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MATERNAL AND CHILD HEALTH/ REPRODUCTIVE HEALTH EDUCATION

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Course code: COM 407

Course title: Maternal and Child Health/Reproductive Health Education

Course credit load: 1 Unit

Series 1: Foundations of Family Health

- **Part 1.1: Concept and Scope of Family Health**
  - Sub Part 1.1.1: Definition and concept of family health
  - Sub Part 1.1.2: Family structures and patterns
  - Sub Part 1.1.3: Components and objectives of family health
- **Part 1.2: Factors Influencing Family Health Status**
  - Sub Part 1.2.1: Biological and genetic factors
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- **Part 1.3: Family Health Services in Nigeria**
  - Sub Part 1.3.1: Integration of family health and MCH services
  - Sub Part 1.3.2: Family health in rural and urban communities
  - Sub Part 1.3.3: Monitoring and evaluation of family health services

Introduction

Family health is the foundation upon which maternal and child health, reproductive health, and community well-being are built. The family unit, in all its diverse forms, is the primary social environment in which health is experienced, health behaviours are formed, and health decisions are made. Understanding family health as a concept, its determinants, and how services are structured to support it is therefore essential preparation for the more specific topics in maternal, child, and reproductive health examined in subsequent Series.

The aim of this Series is to define family health, describe family structures and the components and objectives of family health, examine the major factors influencing family health status, and situate family health services within the Nigerian health system.

We shall commence by defining family health and examining family structures. Next, we will examine the biological, socioeconomic, environmental, cultural, and behavioural factors that determine family health status. Finally, we will close by examining the integration and delivery of family health services in Nigeria.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- **SLO 1.1** define family health and describe its components and objectives,
- **SLO 1.2** describe the major family structures and patterns found in Nigeria,
- **SLO 1.3** explain the biological, socioeconomic, and cultural factors influencing family health status,
- **SLO 1.4** describe the integration of family health and MCH services, and
- **SLO 1.5** explain how family health services are delivered and monitored in rural and urban Nigerian communities.

1.1 Concept and Scope of Family Health

1.1.1 Definition and concept of family health

Family health refers to the physical, mental, social, and spiritual well-being of all members of a family unit throughout their life cycle, from conception through old age. It encompasses not only the absence of disease but also the family capacity to fulfil its biological, social, and economic functions, maintain relationships, and adapt to life events and crises. In public health, family health is both a goal and a setting for intervention.

The family is recognised as the basic unit of society through which most health-relevant decisions are made: what to eat, when to seek care, how many children to have, and how to protect members from infection. Family health programmes therefore address not just individual patients but the household unit as a whole, recognising that the health of each member is interdependent with the health and behaviour of others.

Fill in the blank: Family health refers to the physical, mental, social, and spiritual well-being of all _____ of a family unit throughout their life cycle.

1.1.2 Family structures and patterns

A family may be defined as a group of people related by blood, marriage, or adoption who live together and share resources, responsibilities, and emotional bonds. The nuclear family (a couple and their dependent children) is the most commonly described unit in public health literature. The extended family (nuclear family plus grandparents, uncles, aunts, and cousins sharing a household or compound) is the dominant structure in most Nigerian communities and has significant implications for health decision-making and resource sharing.

Other family patterns include the single-parent family (increasingly common in urban Nigeria), polygamous families (multiple wives with a shared husband, common in northern and some southern communities), and blended or reconstituted families. Each structure carries distinct health implications: extended families may provide strong social support during illness but also

facilitate rapid disease transmission; polygamous structures affect antenatal care frequency and reproductive health decision-making.

Fill in the blank: The _____ family, comprising a couple and their dependent children plus grandparents and other relatives sharing a household, is the dominant family structure in most Nigerian communities.

1.1.3 Components and objectives of family health

The components of family health include: maternal health (care during pregnancy, delivery, and the postnatal period); child health (nutrition, immunisation, growth monitoring, and management of childhood illnesses); family planning (enabling couples to decide the number and spacing of children); adolescent health; school health; and the health of the elderly. Each component addresses a specific life-stage vulnerability and is delivered through a combination of preventive, promotive, and curative services.

The objectives of family health programmes are to reduce maternal, infant, and child mortality; promote healthy behaviours across the life cycle; ensure access to essential reproductive health services; strengthen family capacity to provide a safe and nurturing environment; and integrate family health into the PHC system. In Nigeria, these objectives are pursued through the PHC network, with the Ward Health System and community health extension workers as the primary delivery mechanism.

Fill in the blank: The components of family health include maternal health, child health, family _____ , adolescent health, school health, and the health of the elderly.

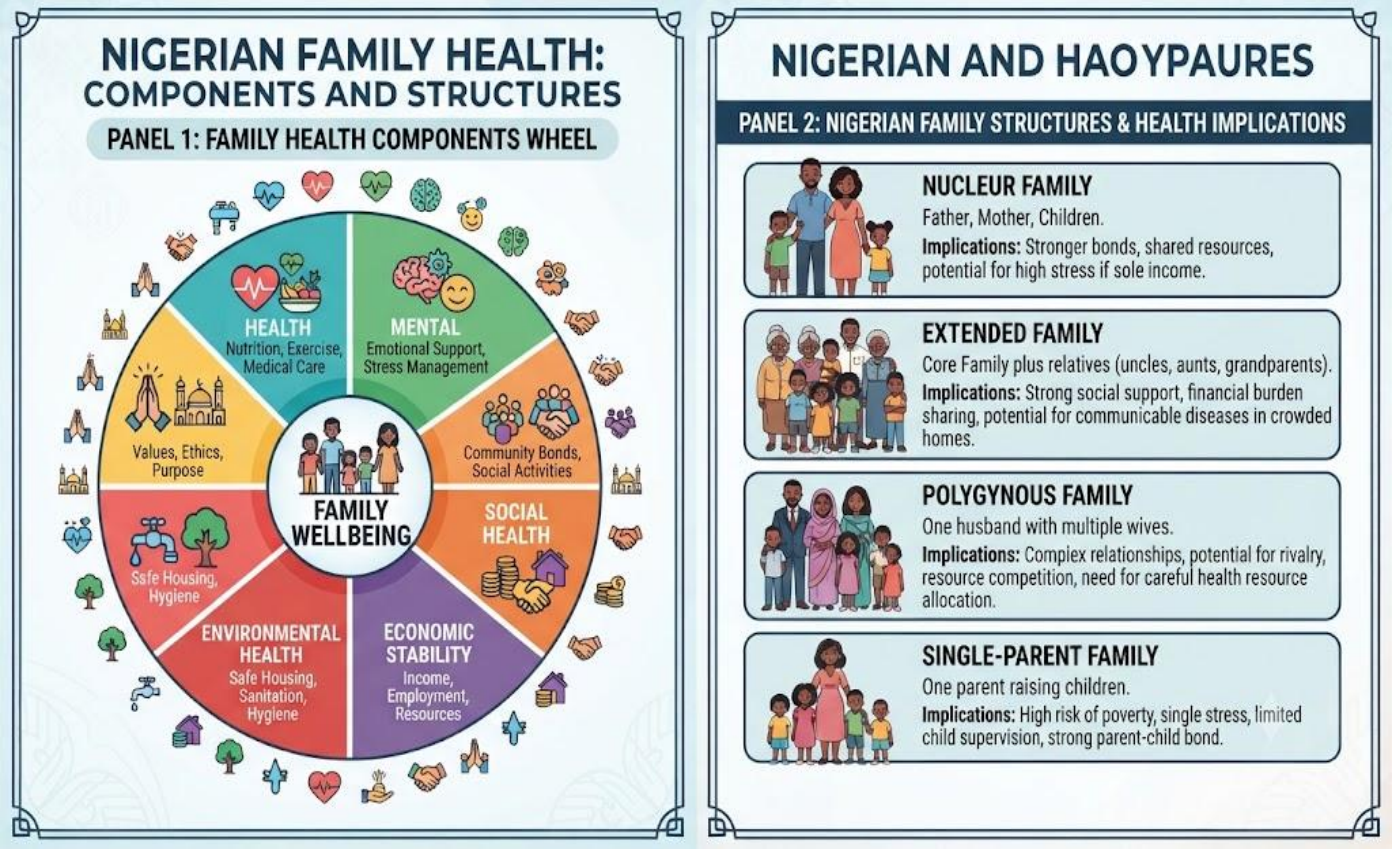

Figure 1.1: Components of family health and family structure types

Pilot questions 1.1

1. Define family health.
2. Name four types of family structures found in Nigeria.
3. List five components of family health.
4. Name three objectives of a family health programme.
5. Why is the family described as the basic unit for health interventions?

1.2 Factors Influencing Family Health Status

1.2.1 Biological and genetic factors

Biological factors that influence family health include the age and sex of family members, nutritional status, immune competence, genetic predisposition to disease, and reproductive biology. In Nigeria, genetic conditions such as sickle cell disease (with a high carrier frequency

in the population) and glucose-6-phosphate dehydrogenase deficiency disproportionately affect family health outcomes, particularly child survival. Maternal age also exerts a strong biological influence: adolescent mothers face higher risks of obstructed labour and low birth weight, while older mothers face increased risks of chromosomal abnormalities.

Nutritional status is among the most powerful biological determinants of family health, influencing maternal outcomes, birth weight, child growth and development, and susceptibility to infectious disease. Chronic household food insecurity, common in large sections of Nigeria, produces the double burden of undernutrition in children and micronutrient deficiency in women, alongside rising overnutrition in urban settings. These interact with infectious disease to produce the complex nutritional emergencies seen in humanitarian settings across northern Nigeria.

Fill in the blank: _____ cell disease, with a high carrier frequency in the Nigerian population, is a genetic condition that disproportionately affects family health outcomes, particularly child survival.

1.2.2 Socioeconomic and environmental factors

Household income, maternal education, and father occupation are among the strongest predictors of family health outcomes in Nigeria, operating through their effects on access to food, health care, safe water, sanitation, and the quality of the home environment. Educated mothers are significantly more likely to seek antenatal care, deliver in a health facility, practise exclusive breastfeeding, and complete their children immunisation schedules, making female education one of the highest-impact investments in family health available to any society.

Environmental factors including housing quality, access to safe water, adequate sanitation, and exposure to indoor and outdoor air pollutants determine the infectious disease burden experienced by the family. Rural households in Nigeria are more likely to use unprotected water sources, open defecation, and solid cooking fuels, all of which drive high rates of diarrhoeal disease, respiratory infections, and child mortality. Urban families in informal settlements face a different but overlapping set of environmental risks from overcrowding and inadequate drainage.

Fill in the blank: Maternal _____ is among the strongest predictors of family health outcomes in Nigeria, significantly increasing rates of antenatal care attendance, facility delivery, and child immunisation.

