

# CHAPTER 1

## 1. Concept of Primary Health Care and its Principles:

- **Definition:** Primary health care (PHC) refers to essential health care services that are accessible, affordable, comprehensive, and community-based. It is the first level of contact between individuals and the health care system.
- **Principles of PHC:**
  1. **Accessibility:** PHC services should be easily accessible to all individuals and communities, irrespective of their geographical location, socioeconomic status, or cultural background.
  2. **Comprehensiveness:** PHC should provide a wide range of essential health services, including preventive, promotive, curative, and rehabilitative care, addressing both individual and community health needs.
  3. **Holistic Approach:** PHC emphasizes a holistic approach to health, considering not just physical well-being but also mental, social, and environmental aspects of health.
  4. **Community Participation:** PHC encourages active involvement of communities in health decision-making, planning, implementation, and evaluation of health programs and services.
  5. **Integration:** PHC promotes integration and coordination of health services across different levels of care, from primary to tertiary, to ensure seamless and efficient delivery of care.
  6. **Equity:** PHC aims to achieve health equity by addressing health disparities, promoting social justice, and ensuring that vulnerable and marginalized populations receive equitable access to health services.
  7. **Sustainability:** PHC focuses on sustainable health systems development, capacity building, health workforce training, and resource allocation to meet present and future health challenges.

## 2. Bhole Committee:

- **Formation:** The Bhole Committee, officially known as the Health Survey and Development Committee, was appointed by the Government of India in 1943 under the chairmanship of Sir Joseph Bhole.
- **Objective:** The committee's primary objective was to assess the health conditions and needs of India and make recommendations for the development of the health care system.
- **Key Recommendations:** The Bhole Committee recommended the establishment of a comprehensive health care infrastructure, including primary health centers, district hospitals, and medical colleges. It emphasized the importance of preventive and

promotive health care, maternal and child health services, rural health services, and public health education.

- **Impact:** The recommendations of the Bhore Committee laid the foundation for the development of India's public health and medical education systems, influencing policies and initiatives in the decades to come.

### 3. Health Care Delivery System in India:

- **Overview:** India's health care delivery system is diverse, comprising public and private sectors, rural and urban facilities, and traditional and modern medicine practices.
- **Components:** The system includes primary health care centers (PHCs), sub-centers, community health centers (CHCs), district hospitals, tertiary care hospitals, specialty clinics, and private hospitals.
- **Public Sector:** The public health care system is managed by the government at the national, state, and local levels. It provides subsidized or free services to the population, especially in rural and underserved areas.
- **Private Sector:** The private health care sector includes corporate hospitals, clinics, nursing homes, diagnostic centers, and individual practitioners. It caters to a significant portion of the population, offering a range of services from basic to specialized care.
- **Challenges:** Challenges in the health care delivery system include disparities in access to care, resource constraints, shortage of health care professionals, infrastructure gaps, quality concerns, and the need for health financing reforms.

### 4. IPHS Standards for Primary Health Centers (PHCs):

- **Infrastructure:** Adequate infrastructure including buildings, waiting areas, consultation rooms, pharmacy, laboratory, and medical equipment.
- **Staffing:** Qualified medical and paramedical staff, including doctors, nurses, pharmacists, laboratory technicians, and support staff.
- **Essential Services:** Provision of essential health services such as maternal and child health care, family planning, immunization, basic diagnostic tests, and treatment for common ailments.
- **Drugs and Supplies:** Availability of essential drugs, vaccines, contraceptives, medical supplies, and equipment as per national guidelines.
- **Health Information System:** Maintaining health records, registers, reporting systems, and data management for monitoring and evaluation.
- **Quality Assurance:** Ensuring quality of care, infection control, waste management, patient safety, and adherence to national standards and protocols.

### 5. IPHS Standards for Sub-Centers:

- **Infrastructure:** Basic infrastructure including a building, examination room, waiting area, pharmacy, and essential amenities.

- **Staffing:** Trained health workers such as auxiliary nurse midwives (ANMs), accredited social health activists (ASHAs), and community health workers for outreach and community-based services.
- **Essential Services:** Delivery of maternal and child health services, immunization, antenatal care, postnatal care, family planning counseling, health education, and basic first aid.
- **Drugs and Supplies:** Availability of essential drugs, contraceptives, medical kits, and supplies for basic health care services.
- **Health Promotion:** Conducting community health programs, awareness campaigns, home visits, and participation in village health committees.
- **Referral System:** Establishing linkages with higher-level health facilities for referrals, emergency services, and follow-up care.

#### 6. World Health Organization (WHO):

- **Role:** The World Health Organization is a specialized agency of the United Nations responsible for international public health.
- **Mandate:** WHO's mandate includes providing leadership on global health issues, setting norms and standards, conducting research, providing technical assistance, and coordinating health initiatives.
- **Functions:** WHO works on a wide range of health priorities, including disease control, health systems strengthening, emergency response, maternal and child health, nutrition, immunization, non-communicable diseases, mental health, and environmental health.
- **Collaboration:** WHO collaborates with member states, international partners, non-governmental organizations (NGOs), academia, and civil society to address global health challenges, promote health equity, and achieve sustainable development goals (SDGs).

#### 7. United Nations Children's Fund (UNICEF):

- **Focus:** UNICEF is a UN agency focused on promoting the rights and well-being of children worldwide.
- **Areas of Work:** UNICEF's work includes child survival, health, nutrition, education, protection, water and sanitation, HIV/AIDS prevention, emergency response, and advocacy for children's rights.
- **Partnerships:** UNICEF works in partnership with governments, NGOs, civil society, communities, and other stakeholders to improve child health outcomes, reduce child mortality, combat malnutrition, and ensure access to essential services for children.

#### 8. International Red Cross and Red Crescent Movement:

- **Mission:** The International Red Cross and Red Crescent Movement is a global humanitarian network dedicated to alleviating human suffering, protecting life and dignity, and promoting humanitarian principles.

- **Components:** The movement includes the International Committee of the Red Cross (ICRC), International Federation of Red Cross and Red Crescent Societies (IFRC), and national Red Cross and Red Crescent societies.
- **Activities:** The movement engages in humanitarian activities such as disaster response, emergency relief, health care services, first aid training, disaster preparedness, advocacy

#### 9. National Health Policy 2017:

- **Overview:** The National Health Policy 2017 is a policy framework developed by the Government of India to guide health sector reforms, address health challenges, and improve health outcomes across the country.
- **Key Objectives:**
  1. **Universal Health Coverage:** Ensuring access to affordable and equitable health care services for all citizens.
  2. **Health System Strengthening:** Strengthening health infrastructure, human resources, and quality of care delivery.
  3. **Health Promotion:** Promoting preventive and promotive health interventions, healthy lifestyles, and community participation.
  4. **Health Financing:** Enhancing health financing mechanisms, risk pooling, insurance coverage, and public-private partnerships.
  5. **Health Governance:** Improving governance, regulation, accountability, and transparency in the health sector.
- **Strategic Priorities:**
  1. **Primary Health Care:** Emphasizing the role of primary health care in delivering comprehensive and integrated health services.
  2. **Maternal and Child Health:** Prioritizing maternal and child health services, nutrition, immunization, and reproductive health.
  3. **Non-Communicable Diseases:** Addressing the rising burden of non-communicable diseases (NCDs) through prevention, early detection, and management.
  4. **Infectious Diseases:** Strengthening disease surveillance, outbreak response, and control of communicable diseases.
  5. **Health Information Systems:** Improving data collection, health information management, and evidence-based decision-making.
- **Implementation:** The policy outlines strategies for implementation, monitoring, evaluation, and collaboration with stakeholders at various levels.

