding environmental sanitation and use of nonconventional energy resources have been launched in rural areas.
- **Environmental Friendly Product Scheme (1991):** Under the environmentally friendly scheme, the environmentally unsafe (from a pollution point of view) products will be tested before marketing and will bear the Label 'ECOMARK' (with an earthen pot logo). A notification regarding this was issued on February 21, 1991 covering four articles of soaps, detergents, paper and paints.
- **Celebration of important days:** By celebrating important days, awareness is created through media , seminars, lectures, public meetings, TV films, audio and video cassettes, puppet shows, etc.

MUST KNOW

The important days concerning the environment are:

- World Environment Day on 5th June was declared in 1972 in Stockholm conference (Sweden)
- Earth Day: 22nd April is celebrated as, 'Save Earth' from greenhouse gases (GHGs) and ozone depletion
- World Population Day: 11th July
- World Health Day: 7th April
- Anti-Tobacco Day: 31st May
- World Forest Day: 21st March
- World Nature Day: 3rd October
- National Science Day: 28th February
- World Food Day: 16th October
- United Nations Day: 24th October
- United Nations (UN) International Day for lessening natural disasters: 13th October
- Wildlife Week: 1–7th October
- National Environmental Awareness Month: 19th November to 18th December
- The first national environment awareness program was started in 1986 at environmental education center Ahmedabad on "Save Water".

- **Important national level awards:** Some national level awards for individuals and organizations with outstanding work in the field of environment protection have been instituted by the

Ministry of Environment and Forest. The main aim of these awards is to motivate people for active participation in environmental protection programs. Some of these awards are listed as under:

- Pitambar Pant National Environment Fellowship Award, 1978
- Indira Priyadarshini Vrikshamitra Award, 1986
- Indira Gandhi Paryavaran Puraskar, 1987
- Incentive on Hindi Books of Environment, 1987
- National Award for Prevention and Control of Pollution, 1991
- The "Sultan Qaboos" Prize for environmental preservation. This prize has been instituted by United Nations Educational, Scientific and Cultural Organization (UNESCO).
- Paryavaran Evam Van Mantralaya Vaigyanik Puraskar, 1992
- Mahavriksha Puraskar, 1993
- Rajiv Gandhi Wildlife Conservation Award, 1998

MAJOR AREAS OF ACTIVITIES FOR POLLUTION CONTROL

- **Air quality monitoring:** A national network of ambient air quality monitoring stations was initiated in 1984 and was set up in cities and towns in India. The parameters to be measured are sulfur dioxide, carbon monoxide and oxides of nitrogen. Suspended particulate matter (SPM), temperature humidity, wind speed and directions.
- **Assessment of water quality:** Under the national water quality monitoring program, the water quality of rivers is being monitored. The stations covering all major rivers of country monitor in respect of 19 parameters such as Total Dissolved Solids (TDS), Biomedical Oxygen Demand (BOD), metals and nitrates.
- **Assessment of coastal water quality:** The Central Pollution Control Board (CPCB) in collaboration with the department of ocean development has identified 173 monitoring stations all along the Indian coast to assess the water quality. Four State Pollution Control Boards (SPCBs) suspended particulate matter have also been involved. 25 parameters are being processed to formulate schemes to control and monitor pollution of the wasted water.
- **Preparation of environmental standards:** These are based on the standard prepared by CPCB and the Bureau of Indian Standard (BIS), effluent and emission standards for different kinds of industries, including thermal power plants have been notified under Environmental Protection Act, 1986.
- **Enforcement of standards:** This is very helpful to control pollution at source. Minimum National Standards (MINAS) have been evolved by CPCB for major categories of water and air polluting industries respectively. These standards refer to the minimum limit of effluents and emissions that an industry may discharge into any water body or the atmosphere. The SPCBs can stipulate the same or more stringent standards for effluent and emission of discharges.
- **Ganga Action Plan:** There are 27 stations along the river at Rishikesh, Kanpur, Allahabad, Varanasi, Patna and Rajmahal, Biochemical Oxygen Demand (BOD) values and other parameters have been recorded to assess the pollution.
- **The Environmental (Protection) Act 1986:** It was formulated in 1986 to provide protection and improvement of environment and matters connected herewith. The Act consists of 26 sections and extends to the whole of India and came into force on November 19, 1986.