1.2.3 Cultural and behavioural factors

Cultural beliefs and practices profoundly shape family health decisions in Nigeria. Traditional beliefs about disease causation, the role of supernatural forces in illness, the appropriate timing and location of childbirth, and the acceptability of contraception all determine whether families use formal health services or rely on traditional alternatives. Female genital cutting, child marriage, food taboos during pregnancy, and preference for male children are examples of cultural practices with direct health consequences for women and children.

Behavioural factors including dietary practices, physical activity, tobacco and alcohol use, sexual behaviour, and health-seeking behaviour are shaped by both culture and socioeconomic circumstances and are directly modifiable through health education and behaviour change communication. The high rates of teenage pregnancy, short birth intervals, and low contraceptive prevalence in Nigeria reflect a combination of cultural norms, inadequate access to services, and limited health education, all amenable to programmatic intervention.

Fill in the blank: Cultural beliefs about disease causation, the role of supernatural forces in illness, and the acceptability of _____ all influence whether Nigerian families use formal health services or rely on traditional alternatives.

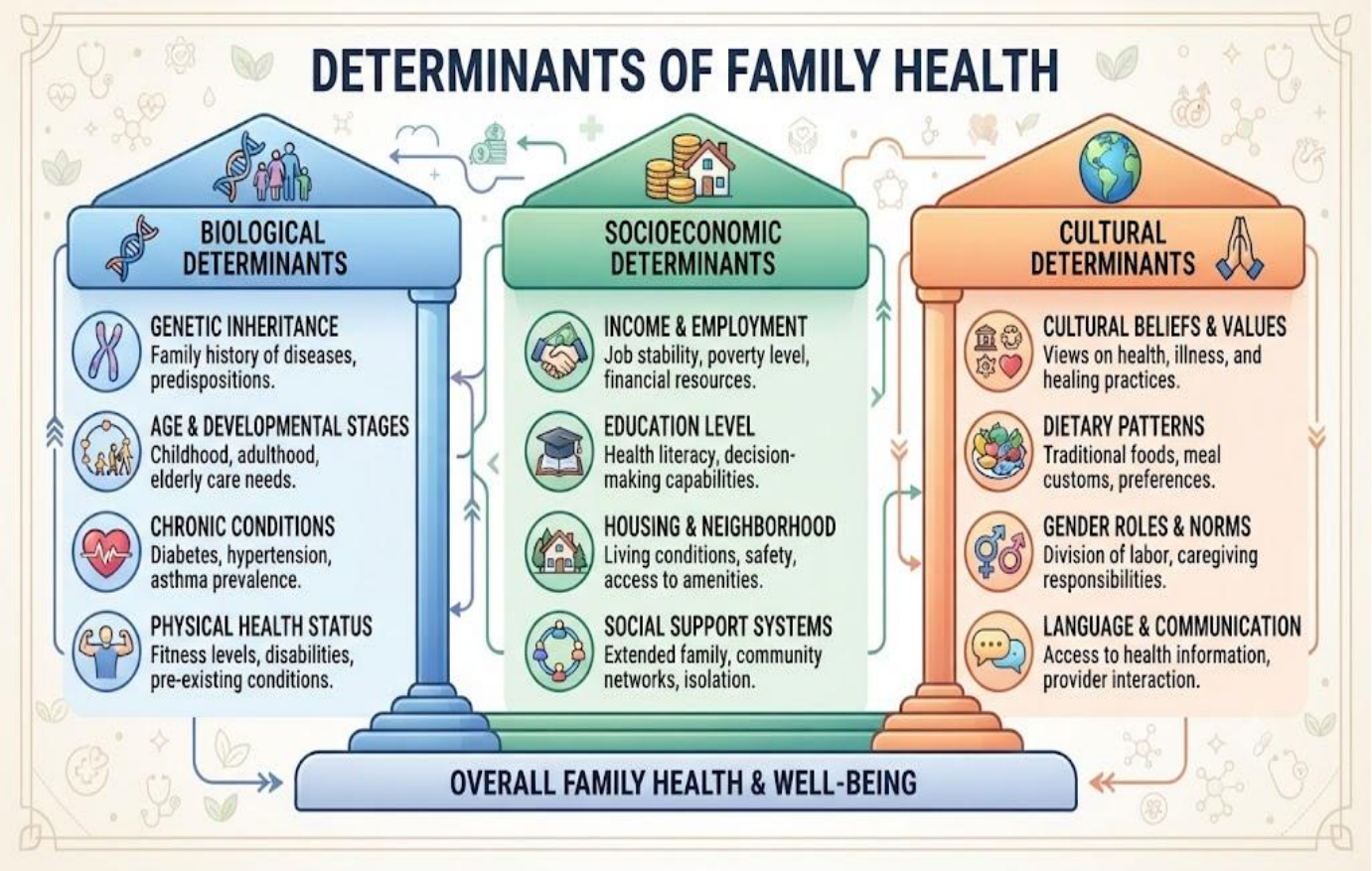

Figure 1.2: Factors influencing family health status

Pilot questions 1.2

1. Give two examples of genetic factors influencing family health in Nigeria.
2. Why is maternal education described as a high-impact investment in family health?
3. Name three environmental factors that increase infectious disease burden in rural Nigerian households.
4. Give two examples of cultural practices with direct health consequences for women in Nigeria.
5. Name two behavioural factors directly modifiable through health education.

1.3 Family Health Services in Nigeria

1.3.1 Integration of family health and MCH services

Family health services and maternal and child health (MCH) services are closely interrelated and in most Nigerian health system contexts are delivered as an integrated package through the same PHC facilities. MCH services form the operational core of family health delivery, encompassing antenatal care, skilled attendance at delivery, postnatal care, child immunisation, growth monitoring, nutrition counselling, and family planning. Their integration ensures that a single visit to the PHC facility can address the health needs of mother, child, and household simultaneously.

The integration approach reduces missed opportunities for health promotion and disease prevention, improves efficiency by concentrating services in fewer contacts, and strengthens the community relationship with the PHC facility through consistent, comprehensive care. In Nigeria, the NPHCDA-coordinated PHC system formally integrates family health, MCH, and disease control services at the ward health centre level, with CHEWs and midwives providing the frontline integrated care package.

Fill in the blank: The integration of family health and MCH services ensures that a single visit to the PHC facility can address the health needs of mother, child, and _____ simultaneously.

1.3.2 Family health in rural and urban communities

Family health service delivery faces distinct challenges in rural and urban settings. Rural communities contend with distance to facilities, poor road infrastructure, shortage of skilled health workers, limited availability of essential medicines and commodities, and low health literacy. These barriers result in consistently lower rates of antenatal care attendance, facility delivery, and child immunisation in rural Nigeria compared with urban areas, contributing to the persistent urban-rural gap in maternal and child health outcomes.

Urban communities, while generally closer to health facilities, face challenges of overcrowding, high service demand, inequitable access in informal settlements, and the growing burden of non-

communicable diseases alongside continued infectious disease. Outreach services, community health volunteers, and mobile clinics have been used to bridge service gaps in both settings, with particular emphasis on reaching the most marginalised households that health facilities alone do not adequately serve.

Fill in the blank: Rural communities face barriers to family health service access including distance to facilities, poor road infrastructure, shortage of skilled health workers, and low _____ literacy.

1.3.3 Monitoring and evaluation of family health services

Monitoring and evaluation (M&E) of family health services tracks whether services are reaching intended populations, being delivered with adequate quality, and producing improvements in health outcomes. Key indicators include antenatal care coverage (percentage of pregnant women receiving four or more ANC visits), skilled birth attendance rate, postnatal care coverage, immunisation coverage, contraceptive prevalence rate, and nutritional status of children under five. These are collected through routine health information systems and periodic household surveys such as the Nigeria Demographic and Health Survey (NDHS).

The NDHS, conducted approximately every five years, provides the most comprehensive national data on family health service coverage and outcomes, tracking trends over time and identifying geographic and socioeconomic disparities. At facility and LGA level, the District Health Information System (DHIS2) provides real-time data for operational M&E, enabling health managers to identify underperforming wards and direct supervisory and resource support where it is most needed.

Fill in the blank: The Nigeria Demographic and Health Survey (NDHS), conducted approximately every five years, provides comprehensive national data on family health service _____ and outcomes, tracking trends and identifying disparities.

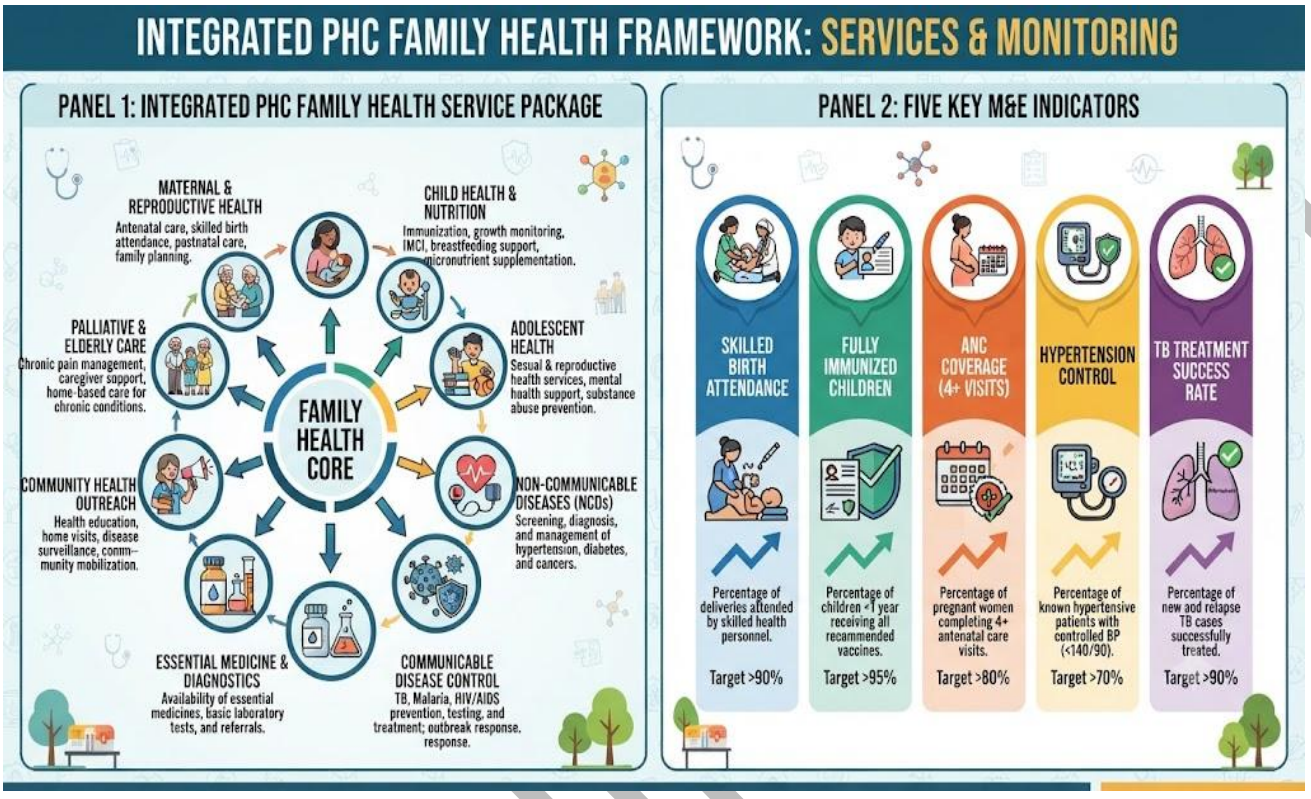

Figure 1.3: Family health service delivery and key M&E indicators

Pilot questions 1.3

1. Name five MCH services included in the integrated family health package.
2. Why does integration of family health and MCH services reduce missed opportunities?
3. Name three barriers to family health service access in rural Nigeria.
4. Name four key indicators used to monitor family health services.
5. What is the role of DHIS2 in family health service M&E?