#### 10. Village Health Sanitation and Nutrition Committee (VHSNC):

- **Formation:** VHSNC is a community-based committee formed at the village level to promote health, sanitation, nutrition, and community participation in health programs.
- **Composition:** The committee includes representatives from local communities, women's groups, elected representatives, health workers, and other stakeholders.
- **Functions:**
  1. **Health Promotion:** Conducting health education, awareness campaigns, and behavioral change communication on key health issues.
  2. **Sanitation:** Promoting hygiene practices, safe drinking water, sanitation facilities, waste management, and cleanliness in villages.
  3. **Nutrition:** Addressing malnutrition, promoting balanced diets, maternal and child nutrition, breastfeeding, micronutrient supplementation, and growth monitoring.
  4. **Community Participation:** Engaging communities in planning, implementing, monitoring, and evaluating health programs, identifying local health priorities, and advocating for health services.
  5. **Linkages:** Establishing linkages with health facilities, government programs, NGOs, and resources for addressing health and development needs at the grassroots level.
- **Impact:** VHSNCs play a vital role in empowering communities, improving health outcomes, reducing health disparities, and fostering sustainable development in rural areas.

## CHAPTER 2

#### 1. MMR (Measles, Mumps, and Rubella):

- **Causes:** MMR is caused by three separate viruses:
  1. **Measles:** Measles virus is highly contagious and spreads through respiratory droplets from coughing or sneezing.
  2. **Mumps:** Mumps virus is also contagious and spreads through saliva, respiratory secretions, or direct contact with infected persons.
  3. **Rubella:** Rubella virus is transmitted through respiratory droplets or direct contact with an infected person, especially during pregnancy, posing risks to the fetus.
- **Preventive Measures:**
  1. **Vaccination:** The most effective preventive measure is vaccination with the MMR vaccine, which provides immunity against measles, mumps, and

rubella. Vaccination is recommended in childhood as part of routine immunization schedules.

2. **Herd Immunity:** Achieving high vaccination coverage in communities helps create herd immunity, reducing the spread of these viral diseases.
3. **Isolation and Quarantine:** Infected individuals should be isolated to prevent transmission to others. Quarantine measures may be necessary during outbreaks.
4. **Health Education:** Promoting awareness about MMR, vaccination benefits, hygiene practices, and early recognition of symptoms can help prevent and control outbreaks.
5. **Public Health Interventions:** Public health agencies conduct surveillance, contact tracing, outbreak investigations, and implement control measures to contain MMR outbreaks.

## 2. Infrastructure of Maternal and Child Health (MCH) Care Delivery in India:

- **Health Facilities:** MCH care infrastructure includes primary health centers (PHCs), community health centers (CHCs), sub-centers, district hospitals, maternal and child hospitals, and specialized MCH clinics.
- **Services Offered:**
  1. Antenatal Care (ANC): Services for pregnant women, including check-ups, ANC visits, screening tests, iron and folic acid supplementation, tetanus vaccination, and counseling.
  2. Postnatal Care (PNC): Care for mothers and newborns after delivery, including postpartum check-ups, breastfeeding support, newborn care, and family planning counseling.
  3. Child Health Services: Immunization, growth monitoring, nutrition counseling, treatment of childhood illnesses, deworming, and early childhood development interventions.
  4. Maternal Health Services: Safe delivery services, skilled birth attendance, emergency obstetric care, maternal nutrition, prenatal and postnatal care, and family planning services.
  5. Neonatal Care: Neonatal intensive care units (NICUs), neonatal resuscitation, kangaroo mother care, newborn screening, and management of neonatal complications.
- **Staffing:** MCH care facilities are staffed by doctors, nurses, midwives, auxiliary nurse midwives (ANMs), health educators, nutritionists, and other allied health professionals.
- **Equipment and Supplies:** Infrastructure includes medical equipment, labor and delivery facilities, neonatal care equipment, vaccines, drugs, contraceptives, and essential supplies for MCH services.

### 3. Preventive Measures for Low Birth Weight (LBW) Baby:

- **Antenatal Care:** Adequate antenatal care for pregnant women, including early and regular ANC visits, screening for risk factors, and management of maternal health conditions.
- **Nutritional Support:** Ensuring maternal nutrition with a balanced diet, iron and folic acid supplementation, micronutrient support, and weight monitoring during pregnancy.
- **Avoidance of Risk Factors:** Preventing maternal smoking, alcohol consumption, substance abuse, exposure to toxins, infections, and stress during pregnancy.
- **Management of Medical Conditions:** Monitoring and managing maternal medical conditions such as hypertension, diabetes, infections, and anemia to reduce the risk of LBW.
- **Birth Preparedness:** Planning for safe delivery, skilled birth attendance, access to emergency obstetric care, and postnatal care for both mother and baby.
- **Breastfeeding Support:** Promoting early initiation of breastfeeding, exclusive breastfeeding, adequate latch, proper positioning, and support for breastfeeding mothers.

### 4. Services Provided in Under-Five Clinic:

- **Growth Monitoring:** Regular measurement of weight, height/length, and head circumference to track child growth and development.
- **Immunization:** Administering vaccines as per the national immunization schedule to protect children against vaccine-preventable diseases.
- **Nutrition Counseling:** Providing guidance on breastfeeding, complementary feeding, micronutrient supplementation, and dietary practices for optimal child nutrition.
- **Child Health Check-ups:** Assessing overall health, screening for common childhood illnesses, developmental milestones, vision and hearing, and providing treatment or referrals as needed.
- **Health Education:** Educating parents/caregivers on childcare practices, hygiene, sanitation, prevention of childhood diseases, injury prevention, and early intervention for developmental delays.
- **Preventive Interventions:** Deworming, vitamin A supplementation, oral rehydration therapy (ORT) for diarrhea management, insecticide-treated bed nets for malaria prevention, and hygiene promotion.

### 5. Uses of Growth Chart:

- **Monitoring Growth:** Tracking changes in weight, height/length, and head circumference over time to assess child growth patterns and detect abnormalities.
- **Assessing Development:** Comparing growth measurements with age-specific norms to evaluate developmental milestones and identify delays or deviations.

- **Nutritional Status:** Assessing nutritional status, nutritional adequacy, growth faltering, undernutrition, overweight, obesity, and micronutrient deficiencies.
- **Health Surveillance:** Providing valuable information for health professionals to identify health issues, make clinical decisions, provide appropriate interventions, and monitor response to treatment.
- **Communication:** Facilitating communication between healthcare providers, parents/caregivers, and policymakers regarding child health, nutrition, and growth promotion strategies.

#### 6. **NUHM Component of NHM (National Health Mission):**

- **National Urban Health Mission (NUHM):** NUHM is a sub-mission under the National Health Mission (NHM) aimed at improving health outcomes in urban areas, especially for the urban poor and vulnerable populations.
- **Objectives:** The key objectives of NUHM include:
  1. Strengthening urban health infrastructure, facilities, and services.
  2. Enhancing access to quality healthcare for urban residents, especially marginalized communities.
  3. Promoting community participation, social mobilization, and health awareness in urban settings.
  4. Addressing urban health challenges such as communicable diseases, non-communicable diseases, maternal and child health, nutrition, sanitation, and environmental health.
- **Components:** NUHM focuses on various components such as establishing Urban Primary Health Centers (UPHCs), Urban Community Health Centers (UCHCs), Urban Family Welfare Centers (UFWCs), Urban Health Posts (UHPs), Mobile Medical Units (MMUs), and strengthening existing urban health facilities.
- **Services:** NUHM provides a range of health services including primary health care, maternal and child health services, family planning, immunization, disease

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prevention, health education, nutrition counseling, adolescent health services, mental health support, reproductive health services, sanitation, hygiene promotion, and environmental health interventions in urban areas.