Objectives of (Section 1)

- The environment quality has been declining since the 1960s. This has resulted in increasing pollution, loss of vegetal cover, excessive concentrations of harmful chemicals in atmosphere and threat to life support system. The concern over the state of the environment has grown.
- There are many laws existing that concern directly or indirectly for protection of environment, but it is necessary to have general legislation for environmental protection.
- There is an urgent need for enforcement and general legislation on environmental protection, speedy response in the event of accidents, threatening environment and deterrents punishment to those who endanger human environment, safety and health.

Definitions (Section 2):

- Environment includes water, air, land and the interrelationship which exists among and between water, air land and human beings, other living creatures, plants, microorganisms and property.
- Environment pollutant means any solid, liquid or gaseous substance present in such concentration as may be, injurious to environment.
- Environment pollution means the presence of any environment pollutant in the environment.
- Hazardous substance means any substance or preparation which, by reason of its chemical or physical properties is liable to cause harm to human life, plant life or property.

Powers and measures of the law:

- Central government has the power to take all necessary measures for the purpose of protecting and improving the quality of environment and preventing, controlling and abating environmental pollution.
- Central government shall have the power to take measures:
  - It must coordinate with the state government.
  - To execute nationwide programs.
  - To lay down standards for the quality of environment.
  - To lay standards for emission or discharge of environmental pollutants.
  - To restrict location of industry in certain area.
  - To lay down procedures and safeguards for the handling of hazardous substances.
  - To examine manufacturing processes as they are likely to cause environmental pollution.
  - To prepare manuals, codes or guidelines relating to the prevention and control of environmental pollution.
  - To establish environmental laboratories.
  - For collection and dissemination of information on environmental pollution.

Central government can issue directions and it can order:

- Closure of an industry
- Stoppage of the supply of water, electricity, or any other service

The rules of central government for the protection of environmental quality: The rules may provide:

- Standard of quality of air, water and soil
- Maximum permissible limit of concentrations of various environmental pollutants (including noise and dust)
- The procedure and safeguard for handling hazardous substances
- Restriction on the location of industry
- Procedures and safeguards for preventing accidents

Measures to control environmental pollution:

- The act prohibits every person carrying on any industry from discharging or emitting any environmental pollutant in excess of the prescribed standards.
- Hazardous substances shall be handled only in accordance with prescribed safeguards.
- The person in charge of premises (industry) from where excess emission occurs is bound to inform the board. He is also bound to render all assistance, if called upon.
- Any authorized officer of the board has the right to enter any place for performing his duty or to examine and test any equipment and industrial point or to determine whether rules are being followed or not.
- Any authorized person of the board can take samples.
- For the analysis of samples, government has set up environmental laboratories and appointed analysts.

Punishment or penalties:

- Any authorized person of the board can lodge a complaint in court.
- Any person can lodge a complaint in court after a notice of at least 60 days.
- The central government has power to make rules regarding various matters.
- If a person is found guilty, does offense again and again then additional fine of up to ₹5000/- and an imprisonment of 7 years can be extended in this case.

THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981

The Air Act was framed in the year 1981, but came into force on March 29, 1982 for the effective prevention control and abatement of air pollution in the country. The Air Act extends to the whole of India and is a welfare legislation dealing with the special evil of pollution. Therefore, it is considered a Modern Act or Special Act. Central and State Pollution Control Boards (Constituted under Water Act, 1974) shall exercise the power and perform functions for the Prevention and Control of Air pollution to improve the quality of air.

Amendment of the Air Prevention and Control of Pollution Act, 1987

Measures to Control Air Pollution

The Air Act was amended in 1987 to remove the difficulties encountered during implementation, to confer more powers on the implementing agencies and to impose more stringent penalties for violation of the provision of the Act. Definition of air pollutant was amended to include noise. Also, Section 19 was added (Air pollution control area can be declared).

The state government after consultation with the state board can:

- Declare any area within the state as a pollution control area. This power provides measures which are preventive in nature, particularly use of only approved appliances in the premises.
- Prohibit the use of any fuel other than the approved fuel in any air pollution control area.
- Prohibit the burning of any material (other than fuel) in any air pollution control area.
- The state government has to notify this declaration in the official gazette:
  - No person without the previous consent of the state board in writing can operate any industrial plant in air pollution control area.