Series Summary

This Series established the foundational concepts of family health. Family health was defined as the physical, mental, social, and spiritual well-being of all family members throughout the life cycle, with the family identified as the basic unit through which health decisions are made. Four major Nigerian family structures were described: nuclear, extended, single-parent, and polygamous, each with distinct health implications. The components of family health, spanning maternal, child, family planning, adolescent, school, and elderly health, and the objectives of family health programmes were established.

The three categories of factors influencing family health status were examined: biological and genetic factors including sickle cell disease and nutritional status; socioeconomic and environmental factors including maternal education, household income, water, and sanitation; and cultural and behavioural factors including traditional beliefs and health-seeking behaviour. The Series concluded by examining the integration of family health and MCH services in the Nigerian PHC system, urban-rural differences in service access and barriers, and the M&E framework using NDHS and DHIS2 to track family health service coverage and outcomes (SLOs 1.1 to 1.5).

Glossary of Terms

- **Contraceptive prevalence rate:** the percentage of women of reproductive age who are currently using a method of contraception.
- **DHIS2:** District Health Information System version 2; a real-time health data platform used for operational monitoring of health services in Nigeria.
- **Extended family:** a family structure in which the nuclear family shares a household or compound with grandparents, uncles, aunts, and other relatives.
- **Family health:** the physical, mental, social, and spiritual well-being of all members of a family unit throughout their life cycle.

- **Family planning:** a component of family health enabling individuals and couples to determine the number and spacing of their children through use of contraception and fertility awareness.
- **MCH services:** maternal and child health services including antenatal care, skilled delivery attendance, postnatal care, immunisation, and growth monitoring.
- **NDHS:** Nigeria Demographic and Health Survey; a nationally representative household survey providing data on family health outcomes and service coverage.
- **Nuclear family:** a family unit comprising a couple and their dependent children.
- **Polygamous family:** a family structure in which a husband has multiple wives, each with their own children, common in parts of northern and some southern Nigerian communities.
- **Skilled birth attendance:** delivery attended by a trained health professional such as a midwife, nurse, or doctor, capable of managing normal deliveries and recognising complications.

Concept Check Questions [Series 1]

Objective questions

1. Family health refers to the physical, mental, social, and spiritual well-being of all _____ of a family unit throughout their life cycle. (Linked to SLO 1.1)
2. The _____ family, which includes grandparents and other relatives in the same household, is the dominant structure in most Nigerian communities. (Linked to SLO 1.2)
3. _____ cell disease, with a high carrier frequency in Nigeria, is a genetic factor disproportionately affecting family health. (Linked to SLO 1.3)
4. Maternal _____ is among the strongest predictors of family health outcomes, increasing ANC attendance, facility delivery, and immunisation rates. (Linked to SLO 1.3)
5. The integration of family health and MCH services ensures a single PHC visit can address the health needs of mother, child, and _____ simultaneously. (Linked to SLO 1.4)
6. The Nigeria Demographic and Health Survey (NDHS) provides comprehensive national data on family health service _____ and outcomes. (Linked to SLO 1.5)

Short-answer questions

7. Describe the components and objectives of family health. (Linked to SLO 1.1)
8. Explain how socioeconomic and environmental factors influence family health status in Nigeria. (Linked to SLO 1.3)

Long-answer questions

9. Discuss the major family structures found in Nigeria and explain the health implications of each. (Linked to SLO 1.2)
10. Evaluate the delivery of family health services in Nigeria, covering integration with MCH services, rural and urban differences, and monitoring and evaluation. (Linked to SLOs 1.4–1.5)

Answers to Concept Check Questions [Series 1]

Objective questions

1. Members.
2. Extended.

3. Sickle.
4. Education.
5. Household.
6. Coverage.

Short-answer questions

7. Components: maternal health, child health, family planning, adolescent health, school health, elderly health. Objectives: reduce maternal, infant, and child mortality; promote healthy behaviours across the life cycle; ensure access to essential reproductive health services; strengthen family capacity to provide a safe and nurturing environment; integrate family health into the PHC system.
8. Household income determines access to food, healthcare, and safe water. Maternal education increases uptake of ANC, facility delivery, and immunisation. Environmental factors including use of unprotected water, open defecation, and solid cooking fuels drive high rates of diarrhoeal disease, respiratory infections, and child mortality, particularly in rural households. Urban informal settlements face overcrowding and inadequate drainage as environmental health risks.

Long-answer questions

9. **Basic response:** Nuclear family: couple and dependent children; the most described unit in public health but less common in Nigeria than extended structures. Extended family: adds grandparents and other relatives; provides strong social support during illness but facilitates disease transmission; strong influence on health decision-making. Single-parent family: increasingly common in urban Nigeria; resource constraints affect child nutrition and healthcare access. Polygamous family: common in northern and some southern communities; affects reproductive health decision-making, birth intervals, and ANC frequency.

   Value-added response: The extended family structure in Nigeria has both protective and risk-generating health effects that programmes must account for. Grandmothers and mothers-in-law often exert greater influence over infant feeding, traditional birth practices, and healthcare-seeking decisions than the child mother herself, making them a critical audience for health education. Ignoring these household authority dynamics in MCH programme design consistently produces interventions that educate mothers without changing household practice.

10. **Basic response:** Integration: MCH services form the operational core of family health; integrating antenatal care, delivery, postnatal care, immunisation, nutrition, and family planning at the same PHC facility reduces missed opportunities and improves efficiency; CHEWs and midwives deliver the integrated package at ward level. Rural challenges: distance, poor roads, staffing shortages, low health literacy. Urban challenges: high demand, inequitable access in informal settlements, growing NCD burden. M&E: NDHS tracks national coverage trends; DHIS2 enables real-time operational monitoring at ward and LGA level.

Value-added response: The persistent urban-rural gap in family health outcomes in Nigeria reflects not only infrastructure and staffing differences but also systematic underinvestment in the community outreach components of family health service delivery. Facility-based integration alone cannot close this gap; it must be complemented by active community outreach through CHEWs, community health volunteers, and mobile services that reach the households that never visit the facility, particularly for the most vulnerable rural women and children.

Answers to Pilot Questions [Series 1]

Part 1.1

1. Family health is the physical, mental, social, and spiritual well-being of all members of a family unit throughout their life cycle, encompassing the family capacity to fulfil its biological, social, and economic functions.
2. Nuclear, extended, single-parent, and polygamous.
3. Any five of: maternal health, child health, family planning, adolescent health, school health, elderly health.
4. Any three of: reduce maternal, infant, and child mortality; promote healthy behaviours; ensure access to reproductive health services; strengthen family capacity for a nurturing environment; integrate family health into PHC.

5. Because most health-relevant decisions are made within the family unit: what to eat, when to seek care, how many children to have, and how to protect members from disease, making the household the key unit for intervention.

Part 1.2

1. Sickle cell disease (high carrier frequency, affecting child survival) and G6PD deficiency (causing haemolysis when triggered by certain drugs or foods).
2. Educated mothers are significantly more likely to seek antenatal care, deliver in a facility, exclusively breastfeed, and complete their children immunisation schedules, producing better outcomes across multiple domains simultaneously.
3. Use of unprotected water sources, open defecation, and solid cooking fuels for cooking.
4. Any two of: female genital cutting, child marriage, food taboos during pregnancy.
5. Any two of: dietary practices, health-seeking behaviour.

Part 1.3

1. Any five of: antenatal care, skilled delivery attendance, postnatal care, child immunisation, growth monitoring, nutrition counselling, family planning.
2. Because a single visit to the PHC facility can address the health needs of mother, child, and household simultaneously, reducing missed opportunities for health promotion and disease prevention.
3. Any three of: distance to facilities, poor road infrastructure, shortage of skilled health workers, limited essential medicines and commodities, low health literacy.
4. Any four of: antenatal care coverage, skilled birth attendance rate, postnatal care coverage, immunisation coverage, contraceptive prevalence rate, nutritional status of children under five.
5. DHIS2 provides real-time operational data at facility, ward, and LGA level, enabling health managers to identify underperforming areas and direct supervisory and resource support where it is most needed.

References and Attributions [Series 1]

Textual references

- Park, K. (2021). Park's textbook of preventive and social medicine (26th ed.). Banarsidas Bhanot.
- National Population Commission Nigeria and ICF. (2019). Nigeria demographic and health survey 2018. NPC and ICF.
- World Health Organization. (2016). Standards for improving quality of maternal and newborn care in health facilities. WHO Press.
- National Open University of Nigeria (NOUN). (2023). Maternal and child health/reproductive health education course material. NOUN Press.

Figures, Plates, Tables, and Boxes

- Figure 1.1: Components of family health and family structure types Attribution: AI generated using prompt "Generate a two-panel diagram showing family health components as a wheel and four Nigerian family structures with health implications." Suggested OER search string: "family health components objectives maternal child family planning Nigeria family structures nuclear extended OER"
- Figure 1.2: Factors influencing family health status Attribution: AI generated using prompt "Generate a three-pillar diagram showing biological, socioeconomic, and cultural determinants of family health with examples under each." Suggested OER search string: "family health determinants biological genetic socioeconomic education environmental cultural Nigeria OER"
- Figure 1.3: Family health service delivery and key M&E indicators Attribution: AI generated using prompt "Generate a two-panel diagram showing the integrated PHC family health service package and five key monitoring and evaluation indicators." Suggested OER search string: "family health MCH services integration PHC Nigeria ANC immunisation monitoring evaluation NDHS DHIS OER"

Course code: COM 407

Course title: Maternal and Child Health/Reproductive Health Education

Course credit load: 1 Unit

Series 2: Maternal and Child Health Services

- **Part 2.1: Objectives and Components of MCH Services**
  - Sub Part 2.1.1: Definition and objectives of MCH services
  - Sub Part 2.1.2: Components of MCH services
  - Sub Part 2.1.3: Prenatal care and safe motherhood
- **Part 2.2: Child Health Services and School Health**
  - Sub Part 2.2.1: Child health services: immunisation and growth monitoring
  - Sub Part 2.2.2: Nutrition and integrated management of childhood illness
  - Sub Part 2.2.3: School health programme
- **Part 2.3: Roles and International Agencies in MCH**
  - Sub Part 2.3.1: The role of traditional birth attendants
  - Sub Part 2.3.2: Roles of international health agencies in MCH development
  - Sub Part 2.3.3: Natural immunisation and the Expanded Programme on Immunisation

Introduction

Maternal and child health services address two of the most health-vulnerable population groups: women during pregnancy, delivery, and the postnatal period, and children from birth through adolescence. In Nigeria, maternal and child mortality remain among the highest in the world, driven by preventable causes that well-organised MCH services can address. Understanding the objectives, components, and delivery of these services, and the actors who provide them, is central to community health practice.