#### 7. **Baby-Friendly Hospital Initiative (BFHI):**

- **Objective:** The Baby-Friendly Hospital Initiative (BFHI) is a global program launched by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) to promote and support breastfeeding in healthcare facilities.



- **Ten Steps to Successful Breastfeeding:** BFHI encourages hospitals and maternity facilities to implement the "Ten Steps to Successful Breastfeeding" to support and protect breastfeeding.
  1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
  2. Train all healthcare staff in skills necessary to implement the breastfeeding policy.
  3. Inform all pregnant women about the benefits and management of breastfeeding.
  4. Help mothers initiate breastfeeding within one hour of birth.
  5. Show mothers how to breastfeed and maintain lactation, even if separated from their infants.
  6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
  7. Practice rooming-in: allow mothers and infants to remain together 24 hours a day.
  8. Encourage breastfeeding on demand.
  9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
  10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
- **Benefits:** BFHI implementation promotes exclusive breastfeeding, improves breastfeeding rates, reduces infant mortality and morbidity, enhances maternal-infant bonding, and supports optimal infant nutrition and development.
- **Accreditation:** Hospitals and maternity facilities can seek BFHI accreditation by demonstrating adherence to the Ten Steps and undergoing assessment and certification processes.
- **Community Support:** BFHI extends beyond healthcare facilities to involve community support networks, lactation consultants, peer counselors, and breastfeeding advocacy groups to promote breastfeeding continuation and support for mothers post-discharge.

# CHAPTER 3

1. **Factors Affecting Population Growth:** Population growth is influenced by various factors, including:
  - **Birth Rate:** The number of births per 1,000 individuals in a population per year. Higher birth rates contribute to population growth.
  - **Death Rate:** The number of deaths per 1,000 individuals in a population per year. Lower death rates can lead to population growth.
  - **Fertility Rate:** The average number of children born to a woman during her reproductive years. High fertility rates contribute to population growth.
  - **Migration:** The movement of individuals into (immigration) or out of (emigration) a population. Net migration can affect population size.
  - **Healthcare:** Access to healthcare services, sanitation, hygiene, nutrition, and disease control impact birth and death rates.
  - **Economic Factors:** Economic conditions, employment opportunities, income levels, and social welfare policies can influence family size decisions.
  - **Education:** Education levels, especially for women, can affect fertility rates and family planning choices.
  - **Cultural and Religious Beliefs:** Cultural norms, traditions, religious beliefs, and societal attitudes towards family size and contraception influence population growth.
  - **Government Policies:** Family planning programs, population control policies, incentives, and regulations implemented by governments can impact population growth rates.
  - **Environmental Factors:** Environmental sustainability, resource availability, ecological balance, and carrying capacity influence population growth and sustainability.
2. **Different Fertility-Related Statistics:**
  - **Total Fertility Rate (TFR):** The average number of children born to a woman during her reproductive years (usually ages 15-49) in a specific population. TFR helps assess fertility patterns and demographic trends.
  - **Crude Birth Rate (CBR):** The number of live births per 1,000 individuals in a population per year. CBR reflects the fertility level of a population.
  - **General Fertility Rate (GFR):** The number of live births per 1,000 women of reproductive age (usually ages 15-44) in a population per year. GFR provides a more specific measure of fertility among women.
  - **Age-Specific Fertility Rate (ASFR):** The number of live births per 1,000 women in specific age groups (e.g., 15-19, 20-24, 25-29, etc.) within a population per year. ASFR helps analyze fertility patterns by age.
  - **Gross Reproduction Rate (GRR):** The average number of daughters that would be born to a woman during her lifetime if she experienced the current age-specific

fertility rates throughout her reproductive years. GRR assesses the potential for population replacement.

- **Net Reproduction Rate (NRR):** Similar to GRR but adjusts for mortality rates, representing the average number of daughters that would be born to a woman surviving to the end of her reproductive years. NRR accounts for mortality in assessing population replacement.
3. **Natural Family Planning (NFP) Methods:** Natural Family Planning methods, also known as fertility awareness-based methods, rely on understanding a woman's menstrual cycle and fertility signs to prevent or achieve pregnancy. These methods include:
- **Calendar or Rhythm Method:** Tracking menstrual cycles over time to predict fertile and non-fertile days based on historical data. Requires regular menstrual cycles.
  - **Basal Body Temperature (BBT) Method:** Monitoring daily basal body temperature to detect slight temperature changes indicating ovulation. Requires precise tracking and consistency.
  - **Cervical Mucus Method:** Observing changes in cervical mucus consistency and texture throughout the menstrual cycle to identify fertile and non-fertile periods.
  - **Symptothermal Method:** Combining calendar tracking with observations of basal body temperature, cervical mucus, and other fertility signs for greater accuracy.
  - **Standard Days Method (SDM):** Identifying a fixed window of days (usually days 8-19 of the menstrual cycle) considered fertile based on average cycle lengths.
  - **Lactational Amenorrhea Method (LAM):** Utilizing breastfeeding as a natural contraceptive method during exclusive breastfeeding in the first six months postpartum, assuming certain conditions are met.
  - **Fertility Awareness-Based Methods (FABMs):** Incorporating multiple fertility signs and behavioral cues to determine fertile and non-fertile phases.
4. **Different Hormonal Contraceptives:** Hormonal contraceptives use synthetic hormones to prevent pregnancy. They include:
- **Combined Oral Contraceptives (COCs):** Pills containing estrogen and progestin hormones to suppress ovulation, thicken cervical mucus, and inhibit fertilization.
  - **Progestin-Only Pills (Mini Pills):** Pills containing only progestin hormones, mainly affecting cervical mucus to prevent sperm penetration and altering the uterine lining.
  - **Contraceptive Patch:** A patch worn on the skin releasing estrogen and progestin hormones to prevent ovulation and thicken cervical mucus.
  - **Contraceptive Ring:** A flexible ring inserted into the vagina releasing estrogen and progestin hormones to prevent ovulation and alter cervical mucus.
  - **Injectable Contraceptives:** Injections of progestin hormones every few months to suppress ovulation, thicken cervical mucus, and inhibit sperm transport.

- **Implants:** Small rods implanted under the skin releasing progestin hormones to prevent ovulation and alter cervical mucus and the uterine lining.
- **Intrauterine Devices (IUDs):** T-shaped devices inserted into the uterus, available as hormonal IUDs releasing progestin or non-hormonal IUDs affecting sperm function and implantation.
- **Emergency Contraception:** High-dose hormonal pills or copper IUDs used after unprotected intercourse for emergency contraception, primarily preventing ovulation or fertilization.

5. **Medical Termination of Pregnancy (MTP) Act of 1971:** The Medical Termination of Pregnancy Act, 1971, is an Indian legislation that governs the termination of pregnancies and related procedures. Here are the key points of the MTP Act:

- **Legalization:** The MTP Act legalized abortions under certain conditions and circumstances to protect women's health and rights.
- **Conditions for Legal Abortion:**
  1. Pregnancy duration: Up to 20 weeks of gestation (in specific cases, up to 24 weeks with medical opinion).
  2. Risk to the woman's life or physical or mental health.
  3. Risk of fetal abnormalities or serious congenital defects.
  4. Pregnancy resulting from rape or incest (with police report).
  5. Failure of contraception (with proof of contraception use).
- **Authorized Providers:** Only registered medical practitioners with specialized training and certification are authorized to perform legal abortions.
- **Authorized Facilities:** Abortions must be conducted in approved hospitals, clinics, or facilities with necessary infrastructure and medical expertise.
- **Informed Consent:** Prior informed consent of the woman or her legal guardian is mandatory before performing an abortion.
- **Confidentiality:** The Act ensures confidentiality regarding abortion procedures, medical records, and the woman's identity.
- **Regulations:** The Act outlines detailed procedures, protocols, documentation, and reporting requirements for legal abortions.
- **Penalties:** Violation of the Act's provisions, illegal abortions, or unauthorized practices can result in penalties, fines, and legal consequences.
- **Public Awareness:** The Act emphasizes public awareness, education, and access to safe abortion services, family planning, and reproductive health care.