- No person operating an industrial plant in any Air Pollution Control (APC) area shall discharge the emission of any air pollutant in excess of the standard laid down by the state board.
- Emission of air pollutant in excess of the standard laid down by the state board is an offence and punishable under section 37 of Air Act. In such cases, board can lodge an application to the court.
- On receipt of application, the court can order the person to check the emission of air pollutants or can authorize board to implement the directions. All expenses incurred by the board shall be recoverable from the person concerned
- Any person authorized by the board has the right to enter any place:
  - For the purpose of performing his duty.
  - For the purpose of determining whether the provisions and directions under this Act are being complied with.
  - For the purpose of examining or testing any control equipment, industrial plant, record register or any other document.
  - Any obstruction or willful delay is punishable offence.
  - State board has the power to obtain any information from a person carrying on any industry.
  - State board has the power to take samples of air emissions. The board has set a procedure to be followed in this connection.

Penalties

- Violation of act under any circumstance may lead to imprisonment from 1½ years to 6 years and a fine (no limit).
- Whosoever damages the property of board leads to imprisonment up to 3 months or a fine up to ₹10,000/- or both.
- Offence by a company or government department may lead to punishment to the director of company or head of the government department according to the offence.
- Court shall take cognizance of any offence if the complaint is made by:
  - Board or its authorized officer
  - Any person who has given notice of not <60 days.
- State government has the power to supersede state board, if the board persistently makes defaults in the performance of its functions.
- Central government has the power to make rules.

THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974

The Water Act was enacted on March 23, 1974 to implement the decision reached at the Stockholm conference under article 252 section-1 of The Indian Constitution. It is a social welfare legislation enacted for:

- Prevention and control of water pollution.
- Maintaining and restoring the wholesomeness of water.

- Establishing pollution control boards.
- Assigning powers and functions relating to water pollution to boards.

The Act has been adopted by states of Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, J&K, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Tripura and West Bengal and all union territories with effect from (WEF) March 23, 1974, the state of Uttar Pradesh adopted it on February 3, 1975.

Definition of Water Pollution

- Contamination of water or alteration of physical, chemical and biological properties of water.
- Discharge of sewage or trade effluent discharge of gaseous substances which may likely to (a) create nuisance (b) render the water harmful or injurious to public health, safety, domestic or commercial, industrial or agricultural uses or the life and health of animals or plants or aquatic life.

Legislation regarding prevention and control of water pollution are: State Pollution Control Board is powered to prevent and control water pollution.

The powers of the state board are:

- To make survey of any area of industry
- To take samples of water of any sewage or trade effluent for the purpose of analysis
- To enter any building to examine any plant or record
- To order closure of any industry or stoppage of supply of electricity and water

Punishment or Penalties

- Failure to comply with the directions of the board to give information results in imprisonment up to 3 months or a fine up to ₹10,000/-.
- If anybody destroys property of the board, will be fined ₹10,000/- or imprisonment or both.
- Anybody who pollutes water will be fined up to ₹5000/- and imprisonment from 1½ year to 6 years.
- Anybody who interferes with monitoring devices (Meter or gauze) will be awarded imprisonment up to 3 months or a fine of ₹10,000.
- If any offence is committed by company, the director or manager of the company will be punished.
- Court shall take cognizance of any offence under this act if the complaint is made by:
  - Board or any authorized officer
  - Any person who has given notice of not <60 days
- Parliament amended the water act in 1988 to make it more effective and also to deal with air pollution.

NOISE POLLUTION AND LEGISLATIVE MEASURES

Noise is defined as a loud, unpleasant or unwanted sound that disturbs unwilling ears. It adversely affects our physiological and mental health. Noise is measured in units called decibels (dB). A sound above 80 dB causes noise pollution (Table 12.2).

