Koshi ANM Syllabus Based complete study Notes

ANM loksewa Notes

4. Maternal, Child Health (MCH) and Nutrition

4.1. Vaccines, Vaccination, Vaccine Vial Monitor (VVM) and National Immunization Schedule

- **Vaccine:**

- **Definition:** A biological preparation that provides active acquired immunity to a particular infectious disease.
- **Mechanism:** Contains an agent that resembles a disease-causing microorganism (antigen), often made from weakened or killed forms of the microbe, its toxins, or one of its surface proteins.
- **Purpose:** Stimulates the body's immune system to recognize the agent as a threat, destroy it, and "remember" it, so that the immune system can more easily recognize and destroy any of these microorganisms that it later encounters.
- **Types:**

- **Live-attenuated vaccines:** Use a weakened (attenuated) form of the living germ (e.g., Measles, Mumps, Rubella (MMR), BCG, Oral Polio Vaccine (OPV)).
- **Inactivated (killed) vaccines:** Use the killed version of the germ (e.g., Inactivated Polio Vaccine (IPV), flu shot, rabies).
- **Toxoid vaccines:** Use a toxin (harmful product) made by the germ. Immune response is targeted to the toxin instead of the whole germ (e.g., Tetanus, Diphtheria).
- **Subunit, recombinant, polysaccharide, and conjugate vaccines:** Use specific pieces of the germ—like its protein, sugar (polysaccharide), or a combination (conjugate) (e.g., Hib, Hepatitis B, Pneumococcal, Shingles).
- **mRNA vaccines:** Contain genetic material called messenger RNA (mRNA) that provides instructions for our cells to make a harmless piece of a specific protein found on the virus. (e.g., some COVID-19 vaccines).

- **Vaccination:**

- **Definition:** The act of administering a vaccine to help the immune system develop protection from a disease.
- **Importance:**

- Protects individuals from preventable diseases.
- Reduces the spread of infectious diseases in the community (herd immunity).
- Prevents complications, disabilities, and death from vaccine-preventable diseases.
- Cost-effective public health intervention.

- **Vaccine Vial Monitor (VVM):**

- **Definition:** A label containing a heat-sensitive material placed on a vaccine vial to register cumulative heat exposure over time.

- **Purpose:** To ensure that vaccines that have been exposed to excessive heat and may have lost potency are not administered.
- **Mechanism:** Consists of a small inner square that is light in color and an outer circle that is darker. As the vaccine is exposed to heat, the inner square gradually darkens.
- **Interpretation:**
- **Stage 1 (Usable):** Inner square is lighter than the outer circle. Vaccine can be used.
- **Stage 2 (Usable):** Inner square is still lighter than the outer circle but starting to darken. Vaccine can be used, but use these vials first.
- **Stage 3 (Discard Point):** Inner square is the same color as the outer circle. DO NOT USE the vaccine.
- **Stage 4 (Beyond Discard Point):** Inner square is darker than the outer circle. DO NOT USE the vaccine.
- **Note:** VVM does not measure vaccine potency directly if frozen; some vaccines are damaged by freezing (e.g., Tetanus Toxoid, DPT, Hepatitis B). VVM only indicates heat exposure.
  - **National Immunization Schedule (NIS):**
- **Definition:** A government-recommended timetable for administering vaccines to infants, children, adolescents, and adults to protect them against vaccine-preventable diseases.
- **Importance:** Ensures timely protection when individuals are most vulnerable and when vaccines are most effective.
- **Content:** Varies by country based on local disease burden, vaccine availability, and public health priorities. Typically includes vaccines against diseases like Tuberculosis (BCG), Diphtheria, Tetanus, Pertussis (DPT), Polio (OPV/IPV), Measles, Mumps, Rubella (MMR), Hepatitis B, Haemophilus influenzae type b (Hib), Pneumococcal disease, Rotavirus, Japanese Encephalitis etc.
- **Example (General components, Nepal specific schedule should be consulted for current details):**
- **Birth:** BCG, OPV-0, Hepatitis B (birth dose)
- **6, 10, 14 weeks:** DPT-HepB-Hib (Pentavalent), OPV, PCV, Rotavirus
- **9 months:** Measles-Rubella (MR) 1st dose, JE (in endemic areas)
- **12 months:** PCV booster
- **15 months:** MR 2nd dose
- **Tetanus Toxoid (TT) / Tetanus-diphtheria (Td):** For pregnant women and older children/adults.

4.2. Major killer diseases (of children under 5)

Globally, the leading causes of death in children under five years are:

1. **Pneumonia:**
   - Infection of the lungs, often caused by bacteria (e.g., *Streptococcus pneumoniae*, *Haemophilus influenzae type b*) or viruses.
   - Symptoms: Cough, difficulty breathing, fast breathing, fever, chest indrawing.
   - Prevention: Vaccination (Hib, PCV, Measles), adequate nutrition, reducing indoor air pollution, exclusive breastfeeding.
   - Management: Antibiotics (for bacterial pneumonia), oxygen, supportive care.

2. **Diarrhoea:**
   - Passage of three or more loose or liquid stools per day.
   - Causes: Viruses (e.g., Rotavirus), bacteria (e.g., *E. coli*, *Shigella*), parasites.
   - Symptoms: Loose/watery stools, dehydration (sunken eyes, dry mouth, reduced urination, lethargy), fever, vomiting.
   - Prevention: Safe drinking water, sanitation, hygiene (handwashing), exclusive breastfeeding, rotavirus vaccination, Vitamin A supplementation.
   - Management: Oral Rehydration Salts (ORS), Zinc supplementation, continued feeding, antibiotics for specific bacterial infections.
3. **Malaria (in endemic areas):**
   - Caused by *Plasmodium* parasites, transmitted through the bites of infected female *Anopheles* mosquitoes.
   - Symptoms: Fever, chills, sweating, headache, vomiting. Severe malaria can lead to anemia, respiratory distress, cerebral malaria, and death.
   - Prevention: Insecticide-treated nets (ITNs), indoor residual spraying (IRS), intermittent preventive treatment in pregnancy (IPTp) and for infants (IPTi) in some areas, malaria vaccine (RTS,S/AS01 in specific regions).
   - Management: Antimalarial drugs.
4. **Neonatal Causes (first 28 days of life):**
   - **Preterm birth complications:** Born before 37 weeks of gestation. Leading cause of neonatal mortality.
   - **Intrapartum-related complications (birth asphyxia):** Lack of oxygen during birth.
   - **Neonatal infections (sepsis, meningitis, pneumonia):** Serious bacterial or viral infections.
   - Prevention: Quality antenatal care, skilled birth attendance, postnatal care, clean delivery practices, thermal care, early and exclusive breastfeeding.
5. **Malnutrition (often an underlying factor):**
   - Contributes to nearly half of all child deaths. Weakens the immune system, making children more susceptible to infections and less able to recover.

4.3. Developmental milestones and developmental tasks

- **Developmental Milestones:**
  - **Definition:** A set of functional skills or age-specific tasks that most children can do at a certain age range. They provide a general guideline to track a child's development.
  - **Domains:**
- **Gross Motor:** Using large muscles (e.g., sitting, standing, walking, running).
- **Fine Motor:** Using small muscles, especially in the hands (e.g., grasping, drawing, writing).
- **Language/Communication:** Understanding and using language (e.g., babbling, first words, sentences).
- **Cognitive:** Thinking, learning, problem-solving.

- **Social/Emotional:** Interacting with others, understanding and managing emotions.
  - **Examples (Approximate ages):**
- **2-3 months:** Lifts head and chest when on stomach, follows moving objects with eyes, smiles socially.
- **6 months:** Sits with support, rolls over, babbles, reaches for objects.
- **9 months:** Sits without support, crawls, pulls to stand, "mama"/"dada" (non-specific).
- **12 months:** Walks with help or alone, pincer grasp (thumb and forefinger), says 1-2 words with meaning, waves "bye-bye."
- **18 months:** Walks well, scribbles, says several single words, points to body parts.
- **2 years:** Runs, kicks a ball, builds tower of 4+ blocks, speaks in 2-word phrases, follows simple instructions.
- **3 years:** Climbs well, rides a tricycle, speaks in 3-4 word sentences, understands "mine" and "his/hers."
- **4 years:** Hops, pours, cuts with supervision, tells stories, knows some basic colors and numbers.
- **5 years:** Swings, skips, draws person with body, speaks clearly in complex sentences, counts 10 or more objects.
  - **Importance of Monitoring:** Early detection of developmental delays allows for timely intervention, improving outcomes.

- **Developmental Tasks:**
  - **Definition:** Broader psychosocial challenges or achievements individuals are expected to master at different stages of life for healthy development (influenced by theories like Erik Erikson's psychosocial stages).
  - **Examples (Childhood Focus):**
- **Infancy (0-1 yr):** Developing trust (vs. mistrust) – learning that caregivers are reliable.
- **Early Childhood (1-3 yrs):** Developing autonomy (vs. shame/doubt) – learning to do things independently (e.g., feeding, dressing, toileting).
- **Preschool (3-5 yrs):** Developing initiative (vs. guilt) – exploring, asking questions, taking on tasks.
- **School Age (6-12 yrs):** Developing industry (vs. inferiority) – learning new skills, competence in school and social activities.
  - **Importance:** Successful completion of developmental tasks contributes to a sense of competence, well-being, and prepares the individual for future challenges.

4.4. Nutritional requirement in various age group, pregnant and lactating mothers

- **General Principles:** Needs vary by age, sex, activity level, growth rate, and physiological state. Key nutrients include energy (calories), protein, carbohydrates, fats, vitamins, and minerals.
- **Infants (0-6 months):**
  - **Exclusive Breastfeeding:** Recommended. Breast milk provides all necessary nutrients in the right proportions, antibodies, and growth factors.
  - **Vitamin D:** Supplementation often recommended, especially for breastfed infants.