# CHAPTER 4

1. **Different Sampling Methods:** Sampling methods are techniques used to select a subset of individuals or units from a larger population for research or data collection purposes. Common sampling methods include:
  - **Simple Random Sampling:** Every individual or unit in the population has an equal chance of being selected, and selection is done randomly.
  - **Stratified Sampling:** The population is divided into homogeneous subgroups (strata), and random samples are drawn from each stratum.
  - **Systematic Sampling:** Every nth individual or unit is selected from a list or sequence after choosing a random starting point.
  - **Cluster Sampling:** The population is divided into clusters, and random clusters are selected for sampling, followed by sampling individuals within the chosen clusters.
  - **Convenience Sampling:** Non-probability sampling where individuals or units are selected based on convenience or accessibility, often used in quick surveys or studies.
  - **Snowball Sampling:** Sampling technique where existing participants refer or recruit additional participants, commonly used in studies involving hard-to-reach populations.
  - **Purposive Sampling:** Non-random sampling based on specific criteria or characteristics, used when researchers want to include certain types of individuals or units.
  - **Quota Sampling:** Non-probability sampling where researchers select individuals based on pre-defined quotas to ensure representation of certain groups or characteristics.
2. **Different Sources of Health Information:** Health information can be obtained from various sources, including:
  - **Health Records and Medical Charts:** Patient medical histories, diagnoses, treatments, and outcomes documented by healthcare providers.
  - **Surveillance Systems:** Public health surveillance systems monitor and track diseases, outbreaks, health behaviors, and vital statistics at local, national, and global levels.
  - **Health Surveys:** Population-based surveys collect data on health status, risk factors, healthcare utilization, access to services, and health behaviors.
  - **Clinical Trials and Research Studies:** Controlled experiments and observational studies conducted to investigate diseases, treatments, interventions, and health outcomes.
  - **Healthcare Facilities:** Hospitals, clinics, primary care centers, pharmacies, and other healthcare settings provide data on patient visits, procedures, prescriptions, and health services.

- **Health Registries:** Disease registries, birth registries, cancer registries, and other specialized databases maintain records on specific health conditions and populations.
  - **Government Reports:** Official reports, publications, and data releases from health departments, ministries of health, and regulatory agencies.
  - **Health Information Systems (HIS):** Electronic health records (EHRs), health information exchanges (HIEs), telemedicine platforms, and digital health platforms.
  - **Non-Governmental Organizations (NGOs):** NGOs, advocacy groups, and health organizations provide data, reports, and research findings on health-related issues.
  - **Academic Institutions:** Universities, research centers, and academic publications contribute to health information through studies, publications, and scholarly work.
3. **Different Ways of Presentation of Data:** Data can be presented in various formats to communicate information effectively:
- **Tabular Presentation:** Organizing data into tables with rows and columns for easy comparison, summarization, and analysis.
  - **Graphical Presentation:** Using charts, graphs, and diagrams to visually represent data, including:
    - Bar Charts: Comparing categories or groups using bars of different lengths.
    - Line Graphs: Showing trends, patterns, or changes over time using lines connecting data points.
    - Pie Charts: Displaying proportions or percentages of a whole with slices of a circle.
    - Scatter Plots: Plotting individual data points to show relationships between variables.
    - Histograms: Representing frequency distributions of continuous data with bars of varying heights.
    - Box Plots: Illustrating distribution, range, median, quartiles, and outliers in a dataset.
  - **Narrative Presentation:** Describing data findings, trends, patterns, and interpretations in written or verbal form, often used in reports, articles, and presentations.
  - **Infographics:** Combining text, visuals, icons, and design elements to convey complex information, statistics, or concepts in a visually appealing and understandable format.
  - **Interactive Data Visualization:** Utilizing interactive tools, dashboards, maps, and online platforms to engage users and explore data dynamically.
4. **Different Mortality Statistics:** Mortality statistics measure deaths and mortality rates in populations. Common mortality statistics include:

- **Crude Death Rate:** The number of deaths per 1,000 individuals in a population per year, providing an overall mortality measure.
  - **Age-Specific Death Rate:** The number of deaths per 1,000 individuals in specific age groups (e.g., infant mortality rate, under-five mortality rate, elderly mortality rate).
  - **Standardized Mortality Rate:** Adjusted mortality rate accounting for age, sex, or other factors to compare mortality between populations with different demographics.
  - **Cause-Specific Mortality Rate:** The number of deaths attributed to specific causes (e.g., cardiovascular disease mortality rate, cancer mortality rate, infectious disease mortality rate).
  - **Maternal Mortality Rate:** The number of maternal deaths related to pregnancy or childbirth per 100,000 live births in a given time period.
  - **Infant Mortality Rate (IMR):** The number of deaths of infants under one year of age per 1,000 live births in a year, indicating child health and healthcare access.
  - **Under-Five Mortality Rate (U5MR):** The number of deaths of children under five years of age per 1,000 live births in a year, reflecting child survival and healthcare quality.
  - **Neonatal Mortality Rate:** The number of deaths of newborns within the first 28 days of life per 1,000 live births, highlighting newborn health and care needs.
  - **Case Fatality Rate:** The proportion of deaths among individuals diagnosed with a specific disease or condition, indicating disease severity or treatment outcomes.
5. **Measurement of Morbidity:** Morbidity refers to the prevalence or incidence of illness, injuries, diseases, and health conditions in a population. Morbidity can be measured in several ways:
- **Prevalence:** The proportion of individuals in a population affected by a specific disease or condition at a given time, indicating the burden of illness.
  - **Incidence:** The rate of new cases of a disease or condition occurring in a population over a specified period, reflecting disease risk and transmission dynamics.
  - **Mortality to Morbidity Ratio:** The ratio of deaths (mortality) to cases of illness or disease (morbidity), providing insights into disease severity and case outcomes.
  - **Health Surveys:** Population-based surveys collect data on self-reported illness, symptoms, disabilities, functional limitations, and health-related quality of life.
  - **Hospital and Healthcare Records:** Medical records, hospital admissions, outpatient visits, emergency department visits, and healthcare utilization data capture morbidity patterns.
  - **Disease Surveillance Systems:** Public health surveillance monitors and tracks morbidity trends, outbreaks, epidemics, notifiable diseases, and health events of public health significance.