The aim of this Series is to describe the objectives and components of MCH services, examine prenatal care and child health services including immunisation, nutrition, and school health, and discuss the roles of traditional birth attendants and international agencies in MCH development in Nigeria.

We shall commence by defining MCH services and examining their components, with emphasis on prenatal and safe motherhood care. Next, we will examine child health services and the school health programme. Finally, we will close by examining the roles of traditional birth attendants, international agencies, and the immunisation programme.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- **SLO 2.1** state the objectives and components of MCH services,
- **SLO 2.2** describe prenatal care and the elements of safe motherhood,
- **SLO 2.3** describe child health services including immunisation, growth monitoring, and nutrition,
- **SLO 2.4** explain the school health programme,
- **SLO 2.5** describe the role of traditional birth attendants in MCH, and
- **SLO 2.6** explain the roles of international health agencies and the national immunisation programme.

2.1 Objectives and Components of MCH Services

2.1.1 Definition and objectives of MCH services

Maternal and child health services are organised health care activities designed to safeguard the health of women during their reproductive years and children from birth through adolescence, with special attention to periods of greatest vulnerability: pregnancy, delivery, the neonatal period, and early childhood. MCH services address both preventive and curative dimensions, aiming to reduce illness and death while promoting optimal growth, development, and well-being across the life cycle.

The objectives of MCH services are to reduce maternal mortality by ensuring access to skilled care during pregnancy and delivery; reduce infant and child mortality through immunisation, nutrition support, and management of childhood illness; promote the physical, mental, and social development of children; support healthy spacing of pregnancies through family planning; and strengthen community capacity to demand and use available MCH services.

Fill in the blank: MCH services aim to reduce _____ mortality by ensuring access to skilled care during pregnancy and delivery, and reduce infant and child mortality through immunisation, nutrition, and management of childhood illness.

2.1.2 Components of MCH services

The core components of MCH services include: antenatal care (ANC) for pregnant women; skilled attendance at delivery and emergency obstetric care; postnatal care for mother and newborn; newborn care including resuscitation, thermal care, and early breastfeeding support; child health including immunisation, growth monitoring, and management of childhood illnesses; family planning; nutrition counselling and support; and health education on maternal, infant, and child health topics.

These components are delivered at multiple levels of the Nigerian health system. The PHC facility provides ANC, normal delivery, postnatal care, immunisation, and family planning. Secondary facilities (general hospitals) manage complicated deliveries and referrals from PHC. Tertiary facilities manage high-risk pregnancies and complex neonatal conditions. Community-level delivery through CHEWs, TBAs, and community health volunteers extends coverage to households not regularly attending facilities.

Fill in the blank: The core components of MCH services include antenatal care, skilled delivery attendance, postnatal care, newborn care, child health services, family planning, and _____ counselling and support.

2.1.3 Prenatal care and safe motherhood

Antenatal care is the care provided by skilled health professionals to pregnant women to ensure the best health conditions for both mother and baby. The WHO recommends a minimum of eight ANC contacts during pregnancy (revised from the previous four-visit focused ANC model in 2016), including blood pressure monitoring, urine testing, blood tests for anaemia and infections, tetanus immunisation, iron and folic acid supplementation, malaria prevention, and birth preparedness counselling. Nigeria NDHS 2018 estimated that only 67% of women received at least four ANC visits.

Safe motherhood encompasses the interventions required to ensure that every woman receives the care she needs to be safe and healthy throughout pregnancy and childbirth. Its pillars include family planning, ANC, skilled birth attendance, emergency obstetric care, and postnatal care. The three delays model identifies delay in deciding to seek care, delay in reaching the facility, and delay in receiving care at the facility as the key points at which preventable maternal deaths occur, guiding programmatic strategies to reduce maternal mortality.

Fill in the blank: The _____ delays model identifies delay in deciding to seek care, delay in reaching the facility, and delay in receiving care at the facility as key points where preventable maternal deaths occur.

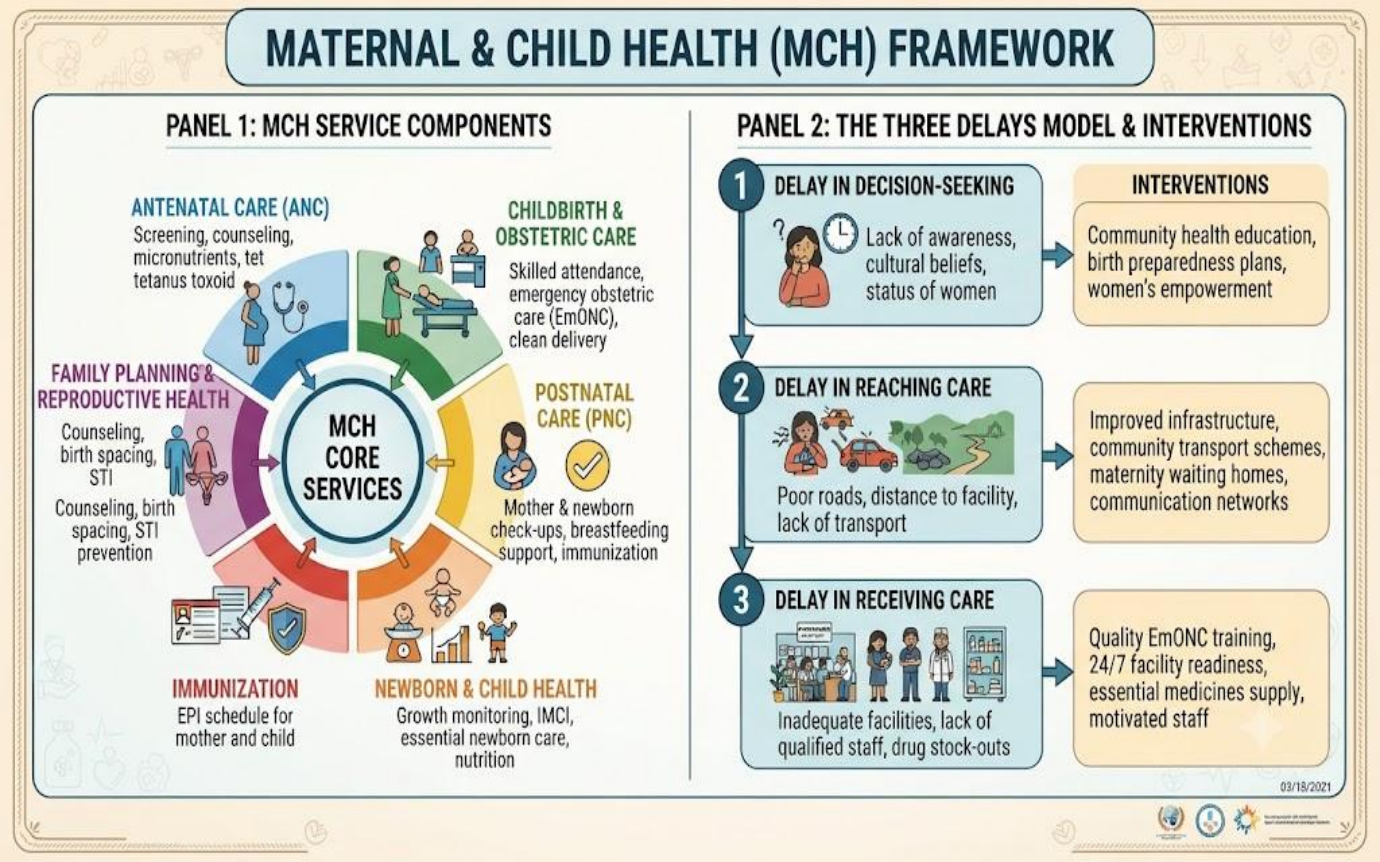

Figure 2.1: Components of MCH services and the safe motherhood framework

Pilot questions 2.1

1. State three objectives of MCH services.
2. List five core components of MCH services.
3. What does the WHO recommend regarding the minimum number of ANC contacts during pregnancy?
4. Name the five pillars of safe motherhood.
5. Explain the three delays model.

2.2 Child Health Services and School Health

2.2.1 Child health services: immunisation and growth monitoring

Immunisation is the most cost-effective child health intervention available, protecting children against vaccine-preventable diseases including tuberculosis, polio, diphtheria, pertussis, tetanus,

measles, hepatitis B, Haemophilus influenzae type b, pneumococcal disease, rotavirus, meningitis, and yellow fever. Nigeria National Programme on Immunisation (NPI), coordinated by the NPHCDA, delivers both routine immunisation through fixed PHC facilities and supplementary immunisation activities (SIAs) such as National Immunisation Days targeting diseases like polio and measles.

Growth monitoring is the regular measurement of a child weight, height, and mid-upper arm circumference (MUAC), plotted on a growth chart and compared against reference standards to identify faltering growth early. It enables timely identification of underweight, stunting, and acute malnutrition before clinical signs appear, triggering nutritional counselling, therapeutic feeding referral, and investigation of underlying causes. In Nigeria, growth monitoring is conducted at the under-five clinic integrated into PHC facilities and during community outreach sessions.

Fill in the blank: Growth monitoring uses regular measurement of weight, height, and mid-upper arm circumference (_____) plotted on growth charts to identify faltering growth early and trigger timely intervention.

2.2.2 Nutrition and integrated management of childhood illness

Childhood malnutrition remains a major public health problem in Nigeria, with the 2018 NDHS reporting stunting rates of 37% and wasting rates of 7% among children under five. Nutrition interventions within MCH services include promotion of exclusive breastfeeding for the first six months of life, timely introduction of complementary foods, micronutrient supplementation (vitamin A, zinc, iron), deworming, and therapeutic feeding for severe acute malnutrition. These are delivered through PHC facilities, community outreach, and school-based programmes.