TABLE 12.2: Permissible noise level in different areas

	Daytime (6 am–9 pm)	Night time (9 pm – 6 am)
Industrial area	75 dB	65 dB
Commercial area	65 dB	55 dB
Residential area	55 dB	45 dB
Silence zone	50 dB	45 dB

Legislative Measures

- Excessive noise has been recognized as a crime under section 268 of the Indian panel code (Nuisance Act, 1860).
- Noise has been recognized as a pollutant under Sections 6 to 26 of Environment Protection Act, 1986. This Act was amended in 1989 to prescribe day and night limits of noise level. An area with 100 meters radius around a hospital or institution or court can be declared a 'silence zone'. The use of vehicular horns, loudspeakers and burning of crackers is banned in areas of a silence zone under this Act.
- Under section 133 of Indian Penal Court (IPC), the use of loudspeaker is a public nuisance.
- Making loud noise is punishable with imprisonment up to 5 years or a fine up to 1 Lakh or both. In case it continues, and additional fine may be extended to five thousand rupees per day. If the above contravention continued beyond a period of 1 year after the date of conviction, imprisonment may be extended to seven years.

Summary

- Environmental factors such as air pollution, water pollution, noise pollution, etc., are responsible for environmental health risks.
- The environmental pollution is protected at the national and state levels.
- The voluntary and social agencies also participate to reduce environmental pollution.
- A comprehensive approach to pollution control based on principles such as to prevent pollution at source, encourage, develop and apply the best available practicable, technical solutions has been undertaken.
- To prevent and control environmental pollution, *Paryavaran Vahinis* have been constituted.
- There are some institutions that are involved in controlling environmental activities such as Environmental Training Institute and Tata Research Center.
- To control environmental pollution, the government of India has formulated various laws and acts. Any violation of these laws results in penalties. These laws are:
  - Indian Forest Act, 1972
  - Wildlife Protection Act, 1972
  - Water Act, 1974
  - Forest (Conservation) Act, 1980
  - Air (Protection and Control of Pollution) Act, 1981
  - Environment Protection Act, 1986
  - National Environmental Tribunal Act, 1995
  - Public Liability Insurance Act, 1991
- The government of India has started programs to create awareness among the people to protect environment such as environmental education, national environmental campaign, *Paryavaran Vahini*, environmentally friendly product scheme and celebration of important days to create awareness about environment protection.

STUDENT ASSIGNMENT

LONG ANSWER TYPE QUESTIONS

1. Explain the principles of pollution control.
2. Discuss the role of NGOs in pollution control.

SHORT ANSWER TYPE QUESTIONS

1. Write short notes of the following:
   a. *Paryavaran Vahini*
   b. Environmental agencies at the national level categories of environmental health risk
2. Enlist various acts to prevent environmental pollution and briefly describe each.

MULTIPLE CHOICE QUESTIONS

1. Forest Conservation Act was enacted in:
a. 1984 b. 1976
c. 1972 d. 1980

2. The Prevention of Food Adulteration Act was enacted in:
a. 1953 b. 1954
c. 1950 d. 1963

3. The Insecticide Act was enacted in:
a. 1948 b. 1978
c. 1958 d. 1968

4. The Motor Vehicle Act was enacted in:
a. 1948 b. 1953
c. 1938 d. 1928

5. The Shore (Bombay) Nuisance Act was formed in:
a. 1963 b. 1853
c. 1933 d. 1973

6. Which of the following Act was made in 1972?
a. Water Act b. Indian Forest Act
c. Wildlife Protection Act d. Both (b) and (c)

ANSWER KEY

1. a **2.** b **3.** b **4.** c **5.** b **6.** d

Textbook of
Community Health Nursing–I for GNM Nursing Students

Salient Features

- Completely revised and updated compendium aligned with the revised INC syllabus for GNM Nursing Students
- This book reflects perfect integration of Theoretical and Clinical aspects for dual understanding of the concepts
- Recent updates on demographic data and stats have been provided giving a glimpse of the latest advancements in community health segment
- Important National Health Programs and Policies have been extensively covered throughout the book.

Learning Objectives given in all the units focus on the areas that a student shall gain after completing the unit.

LEARNING OBJECTIVES

After the completion of the unit, the readers will be able to:

- Discuss the concepts, goals and objectives of family health nursing care.
- Demonstrate skills in providing comprehensive nursing care to

Every unit starts with a **Unit Outline** that gives the glimpse of the content covered in the unit.