- **Health Indicators:** Morbidity indicators such as disability-adjusted life years (DALYs), quality-adjusted life years (QALYs), years of life lost (YLL), years lived with disability

## CHAPTER 5

1. **Duties and Responsibilities of the Registrar under the Act:** The Registrar, under the act, typically refers to the Registrar of Births and Deaths. In India, the Registration of Births and Deaths Act, 1969, governs the registration process. The duties and responsibilities of the Registrar include:
  - **Registration of Births and Deaths:** The primary responsibility is to register all births and deaths occurring within their jurisdiction promptly and accurately.
  - **Issuing Certificates:** Provide birth and death certificates to individuals, families, or authorized entities upon request. These certificates serve as legal documents for various purposes like education, employment, inheritance, and government services.
  - **Maintaining Records:** Keep accurate and updated records of registered births and deaths in the prescribed format. Ensure confidentiality and security of vital statistics data.
  - **Verification and Validation:** Verify the information provided during registration to ensure accuracy and compliance with legal requirements. Validate supporting documents if necessary.
  - **Reporting to Authorities:** Submit periodic reports and statistical data related to births and deaths to the concerned government authorities, as mandated by the act.
  - **Public Awareness and Education:** Conduct awareness campaigns, workshops, and outreach programs to educate the public about the importance of birth and death registration, procedures, and legal implications.
  - **Enforcement of Regulations:** Ensure adherence to registration rules, guidelines, timelines, and procedural requirements specified under the Registration of Births and Deaths Act and related regulations.
  - **Coordination with Health Institutions:** Collaborate with hospitals, healthcare providers, municipalities, local bodies, and community organizations to streamline registration processes and improve data quality.
  - **Digitalization and Modernization:** Embrace technology for online registration, digital record-keeping, e-certificates issuance, data analytics, and automation to enhance efficiency, accuracy, and accessibility of vital statistics.
2. **Procedure of Disposal of Dead in India:** Disposal of dead bodies in India involves several steps, adhering to cultural, religious, legal, and environmental considerations. Here's a detailed procedure:

### 1. Death Declaration and Notification:

- When a person dies, the family or responsible individuals must notify the local authorities or the Registrar of Births and Deaths within 21 days of the death occurrence, as per the Registration of Births and Deaths Act, 1969.



- Provide necessary information for death registration, including the deceased's name, age, gender, date and place of death, cause of death (if known), and details of the informant.

## **2. Death Certificate and Registration:**

- Obtain the death certificate from the Registrar of Births and Deaths after completing the registration process. The death certificate is a crucial legal document for various purposes.
- The registration process includes filling out the prescribed forms, submitting required documents and proofs (e.g., medical certificate of cause of death, identity proofs), and paying applicable fees.

## **3. Handling and Transporting the Body:**

- Ensure proper handling and transportation of the deceased's body, following cultural, religious, and legal protocols. Some communities may perform specific rituals or observances before transportation.
- Use appropriate transportation means, such as ambulances or hearses, to transfer the body to the place of burial or cremation. Adhere to health and safety standards during transportation.

## **4. Burial or Cremation:**

- Burial: In case of burial, prepare the gravesite according to religious or cultural customs. Follow local regulations regarding grave depth, coffin requirements (if applicable), and cemetery protocols.
- Cremation: If cremation is chosen, take the body to the designated crematorium. Follow cremation procedures, including paperwork, documentation, cremation chamber use, and ashes collection (if desired).

## **5. Post-Disposal Formalities:**

- Obtain necessary documentation or certificates from the cemetery, crematorium, or authorities confirming the burial or cremation.
- Notify relevant agencies or organizations about the death for legal and administrative purposes (e.g., banks, insurance companies, government offices).
- Fulfill any post-disposal rituals, ceremonies, or religious observances as per personal beliefs or customs.

## **6. Legal Compliance and Record-Keeping:**

- Ensure compliance with local laws, regulations, and environmental guidelines regarding the disposal of dead bodies.
- Maintain accurate records of the death, disposal process, certificates, permits, and related documents for future reference and legal requirements.

## **7. Environmental Considerations:**

- Follow eco-friendly practices for burial or cremation to minimize environmental impact. Use biodegradable materials, sustainable practices, and pollution control measures as applicable.

#### **8. Cultural and Religious Sensitivities:**

- Respect and accommodate cultural, religious, and individual preferences regarding funeral rites, mourning periods, and memorial services.
- Seek guidance from religious leaders, community elders, or funeral directors to ensure culturally sensitive and appropriate practices.

#### **9. Post-Disposal Support:**

- Provide support and assistance to the bereaved family members, including emotional support, counseling services, and practical help with post-death arrangements and legal matters.

## **CHAPTER 6**

- **National Tuberculosis Control Program (NTP):**
  - Aligned with WHO guidelines and operates under RNTCP.
  - Focuses on early diagnosis, effective treatment, and DOTS-Plus services.
  - Includes public awareness, integrated TB-HIV services, and contact tracing.
  - Emphasizes capacity building, monitoring, and data-driven improvements.
- **National AIDS Control Program (NACP):**
  - Led by NACO, focuses on HIV/AIDS prevention and treatment.
  - Implements prevention, testing, ART, targeted interventions, and community engagement.
  - Strengthens healthcare systems, surveillance, and capacity building.
  - Promotes rights, advocacy, and stigma reduction for PLHIV.
- **National Vector Borne Disease Control Program (NVBDCP):**
  - Targets vector-borne diseases like malaria, dengue, and lymphatic filariasis.
  - Utilizes IVM strategies, vector control measures, and early diagnosis/treatment.
  - Engages communities, conducts surveillance, and supports research/innovation.
  - Addresses local epidemiology, environmental sanitation, and health education.

1. **Strategies under NLEP:**

- **Early Case Detection:** Active surveillance and health education.
- **Multi-Drug Therapy (MDT):** Standardized treatment regimens.
- **Strengthened Health Systems:** Improved infrastructure and integration.
- **IEC Activities:** Awareness and social mobilization campaigns.
- **Surveillance and Monitoring:** Robust tracking and reporting systems.
- **Disability Management:** Rehabilitation and support services.
- **Collaboration:** Partnering with various organizations for effective control.

2. **Measures to Control STDs:**

- **Preventive Measures:** Safe sex practices, education, screening, immunization.
- **Diagnostic and Treatment Services:** Accessible testing, timely treatment, partner notification.
- **Health Education and Counseling:** Risk reduction, behavior change support.
- **Surveillance and Monitoring:** Tracking STD trends and treatment outcomes.
- **Collaboration and Integration:** Working with other health programs for comprehensive control.

3. **Vision 2020: Right to Sight:**

- **Preventive Services:** Promoting eye health and disease prevention.
- **Primary Eye Care:** Strengthening primary healthcare for eye services.
- **Capacity Building:** Training healthcare workers and volunteers.
- **Integrated Eye Care:** Incorporating eye care into existing health infrastructure.
- **Community Engagement:** Involving communities and stakeholders.
- **Technology and Innovation:** Utilizing modern tools for eye care.
- **Partnerships:** Collaborating with various entities to drive collective action.

4. **Preventive Measures under National Diabetes Control Programme:**

- **Health Promotion:** Encouraging healthy lifestyles and weight management.
- **Screening and Early Detection:** Identifying high-risk individuals.
- **Diabetes Education:** Providing self-management training.
- **Awareness Campaigns:** Raising public awareness about diabetes.
- **Nutritional Support:** Offering dietary counseling.
- **Physical Activity Promotion:** Encouraging regular exercise.
- **Healthcare Infrastructure:** Strengthening primary care services.

- **Community Engagement:** Mobilizing community support.
- **Data Surveillance:** Monitoring diabetes trends.
- **Policy Advocacy:** Supporting policies for diabetes prevention.

#### 5. Interventions under PPTCT Programme:

- **Antenatal Screening:** Routine HIV screening for pregnant women.
- **Voluntary Counseling and Testing (VCT):** Providing HIV testing and counseling.
- **Prevention Strategies:** Promoting safe sex and prevention education.
- **Antiretroviral Therapy (ART):** Providing ARVs to HIV-positive pregnant women.
- **ARV Prophylaxis:** Administering prophylaxis to newborns.
- **Exclusive Breastfeeding:** Counseling on safe breastfeeding practices.
- **Early Infant Diagnosis (EID):** Conducting early HIV testing for infants.
- **Postnatal Care:** Providing comprehensive follow-up care.
- **Data Monitoring and Evaluation:** Tracking program performance and outcomes.
- **Community Engagement:** Involving communities to reduce stigma.
- **Capacity Building:** Training healthcare providers and volunteers.