The Integrated Management of Childhood Illness (IMCI) strategy provides a standardised approach to the assessment and management of the most common causes of child mortality: pneumonia, diarrhoea, malaria, measles, and malnutrition. IMCI integrates clinical assessment, case classification, treatment, and health education into a single algorithm, improving care quality at PHC level. Nigeria has adapted IMCI for both facility-based and community-based (C-IMCI) delivery, with training extended to CHEWs for household-level application.

Fill in the blank: The Integrated Management of Childhood Illness (IMCI) strategy provides a standardised approach to assessment and management of pneumonia, diarrhoea, malaria, measles, and _____ at the primary care level.

2.2.3 School health programme

The school health programme extends health services and health education to school-age children through the school setting, reaching a large proportion of children in a structured, accessible environment. Its components include health screening and referral (vision, hearing, dental, and nutritional status assessments); health education on personal hygiene, nutrition, and disease prevention; immunisation of school-age children; environmental sanitation of school premises; and school feeding programmes that improve nutritional status and school attendance simultaneously.

In Nigeria, the school health programme is a joint responsibility of the Federal Ministries of Health and Education, implemented through state-level school health units and delivered by school health nurses, teachers, and environmental health officers. Challenges include inadequate funding, shortage of trained school health personnel, poor school sanitation infrastructure, and variable implementation quality across states. The programme is a critical platform for reaching adolescents with reproductive health education, examined in Series 4.

Fill in the blank: The school health programme components include health screening and referral, health education, immunisation, environmental _____ of school premises, and school feeding programmes.

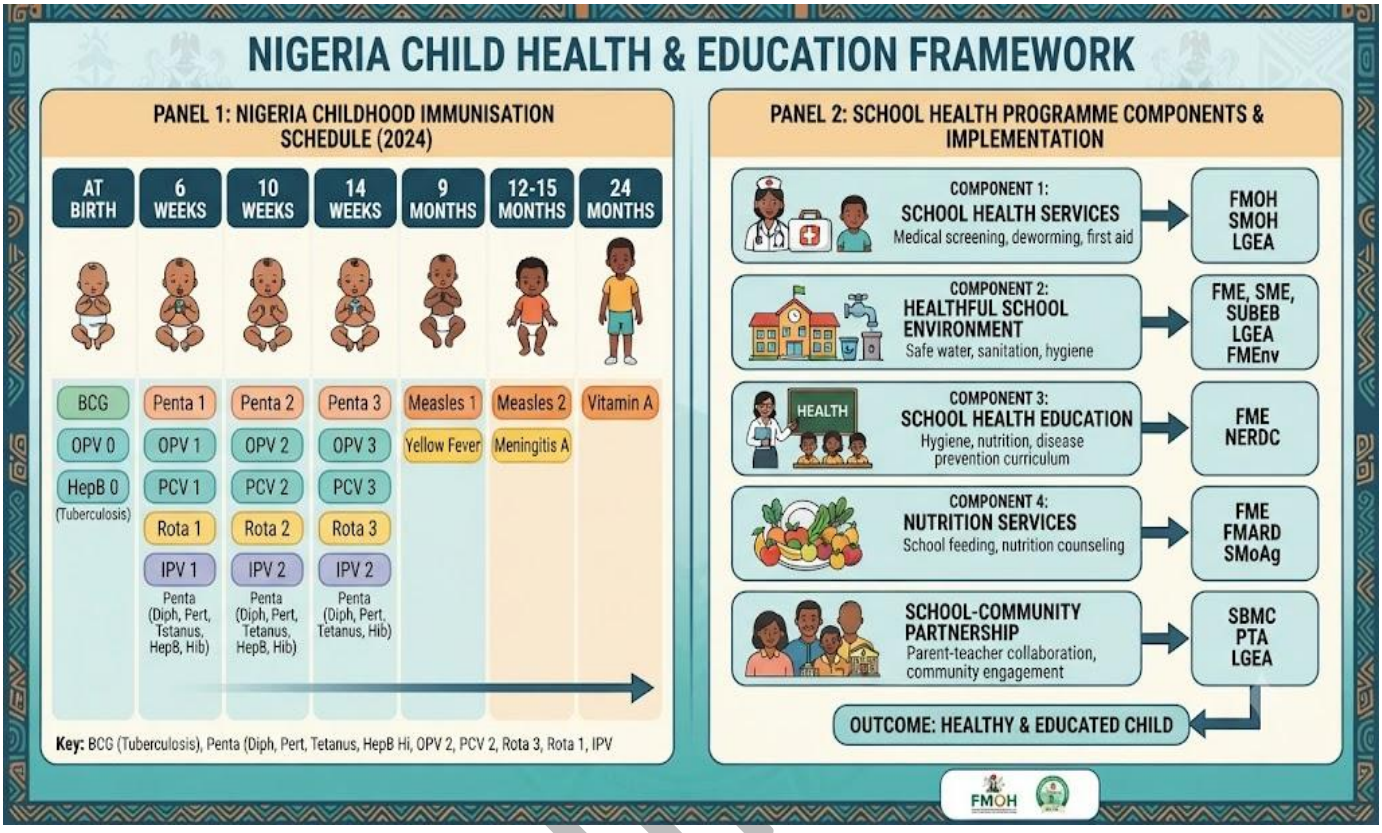

Figure 2.2: Child health services and the school health programme

Pilot questions 2.2

1. Name five vaccine-preventable diseases targeted by Nigeria NPI.
2. What is growth monitoring and what measurements does it use?
3. State two nutritional interventions delivered within MCH services.
4. What five conditions does IMCI address?
5. Name four components of the school health programme.

2.3 Roles and International Agencies in MCH

2.3.1 The role of traditional birth attendants

Traditional birth attendants (TBAs) are community-based individuals who assist women during childbirth and provide basic maternal care, typically without formal health training. In Nigeria,

particularly in rural areas, a significant proportion of deliveries still occur outside health facilities, often assisted by TBAs. They are trusted members of their communities, speak local languages, are available day and night, and can be reached without payment in cash, making them important actors in communities where formal services are physically and financially inaccessible.

The role of TBAs in safe motherhood is debated in public health. While they provide a social and emotional support function that formal services often cannot replicate, studies consistently show that untrained TBAs cannot safely manage obstetric complications, leading to preventable maternal and neonatal deaths. WHO and Nigeria policy favour training TBAs in clean delivery practices, danger sign recognition, and timely referral, and integrating them into community health volunteer networks under CHEW supervision rather than replacing them abruptly.

Fill in the blank: Traditional birth attendants are trusted in their communities because they speak local languages, are available day and night, and can be reached without _____ payment, making them important where formal services are inaccessible.

2.3.2 Roles of international health agencies in MCH development

Several international agencies play significant roles in supporting MCH in Nigeria. WHO provides technical standards, guidelines, and normative support for ANC, delivery care, immunisation, and IMCI. UNICEF funds immunisation, nutrition, and child survival programmes and supports community-based MCH outreach. The World Bank finances health system strengthening projects with MCH components. USAID and its implementing partners (including the Maternal and Child Survival Program) provide substantial support for facility-based and community-level MCH service improvement.

UNFPA focuses on reproductive health and maternal mortality reduction, supporting skilled birth attendance, emergency obstetric care strengthening, and family planning. The Global Fund supports HIV-related maternal health interventions, including prevention of mother-to-child transmission (PMTCT). These agencies work through the Federal Ministry of Health, state health systems, and civil society organisations, providing financial resources, technical assistance, and accountability systems that complement government investment in MCH.

Fill in the blank: _____ focuses on reproductive health and maternal mortality reduction, supporting skilled birth attendance, emergency obstetric care, and family planning in Nigeria.

2.3.3 Natural immunisation and the Expanded Programme on Immunisation

Natural immunisation refers to the immunity acquired through natural infection with a pathogen, as distinguished from vaccine-induced (artificial) immunisation. While natural infection with diseases such as measles confers lasting immunity, it does so at the cost of the morbidity and mortality associated with the disease itself, making natural immunisation an unacceptable substitute for vaccination from a public health perspective. Understanding this distinction is important for health education, particularly in addressing community misconceptions that natural infection is preferable or equivalent to vaccination.

The Expanded Programme on Immunisation (EPI), launched globally by WHO in 1974 and adopted in Nigeria, provides the framework for routine immunisation of all children against vaccine-preventable diseases. Nigeria NPI administers the EPI schedule through fixed facility sessions, outreach sessions to under-served communities, and mobile immunisation for nomadic and displaced populations. Despite improvements, full immunisation coverage in Nigeria remains below 50% nationally, with wide regional disparities, driving continued National Immunisation Days and catch-up campaigns.

Fill in the blank: The Expanded Programme on Immunisation (EPI), launched by WHO in 1974 and adopted in Nigeria, provides the framework for _____ immunisation of all children against vaccine-preventable diseases.

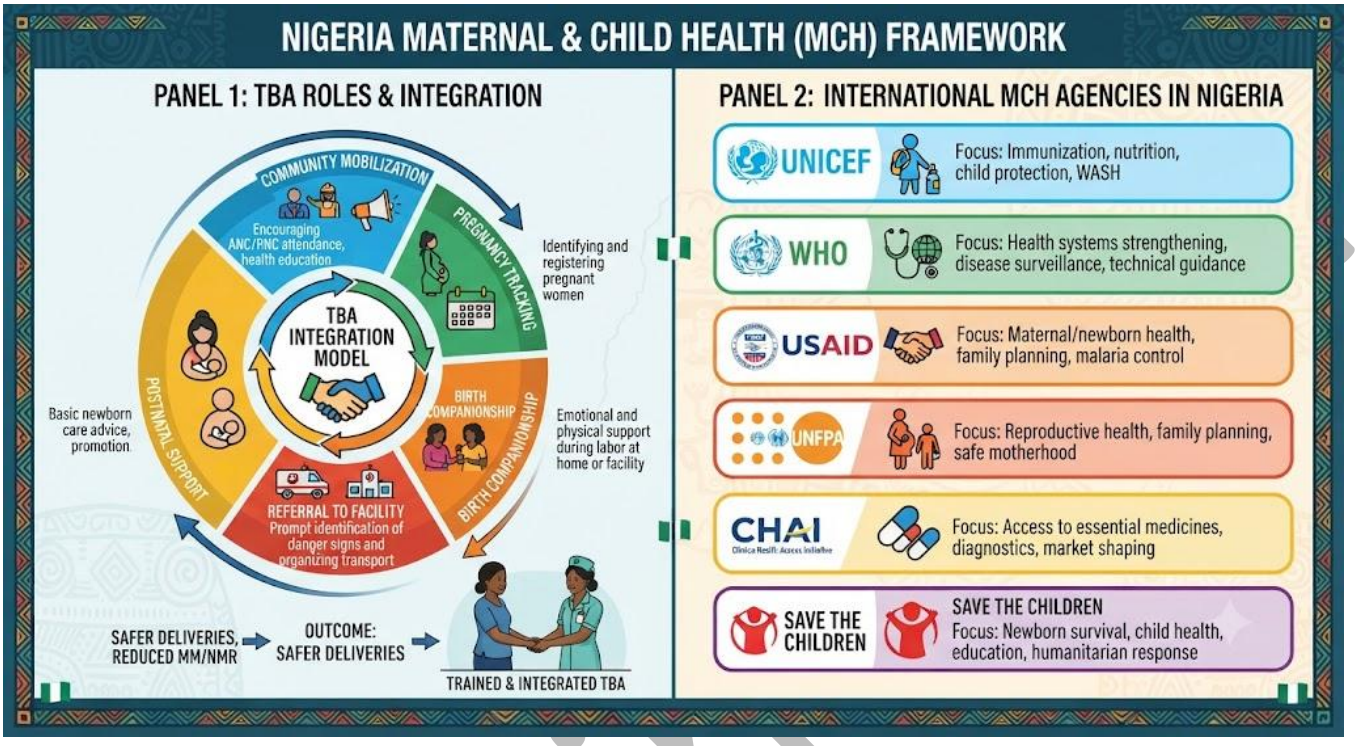

Figure 2.3: Traditional birth attendants and international MCH agencies

Pilot questions 2.3

1. Name three reasons why TBAs are trusted in Nigerian communities.
2. What is the current WHO and Nigerian policy position on the role of TBAs?
3. Name four international agencies involved in MCH in Nigeria and state the primary MCH focus of each.
4. Distinguish between natural immunisation and vaccine-induced immunisation.
5. What is the EPI and why was it established?