  - **Iron:** Full-term infants have stores for first 4-6 months; preterm infants may need earlier supplementation.
- **Infants (6-12 months):**
  - **Continued Breastfeeding/Formula:** Main source of nutrition.
  - **Complementary Foods:** Introduced around 6 months. Should be timely, adequate, safe, and properly fed.
  - **Energy:** Increased needs for growth and activity.
  - **Protein:** For tissue building.
  - **Iron:** Critical; iron-rich foods (meat, fortified cereals) are important.
  - **Zinc, Vitamin A:** Essential for growth and immunity.
- **Toddlers (1-3 years):**
  - **Energy:** High needs relative to body size due to rapid growth and activity.
  - **Protein:** For continued growth.
  - **Fat:** Important for brain development (especially omega-3 and omega-6 fatty acids).
  - **Calcium & Vitamin D:** For bone development.
  - **Iron:** To prevent anemia.
  - Focus on nutrient-dense foods; appetite can be variable.
- **Preschool Children (4-5 years):**
  - Similar to toddlers but slightly increased amounts.
  - Encourage variety and healthy eating habits.
- **School-Age Children (6-12 years):**
  - Steady growth.
  - Balanced diet crucial for learning and physical activity.
  - Adequate calcium for peak bone mass.
- **Adolescents (13-18 years):**
  - Rapid growth spurt (puberty).
  - **Energy & Protein:** Significantly increased needs.
  - **Iron:** Especially high for girls due to menstruation.
  - **Calcium & Vitamin D:** Crucial for achieving peak bone mass.
  - Risk of unhealthy eating patterns (skipping meals, fast food).
- **Pregnant Mothers:**
  - **Energy:** Increased needs, especially in 2nd and 3rd trimesters (approx. +300-450 kcal/day).
  - **Protein:** Increased for fetal growth and maternal tissues (approx. +25g/day).
  - **Folic Acid:** Crucial before and during early pregnancy to prevent neural tube defects (recommended 400-800 mcg/day).
  - **Iron:** Significantly increased to prevent maternal anemia and support fetal iron stores (supplementation usually required).
  - **Calcium & Vitamin D:** For fetal bone development and maternal stores.

- **Iodine:** Essential for fetal brain development.
- **Omega-3 (DHA):** Important for fetal brain and eye development.
- Avoidance of alcohol, smoking, and certain foods (e.g., raw fish, unpasteurized dairy).

- **Lactating Mothers:**
  - **Energy:** Highest needs (approx. +500 kcal/day above pre-pregnancy needs) to produce milk.
  - **Protein:** Increased to support milk production.
  - **Fluids:** Increased intake essential.
  - **Calcium, Vitamin A, Vitamin C, Iodine, Zinc:** Increased needs passed into breast milk.
  - Continued importance of a nutrient-dense diet.

4.5. Growth monitoring, Nutritional deficiencies disorders (macro and micronutrients) and their management

- **Growth Monitoring:**
  - **Definition:** Regular measurement of a child's physical growth to assess nutritional status and overall health.
  - **Purpose:**
    - Early detection of growth faltering or excessive weight gain.
    - Identify children at risk of malnutrition or overweight/obesity.
    - Promote appropriate feeding and care practices.
    - Guide interventions.
  - **Tools/Parameters:**
    - **Weight-for-age:** Assesses underweight. Sensitive to acute changes.
    - **Height/Length-for-age:** Assesses stunting (chronic malnutrition).
    - **Weight-for-height/Length:** Assesses wasting (acute malnutrition) or overweight/obesity.
    - **Mid-Upper Arm Circumference (MUAC):** Simple, quick screening for acute malnutrition, especially in emergencies.
    - **Head Circumference (up to 2-3 years):** Indicates brain growth.
    - **Growth Charts:** Standardized charts (e.g., WHO Growth Standards) used to plot measurements and compare with reference populations.
  - **Process:** Regular measurements (e.g., monthly for infants, quarterly for older children), plotting on growth charts, interpreting the trend, counseling caregivers, and taking action if needed.
- **Nutritional Deficiency Disorders:**
  - **Macronutrient Deficiencies:**
    1. **Protein-Energy Malnutrition (PEM):**
    - **Kwashiorkor:** Primarily protein deficiency with adequate/near-adequate energy intake.
      - Symptoms: Edema (swelling, especially in feet, legs, face), skin lesions (flaky paint dermatosis), hair changes (thin, discolored), apathy, enlarged fatty liver, poor appetite.

- Often occurs in children 1-3 years after weaning.
- **Marasmus:** Severe deficiency of both protein and calories.
  - Symptoms: Severe wasting of muscle and fat ("skin and bones" appearance), emaciation, prominent ribs, old man's face, alert but irritable, good appetite (initially).
  - Often occurs in infants under 1 year.
- **Marasmic-Kwashiorkor:** Mixed features of both.
- **Management of Severe Acute Malnutrition (SAM) (Wasting/Edema):**
  - **Inpatient care (for complications):** Treat infections, dehydration, hypoglycemia, hypothermia. Gradual refeeding with therapeutic milks (F-75, F-100).
  - **Outpatient care (for uncomplicated SAM):** Ready-to-Use Therapeutic Foods (RUTF).
  - Micronutrient supplementation.
  - Supportive care and stimulation.

Micronutrient Deficiencies (Hidden Hunger):

1. **Iron Deficiency Anemia (IDA):**

- Cause: Insufficient iron intake, poor absorption, blood loss.
- Symptoms: Pallor, fatigue, weakness, shortness of breath, poor concentration, developmental delays in children, increased susceptibility to infection.
- Management: Iron supplementation (ferrous sulfate), dietary diversification (iron-rich foods like red meat, leafy greens, legumes), food fortification.

2. **Iodine Deficiency Disorders (IDD):**

- Cause: Insufficient iodine intake.
- Symptoms: Goiter (enlarged thyroid gland), hypothyroidism. In severe cases, especially during pregnancy/infancy: cretinism (irreversible mental retardation, stunted growth), increased risk of stillbirth, miscarriage.
- Management: Iodized salt, iodine supplementation (e.g., iodized oil capsules in deficient areas).

3. **Vitamin A Deficiency (VAD):**

- Cause: Insufficient Vitamin A intake.
- Symptoms: Night blindness (earliest sign), xerophthalmia (dry eyes), Bitot's spots, corneal ulceration leading to blindness, increased susceptibility and severity of infections (especially measles, diarrhea).
- Management: High-dose Vitamin A supplementation (capsules, often given with immunizations), dietary diversification (foods rich in Vitamin A like liver, eggs, dairy, dark green leafy vegetables, orange/yellow fruits), food fortification.

4. **Zinc Deficiency:**

- Cause: Inadequate intake, poor absorption.
- Symptoms: Growth retardation, impaired immune function (increased risk/duration of diarrhea, pneumonia), skin lesions, delayed wound healing, loss of appetite.
- Management: Zinc supplementation (especially for diarrhea management), dietary diversification (meat, poultry, seafood, whole grains), food fortification.

5. **Vitamin D Deficiency:**

- Cause: Inadequate sunlight exposure, poor dietary intake.
- Symptoms: Rickets in children (softening and weakening of bones, bowed legs, bone pain), osteomalacia in adults.
- Management: Vitamin D supplementation, adequate (safe) sunlight exposure, fortified foods.

6. **Vitamin B12 Deficiency:**

- Cause: Primarily in strict vegetarians/vegans or due to malabsorption.
- Symptoms: Megaloblastic anemia, neurological problems (numbness, tingling, memory loss).
- Management: Supplementation, fortified foods.

7. **Folate (Vitamin B9) Deficiency:**

- Cause: Inadequate intake.
- Symptoms: Megaloblastic anemia. Deficiency in early pregnancy causes neural tube defects in fetus.
- Management: Supplementation (especially for pregnant women), dietary sources (leafy green vegetables, legumes).

4.6. Community Based Integrated Management of Newborn and Childhood Illness (CBIMNCI)

- **Definition:** An integrated strategy to reduce death, illness, and disability, and to promote improved growth and development among children under five years of age. CBIMNCI emphasizes community and household level care, linking it with health facility services. (Often adapted from WHO/UNICEF's IMCI strategy).
- **Key Principles:**
  - **Integration:** Addresses major childhood illnesses (pneumonia, diarrhea, malaria, measles, malnutrition, neonatal problems) in a holistic manner.
  - **Community-based:** Focuses on interventions delivered at the community and household level, often by community health workers (e.g., Female Community Health Volunteers - FCHVs in Nepal) and primary health care staff.
  - **Continuum of Care:** Links care from home to health facility and back.
  - **Evidence-based guidelines:** Uses standardized protocols for assessment, classification, treatment, and referral.
- **Three Main Components:**

1. **Improving Case Management Skills of Health Staff:**

- Training health workers in first-level health facilities to assess, classify, treat, or refer sick children and newborns.
- Use of standardized IMNCI algorithms/charts.
- Ensuring availability of essential drugs and supplies.

2. **Improving Overall Health Systems:**

- Strengthening health system components like drug supply, supervision, health information systems, and referral pathways to support CBIMNCI.

3. **Improving Family and Community Practices:**

    - Empowering families and communities with knowledge and skills for disease prevention and appropriate care-seeking.
    - Key family practices promoted:
  - Exclusive breastfeeding for 6 months.
  - Appropriate complementary feeding from 6 months.
  - Vitamin A supplementation.
  - Immunization.
  - Use of ORS for diarrhea.
  - Handwashing with soap.
  - Use of insecticide-treated bed nets (in malaria areas).
  - Recognizing danger signs and seeking timely care.
  - Antenatal care for pregnant women.
  - Clean and safe delivery.
  - Essential newborn care (thermal care, hygiene, early breastfeeding).
- **Role of Community Health Workers (e.g., FCHVs):**
  - Identify sick newborns and young infants.
  - Provide home-based care for specific conditions (e.g., possible serious bacterial infection in newborns when referral is not possible, under strict protocols).
  - Counsel families on key home care practices.
  - Promote health-seeking behavior.
  - Manage uncomplicated diarrhea with ORS and zinc.
  - Support growth monitoring and promotion.
  - Refer severely ill children and newborns.