## CHAPTER 7

### 1. Mention Classification of Foods

Foods can be classified into various categories based on their nutritional content and function in the body:

- **Carbohydrates:** Cereals, grains, fruits, vegetables, and sugars. They provide energy.
- **Proteins:** Meat, fish, eggs, dairy products, legumes, and nuts. Essential for growth, repair, and maintenance of tissues.
- **Fats:** Oils, butter, ghee, nuts, seeds, and fatty fish. Provide energy and support cell function.
- **Vitamins and Minerals:** Fruits, vegetables, dairy, meat, and fortified foods. Essential for various biochemical processes and maintaining health.
- **Water:** Beverages, fruits, and vegetables. Essential for hydration and various bodily functions.
- **Fiber:** Whole grains, fruits, vegetables, and legumes. Important for digestive health.

### 2. Mention Function of Proteins in Body

Proteins perform numerous vital functions in the body:

- **Structural Support:** Form the building blocks of muscles, bones, skin, and hair.
- **Enzymes:** Act as catalysts for biochemical reactions.

- **Transport:** Hemoglobin in red blood cells transports oxygen; other proteins transport nutrients and waste products.
- **Hormones:** Insulin and other hormones regulate various physiological processes.
- **Immune Function:** Antibodies are proteins that help fight infections.
- **Fluid Balance:** Proteins help maintain fluid balance in cells and tissues.
- **Energy Source:** Provide energy when carbohydrates and fats are insufficient.

### 3. Features of Vitamin A Deficiency and Its Preventive Measures

#### Features:

- **Night Blindness:** Difficulty seeing in low light conditions.
- **Xerophthalmia:** Dryness of the conjunctiva and cornea.
- **Bitot's Spots:** Foamy patches on the white part of the eyes.
- **Keratomalacia:** Softening of the cornea, leading to blindness.
- **Impaired Immune Function:** Increased susceptibility to infections.

#### Preventive Measures:

- **Dietary Intake:** Consumption of vitamin A-rich foods such as liver, dairy products, eggs, and colorful fruits and vegetables (e.g., carrots, sweet potatoes, spinach).
- **Supplementation:** Providing vitamin A supplements to high-risk populations, especially children and pregnant women.
- **Fortification:** Fortifying staple foods (e.g., sugar, oil) with vitamin A.
- **Public Health Education:** Raising awareness about the importance of vitamin A and promoting dietary diversification.

### 4. Spectrum of Iodine Deficiency Disorders

Iodine deficiency can lead to a range of disorders collectively known as iodine deficiency disorders (IDD):

- **Goiter:** Enlargement of the thyroid gland.
- **Cretinism:** Severe mental and physical retardation in infants and children due to maternal iodine deficiency.
- **Hypothyroidism:** Reduced production of thyroid hormones leading to fatigue, weight gain, and other symptoms.
- **Neonatal Hypothyroidism:** Inadequate thyroid hormone levels in newborns.
- **Impaired Cognitive Function:** Reduced intellectual ability and learning capacity.
- **Increased Pregnancy-Related Risks:** Higher risk of miscarriages, stillbirths, and preterm delivery.

### 5. Difference Between Marasmus and Kwashiorkor

Feature	Marasmus	Kwashiorkor
Cause	Severe deficiency of calories and energy	Severe deficiency of protein
Age Group	Common in children under 1 year	Common in children aged 1-3 years
Appearance	Very thin, wasted appearance	Edema, swollen belly, and limbs
Muscle Wasting	Severe	Mild to moderate
Skin Changes	Dry, wrinkled skin	Flaky paint dermatosis, skin lesions
Hair Changes	Sparse, thin, easily pluckable	Discolored, brittle hair
Other Symptoms	Prominent ribs, sunken eyes	Fatty liver, lethargy, apathy

#### 6. Preventive Measures for Protein Energy Malnutrition (PEM)

- **Improved Nutrition:** Ensuring adequate intake of balanced diets rich in proteins and calories.
- **Breastfeeding:** Promoting exclusive breastfeeding for the first six months and continued breastfeeding with complementary feeding.
- **Nutritional Education:** Educating caregivers and communities about proper nutrition and child feeding practices.
- **Food Security:** Enhancing access to affordable, nutritious food through agricultural and economic policies.
- **Supplementary Feeding Programs:** Providing supplementary nutrition to vulnerable groups, such as children and pregnant women.
- **Healthcare Access:** Improving access to healthcare services for early detection and treatment of malnutrition.

#### 7. Methods of Nutritional Assessment

- **Anthropometry:** Measuring body size, weight, height, and body mass index (BMI).
- **Biochemical Tests:** Analyzing blood, urine, and other bodily fluids for nutrient levels.
- **Clinical Assessment:** Observing physical signs of nutrient deficiencies or excesses.
- **Dietary Assessment:** Evaluating dietary intake through food diaries, 24-hour recalls, and food frequency questionnaires.
- **Functional Assessment:** Assessing physical and cognitive functions related to nutrition status (e.g., grip strength, cognitive tests).

#### 8. Lathyrism: Causes, Clinical Features, and Prevention

##### Cause:

- Consumption of *Lathyrus sativus* (grass pea), which contains neurotoxin  $\beta$ -ODAP.

##### Clinical Features:

- **Neurological Symptoms:** Weakness, spasticity, and paralysis, primarily in the lower limbs.
- **Muscle Wasting:** Severe muscle atrophy and stiffness.
- **Gait Abnormalities:** Difficulty walking due to spastic paralysis.

**Prevention:**

- **Dietary Diversification:** Encouraging consumption of a varied diet to avoid dependence on grass pea.
- **Agricultural Practices:** Promoting cultivation of low-toxin varieties of *Lathyrus sativus*.
- **Food Processing:** Soaking and cooking grass peas to reduce toxin levels.
- **Public Awareness:** Educating communities about the risks of lathyrism and safe consumption practices.

**9. Integrated Child Development Services (ICDS) Programme**

- **Supplementary Nutrition:** Providing nutritious food to children, pregnant women, and lactating mothers.
- **Immunization:** Ensuring timely vaccination against preventable diseases.
- **Health Check-ups:** Regular health screenings and medical referrals.
- **Pre-School Education:** Early childhood education through Anganwadi centers.
- **Health and Nutrition Education:** Educating mothers and caregivers on health, nutrition, and hygiene practices.
- **Growth Monitoring:** Tracking growth and development of children to identify and address malnutrition.

**10. Nutritional Rehabilitation Centre (NRC)**

- **Purpose:** NRCs provide care and treatment for children with severe acute malnutrition.
- **Services:**
  - **Medical Treatment:** Addressing infections and medical complications.
  - **Nutritional Therapy:** Providing therapeutic diets to restore nutritional status.
  - **Counseling:** Educating caregivers on proper child care and feeding practices.
  - **Follow-up:** Ensuring continued care and monitoring post-discharge.
- **Team:** Multidisciplinary team including doctors, nurses, nutritionists, and social workers.
- **Goal:** To rehabilitate malnourished children and prevent relapse through education and support.

# CHAPTER 8

## Registers to be Maintained at Subcentre

- **MCH Register:** Maternal and child health services.
- **Family Planning Register:** Family planning services and contraception.
- **Immunization Register:** Immunization details.
- **Birth and Death Register:** Births and deaths.
- **Communicable Disease Register:** Communicable diseases.
- **Drug Register:** Drugs and medical supplies.
- **Outpatient Register:** Outpatient consultations.
- **Referral Register:** Cases referred to higher facilities.