Series Summary

This Series examined the objectives, components, and delivery of maternal and child health services. MCH services were defined as organised activities safeguarding women during their reproductive years and children from birth through adolescence, with objectives covering maternal and child mortality reduction, growth and development promotion, and family planning integration. Prenatal care and safe motherhood were examined, including the WHO eight-contact ANC recommendation and the three delays model. Child health services were described through immunisation, growth monitoring, IMCI, and nutrition interventions.

The school health programme was described across its components of screening, health education, immunisation, environmental sanitation, and school feeding. The role of traditional birth attendants was examined, balancing their community trust value against their clinical limitations and supporting an integration and training approach. The contributions of WHO, UNICEF, UNFPA, USAID, the World Bank, and the Global Fund to MCH development in Nigeria were described. The Series concluded by distinguishing natural from vaccine-induced immunisation and describing the EPI framework and its implementation through the Nigerian NPI (SLOs 2.1 to 2.6).

Glossary of Terms

1. **Antenatal care (ANC):** care provided by skilled health professionals to pregnant women to ensure the best health conditions for mother and baby throughout pregnancy.
2. **EPI (Expanded Programme on Immunisation):** the WHO framework launched in 1974 providing for routine immunisation of all children against vaccine-preventable diseases.
3. **IMCI:** Integrated Management of Childhood Illness; a standardised strategy for assessing and managing the most common causes of child mortality at primary care level.

4. **Natural immunisation:** immunity acquired through natural infection with a pathogen, as distinguished from vaccine-induced immunisation.

5. **Postnatal care:** care provided to mother and newborn in the hours, days, and weeks following delivery.

6. **Safe motherhood:** the package of interventions ensuring every woman is safe and healthy throughout pregnancy and childbirth, encompassing ANC, skilled delivery, emergency obstetric care, and postnatal care.

7. **School health programme:** a structured programme extending health services and health education to school-age children through the school setting.

8. **Skilled birth attendance:** delivery attended by a trained health professional capable of managing normal deliveries and recognising and managing complications.

9. **Three delays model:** a framework identifying delay in deciding to seek care, delay in reaching the facility, and delay in receiving care as key points where preventable maternal deaths occur.

10. **Traditional birth attendant (TBA):** a community-based individual who assists women during childbirth without formal health training.

Concept Check Questions [Series 2]

Objective questions

- MCH services aim to reduce _____ mortality by ensuring access to skilled care during pregnancy and delivery. (Linked to SLO 2.1)
- The _____ delays model identifies three key points where preventable maternal deaths occur. (Linked to SLO 2.2)
- Growth monitoring uses weight, height, and mid-upper arm circumference (_____) measurements plotted on growth charts. (Linked to SLO 2.3)
- IMCI addresses pneumonia, diarrhoea, malaria, measles, and _____. (Linked to SLO 2.3)
- Environmental _____ of school premises is one component of the school health programme. (Linked to SLO 2.4)
- The EPI, launched by WHO in 1974, provides the framework for _____ immunisation of all children. (Linked to SLO 2.6)

Short-answer questions

- Describe the components of MCH services and explain how they are delivered at different levels of the Nigerian health system. (Linked to SLO 2.1)
- Explain the role of TBAs in MCH, their strengths and limitations, and the recommended policy approach. (Linked to SLO 2.5)

Long-answer questions

- Discuss prenatal care and safe motherhood, covering the WHO ANC recommendations, the three delays model, and strategies for reducing maternal mortality in Nigeria. (Linked to SLO 2.2)
- Evaluate child health services in Nigeria, covering immunisation, growth monitoring, IMCI, and nutrition interventions, and explain the contribution of international agencies. (Linked to SLOs 2.3, 2.6)

Answers to Concept Check Questions [Series 2]

Objective questions

1. Maternal.
2. Three.
3. MUAC.
4. Malnutrition.
5. Sanitation.
6. Routine.

Short-answer questions

7. Components: ANC, skilled delivery attendance, emergency obstetric care, postnatal care, newborn care, child immunisation, growth monitoring, family planning, nutrition counselling, health education. Delivery: PHC facilities provide ANC, normal delivery, postnatal care, immunisation, and family planning. Secondary facilities manage complicated deliveries and referrals. Tertiary facilities manage high-risk pregnancies. Community-level delivery through CHEWs, TBAs, and community volunteers extends coverage to non-facility-attending households.
8. TBAs are trusted community members who speak local languages, are available day and night, and are often accessible without cash payment, making them important where formal services are inaccessible. Limitation: untrained TBAs cannot safely manage obstetric complications, contributing to preventable maternal and neonatal deaths. Recommended policy: train TBAs in clean delivery, danger sign recognition, and timely referral, and integrate them into community health volunteer networks under CHEW supervision.

Long-answer questions

9. **Basic response:** WHO recommends minimum eight ANC contacts for all pregnant women including blood pressure monitoring, urine testing, blood tests, tetanus immunisation, iron and folic acid supplementation, malaria prevention, and birth

preparedness. Nigeria 2018 NDHS estimated only 67% received at least four visits. Three delays model: delay 1 (deciding to seek care, addressed by health education and community mobilisation); delay 2 (reaching facility, addressed by transport schemes and proximity of facilities); delay 3 (receiving care, addressed by emergency obstetric care strengthening and staffing). Safe motherhood pillars: family planning, ANC, skilled birth attendance, emergency obstetric care, postnatal care.

Value-added response: The three delays model remains the most practically useful framework for diagnosing where a specific community maternal mortality burden is concentrated and targeting intervention accordingly. Communities where delay 1 predominates require community health education and male partner engagement; those where delay 2 predominates require transport solutions or community waiting homes; those where delay 3 predominates require clinical quality improvement and emergency obstetric care investments. Applying the model without distinguishing which delay dominates in a specific setting leads to generic, unfocused maternal health programmes that achieve limited reduction in mortality.

10. **Basic response:** Immunisation: NPI delivers EPI schedule through fixed facilities, outreach, and SIAs; coverage remains below 50% nationally. Growth monitoring: weight, height, MUAC plotted on growth charts, triggers early intervention for faltering growth. IMCI: standardised assessment and management of pneumonia, diarrhoea, malaria, measles, malnutrition at PHC level; extended to community through C-IMCI. Nutrition: exclusive breastfeeding promotion, complementary feeding, vitamin A and zinc supplementation, deworming, therapeutic feeding for SAM. International agencies: WHO (technical standards), UNICEF (immunisation, nutrition funding), UNFPA (maternal health), USAID (facility and community MCH improvement).

Value-added response: The persistent gap between available child health interventions and their population-level impact in Nigeria reflects implementation constraints rather than evidence gaps: all the interventions described are proven effective. The challenge is reaching the nearly half of Nigerian children who never receive a full immunisation schedule and the third who are stunted despite existing nutrition programmes. Strengthening community

outreach, reducing stock-outs, and improving CHEW supervision represent the operational priorities that evidence consistently identifies as the binding constraints on child health outcomes in Nigeria.

Answers to Pilot Questions [Series 2]

Part 2.1

6. Any three of: reduce maternal mortality; reduce infant and child mortality; promote physical, mental, and social development of children; support healthy pregnancy spacing; strengthen community capacity to use MCH services.
7. Any five of: antenatal care, skilled delivery attendance, emergency obstetric care, postnatal care, newborn care, child immunisation, growth monitoring, family planning, nutrition counselling, health education.
8. A minimum of eight ANC contacts during pregnancy.
9. Family planning, antenatal care, skilled birth attendance, emergency obstetric care, and postnatal care.
10. Three delays: delay 1 is delay in deciding to seek care; delay 2 is delay in reaching the health facility; delay 3 is delay in receiving adequate care at the facility. Each delay is a point at which preventable maternal death may occur.

Part 2.2

11. Any five of: tuberculosis, polio, diphtheria, pertussis, tetanus, measles, hepatitis B, Haemophilus influenzae type b, pneumococcal disease, rotavirus, meningitis, yellow fever.
12. Growth monitoring is the regular measurement of a child physical growth to identify faltering early. It uses weight, height or length, and mid-upper arm circumference (MUAC).

13. Any two of: exclusive breastfeeding promotion, complementary feeding introduction, vitamin A supplementation, zinc supplementation, iron supplementation, deworming, therapeutic feeding for severe acute malnutrition.
14. Pneumonia, diarrhoea, malaria, measles, and malnutrition.
15. Any four of: health screening and referral, health education, immunisation of school-age children, environmental sanitation of school premises, school feeding programme.

Part 2.3

1. They speak local languages, are available day and night, and can be accessed without cash payment.
2. WHO and Nigeria policy favour training TBAs in clean delivery practices, danger sign recognition, and timely referral, and integrating them into community health volunteer networks under CHEW supervision.
3. Any four of: WHO (technical standards and guidelines), UNICEF (immunisation and nutrition funding), UNFPA (reproductive health and maternal mortality), USAID (facility and community MCH improvement), World Bank (health system strengthening), Global Fund (PMTCT and HIV-related maternal health).
4. Natural immunisation is immunity acquired through natural infection with a pathogen; vaccine-induced immunisation is immunity conferred by vaccination without requiring the disease to occur. Natural immunisation carries the morbidity and mortality risks of the disease itself, making it an unacceptable substitute for vaccination.
5. The EPI is the WHO framework launched in 1974 providing for routine immunisation of all children against vaccine-preventable diseases. It was established to systematically extend immunisation beyond the wealthiest and most accessible populations to achieve universal child protection.