4.7. Breast feeding and Supplementary /Complementary feeding

- **Breastfeeding:**
  - **Definition:** Feeding an infant or young child with breast milk directly from female human breasts (i.e., via lactation) rather than from a baby bottle or other container.
  - **Recommendations (WHO/UNICEF):**
    - **Early initiation:** Within one hour of birth.
    - **Exclusive breastfeeding (EBF):** For the first six months of life (no other food or drink, not even water, except for ORS, drops/syrups of vitamins, minerals or medicines).
    - **Continued breastfeeding:** Along with appropriate complementary foods, up to two years of age or beyond.
  - **Colostrum:** The first milk produced in the first few days after birth. It is rich in antibodies (especially IgA), protein, vitamins, and minerals. "Baby's first immunization."
  - **Benefits of Breastfeeding:**
    - **For the Infant:**

        - Perfect nutrition: Balanced nutrients, easily digestible.
        - Protection against infections: Contains antibodies, reduces risk of diarrhea, pneumonia, ear infections, UTIs.
        - Reduced risk of chronic diseases: Obesity, type 1 & 2 diabetes, allergies, asthma.
        - Enhanced cognitive development.
        - Promotes bonding with mother.
    - **For the Mother:**
        - Reduced risk of postpartum hemorrhage (helps uterus contract).
        - Lactational Amenorrhea Method (LAM): Natural (but not foolproof) contraception.
        - Reduced risk of breast and ovarian cancer, type 2 diabetes, osteoporosis.
        - Promotes bonding with infant.
        - Helps with postpartum weight loss.
    - **For the Family/Society:**
        - Cost-effective: Saves money on formula, healthcare.
        - Environmentally friendly.
  - **Techniques for Successful Breastfeeding:**
    - Proper positioning and attachment (latch).
    - Feeding on demand.
    - Ensuring comfort for mother and baby.
  - **Common Problems:** Sore nipples, engorgement, mastitis, perceived insufficient milk (often due to poor latch or infrequent feeding).
- **Supplementary/Complementary Feeding:**
  - **Definition:** The process of introducing other foods and liquids alongside breast milk when breast milk alone is no longer sufficient to meet the nutritional needs of the infant (around 6 months of age).
  - **"Supplementary"** often refers to giving something *in place of* breastmilk (like formula if mother cannot breastfeed enough), while **"Complementary"** means foods given *in addition to* breastmilk. In practice, "complementary feeding" is the widely used term for the transition period.
  - **When to Start:** Around 6 months of age. The infant's digestive system is mature enough, and nutrient needs (especially iron and zinc) exceed what breast milk alone can provide.
  - **Key Principles (AFTERS/SAFE):**
    - **T - Timeliness:** Start at 6 months.
    - **A - Adequacy:** Foods should provide sufficient energy, protein, and micronutrients.
    - **F - Frequency:** Gradually increase number of meals per day (2-3 times for 6-8 months, 3-4 times for 9-23 months, plus snacks).
    - **S - Safety/Hygiene:** Prepare and store food hygienically to prevent contamination.
    - **R - Responsiveness:** Feed infants directly and assist older children. Feed slowly and patiently, encourage but do not force.

- **A - Appropriateness:** Food texture should be appropriate for age (start with pureed/mashed, progress to finger foods and family foods). Variety of food groups.

- **What to Feed:**
  - Start with single-ingredient pureed foods (e.g., cereals, fruits, vegetables).
  - Gradually introduce variety:
    - Cereals (rice, maize, wheat) often fortified.
    - Fruits and vegetables (rich in vitamins and minerals).
    - Legumes, pulses (protein, iron).
    - Meat, fish, poultry, eggs (protein, iron, zinc).
    - Dairy products (calcium, protein) if culturally appropriate and no allergy.
  - Avoid salt, sugar, honey (before 1 year), cow's milk as main drink (before 1 year), choking hazards (nuts, whole grapes).
- **Continued Breastfeeding:** Should continue alongside complementary foods up to 2 years or beyond.

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5. Community Health Nursing

5.1. Determinants of health

- **Definition:** Factors that influence the health status of individuals, communities, and populations. Health is a result of complex interactions between these factors.
- **Major Categories (Lalonde Framework often cited, but many models exist):**

1. **Social and Economic Factors (Socioeconomic Determinants):** Often the most significant.
   - **Poverty/Income:** Low income limits access to nutritious food, safe housing, education, healthcare.
   - **Education:** Higher education is linked to better health literacy, employment, and healthier choices.
   - **Employment and Working Conditions:** Unemployment, job insecurity, and unsafe work environments negatively impact health.
   - **Social Support Networks:** Strong family and community ties promote mental and physical well-being.
   - **Social Exclusion/Discrimination:** Racism, gender inequality, discrimination based on caste, ethnicity, or disability lead to poorer health outcomes.
   - **Culture:** Cultural beliefs and practices can influence health behaviors and access to care.
   - **Early Childhood Development:** Experiences in early life have long-lasting impacts on health.
2. **Physical Environment:**
   - **Housing:** Overcrowding, poor sanitation, lack of safe water, indoor air pollution.
   - **Clean Water and Sanitation:** Essential for preventing infectious diseases.
   - **Air Quality:** Pollution from traffic, industry, indoor smoke.

- **Safe Workplaces and Communities:** Reducing exposure to hazards, violence.
- **Access to Green Spaces:** Opportunities for recreation and mental well-being.
- **Climate Change:** Impacts on disease patterns, food security, extreme weather events.

3. **Individual Lifestyle Factors / Health Behaviours:**
   - **Diet and Nutrition:** Choices regarding food intake.
   - **Physical Activity:** Regular exercise.
   - **Tobacco Use, Alcohol Consumption, Drug Use:**
   - **Sexual Practices:** Safe sex.
   - **Hygiene Practices:** Handwashing.
   - **Coping Skills:** Ability to manage stress.
4. **Health Services (Access and Quality):**
   - **Availability:** Presence of health facilities, personnel, medicines.
   - **Accessibility:** Geographic, financial, cultural barriers to reaching services.
   - **Affordability:** Cost of services.
   - **Acceptability:** Services are culturally appropriate and responsive to needs.
   - **Quality of Care:** Competent staff, evidence-based practices, patient safety.
5. **Genetics and Biological Factors:**
   - Inherited predispositions to certain diseases.
   - Age and sex.

- **Interconnectedness:** These determinants are often interlinked and influence each other. For example, poverty can lead to poor housing, limited education, and reduced access to healthcare, all of which impact health.

5.2. Modes of disease transmission

- **Definition:** The ways in which an infectious agent (pathogen) is spread from a reservoir (or source) to a susceptible host. Understanding transmission is crucial for prevention and control.
- **Chain of Infection:** For transmission to occur, six elements are needed:
  1. Infectious Agent (pathogen)
  2. Reservoir (where the agent lives and multiplies)
  3. Portal of Exit (how it leaves the reservoir)
  4. Mode of Transmission
  5. Portal of Entry (how it enters the host)
  6. Susceptible Host
- **Modes of Transmission:**
  1. **Direct Transmission:** Immediate transfer of the infectious agent from an infected host or reservoir to an appropriate portal of entry in a susceptible host.
     - **Direct Contact:** Touching, kissing, sexual intercourse, skin-to-skin contact. (e.g., STIs, scabies, common cold via hand contact).

- **Droplet Spread:** Spread of relatively large, short-range aerosols produced by sneezing, coughing, or talking. Droplets travel short distances (usually <1 meter) and land on mucous membranes of the eye, nose, or mouth. (e.g., influenza, common cold, pertussis, meningitis).

2. **Indirect Transmission:** The infectious agent is carried from a reservoir to a susceptible host by an intermediary.

- **Airborne Transmission:** Dissemination of microbial aerosols (droplet nuclei or dust particles) that can remain suspended in the air for long periods and be inhaled. These particles can travel longer distances. (e.g., tuberculosis, measles, chickenpox, fungal spores).
- **Vehicle-borne Transmission:** An inanimate object or material (fomite) becomes contaminated with the infectious agent and transmits it to multiple hosts.
  - **Waterborne:** Contaminated water (e.g., cholera, typhoid, dysentery).
  - **Foodborne:** Contaminated food (e.g., salmonellosis, E. coli).
  - **Fomites:** Inanimate objects like bedding, clothes, toys, medical equipment (e.g., MRSA).
  - **Biological products:** Blood, serum, plasma, tissues (e.g., HIV, Hepatitis B/C).
- **Vector-borne Transmission:** An animate intermediary, typically an arthropod (insect, tick, mite), carries the agent from an infected host to a susceptible host.
  - **Mechanical Vector:** The vector physically carries the agent on its body (e.g., flies carrying Shigella on their feet to food). No multiplication of the agent in the vector.
- **Biological Vector:** The agent undergoes multiplication or development within the vector before being transmitted (e.g., mosquitoes transmitting malaria, dengue; ticks transmitting Lyme disease).