## General Guidelines for Maintaining Health Records

- **Accuracy:** Ensure correctness.
- **Legibility:** Write clearly.
- **Confidentiality:** Protect patient information.
- **Completeness:** Include all relevant details.
- **Timeliness:** Update promptly.
- **Standardization:** Use consistent forms.
- **Security:** Store securely.
- **Accountability:** Assign maintenance responsibility.
- **Regular Review:** Periodic audits.
- **Compliance:** Follow legal requirements.

## Steps in Management Information System (MIS)

- **Data Collection:** Gather data using standardized tools.
- **Data Entry:** Accurate and complete input.
- **Data Processing:** Analyze data for insights.
- **Data Storage:** Secure and organized storage.
- **Data Retrieval:** Efficient access to data.
- **Data Reporting:** Generate tailored reports.
- **Data Use:** Utilize for decision-making and improvement.
- **Feedback:** Provide and encourage continuous improvement.



- **Training:** Educate staff on MIS tools.
- **Evaluation:** Regularly assess and enhance the system.

## CHAPTER 9

### 1. Functions of a Supervisor

- **Planning:** Setting goals, defining tasks, and determining resources.
- **Organizing:** Allocating tasks, delegating responsibilities, and arranging resources.
- **Staffing:** Recruiting, training, and evaluating employees.
- **Leading:** Motivating, guiding, and directing the workforce.
- **Controlling:** Monitoring performance, ensuring compliance, and implementing corrective actions.
- **Communication:** Facilitating clear and effective information flow between management and employees.
- **Problem-Solving:** Identifying issues and developing solutions.
- **Performance Evaluation:** Assessing employee performance and providing feedback.
- **Conflict Resolution:** Addressing and resolving conflicts within the team.

### 2. Objectives of Bookkeeping

- **Accurate Record-Keeping:** Maintaining a detailed and accurate record of financial transactions.
- **Financial Reporting:** Providing financial statements and reports to stakeholders.
- **Budgeting:** Assisting in the preparation and monitoring of budgets.
- **Compliance:** Ensuring adherence to legal and regulatory requirements.
- **Decision-Making:** Supplying relevant financial information for informed decision-making.
- **Performance Tracking:** Monitoring financial performance and business health.
- **Tax Preparation:** Facilitating accurate and timely tax filings.

### 3. Different Types of Accounts

- **Assets:** Resources owned by a business (e.g., cash, inventory, property).
- **Liabilities:** Obligations owed to outsiders (e.g., loans, accounts payable).
- **Equity:** Owner's interest in the business (e.g., capital, retained earnings).
- **Revenue:** Income earned from business operations (e.g., sales, service fees).
- **Expenses:** Costs incurred in business operations (e.g., rent, salaries, utilities).

### 4. Describe the “Ledger”

A ledger is a book or digital record that contains all the accounts used by a business. Each account has its own page or section where all transactions related to that account are recorded. The ledger provides a complete and detailed record of all financial transactions and is used to prepare financial statements. Key features include:

- **Account Entries:** Separate records for each account (assets, liabilities, equity, revenue, and expenses).
- **Debit and Credit Columns:** Entries are recorded as debits or credits to reflect increases or decreases.
- **Balances:** Running balances for each account to show current status.
- **Posting:** Process of transferring journal entries to the ledger accounts.

**5. Difference Between Commercial Accounting and Local Body Accounting**

Feature	Commercial Accounting	Local Body Accounting
Purpose	Profit maximization and financial performance	Public service and community welfare
Users	Business owners, investors, and creditors	Government officials, taxpayers, and citizens
Standards	Generally Accepted Accounting Principles (GAAP)	Governmental Accounting Standards
Revenue Sources	Sales, services, and investments	Taxes, grants, and public funds
Expenditure Focus	Operating costs and capital expenses	Public services, infrastructure, and community projects
Reporting	Financial statements (balance sheet, income statement)	Budgetary and performance reports

**6. Describe the Kuppuswamy Classification of Socioeconomic Scale**

The Kuppuswamy socioeconomic scale is used to classify the socioeconomic status (SES) of urban households in India. It is based on three main criteria:

- **Education of the Head of the Family:** The educational qualification of the family head, with scores assigned to different levels of education (e.g., illiterate, primary school, graduate, etc.).
- **Occupation of the Head of the Family:** The type of occupation, with scores for different types of jobs (e.g., unskilled worker, skilled worker, professional, etc.).
- **Family Income:** Monthly income of the family, categorized into different income brackets with corresponding scores.

The total score from these three criteria places the family into one of five socioeconomic classes:

1. Upper Class
2. Upper Middle Class
3. Lower Middle Class

4. Upper Lower Class
5. Lower Class

## CHAPTER 10

### 1. Norms in BMC Act for Food Sanitation & Control on Food Establishments and Vendors

The Brihanmumbai Municipal Corporation (BMC) Act establishes various norms for food sanitation and the control of food establishments and vendors to ensure public health and safety:

- **Licensing:** Food establishments and vendors must obtain a license from the BMC before operating. This includes restaurants, street vendors, and food processing units.
- **Hygiene Standards:** Establishments must adhere to strict hygiene practices, including clean premises, proper waste disposal, and pest control measures.
- **Food Safety:** Regular inspections are conducted to ensure compliance with food safety standards. Food handlers must undergo medical examinations and possess health certificates.
- **Sanitation:** Adequate sanitation facilities, including clean water supply and proper sewage systems, must be maintained.
- **Packaging and Storage:** Food must be properly packaged and stored to prevent contamination. This includes maintaining appropriate temperatures for perishable items.
- **Labeling:** Proper labeling of food items is required, including information on ingredients, expiration dates, and nutritional facts.
- **Penalties:** Non-compliance with these norms can result in penalties, including fines, license suspension, or closure of the establishment.

### 2. Norms of BMC Act Related to Regulation of Places for Disposal of Dead

The BMC Act includes regulations for the management and operation of places for the disposal of the dead to maintain public health and dignity:

- **Licensing:** Cemeteries, crematoriums, and other places for the disposal of the dead must be licensed by the BMC.
- **Location:** These facilities must be situated away from residential areas to avoid health hazards and ensure respect for the deceased.
- **Maintenance:** Proper maintenance of disposal sites is required, including cleanliness, sanitation, and management of waste.
- **Records:** Accurate records of all disposals must be maintained, including details of the deceased and the date and method of disposal.
- **Public Health:** Measures must be taken to prevent any risk to public health, including the control of infectious diseases.
- **Regulation of Services:** Funeral services and related activities must comply with the guidelines set by the BMC to ensure dignity and respect for the deceased.

### 3. Requirements Under Maharashtra Cinema Regulation Rules to Be Observed by Cinema Houses

Cinema houses in Maharashtra must comply with several regulations under the Maharashtra Cinema Regulation Rules to ensure safety and comfort for patrons:

- **Licensing:** Cinema houses must obtain a license from the local authority and adhere to the specified regulations.
- **Safety Measures:** Adequate fire safety measures, including fire extinguishers, emergency exits, and regular safety drills, must be in place.
- **Seating Arrangement:** Seating arrangements should ensure comfort and safety, with clear aisles and unobstructed access to exits.
- **Cleanliness:** Premises must be kept clean, with regular maintenance and sanitation of restrooms, seating areas, and common spaces.
- **Sound and Light Control:** Proper soundproofing and controlled lighting must be ensured to provide an optimal viewing experience.
- **Accessibility:** Facilities must be accessible to people with disabilities, including ramps and designated seating.
- **Prohibition of Smoking and Alcohol:** Smoking and alcohol consumption are strictly prohibited within cinema premises.