References and Attributions [Series 2]

Textual references

6. World Health Organization. (2016). WHO recommendations on antenatal care for a positive pregnancy experience. WHO Press.
7. National Population Commission Nigeria and ICF. (2019). Nigeria demographic and health survey 2018. NPC and ICF.
8. Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal mortality in context. Social Science and Medicine, 38(8), 1091-1110.
9. National Open University of Nigeria (NOUN). (2023). Maternal and child health/reproductive health education course material. NOUN Press.

Figures, Plates, Tables, and Boxes

11. Figure 2.1: Components of MCH services and the safe motherhood framework Attribution: AI generated using prompt "Generate a two-panel diagram showing MCH service components and the three delays model with intervention strategies." Suggested OER search string: "MCH services components antenatal care safe motherhood three delays model maternal mortality Nigeria OER"
12. Figure 2.2: Child health services and the school health programme Attribution: AI generated using prompt "Generate a two-panel diagram showing the Nigerian childhood immunisation schedule and the components of the school health programme with implementing agencies." Suggested OER search string: "Nigeria immunisation schedule NPI vaccine-preventable diseases school health programme components OER"
13. Figure 2.3: Traditional birth attendants and international MCH agencies Attribution: AI generated using prompt "Generate a two-panel diagram showing TBA roles and integration, and six international MCH agencies with their focus areas in Nigeria."

Suggested OER search string: "traditional birth attendants TBA role Nigeria international MCH agencies WHO UNICEF UNFPA EPI OER"

Course code: COM 407

Course title: Maternal and Child Health/Reproductive Health Education

Course credit load: 1 Unit

Series 3: Morbidity, Mortality, and Community Health

- **Part 3.1: Causes of Morbidity and Mortality in Women and Children**
  - Sub Part 3.1.1: Leading causes of maternal morbidity and mortality
  - Sub Part 3.1.2: Leading causes of child morbidity and mortality
  - Sub Part 3.1.3: Malaria in pregnancy and its consequences
- **Part 3.2: Harmful Traditional Practices and Abortion**
  - Sub Part 3.2.1: Harmful traditional practices affecting women and children
  - Sub Part 3.2.2: Unsafe abortion: magnitude and consequences
  - Sub Part 3.2.3: Prevention strategies for harmful practices and unsafe abortion
- **Part 3.3: Community Health Strategies for Reducing Morbidity and Mortality**
  - Sub Part 3.3.1: Community-based interventions for maternal health
  - Sub Part 3.3.2: Community-based interventions for child health
  - Sub Part 3.3.3: The role of community health in reducing preventable deaths

Introduction

Despite decades of investment in maternal and child health services, Nigeria continues to carry one of the highest burdens of maternal and child mortality in the world. Understanding the causes of this burden, including infectious diseases, harmful traditional practices, and unsafe abortion, is essential for designing effective community health responses. Equally important is understanding the community-based strategies that have demonstrated impact in reducing preventable deaths in resource-constrained settings.

The aim of this Series is to describe the leading causes of morbidity and mortality among women and children in Nigeria, examine harmful traditional practices and unsafe abortion, and explain the community-based strategies for reducing preventable maternal and child deaths.

We shall commence by examining the causes of maternal and child morbidity and mortality, with particular attention to malaria in pregnancy. Next, we will examine harmful traditional practices and unsafe abortion. Finally, we will close by describing the community-based interventions that have demonstrated impact on maternal and child health outcomes.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- **SLO 3.1** enumerate the leading causes of maternal morbidity and mortality in Nigeria,
- **SLO 3.2** enumerate the leading causes of child morbidity and mortality in Nigeria,
- **SLO 3.3** explain malaria in pregnancy and its consequences for mother and child,
- **SLO 3.4** describe harmful traditional practices affecting women and children,
- **SLO 3.5** explain the magnitude and consequences of unsafe abortion in Nigeria, and
- **SLO 3.6** describe community-based strategies for reducing maternal and child morbidity and mortality.

3.1 Causes of Morbidity and Mortality in Women and Children

3.1.1 Leading causes of maternal morbidity and mortality

Nigeria maternal mortality ratio is estimated at approximately 512 deaths per 100,000 live births (2017 WHO estimate), among the highest globally. The direct obstetric causes of maternal death are haemorrhage (the leading cause), hypertensive disorders of pregnancy (pre-eclampsia and eclampsia), sepsis, obstructed labour, and complications of unsafe abortion. These five causes together account for the majority of preventable maternal deaths and are all addressable through skilled birth attendance, emergency obstetric care, and timely referral.

Indirect causes, which worsen maternal outcomes by complicating pregnancy, include malaria, anaemia, HIV, tuberculosis, and sickle cell disease. Anaemia, often resulting from iron deficiency, malaria, and hookworm infection in combination, affects a large proportion of Nigerian pregnant women and significantly increases the risk of haemorrhage-related death. Addressing indirect causes requires integrating management of these conditions into antenatal care alongside direct obstetric care.

Fill in the blank: The five direct obstetric causes of maternal death are haemorrhage, hypertensive disorders of pregnancy, _____ , obstructed labour, and complications of unsafe abortion.

3.1.2 Leading causes of child morbidity and mortality

Under-five mortality in Nigeria is estimated at 132 deaths per 1,000 live births (2018 NDHS), one of the highest rates in the world. The leading causes of under-five mortality are neonatal conditions (preterm birth complications, birth asphyxia, and neonatal sepsis, collectively accounting for approximately 30% of deaths), pneumonia, diarrhoeal diseases, and malaria. Malnutrition underlies or contributes to approximately 45% of all child deaths by impairing immune function and increasing susceptibility to and severity of infections.

Neonatal mortality (deaths in the first 28 days of life) accounts for nearly half of all under-five deaths in Nigeria, driven by inadequate newborn care at birth, including failure to establish breathing, maintain temperature, prevent infection, and initiate breastfeeding promptly. Improving newborn care at the facility and household level through skilled attendance, kangaroo mother care for premature infants, and early breastfeeding support represents one of the highest-impact strategies for reducing child mortality.

Fill in the blank: Neonatal conditions, pneumonia, diarrhoeal diseases, and _____ are the leading causes of under-five mortality in Nigeria, with malnutrition underlying approximately 45% of all child deaths.

3.1.3 Malaria in pregnancy and its consequences

Malaria in pregnancy is a major contributor to both maternal and child morbidity and mortality in Nigeria. Pregnant women, particularly primigravidae, have reduced immunity to malaria and are therefore more susceptible to infection, more likely to develop severe malaria, and more likely to experience malaria-related anaemia than non-pregnant women. The consequences for the mother include severe anaemia, hypoglycaemia, pulmonary oedema, and death; for the baby, the major consequences are low birth weight, preterm delivery, intrauterine growth restriction, and increased neonatal mortality.

Prevention of malaria in pregnancy in Nigeria is guided by three interventions: intermittent preventive treatment in pregnancy (IPTp) with sulfadoxine-pyrimethamine, administered at each ANC contact from the second trimester; insecticide-treated bed nets (ITNs) for all pregnant women; and effective case management of malaria when it occurs. Despite these established interventions, coverage remains suboptimal, with only a minority of pregnant women receiving the recommended three or more doses of IPTp according to national surveys.

Fill in the blank: Prevention of malaria in pregnancy relies on three interventions: intermittent preventive treatment in pregnancy (IPTp), insecticide-treated bed nets (ITNs), and effective _____ management when malaria occurs.

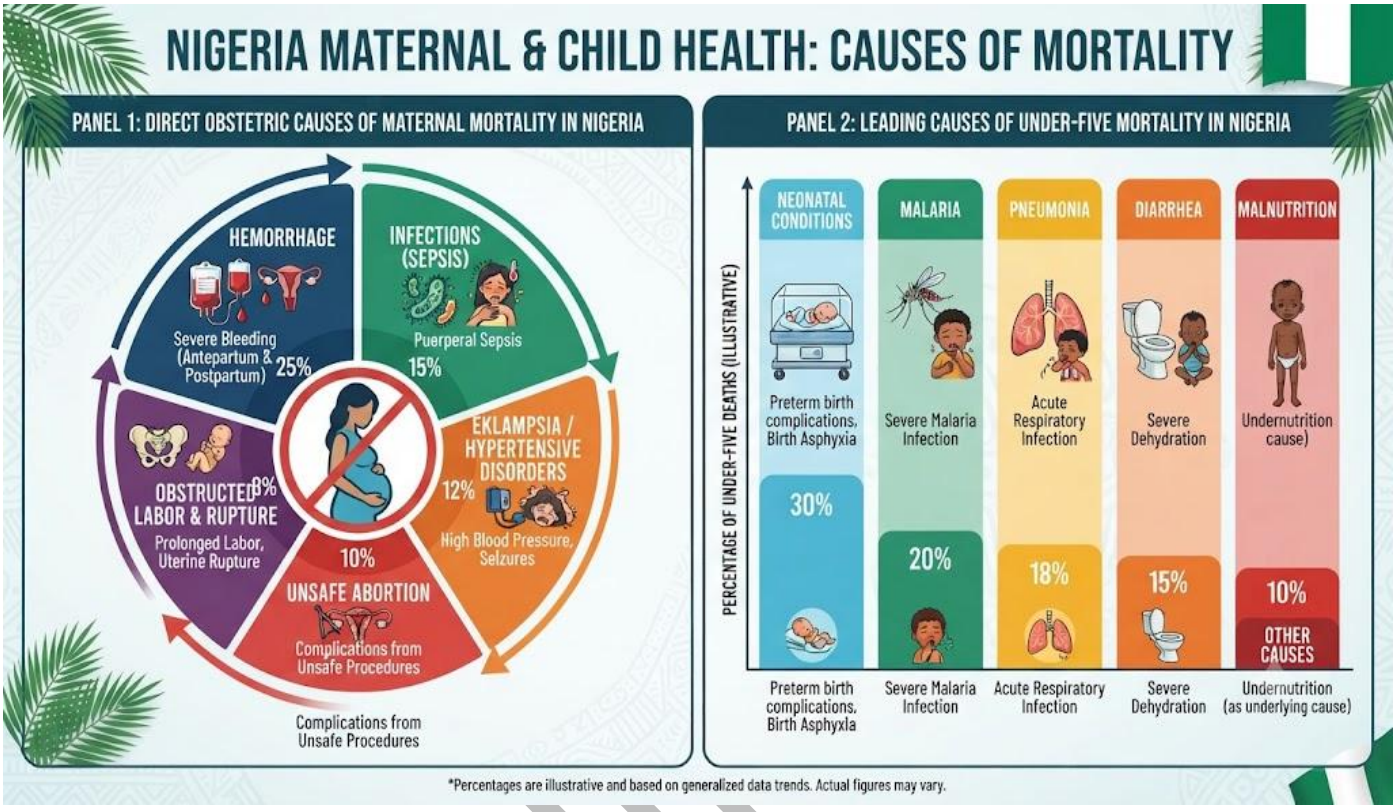

Figure 3.1: Causes of maternal and child mortality in Nigeria

Pilot questions 3.1

1. Name the five direct obstetric causes of maternal death.
2. Name three indirect causes that worsen maternal outcomes.
3. What are the four leading causes of under-five mortality in Nigeria?
4. What proportion of child deaths does malnutrition underlie?
5. Name three consequences of malaria in pregnancy for the baby.