5.3. Family Planning

- **Definition:** The ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility.
- **Importance/Benefits:**
  - **Maternal Health:** Reduces maternal mortality and morbidity by preventing high-risk pregnancies (too young, too old, too many, too closely spaced).
  - **Child Health:** Improves child survival and health by allowing for better birth spacing, which ensures adequate maternal attention and resources.
  - **Women's Empowerment:** Enables women to make informed choices about their bodies and futures, pursue education and employment.
  - **Economic Benefits:** Smaller family size can reduce financial strain on families and allow for better investment in each child's health and education. Contributes to national economic development.
  - **Environmental Sustainability:** Helps manage population growth, reducing pressure on resources.
- **Methods of Family Planning (Contraception):**
  1. **Barrier Methods:** Prevent sperm from reaching the egg.
     - Male Condoms: Also protect against STIs.
     - Female Condoms: Also protect against STIs.

- Diaphragm, Cervical Cap: Used with spermicide.

2. **Hormonal Methods:** Use hormones to prevent ovulation, thicken cervical mucus, or alter uterine lining.

- Oral Contraceptive Pills (Combined or Progestin-only).
- Injectables (e.g., Depo-Provera - DMPA).
- Implants (e.g., Norplant, Jadelle).
- Hormonal Intrauterine Devices (IUDs) (e.g., Mirena).
- Patches, Vaginal Rings.
- Emergency Contraceptive Pills (ECPs).

3. **Intrauterine Devices (IUDs):** Small devices inserted into the uterus.

- Copper IUDs: Release copper, which is spermicidal. Long-acting.
- Hormonal IUDs: Release progestin.

4. **Permanent Methods (Sterilization):**

- **Female Sterilization (Tubal Ligation/Minilap):** Blocking or cutting fallopian tubes.
- **Male Sterilization (Vasectomy):** Blocking or cutting vas deferens.

5. **Natural Methods (Fertility Awareness-Based Methods):**

- Calendar/Rhythm Method.
- Basal Body Temperature Method.
- Cervical Mucus/Ovulation Method.
- Sympto-Thermal Method (combines temperature and mucus).
- Lactational Amenorrhea Method (LAM): Temporary, high effectiveness if criteria met (exclusive breastfeeding, amenorrhea, baby <6 months).

6. **Withdrawal (Coitus Interruptus):** Pulling out before ejaculation. High failure rate.

- **Counseling:** Essential component. Includes providing information on all available methods, their effectiveness, side effects, correct usage, and helping individuals choose a method that suits their needs and circumstances.

5.4. Environmental sanitation, Waste management (Solid waste, Health care waste and Liquid waste), Excreta disposal and Health hazards due to various environmental pollution

- **Environmental Sanitation:**
  - **Definition:** The control of all those factors in man's physical environment which exercise or may exercise a deleterious effect on his physical development, health, and survival.
  - **Components:**

- Safe water supply.
- Hygienic disposal of human excreta.
- Safe disposal of solid and liquid wastes.
- Control of vectors (insects, rodents).
- Food hygiene.

- Housing and air hygiene.
- Personal hygiene.

- **Waste Management:**

  - **Solid Waste Management:**

- **Sources:** Households, commercial establishments, industries, institutions.
- **Types:** Organic (food waste), paper, plastic, glass, metal, etc.
- **Principles (Hierarchy):**
  1. **Reduce:** Minimize waste generation at source.
  2. **Reuse:** Use items multiple times.
  3. **Recycle:** Process waste materials into new products.
  4. **Recovery:** Energy recovery (e.g., incineration with energy capture, anaerobic digestion).
  5. **Disposal:** Safe and environmentally sound disposal (e.g., sanitary landfills).
- **Methods:** Composting (organic waste), incineration, landfilling.
- **Challenges:** Improper disposal leads to land and water pollution, breeding sites for vectors, aesthetic nuisance.

  - **Health Care Waste (HCW) Management / Biomedical Waste Management:**

- **Definition:** All waste generated by health care establishments, research facilities, and laboratories. A significant portion is hazardous.
- **Categories (WHO):** Infectious, pathological, sharps, pharmaceutical, genotoxic, chemical, radioactive, heavy metals.
- **Key Steps:**
  1. **Segregation (at source):** Crucial. Using color-coded bins/bags for different waste types (e.g., Yellow: infectious, pathological; Red: recyclable contaminated plastic; Blue/White: sharps; Black: general non-hazardous).
  2. **Collection & Transportation:** Safe handling, puncture-proof containers for sharps, dedicated trolleys.
  3. **Treatment:**
     - **Infectious waste:** Autoclaving (steam sterilization), microwaving, chemical disinfection, incineration.
     - **Sharps:** Disinfection followed by shredding/encapsulation.
     - **Pharmaceutical/Chemical:** Incineration at high temperatures or secure landfill after immobilization.
  4. **Disposal:** Treated waste can go to municipal landfill (if non-hazardous) or secure landfill (for hazardous residues).
- **Risks of Improper Management:** Injury from sharps, infection (HIV, Hepatitis B/C) for healthcare workers and public, environmental pollution.

  - **Liquid Waste Management:**

- **Sources:** Domestic sewage, industrial effluents, storm water runoff.
- **Domestic Sewage:** Wastewater from households (toilets, kitchens, bathrooms).

- **Treatment:**
  - **On-site:** Septic tanks, soak pits.
  - **Off-site (Centralized):** Sewerage systems leading to Sewage Treatment Plants (STPs). STPs involve primary (screening, sedimentation), secondary (biological processes like activated sludge, trickling filters), and tertiary treatment (disinfection, nutrient removal).
- **Importance:** Prevents waterborne diseases, protects aquatic ecosystems, allows water reuse.

- **Excreta Disposal:**

  - **Importance:** Prevents fecal-oral transmission of diseases (cholera, typhoid, dysentery, parasitic infections), controls flies, protects water sources.
  - **Methods:**
- **Non-Water Carriage (Dry Latrines):**
  - Pit latrine (simple, VIP - Ventilated Improved Pit).
  - Borehole latrine.
  - Composting toilets.
- **Water Carriage (Wet Latrines):**
  - Pour-flush latrine (requires small amount of water).
  - Cistern-flush toilet (connected to septic tank or sewer).
  - **Sanitation Ladder:** Progression from open defecation to improved sanitation facilities.

- **Health Hazards due to various Environmental Pollution:**

1. **Air Pollution:**

- **Sources:** Vehicle emissions, industrial processes, burning fossil fuels, indoor cooking with solid fuels.
- **Pollutants:** Particulate matter (PM2.5, PM10), sulfur dioxide (SO2), nitrogen oxides (NOx), carbon monoxide (CO), ozone (O3), lead.
- **Health Effects:** Respiratory diseases (asthma, bronchitis, COPD, lung cancer), cardiovascular diseases, stroke, eye irritation, adverse pregnancy outcomes.

2. **Water Pollution:**

- **Sources:** Sewage discharge, industrial effluents, agricultural runoff (pesticides, fertilizers), solid waste dumping.
- **Pollutants:** Pathogens, heavy metals, chemicals, nitrates.
- **Health Effects:** Waterborne diseases (cholera, typhoid, dysentery, hepatitis A/E), poisoning (e.g., lead, arsenic, mercury), developmental problems, cancer.

3. **Soil/Land Pollution:**

- **Sources:** Improper waste disposal, industrial spills, pesticides, fertilizers.
- **Health Effects:** Contamination of food chain, direct contact risks (e.g., tetanus, parasitic infections), leaching into groundwater.

4. **Noise Pollution:**

- **Sources:** Traffic, construction, industries, loud music.

- **Health Effects:** Hearing loss, sleep disturbance, stress, hypertension, cardiovascular problems, impaired cognitive function.

5. **Chemical Pollution:**

- **Sources:** Industrial emissions/discharges, pesticides, consumer products.
- **Health Effects:** Acute poisoning, cancer, reproductive problems, endocrine disruption, neurological damage.

6. **Radiation:**

- **Sources:** Natural (radon), medical (X-rays), nuclear.
- **Health Effects:** Cancer, genetic mutations.

5.5. Communication: technique, process, elements and barriers

- **Definition:** The process of conveying information, ideas, emotions, and understanding between individuals or groups through verbal and non-verbal means.
- **Techniques for Effective Communication (especially in health settings):**
  - **Active Listening:** Paying full attention, showing interest, nodding, paraphrasing, asking clarifying questions.
  - **Empathy:** Understanding and sharing the feelings of another.
  - **Clarity and Simplicity:** Using clear, simple language, avoiding jargon.
  - **Non-Verbal Communication:**
    - **Body Language:** Posture, gestures, facial expressions.
    - **Eye Contact:** Shows interest and engagement.
    - **Tone of Voice:** Conveys emotion and attitude.
    - **Proxemics:** Use of personal space.
  - **Questioning Skills:**
    - **Open-ended questions:** Encourage detailed responses (e.g., "How are you feeling?").
    - **Closed-ended questions:** Elicit specific, short answers (e.g., "Do you have a fever?").
  - **Providing Feedback:** Constructive and specific.
  - **Respect and Cultural Sensitivity:** Acknowledging and respecting diverse backgrounds.
  - **Summarizing:** Repeating key points to ensure understanding.
  - **Using Silence Appropriately:** Giving time for thought and response.
- **Process of Communication (SMCRF Model):**
  1. **Sender (Source/Encoder):** The individual or group initiating the message. Encodes the message (translates thoughts/ideas into a communicable form).
  2. **Message:** The information, idea, or feeling being conveyed (verbal, non-verbal, written).
  3. **Channel (Medium):** The means by which the message is transmitted (e.g., face-to-face, phone, letter, email, gestures, media).
  4. **Receiver (Decoder):** The individual or group to whom the message is directed. Decodes the message (interprets its meaning).

5. **Feedback:** The receiver's response to the message, indicating whether it was understood, and how it was interpreted. This makes communication a two-way process.
6. **(Noise):** Any interference that distorts the message or hinders the communication process. Can occur at any stage.
7. **(Context/Environment):** The setting or situation in which communication occurs (physical, social, cultural).