### 4. Norms for Registration of Nursing Homes

The registration and operation of nursing homes are governed by specific norms to ensure the provision of quality healthcare services:

- **Licensing:** Nursing homes must obtain a license from the relevant health authority. The license must be renewed periodically.
- **Infrastructure:** Adequate infrastructure must be provided, including clean and well-maintained facilities, sufficient space, and necessary medical equipment.
- **Staffing:** Qualified medical and support staff must be employed, including doctors, nurses, and administrative personnel.
- **Hygiene and Sanitation:** High standards of hygiene and sanitation must be maintained to prevent infections and ensure patient safety.
- **Record-Keeping:** Accurate records of all patients, treatments, and medical procedures must be maintained.
- **Patient Care:** Nursing homes must provide quality patient care, including emergency services, regular medical check-ups, and proper management of medical waste.
- **Inspections:** Regular inspections by health authorities are required to ensure compliance with regulations and standards.
- **Compliance:** Nursing homes must comply with all relevant health and safety regulations, including those related to fire safety, building codes, and environmental health.

# CHAPTER 11

## Objectives of School Health Programme

1. **Health Awareness:** Educate students on healthy habits, hygiene, nutrition, and preventive healthcare.
2. **Disease Detection:** Early identification and prevention of health issues.
3. **Physical and Mental Well-being:** Promote physical activity, mental health awareness, and sports.
4. **Immunization:** Ensure vaccination coverage according to the schedule.
5. **Safe Environment:** Address sanitation, water supply, and hygiene in schools.
6. **Community Collaboration:** Involve parents, teachers, and healthcare professionals.
7. **Comprehensive Education:** Cover topics like nutrition, hygiene, reproductive health, and first aid.

## Components of School Health Services

1. **Health Education:** Teach health topics and promote awareness.
2. **Health Screening:** Conduct regular check-ups for vision, hearing, dental health, etc.
3. **Immunization:** Ensure students are up-to-date with vaccinations.
4. **First Aid:** Train staff and maintain first aid kits.
5. **Counseling:** Provide mental health support and counseling services.
6. **Nutritional Support:** Offer balanced meals and promote healthy eating.
7. **Physical Activity:** Encourage sports and fitness activities.
8. **Health Records:** Maintain student health records and monitor status.
9. **Collaboration:** Partner with healthcare providers for specialized services.

## Common Health Problems of School Children in India

1. **Malnutrition:** Both undernutrition and overnutrition are prevalent.
2. **Infectious Diseases:** Respiratory, gastrointestinal, and vaccine-preventable diseases.
3. **Dental Issues:** Tooth decay, gum diseases, and poor oral hygiene.
4. **Vision and Hearing Problems:** Refractive errors, vision impairments, and hearing difficulties.
5. **Anemia:** Iron deficiency leading to fatigue and weakness.
6. **Respiratory Disorders:** Asthma, allergies, and infections.
7. **Mental Health Concerns:** Anxiety, depression, stress, and behavioral issues.
8. **Reproductive Health:** Lack of awareness about reproductive and menstrual health.

9. **Injuries:** Accidental injuries and sports-related injuries.
10. **Substance Abuse:** Tobacco, alcohol, and drug abuse among older students.

## CHAPTER 12

### 1. Ergonomics

- **Definition:** Ergonomics is the study of designing and arranging workspaces, products, and systems to fit the people who use them, aiming to enhance efficiency, safety, and comfort.
- **Key Points:**
  - **Workplace Design:** Optimizing workstation layout, seating, lighting, and equipment to reduce strain and fatigue.
  - **Human Factors:** Considering human capabilities and limitations in design to prevent musculoskeletal disorders and improve productivity.
  - **Safety:** Ensuring ergonomic design reduces the risk of injuries and promotes overall well-being.
  - **Applications:** Applied in various fields like office ergonomics, industrial ergonomics, healthcare ergonomics, and product design.

### 2. Occupational Health Hazards of Agricultural Workers

- **Physical Hazards:** Injuries from machinery, falls, lifting heavy loads, and exposure to extreme temperatures.
- **Chemical Hazards:** Pesticides, fertilizers, and other agrochemicals leading to poisoning, respiratory issues, and skin disorders.
- **Biological Hazards:** Exposure to infectious agents, zoonotic diseases, and allergens from animals and plants.
- **Psychosocial Hazards:** Stress, long working hours, isolation, and mental health concerns due to the nature of agricultural work.
- **Prevention:** Use of protective equipment, training on safe practices, regular health check-ups, and proper handling of chemicals.

### 3. Health Problems Due to Industrialization

- **Environmental Pollution:** Air, water, and soil pollution leading to respiratory diseases, cancers, and environmental degradation.
- **Occupational Diseases:** Exposure to hazardous substances, noise, and ergonomic issues causing respiratory disorders, musculoskeletal disorders, and mental health issues.
- **Urbanization Effects:** Overcrowding, poor sanitation, and lifestyle changes leading to communicable diseases, malnutrition, and stress-related disorders.

- **Industrial Accidents:** Injuries, fatalities, and long-term disabilities due to machinery, explosions, and hazardous working conditions.
- **Healthcare Burden:** Increased healthcare needs, strain on healthcare infrastructure, and challenges in managing public health.

#### 4. Medical and Engineering Measures of Control of Occupational Diseases

- **Medical Measures:**
  - Regular health screenings and medical examinations for workers.
  - Prompt diagnosis and treatment of occupational illnesses.
  - Education and awareness programs on occupational health hazards.
  - Rehabilitation and support services for workers with disabilities.
- **Engineering Measures:**
  - Designing safer workplaces with ergonomic considerations.
  - Installing ventilation systems, noise control measures, and safety barriers.
  - Implementing automation and robotics to reduce manual labor and exposure to hazards.
  - Providing personal protective equipment (PPE) and training on its use.

#### 5. ESI Act 1948

- **Employees' State Insurance Act (ESI), 1948:** Provides social security and benefits to workers in case of sickness, injury, maternity, or death while on duty.
- **Key Provisions:**
  - Mandatory insurance for employees earning below a specified wage threshold.
  - Medical benefits, including free medical treatment, medicines, and hospitalization.
  - Cash benefits during sickness, disability, or maternity leave.
  - Dependent benefits for family members in case of the employee's demise.
  - Administrative setup with ESI hospitals, dispensaries, and medical services for beneficiaries.

#### 6. Provisions Under Factories Act 1948

- **Factories Act, 1948:** Regulates working conditions, health, safety, and welfare of workers in factories.
- **Key Provisions:**
  - Factory registration and licensing requirements.
  - Working hours, breaks, and overtime regulations.

- Health and safety measures, including ventilation, lighting, sanitation, and hazardous substances handling.
- Welfare facilities like canteens, restrooms, first aid, and safety equipment provision.
- Prohibition of child labor and provisions for employment of young workers.

## **7. Causes and Preventive Measures of Occupational Cancers**

- **Causes:**

- Exposure to carcinogens like asbestos, benzene, radon, and chemicals in industries such as mining, construction, and manufacturing.
- Radiation exposure in nuclear facilities, healthcare settings, and research laboratories.
- Tobacco smoke, diesel exhaust, and other environmental pollutants in workplaces.

- **Preventive Measures:**

- Implementing strict workplace safety standards and controls for carcinogenic substances.
- Providing personal protective equipment (PPE) and ensuring its proper use.
- Regular monitoring, health screenings, and medical surveillance for workers exposed to carcinogens.
- Education and training on the risks of occupational cancers and preventive measures.
- Environmental controls, ventilation systems, and engineering solutions to minimize exposure to hazardous substances.