UNIT OUTLINE

- Introduction
- Family
- Concept of Family Health
- Family Healthcare Services
- Family Healthcare Plan
- Family Health Nursing Process
- Family Health Services
- Role of Community Health Nurse in Family Health Services

Important terms used in the unit are enlisted under **Key Terms.**

KEY TERMS

Family health: Health of the members of family; a state in which the family is a resource for the day-to-day living and health of its members.

Family health nursing: Nursing services provided to the family; generalized, well-balanced and integrated, comprehensive and continuous are requiring planning to accomplish its goal.

Family planning: Limiting the size of the family; the consideration of the number of children a person wishes to have, including the choice to

Must Know boxes covering valuable facts are strategically placed to highlight critical information, ensuring readers are well-informed of key concepts and important details.

MUST KNOW

Relation between Records and Reports

Records and reports are interdependent. Reports are written based on records. Reports can also be presented as record. Records are always in written form, whereas report can be written as well as verbal. Records can be preserved, whereas verbal reports can be forgotten. In spite of being different, both seem synonymous and are interdependent. Both are important tools of communication and management in hospitals and community health centers and nursing.

Numerous **images and diagrams** have been used at relevant places to simplify the concepts for the students.

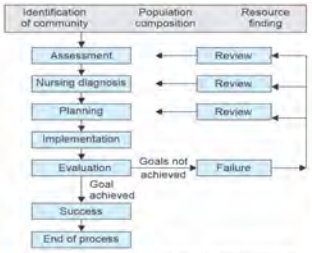

Fig. 2.4: Steps of community health nursing process

Plenty of **Tables** are used in the text to provide necessary data and information to supplement the text.

TABLE 20.1: List of food adulterants

Food stuffs	Adulterants
Milk	Removal of fat, addition of water, extraction of cream, mixing arrowroot, urea, etc.
Ghee	Pure ghee is adulterated with dalda and animal fat, such as pig's fat
Vegetable oil	Mineral oil, inedible oil
Cereals	Mixing with soil, pieces of stones, powder, infested cereal and broken food grains

Nursing Consideration boxes are covered throughout the book for implementation of better clinical practices.

Nursing Considerations

Important Points to Remember while Immunizing

- Only disposable syringes should be used.
- Hepatitis B dose is given only within 24 hours after birth as it helps to prevent prenatal transmission of hepatitis B.
- OPV-0 dose is given within 15 days after birth. OPV can be given up to 5 years of age.
- Pentavalent vaccines contain a combination of DPT, hepatitis B and Hib. Hepatitis B birth dose and booster dose of DPT will continue as before.

Recent Updates keep students aware of all the latest advances and developments in the field.

Recent Updates

New Stroke Prevention Guidelines (American Heart Association 2014)

Individualized Approach to Lifestyle Modifications

- Physical activity
- Diet and nutrition
- Smoking cessation
- Obesity and dyslipidemia

Prevention and Control

- Early detection and treatment of transient ischemic attack to prevent the stroke.
- **Modification of lifestyle:** Alteration in lifestyle to manage the risk factors like hypertension, diabetes and coronary heart disease, etc.
- **Healthcare facilities:** People should be made aware about the available healthcare facilities and how to make use of them.
- **Health education:** People should be educated about the prevention and control of strokes.

Each and every unit ends with **Summarized one liners** for quick revision of the unit

Summary

- The philosophy of community health nursing is that nursing services should be provided to all irrespective of race, religion, caste, creed and sex.
- Community health nursing is influenced by attitude of family, religion, culture, education, value, norms and beliefs of the family.
- The main goal of community health nursing is to promote the health of the individuals, families and community.
- The main principles of community health nursing include planned services according to the need and requirement of the community, maintaining good interpersonal relationship with the community, and providing services irrespective of caste, creed, color, religion, etc.

Student Assignment in the form of comprehensive exercises in each and every unit will facilitate structured learning and revision of the material provided in the respective units.

STUDENT ASSIGNMENT

LONG ANSWER TYPE QUESTIONS

1. Describe the factors affecting environmental health.
2. Explain the environmental problems affecting human health.

SHORT ANSWER TYPE QUESTIONS

1. Define environment.
2. Enlist the components of environment.

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CBS Publishers & Distributors Pvt. Ltd.

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ISBN: 978-81-977500-0-7