- **Elements of Communication:** (Largely overlaps with the process)
    - **Sender**
    - **Receiver**
    - **Message**
    - **Channel**
    - **Encoding** (by sender)
    - **Decoding** (by receiver)
    - **Feedback**
    - **Noise**
    - **Context**
- **Barriers to Effective Communication:**
    1. **Physical Barriers:**
        - Noise, distractions in the environment.
        - Distance between sender and receiver.
        - Poor lighting, uncomfortable temperature.
        - Technical problems with equipment (e.g., phone, microphone).
    2. **Psychological/Emotional Barriers:**
        - Prejudice, bias, stereotypes.
        - Lack of trust or rapport.
        - Fear, anxiety, anger, stress.
        - Selective perception (hearing what one wants to hear).
        - Emotional state of sender or receiver.
        - Information overload.
    3. **Semantic/Language Barriers:**
        - Use of jargon, technical terms, or complex language unfamiliar to the receiver.
        - Differences in dialect or accent.
        - Ambiguous words or phrases with multiple meanings.
        - Poorly structured message.
        - Misinterpretation of non-verbal cues.
    4. **Cultural Barriers:**
        - Differences in cultural norms, values, beliefs, and customs affecting interpretation of messages (e.g., eye contact, gestures, personal space).

- Language differences (translation issues).

5. **Physiological Barriers:**
   - Hearing impairments, visual impairments.
   - Speech difficulties.
   - Illness, pain, fatigue.
6. **Organizational Barriers:**
   - Hierarchical structures that impede information flow.
   - Lack of clear communication channels.
   - Unclear roles and responsibilities.
   - Restrictive policies.

5.6. Community Diagnosis: Process importance

- **Definition:** A comprehensive assessment of the health status of a community, including identification of its health problems, resources, strengths, and needs. It aims to understand the determinants of health and disease within that specific community.
- **Importance:**

1. **Identifies Health Problems & Needs:** Reveals the most prevalent diseases, risk factors, and vulnerable groups.
2. **Prioritization:** Helps prioritize health problems based on magnitude, severity, feasibility of intervention, and community concern.
3. **Planning Interventions:** Provides baseline data for designing targeted, effective, and culturally appropriate health programs and services.
4. **Resource Allocation:** Guides the efficient allocation of limited resources (manpower, money, materials).
5. **Community Participation & Empowerment:** Involves the community in identifying their own problems and solutions, fostering ownership and sustainability.
6. **Monitoring & Evaluation:** Provides baseline data against which the impact of interventions can be measured.
7. **Advocacy:** Data can be used to advocate for policy changes and resource mobilization.
8. **Understanding Determinants:** Helps uncover the underlying social, economic, and environmental factors influencing health.

- **Process of Community Diagnosis:** (A cyclical process)

1. **Define the Community:**
   - Clearly delineate the geographic boundaries, population characteristics (demographics, socio-cultural aspects), and shared interests of the community to be studied.
2. **Preparation & Planning:**
   - Form a team.
   - Define objectives and scope of the diagnosis.
   - Identify resources needed.

- Develop a timeline.
- Obtain necessary permissions and ethical approvals.
- Engage community leaders and members from the outset.

3. **Data Collection:** Gather information using various methods:
   - **Quantitative Data:**
     - **Surveys:** Household surveys, questionnaires.
     - **Secondary Data:** Review existing records (health facility data, census data, vital statistics, previous reports).
     - **Observation:** Using checklists.
   - **Qualitative Data:**
     - **Key Informant Interviews:** With community leaders, health workers, knowledgeable individuals.
     - **Focus Group Discussions (FGDs):** Small group discussions on specific topics.
     - **Direct Observation:** Observing community environment, practices, interactions.
     - **Case Studies.**
     - **Community Mapping:** Visual representation of resources, hazards, etc.
4. **Data Analysis and Interpretation:**
   - **Quantitative data:** Statistical analysis (frequencies, percentages, rates, means).
   - **Qualitative data:** Thematic analysis, content analysis.
   - Identify patterns, trends, and relationships.
   - Compare findings with local, national, or international standards.
5. **Identification of Health Problems and Needs:**
   - List all identified health problems, risk factors, and community concerns.
6. **Prioritization of Problems:**
   - Rank problems using criteria such as:
     - Magnitude (prevalence, incidence).
     - Severity (mortality, morbidity, disability).
     - Feasibility of intervention (availability of resources, technology, community acceptance).
     - Community concern/perception.
     - Potential for prevention.
7. **Developing a Community Health Plan (Action Plan):**
   - Based on prioritized problems, formulate objectives, strategies, activities, responsible persons, timeline, and resources required for interventions.
8. **Implementation of the Plan:** (This is an action step beyond diagnosis but linked)
9. **Monitoring and Evaluation:** (Also linked action step)
   - Track progress and assess the effectiveness of interventions.
10. **Dissemination of Findings:**
    - Share the results with the community, stakeholders, and relevant authorities in an understandable format. This promotes transparency and collaboration.

5.7. Health education: Principles, methods and media

- **Definition:** Any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes and behaviors. It aims to empower people to make informed decisions about their health and well-being.
- **Principles of Health Education:**

1. **Interest:** Learning is more effective if the topic is relevant and interesting to the audience. Start with their felt needs.
2. **Participation:** Active involvement of learners enhances learning and commitment (e.g., discussions, demonstrations, problem-solving).
3. **Motivation:** People need to be motivated to learn and change behavior. Use positive reinforcement, appeal to their goals.
4. **Comprehension:** Information should be presented clearly, in simple language, and at the learner's level of understanding.
5. **Reinforcement:** Repetition of information in different ways helps retention and encourages adoption of new behaviors.
6. **Known-to-Unknown:** Start with what people already know and gradually introduce new information.
7. **Credibility:** The health educator and the information provided must be perceived as trustworthy and accurate.
8. **Setting an Example:** Health educators should practice the health behaviors they advocate.
9. **Good Human Relations:** Establish rapport and trust with the audience.
10. **Learning by Doing:** Practical application of knowledge leads to better skill development.
11. **Soil, Seed, Sower:** The "soil" is the community/learner, the "seed" is the health message, and the "sower" is the health educator. All must be conducive.
12. **Feedback:** Essential for the educator to know if the message is being understood and for learners to confirm their understanding.
13. **Cultural Appropriateness:** Tailor messages and methods to the cultural context of the audience.

- **Methods of Health Education:**

1. **Individual Methods:** One-to-one interaction.
   - **Counseling:** Personalized guidance to address specific health issues or behavior change.
   - **Interviews:** Can be used for assessment and providing tailored advice.
   - **Home Visits:** Opportunity to observe home environment and provide education in a familiar setting.
2. **Group Methods:** For small to medium-sized groups (usually 10-30 people).
   - **Lectures/Talks:** Formal presentation of information. Best if combined with other methods.
   - **Group Discussions:** Facilitated exchange of ideas, experiences, and problem-solving.
   - **Demonstrations:** Showing how to perform a skill (e.g., preparing ORS, handwashing).
   - **Role-Playing:** Acting out scenarios to explore attitudes and practice skills.
   - **Workshops/Seminars:** More intensive, focused learning sessions.
   - **Brainstorming:** Generating ideas.

- **Storytelling:** Engaging way to convey messages, especially in certain cultures.

3. **Mass Methods:** Reaching large, diverse populations.
   - **Television:** Dramas, spots, discussions.
   - **Radio:** Talks, jingles, dramas.
   - **Newspapers/Magazines:** Articles, advertisements.
   - **Posters, Billboards, Banners.**
   - **Internet/Social Media:** Websites, blogs, social networking platforms.
   - **Public Meetings/Campaigns.**
   - **Exhibitions.**

- **Media (Audio-Visual Aids) in Health Education:** Tools used to support and enhance the communication process.

1. **Audio Aids:**
   - Radio, audio recordings (tapes, CDs, podcasts), microphones, amplifiers.
2. **Visual Aids:**
   - **Non-Projected:** Chalkboards, whiteboards, posters, charts, graphs, flip charts, flannel graphs, models, specimens, photographs, pamphlets, leaflets.
   - **Projected:** Slides, filmstrips, overhead projectors (OHP), LCD projectors (for PowerPoint presentations), films/movies.
3. **Audio-Visual Aids:**
   - Television, videos, films with sound, computers (multimedia presentations).
4. **Traditional/Folk Media:**
   - Puppet shows, street theatre, folk songs, dances. (Highly effective for community engagement).

- **Selection of Media:** Depends on the audience (literacy, age, culture), message content, objectives, available resources, and setting.

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6. Health Management

6.1. Job description of Auxiliary Nurse Midwife (ANM)

An ANM is a village-level female health worker in Nepal and some other South Asian countries, who is the first contact point between the community and the health services. Her role is crucial in providing basic maternal and child health, family planning, and some curative services.

Core Responsibilities (may vary slightly by specific program guidelines but generally include):

1. **Maternal Health Care:**
   - Antenatal care (ANC): Registration, regular check-ups (weight, BP, FHS, edema, anemia screening), TT immunization, IFA supplementation, health education on nutrition, danger signs, birth preparedness.

- Identification and referral of high-risk pregnancies.
- Conducting safe home deliveries (in areas with limited facility access, though facility delivery is promoted). Assisting in skilled birth attendance at health facilities.
- Postnatal care (PNC) for mother and newborn: Check-ups, counseling on breastfeeding, hygiene, nutrition, family planning, danger signs.
- Promotion of institutional delivery.

2. **Newborn and Child Health Care:**
   - Essential newborn care: Thermal care, hygiene, early and exclusive breastfeeding.
   - Identification of sick newborns and referral.
   - Immunization services (as per NIS).
   - Growth monitoring and promotion.
   - Management of common childhood illnesses (e.g., diarrhea with ORS/Zinc, ARI) as per IMNCI/CBIMNCI guidelines.
   - Vitamin A supplementation. Deworming.
   - Counseling on child nutrition and development.
3. **Family Planning Services:**
   - Counseling on available contraceptive methods.
   - Provision of temporary methods (e.g., pills, condoms, injectables like DMPA).
   - Referral for permanent methods and IUDs.
   - Follow-up of family planning users.
4. **Nutrition Services:**
   - Counseling on nutrition for pregnant women, lactating mothers, infants, and young children.
   - Identification and management/referral of malnourished children.
   - Promotion of IFA supplementation.
5. **Communicable Disease Control:**
   - Basic information and awareness on common communicable diseases (e.g., TB, malaria, dengue).
   - Case detection (e.g., fever surveillance) and referral.
   - Participation in national disease control programs (e.g., polio eradication campaigns).
6. **Health Education and Counseling:**
   - On various health topics including MCH, nutrition, family planning, hygiene, sanitation, communicable diseases.
   - Organizing mothers' group meetings.
7. **Record Keeping and Reporting:**
   - Maintaining records of services provided (MCH register, immunization register, FP register, etc.).
   - Preparing and submitting regular reports to the health facility in-charge (e.g., Health Post).
   - Maintaining inventory of supplies and equipment.
8. **Community Mobilization and Coordination:**

- Working closely with Female Community Health Volunteers (FCHVs), local leaders, schools, and community groups.
- Facilitating community participation in health programs.
- Home visits for follow-up and outreach services.

9. **Basic Curative Care:**
    - Management of minor ailments as per approved protocols and drug list.
    - First aid for injuries and emergencies.
    - Referral of cases beyond her capacity.
10. **Environmental Sanitation and Hygiene Promotion:**
    - Educating community on safe water, sanitation, and personal hygiene.
11. **Maintaining Clinic/Sub-Health Post:**
    - Ensuring cleanliness and organization of the health facility.
    - Proper storage and management of vaccines (cold chain), drugs, and supplies.

6.2. Principle and Functions of management

- **Management Definition:** The process of planning, organizing, leading (directing), and controlling the efforts of organization members and of using all other organizational resources to achieve stated organizational goals.
- **Principles of Management (Henri Fayol's 14 Principles are classic, though modern interpretations exist):**

1. **Division of Work:** Specialization increases efficiency.
2. **Authority and Responsibility:** Authority is the right to give orders; responsibility is the obligation to perform. They should be commensurate.
3. **Discipline:** Obedience, application, energy, and respect for agreements.
4. **Unity of Command:** Each employee should receive orders from only one superior.
5. **Unity of Direction:** One head and one plan for a group of activities having the same objective.
6. **Subordination of Individual Interest to General Interest:** The interests of the organization should take precedence over individual interests.
7. **Remuneration:** Fair and satisfactory compensation for employees.
8. **Centralization:** The degree to which authority is concentrated at higher levels. Optimum balance is needed.
9. **Scalar Chain (Line of Authority):** The formal line of authority from top to bottom.
10. **Order:** A place for everything and everyone, and everything and everyone in its place (material and social order).
11. **Equity:** Kindness and justice in dealing with employees.
12. **Stability of Tenure of Personnel:** High employee turnover is inefficient.
13. **Initiative:** Allowing employees to conceive and carry out their plans, even if some mistakes result.
14. **Esprit de Corps:** Harmony and union among personnel; teamwork.

- **Functions of Management (POSDCORB is a common acronym, though often simplified):**

1. **Planning:**
    - Defining goals and objectives for the future.
    - Determining strategies, policies, programs, and procedures to achieve them.
    - Involves forecasting, decision-making, and problem-solving.
2. **Organizing:**
    - Establishing the structure of roles and responsibilities.
    - Grouping activities, assigning tasks, delegating authority.
    - Allocating resources (human, financial, material).
    - Developing an organizational chart.
3. **Staffing:**
    - Recruiting, selecting, training, developing, appraising, and compensating personnel.
    - Ensuring the right people are in the right jobs.
4. **Directing (Leading):**
    - Guiding, motivating, and supervising employees to achieve organizational goals.
    - Includes communication, leadership, motivation, and team building.
5. **Coordinating:**
    - Integrating and synchronizing the activities of different individuals, groups, and departments to ensure harmonious functioning towards common goals.
    - Avoiding conflicts and duplication of effort.
6. **(Reporting):** (Often part of Controlling or Communicating)
    - Keeping superiors, subordinates, and other stakeholders informed through records, research, and inspection.
7. **(Budgeting):** (Often part of Planning and Controlling)
    - Financial planning, accounting, and control.
8. **Controlling:**
    - Measuring actual performance against planned standards.
    - Identifying deviations and taking corrective actions.
    - Ensuring that activities are proceeding as planned. (Includes monitoring and evaluation).

A more modern simplification often lists: Planning, Organizing, Leading, and Controlling (POLC).

6.3. Supervision, monitoring and evaluation

These are critical management functions for ensuring program effectiveness and efficiency.

- **Supervision:**

- **Definition:** A process of guiding, supporting, and overseeing the work of staff to ensure they perform their duties effectively and efficiently, meeting quality standards and achieving objectives. It is more about enabling and empowering than just controlling.
- **Purpose:**
  - Improve staff performance and skills.
  - Ensure quality of services.
  - Solve problems and overcome obstacles.
  - Provide support, motivation, and feedback.
  - Ensure adherence to policies and procedures.
  - Facilitate communication and teamwork.
  - Identify training needs.
- **Types:**
  - **Supportive Supervision:** Focuses on joint problem-solving, mentoring, and skill-building.
  - **Administrative/Directive Supervision:** Focuses on compliance, resource management, and task completion.
- **Process:** Planning supervisory visits, observation, discussion, feedback, joint problem-solving, follow-up.
- **Tools:** Checklists, observation guides, performance standards.

- **Monitoring:**
- **Definition:** The routine, ongoing collection and analysis of information to track the progress of a program or activity against pre-set targets and objectives. It focuses on inputs, activities, and outputs.
- **Purpose:**
  - Assess whether activities are being implemented as planned.
  - Identify problems and bottlenecks in implementation early on.
  - Provide timely information for corrective action and decision-making.
  - Ensure accountability for resource use.
  - Track progress towards achieving outputs.
- **What is Monitored:** Inputs (resources), activities (processes), outputs (immediate results of activities), timelines, budget expenditure.
- **Methods:** Review of records and reports, field visits, observation, interviews, routine data collection systems (e.g., HMIS).
- **Key Questions:** What is being done? When? Where? By whom? How many? How much? Are we on track?

- **Evaluation:**
- **Definition:** A systematic and objective assessment of an ongoing or completed project, program, or policy, its design, implementation, and results. It aims to determine the relevance, effectiveness, efficiency, impact, and sustainability.
- **Purpose:**
  - Assess the overall achievement of objectives and outcomes/impacts.

- Determine the value or worth of a program.
- Identify lessons learned for future planning and improvement.
- Inform decisions about continuation, modification, or termination of programs.
- Promote accountability.

- **Types:**
  - **Formative Evaluation:** Conducted during program implementation to improve design and performance.
  - **Summative Evaluation:** Conducted at the end of a program to assess its overall success and impact.
  - **Process Evaluation:** Assesses how the program was implemented.
  - **Impact Evaluation:** Assesses the long-term, broader effects of the program.
  - **Outcome Evaluation:** Assesses the medium-term effects/changes resulting from outputs.
  - **Efficiency Evaluation:** Relates costs to benefits (cost-benefit, cost-effectiveness).
- **Key Questions:** Did the program achieve its goals (effectiveness)? What changes occurred as a result of the program (outcome/impact)? Were resources used wisely (efficiency)? Is the program relevant? Is it sustainable?
- **Relationship:** Monitoring provides data that can be used for evaluation. Supervision helps ensure that monitored activities are performed correctly. All three are interconnected and essential for good management.

6.4. Role and responsibilities of Health Facility Operation and Management Committee (HFOMC)

In Nepal, HFOMCs are established at the local health facility level (e.g., Health Posts, Primary Health Care Centers) to promote community participation, local ownership, and improve the management and functioning of the facility.

- **Composition:** Typically includes representatives from local government (ward chairperson is often the head), female community health volunteers (FCHVs), local school teachers, community leaders, service users, and the health facility in-charge (as member-secretary).
- **Role:**
  1. **Local Governance and Ownership:** To act as a bridge between the community and the health facility, fostering local ownership and accountability.
  2. **Oversight and Management Support:** To oversee the day-to-day operations of the health facility and support the health facility in-charge in its smooth functioning.
  3. **Resource Mobilization:** To mobilize local resources (financial, material, human) to supplement government provisions and improve services.
  4. **Quality Assurance:** To monitor the quality, availability, and accessibility of health services provided by the facility.
  5. **Community Mobilization and Engagement:** To encourage community participation in health programs and promote utilization of services.

6. **Advocacy:** To advocate for the needs of the health facility and community with higher authorities.

- **Responsibilities:**
    1. **Planning and Budgeting:**
        - Participate in the annual planning and budgeting process for the health facility.
        - Approve the health facility's annual plan and budget.
    2. **Financial Management:**
        - Oversee the financial management of the health facility, including income and expenditure.
        - Ensure proper utilization of funds and transparency.
        - Approve expenditures as per guidelines.
    3. **Monitoring and Supervision:**
        - Regularly monitor the services provided by the health facility (e.g., opening hours, staff attendance, availability of drugs and supplies).
        - Monitor the utilization of services by the community.
        - Supervise maintenance and upkeep of the facility infrastructure and equipment.
    4. **Addressing Grievances:**
        - Act as a mechanism for community members to voice complaints or suggestions regarding health services and help resolve them.
    5. **Human Resource Management Support:**
        - Support in managing locally hired staff (if any).
        - Monitor attendance and performance of health facility staff.
    6. **Procurement and Supplies:**
        - Oversee local procurement of essential supplies or minor repairs if needed, following financial regulations.
    7. **Coordination:**
        - Coordinate with local government bodies, NGOs, and other stakeholders for health-related activities.
    8. **Reporting:**
        - Ensure the health facility submits regular reports. The committee itself may also report to the local government health section.
    9. **Promoting Health Programs:**
        - Support the implementation of national health programs and campaigns at the local level.
        - Encourage community participation in health awareness and sanitation activities.
    10. **Facility Development:**
        - Identify needs for facility improvement (e.g., repairs, expansion, equipment) and seek resources for them.

6.5. Organizational structures of health services (Federal, Provincial and Local level) - Nepal Specific

Following the 2015 Constitution, Nepal adopted a federal system, restructuring its health service delivery.

1. **Federal Level:**
    - **Ministry of Health and Population (MoHP):**
    - Apex body responsible for overall health policy formulation, planning, coordination, regulation, and international health cooperation.
    - Sets national standards and guidelines.
    - Manages tertiary level hospitals, specialized centers, and national public health programs.
    - Resource mobilization and allocation to provinces and for national programs.
    - **Department of Health Services (DoHS):**
    - The main technical and implementing arm of MoHP for public health programs.
    - Has several divisions (e.g., Management, Curative Service, Family Welfare, Epidemiology and Disease Control, Logistics Management).
    - Manages central level hospitals not designated as autonomous.
    - **Other Central Level Bodies:**
    - Department of Drug Administration (DDA): Regulates drugs and pharmaceuticals.
    - Department of Ayurveda and Alternative Medicine.
    - National Health Training Center, National Public Health Laboratory, National Health Education, Information and Communication Center (NHEICC), etc.
    - Various professional councils (Medical, Nursing, Pharmacy, etc.).
2. **Provincial Level (7 Provinces):**
    - **Ministry of Social Development (MoSD) (or a dedicated Ministry of Health in some provinces):**
    - Responsible for health policy, planning, and program implementation within the province, aligning with federal policies.
    - Manages provincial-level hospitals (former Zonal/Regional hospitals).
    - Oversees and supports health services delivered by local levels within the province.
    - Coordinates with federal and local governments.
    - **Provincial Health Directorate:** Technical arm of the provincial ministry, responsible for program implementation, monitoring, and supervision of health services in the province.
    - **Other Provincial Structures:** Provincial Health Logistics Management Center, Provincial Health Training Center, Provincial Public Health Laboratory.
3. **Local Level (753 Local Governments: Municipalities and Rural Municipalities):**
    - **Municipal/Rural Municipal Executive:**
    - Responsible for the management and delivery of basic health services within their jurisdiction as per the Local Government Operation Act, 2074.
    - **Health Section (under the Municipality/Rural Municipality Office):**

- Manages and coordinates health programs and facilities at the local level.
- Supervises Health Posts, Primary Health Care Centers (PHCCs), Urban Health Centers, Community Health Units.
    - **Health Facilities at Local Level:**
- **Basic Hospitals (5, 10, 15 beds):** Being established/upgraded in many local levels.
- **Primary Health Care Centers (PHCCs):** Provide comprehensive primary health care, including some inpatient and emergency services.
- **Health Posts (HPs):** The main primary health care delivery outlet at the ward/community level.
- **Urban Health Clinics (UHCs) / Community Health Units (CHUs):** Provide basic outreach services.
- **Female Community Health Volunteers (FCHVs):** Grassroots volunteers promoting health and linking community with facilities.
    - **Health Facility Operation and Management Committee (HFOMC):** At each PHCC and HP, to ensure community participation and local management.

Flow of Authority & Coordination: Federal government sets policies and standards, provinces adapt and implement, local governments are primarily responsible for service delivery of basic health. There is a need for strong coordination between these three tiers.

6.6. Recording and reporting in various level of health care system including HMIS

- **Recording:** The process of documenting data and information related to health services, patient care, program activities, and resource utilization in a systematic manner.
    - **Reporting:** The process of compiling, analyzing, and transmitting recorded information in a summarized format to higher authorities or relevant stakeholders for decision-making, monitoring, and evaluation.
    - **Importance of Recording and Reporting:**
        1. **Patient/Client Management:** Provides a history for continuity of care.
        2. **Monitoring & Evaluation:** Tracks progress of programs, identifies gaps, and assesses performance.
        3. **Planning & Decision Making:** Provides data for evidence-based planning, resource allocation, and policy formulation.
        4. **Accountability:** Ensures transparency and accountability for services delivered and resources used.
        5. **Disease Surveillance:** Helps in early detection of outbreaks and monitoring disease trends.
        6. **Resource Management:** Tracks use of drugs, supplies, equipment.
        7. **Legal Documentation:** Records can serve as legal evidence.
        8. **Research:** Provides data for health research.
    - **Levels and Types of Records/Reports (Examples in Nepal):**
        - **Community Level (FCHVs):**
        - **Records:** FCHV register (household data, MCH services, vital events).
        - **Reports:** Monthly summary to local health facility (e.g., Health Post).

- **Health Post (HP) / PHCC Level:**
- **Records:** Outpatient (OPD) register, MCH register, immunization register, family planning register, TB register, stock register, daily attendance, etc. Individual patient cards.
- **Reports:** Monthly HMIS reports (summarizing services, disease patterns, commodity consumption) submitted to the local government's Health Section and often to the district/provincial level.
- **Hospital Level (Basic, District, Provincial, Federal):**
- **Records:** Inpatient records (patient files), OPD registers, specialized clinic registers, operation theatre records, lab/radiology records, mortality/morbidity records, administrative records.
- **Reports:** Monthly/quarterly/annual HMIS reports, disease-specific reports, financial reports, administrative reports to respective managing authorities (local, provincial, federal).
- **Local Government (Health Section):**
- Compiles reports from HPs/PHCCs within its jurisdiction.
- Reports to Provincial Health Directorate/Ministry and relevant local government bodies.
- **Provincial Level (Health Directorate/Ministry):**
- Compiles reports from local governments and provincial hospitals.
- Analyzes provincial health status and program performance.
- Reports to MoHP (Federal) and provincial government.
- **Federal Level (MoHP/DoHS):**
- Compiles national health statistics from provinces and federal hospitals.
- Analyzes national health trends, program achievements.
- Publishes annual health reports.
- Reports to government, international agencies.

- **Health Management Information System (HMIS):**
  - **Definition:** A system designed to collect, process, analyze, interpret, and disseminate health-related data to support planning, management, and decision-making in the health sector.
  - **Purpose:** To provide timely, accurate, and relevant information for effective health service management.
  - **Components of HMIS in Nepal (generally):**
- **Data Sources:** Health facilities, community health workers, surveys, vital registration.
- **Data Collection Tools:** Standardized registers, forms, reporting formats (often paper-based at periphery, increasingly electronic).
- **Data Transmission:** Flow of reports from lower to higher levels.
- **Data Processing & Analysis:** Compilation, cleaning, analysis (often computerized at district, provincial, central levels using systems like DHIS2 - District Health Information Software 2).
- **Information Dissemination:** Reports, bulletins, dashboards, website.
- **Feedback:** Providing analyzed information back to lower levels for local action.
  - **Indicators:** Key metrics tracked through HMIS (e.g., immunization coverage, ANC attendance, facility delivery rate, contraceptive prevalence rate, disease incidence).

- **Challenges:** Data quality (accuracy, completeness, timeliness), under-reporting, capacity for data analysis and use at lower levels, integration of different information systems.

6.7. Minimum Service Standard (MSS) of Health Post and Hospitals

- **Definition:** A set of explicit criteria outlining the minimum level of services, resources (human, infrastructure, equipment, drugs), and operational processes that a health facility must meet to provide a defined package of quality health care.
- **Purpose of MSS:**
  1. **Quality Assurance:** To ensure a basic standard of quality care across all facilities of a similar type.
  2. **Equity:** To reduce disparities in service availability and quality.
  3. **Accountability:** Provides a benchmark against which facility performance can be assessed.
  4. **Planning and Resource Allocation:** Helps identify gaps and guide resource allocation for improvement.
  5. **Guidance for Staff:** Clarifies expectations regarding service delivery.
  6. **Patient/Community Rights:** Informs the community about the services they are entitled to expect.
- **Components of MSS (typically cover):**
  1. **Service Delivery:** Range of services to be provided (e.g., OPD, MCH, FP, immunization, basic lab, emergency care).
  2. **Human Resources:** Minimum number and qualification of staff (doctors, nurses, paramedics, support staff).
  3. **Infrastructure:** Physical building requirements (rooms, space, sanitation, water, electricity).
  4. **Equipment and Supplies:** List of essential medical equipment, furniture, drugs, and consumables.
  5. **Operational Processes:** Guidelines for patient flow, record keeping, waste management, infection control, referral systems.
  6. **Management and Governance:** Role of HFOMC, financial management, reporting.
  7. **Community Linkages:** Engagement with FCHVs, community groups.
- **MSS for Health Post (Nepal - General Example, specific MoHP documents should be consulted):**
  - **Services:** OPD consultation, MCH (ANC, PNC, delivery if equipped, immunization), family planning, nutrition services, diagnosis and treatment of common illnesses, basic lab tests (e.g., Hb, urine), referral, health education.
  - **Staffing:** Health Assistant (HA) or Staff Nurse as In-charge, ANM, AHW (Auxiliary Health Worker), support staff.
  - **Infrastructure:** Consultation room, dressing/minor procedure room, MCH/FP room, dispensing room, waiting area, toilets, reliable water source.

  - **Equipment:** BP apparatus, stethoscope, weighing scales (adult/infant), height measure, basic surgical set, delivery kit (if providing delivery), vaccine carrier, refrigerator (for vaccines), essential furniture.
  - **Drugs:** List of essential drugs as per national guidelines.
- **MSS for Hospitals (Nepal - Varies by level: Basic Hospital, District Hospital, Provincial Hospital, etc.):**
  - **Services:** More comprehensive than HPs. OPD, inpatient care, emergency services, surgical services (e.g., C-section, major/minor surgery depending on level), advanced diagnostics (X-ray, ultrasound, more extensive lab), specialized clinics.
  - **Staffing:** Medical officers, specialists (depending on level), nurses (various grades), lab technicians, radiographers, pharmacists, administrative and support staff.
  - **Infrastructure:** Wards (male, female, pediatric, maternity), OPD rooms, emergency room, operation theatre, labor room, laboratory, pharmacy, X-ray unit, mortuary (at higher levels).
  - **Equipment:** More sophisticated equipment corresponding to the services provided.
  - **Drugs:** Broader range of essential and specialized drugs.
- **Implementation:** MSS is often used as a tool for accreditation, licensing, or performance-based financing. Regular assessment against MSS helps identify areas for improvement.

6.8. Rights and policies related to health

- **Health as a Human Right:** The right to the enjoyment of the highest attainable standard of physical and mental health is a fundamental human right recognized in international law (e.g., WHO Constitution, Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights).
- **Key Health-Related Rights (often interlinked):**
  1. **Right to Health Care:** Includes access to timely, acceptable, and affordable health care of appropriate quality.
  2. **Right to Non-discrimination:** Health services, goods, and facilities must be accessible to all without discrimination on any basis (race, color, sex, language, religion, political or other opinion, national or social origin, property, birth, physical or mental disability, health status (e.g. HIV/AIDS), sexual orientation, or civil, political, social or other status).
  3. **Right to Information:** Access to health information, including on health status, treatment options, and risks.
  4. **Right to Participation:** Individuals and communities have the right to participate in decision-making processes that affect their health.
  5. **Right to Privacy and Confidentiality:** Protection of personal health information.
  6. **Right to Consent:** Informed consent for medical treatment.
  7. **Right to a Healthy Environment:** Including safe water, sanitation, adequate food and housing, healthy occupational and environmental conditions.
  8. **Rights related to specific groups:** e.g., rights of women to reproductive health, rights of children to health and development, rights of persons with disabilities.

- **National Health Policies (Examples of general types; specific policies in Nepal should be referenced):**
    - **National Health Policy:** The overarching policy document that sets the vision, goals, objectives, strategies, and priorities for the health sector of a country. (Nepal has its National Health Policy).
    - **Specific Programmatic Policies:**
    - **Safe Motherhood and Newborn Health Policy:** Aims to reduce maternal and neonatal mortality and morbidity.
    - **National Immunization Policy:** Guides the implementation of immunization programs.
    - **National Nutrition Policy/Strategy:** Addresses malnutrition in all its forms.
    - **Communicable Disease Control Policies:** (e.g., for TB, HIV/AIDS, Malaria).
    - **Non-Communicable Disease (NCD) Policy/Strategy.**
    - **Mental Health Policy.**
    - **Essential Drugs Policy:** Ensures availability, affordability, quality, and rational use of essential medicines.
    - **Human Resources for Health Policy:** Addresses planning, development, and management of health workforce.
    - **Health Financing Policy/Strategy:** Outlines how health services will be funded (e.g., government budget, health insurance, user fees).
    - **Environmental Health Policy.**
- **Legislations/Acts:**
    - Public Health Service Act (or similar name): Provides legal framework for public health interventions, disease surveillance, control of epidemics.
    - Food Safety Act.
    - Tobacco Control Act.
    - Mental Health Act.
    - Acts related to professional councils (medical, nursing, etc.) for regulation.
    - Reproductive Health Rights Act.

6.9. Health related concern in The Constitution of Nepal

The Constitution of Nepal (2015) has several provisions related to health, establishing it as a fundamental right and outlining state responsibilities.

- **Preamble:** Mentions ending all forms of discrimination and oppression, creating an egalitarian society, and ensuring economic equality, prosperity and social justice, which are underlying determinants of health.
- **Part 3: Fundamental Rights and Duties**

- **Article 30: Right to Clean Environment:**
    - "(1) Every citizen shall have the right to live in a clean and healthy environment."

- "(2) The victim shall have the right to obtain compensation, in accordance with law, for any injury caused from environmental pollution or degradation."
- This directly impacts health by ensuring conditions conducive to well-being.

- **Article 35: Right relating to Health:** This is the core article.
  - "(1) Every citizen shall have the right to free basic health services from the State, and no one shall be deprived of emergency health services."
  - *Implication:* Guarantees free access to a defined package of basic health services and ensures emergency care is always available.
  - "(2) Every person shall have the right to get information about his or her medical treatment."
  - *Implication:* Upholds patient's right to know, crucial for informed consent.
  - "(3) Every citizen shall have equal access to health services."
  - *Implication:* Reinforces non-discrimination and equity in access.
  - "(4) Every citizen shall have the right of access to clean drinking water and sanitation."
  - *Implication:* Recognizes key determinants of public health as rights.
- **Article 38: Rights of Women:**
  - "(2) Every woman shall have the right to safe motherhood and reproductive health."
  - *Implication:* Specific protection and promotion of women's reproductive health.
- **Article 39: Rights of the Child:**
  - "(2) Every child shall have the right to education, health, maintenance, proper care, sports, entertainment and overall personality development from the family and the State."
  - "(3) Every child shall have the right to nutrition..."
  - *Implication:* State responsibility for child health and nutrition.
- **Article 40: Rights of Dalit:**
  - Includes provisions for health care for the Dalit community.
- **Article 42: Right to Social Justice:**
  - Economically poor, marginalized communities, persons with disabilities, etc., have the right to special opportunities and benefits in education, health, housing, employment, food, and social security.

- **Part 4: Directive Principles, Policies and Obligations of the State**
- **Article 51: Policies of the State:**
  - **(h) Policies relating to basic needs of citizens:**
  - "(1) Making education healthy, qualitative, employment-oriented, and accessible to all."
  - "(2) Making health services easily available, accessible and equal for all citizens; and investing in the health sector for this purpose."
  - "(3) Ensuring easily available and accessible supply of healthy food, and protecting citizens from food scarcity and food insecurity."
  - "(4) Ensuring planned supply of basic goods and services, including safe drinking water and sanitation."

- These sections direct the state to actively work towards improving health and its determinants.

- **Schedules (related to powers of different government tiers):**

- Schedules 5, 6, 7, 8, and 9 outline the powers of Federal, Provincial, and Local governments, and concurrent powers. Health sector responsibilities are distributed among these tiers (e.g., "basic health and sanitation" is a key responsibility of Local Levels as per Schedule 8).

6.10. Local government operation Act 2074 (health related provisions)

The Local Government Operation Act, 2074 (2017 AD) operationalizes the constitutional provisions for local governance, detailing the functions, duties, and powers of Rural Municipalities and Municipalities. It assigns significant responsibilities in the health sector to local governments.

Key Health-Related Provisions (Functions, Duties, and Powers of Rural Municipality/Municipality - Section 11):

1. **Basic Health Services Management:**
   - Operation and management of health institutions like Health Posts, Primary Health Care Centers, Urban Health Clinics, Community Health Units, and Basic Hospitals (up to 15 beds) within their jurisdiction.
   - Ensuring availability of basic health services as defined by federal and provincial laws.
2. **Maternal, Newborn, and Child Health:**
   - Management of programs related to safe motherhood, neonatal health, child health (including immunization, nutrition programs like Vitamin A, deworming).
3. **Family Planning and Reproductive Health:**
   - Management and promotion of family planning services and reproductive health programs.
4. **Disease Control and Prevention:**
   - Management of programs for control of communicable and non-communicable diseases.
   - Epidemic and disaster preparedness and response related to health.
5. **Nutrition Programs:**
   - Implementation of nutrition programs, addressing malnutrition.
6. **Health Promotion and Education:**
   - Conducting health awareness campaigns, health education activities.
7. **Environmental Sanitation and Hygiene:**
   - Management of local sanitation, hygiene promotion, safe drinking water supply (in coordination with relevant committees).
   - Solid waste management.
8. **Health Infrastructure:**
   - Construction, repair, and maintenance of local health facilities.
   - Ensuring availability of necessary equipment and supplies.
9. **Human Resource Management:**

- Management of health personnel at local level health facilities as per federal and provincial laws (recruitment, deployment, supervision of certain categories of staff).

10. **Data Collection, Record Keeping, and Reporting:**
    - Collection, analysis, and reporting of health information (HMIS) from local facilities to higher levels.
11. **Regulation and Monitoring:**
    - Monitoring and regulation of private health facilities operating within their area (as per federal/provincial laws).
    - Monitoring quality of health services.
12. **Coordination:**
    - Coordination with FCHVs, HFOMCs, NGOs, CBOs, and other stakeholders in health.
    - Coordination with provincial and federal government entities.
13. **Health Facility Operation and Management Committees (HFOMCs):**
    - Formation, mobilization, and facilitation of HFOMCs.
14. **Budgeting and Financial Management:**
    - Allocating and managing budget for local health programs and facilities.
    - Mobilizing local resources for health.
15. **Ayurveda and Traditional Medicine:**
    - Promotion and management of Ayurveda and other traditional health services.
16. **School Health Programs:**
    - Implementation of school health and nutrition programs.

Significance: This Act empowers local governments to be the primary players in delivering basic health services, making them directly accountable to their communities for health outcomes. It is a cornerstone of decentralization in Nepal's health system.