3.2 Harmful Traditional Practices and Abortion

3.2.1 Harmful traditional practices affecting women and children

Harmful traditional practices (HTPs) are cultural or community practices that cause physical or psychological harm, disproportionately affecting women and children. Female genital cutting

(FGC, also called female genital mutilation, FGM) is among the most significant HTPs in Nigeria, involving partial or total removal of the external female genitalia for non-medical reasons. It is associated with acute complications including haemorrhage, infection, and urinary retention, and long-term consequences including chronic pain, obstetric complications, sexual dysfunction, and psychological harm.

Other HTPs in Nigeria include child marriage (marriage before age 18, increasing risk of adolescent pregnancy, obstructed labour, and discontinuation of education); early and forced marriage; uvulectomy; scarification; nutritional taboos during pregnancy that restrict protein intake; and prolonged labour practices that delay emergency care-seeking. These practices often reflect deeply held cultural values and must be addressed through community engagement, education, and legislative enforcement rather than simple condemnation, which risks alienating the communities targeted.

Fill in the blank: Female genital cutting is associated with acute complications including haemorrhage, infection, and urinary retention, and long-term consequences including obstetric complications, sexual dysfunction, and _____ harm.

3.2.2 Unsafe abortion: magnitude and consequences

Unsafe abortion is a major contributor to maternal mortality in Nigeria. Nigeria abortion laws are highly restrictive, permitting abortion only to save the life of the woman, which means that the vast majority of abortions occur outside the formal health system, frequently performed by untrained providers or using dangerous methods. It is estimated that over one million unsafe abortions occur in Nigeria annually, resulting in approximately 34% of all maternal deaths from abortion-related complications including haemorrhage, sepsis, and uterine perforation.

The consequences of unsafe abortion extend beyond mortality to include significant morbidity: an estimated 212,000 women are hospitalised annually in Nigeria for treatment of complications. Unsafe abortion disproportionately affects young and unmarried women who lack access to contraception and face social stigma against seeking care. Post-abortion care (PAC), the treatment of abortion complications regardless of how the abortion was induced, represents the minimum humanitarian health response available within current legal constraints.

Fill in the blank: Post-abortion _____ (PAC) is the treatment of abortion complications regardless of how the abortion was induced, representing the minimum health response available within current legal constraints in Nigeria.

3.2.3 Prevention strategies for harmful practices and unsafe abortion

Addressing HTPs requires a multi-pronged strategy: community education and dialogue that engages community leaders, women groups, and religious authorities as allies rather than adversaries; enforcement of legislative frameworks including the Child Rights Act and Violence Against Persons Prohibition Act, which prohibit FGM, child marriage, and other HTPs; and provision of safe, accessible health services for women and girls affected by these practices. Health workers play a critical role in sensitising communities and identifying affected individuals during routine health contacts.

Reducing unsafe abortion requires expanding access to contraception to prevent unwanted pregnancy, providing comprehensive sexuality education to adolescents, ensuring universal availability of post-abortion care, and engaging policymakers on the public health case for legal reform. While legal and political constraints limit what can be achieved within current frameworks, integrating contraceptive counselling and family planning services into every health contact for women of reproductive age offers the highest-impact immediate strategy for reducing unwanted pregnancy and therefore unsafe abortion.

Fill in the blank: Addressing harmful traditional practices requires community education, enforcement of legislative frameworks such as the Child Rights Act and Violence Against Persons _____ Act, and provision of safe health services for affected women and girls.

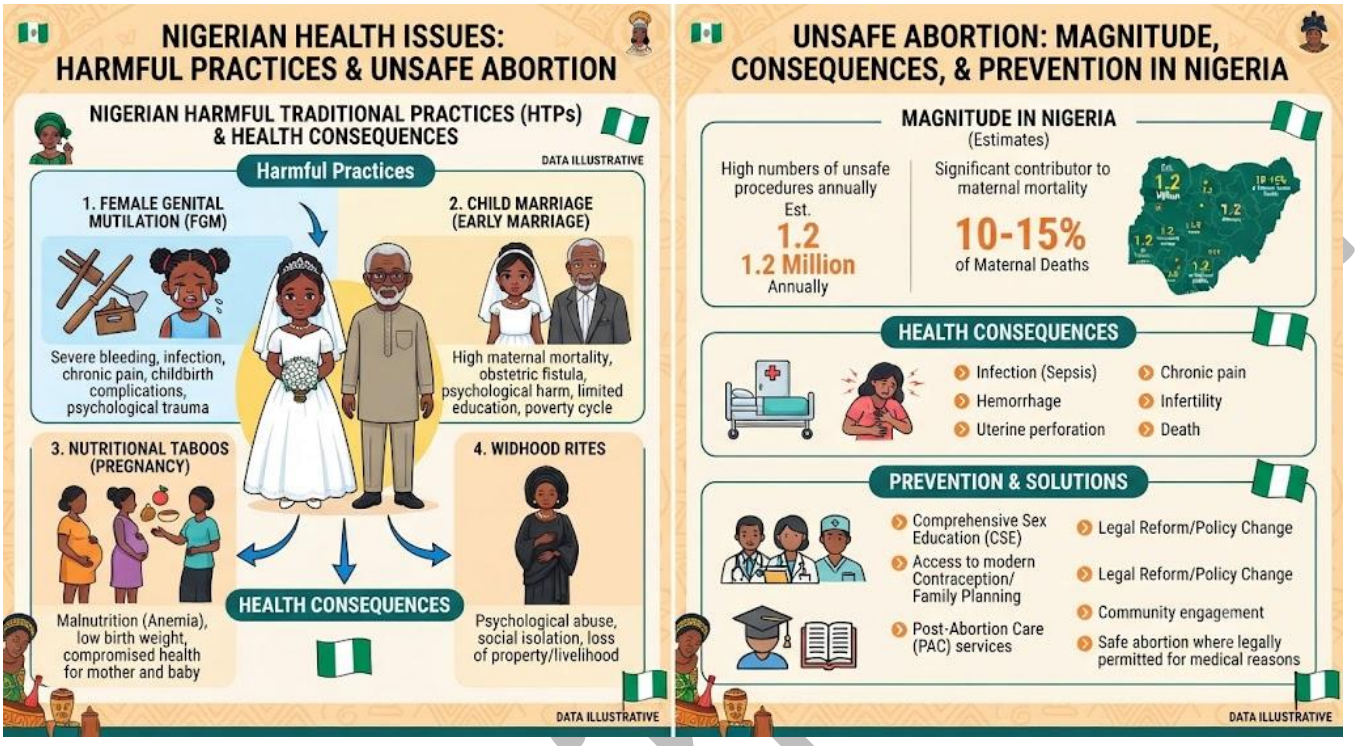

Figure 3.2: Harmful traditional practices and unsafe abortion in Nigeria

Pilot questions 3.2

1. Define female genital cutting and name two acute and two long-term complications.
2. Name three other harmful traditional practices found in Nigeria besides FGC.
3. What proportion of maternal deaths in Nigeria is attributable to unsafe abortion?
4. What is post-abortion care?
5. Name three strategies for reducing unsafe abortion in Nigeria.

3.3 Community Health Strategies for Reducing Morbidity and Mortality

3.3.1 Community-based interventions for maternal health

Community-based interventions have demonstrated significant impact on maternal health outcomes in settings where facility-based care is inaccessible or underutilised. Birth preparedness and complication readiness counselling, conducted during ANC visits and

community outreach, prepares families to plan for skilled delivery, save money for transport and facility costs, identify a birth companion, and recognise danger signs requiring emergency care-seeking. When well implemented, birth preparedness programmes increase the proportion of women delivering in facilities and reduce delays in seeking emergency care.

Community maternal death surveillance and response (CMDSR) is a system for identifying and reviewing maternal deaths at the community level, engaging community members in understanding why deaths occurred and what could have been done differently. Community health committees, women groups, and PHC facility staff participate in case reviews that identify service gaps, community barriers, and social factors contributing to deaths, generating community-owned action plans to prevent similar deaths. This approach embodies the community participation principles that underpin effective PHC.

Fill in the blank: Birth preparedness and complication _____ counselling prepares families to plan for skilled delivery, save money for transport, identify a birth companion, and recognise danger signs requiring emergency care.

3.3.2 Community-based interventions for child health

Community case management (CCM) extends the management of common childhood illness to community level through trained community health workers, enabling treatment of pneumonia, diarrhoea, and malaria at home for children who cannot access facilities. Evidence from multiple low-income countries, including Nigeria, demonstrates that CCM reduces child mortality significantly when implemented at scale with adequate supply chain support and supervision. The CHIPS agent programme in Nigeria is intended to deliver this function, though coverage and quality remain variable.

Promotion of optimal infant and young child feeding (IYCF) practices, including exclusive breastfeeding for six months and appropriate complementary feeding from six months, is among the highest-impact child health interventions available at community level. Community-based growth promotion through regular weighing, nutritional counselling, and referral of faltering children, combined with community cooking demonstrations for affordable complementary

feeding using locally available foods, has demonstrated sustained impact on child nutritional status in multiple Nigerian contexts.

Fill in the blank: Community case management (CCM) extends management of common childhood illness including pneumonia, diarrhoea, and _____ to community level through trained community health workers.

3.3.3 The role of community health in reducing preventable deaths

The majority of maternal and child deaths in Nigeria are preventable with available interventions. The gap between available knowledge and demonstrated community health impact reflects the persistent challenge of implementation: reaching the most marginalised households with consistent, high-quality services, including those in hard-to-reach rural and conflict-affected areas where mortality rates are highest. Community health workers, when adequately trained, supplied, supervised, and financially incentivised, function as the most important bridge between formal health systems and underserved households.

Integrating community health with facility-based services, ensuring robust two-way referral, providing responsive feedback to community health workers on patient outcomes, and engaging communities in identifying and solving local barriers to care-seeking are the operational disciplines that determine whether community health programmes achieve their potential impact. In Nigeria, sustainable reduction in maternal and child mortality will require this integrated approach, combining strong PHC facilities, well-supported community health workers, and empowered communities capable of demanding and holding accountable the services they deserve.

Fill in the blank: Community health workers function as the most important _____ between formal health systems and underserved households when adequately trained, supplied, supervised, and financially incentivised.

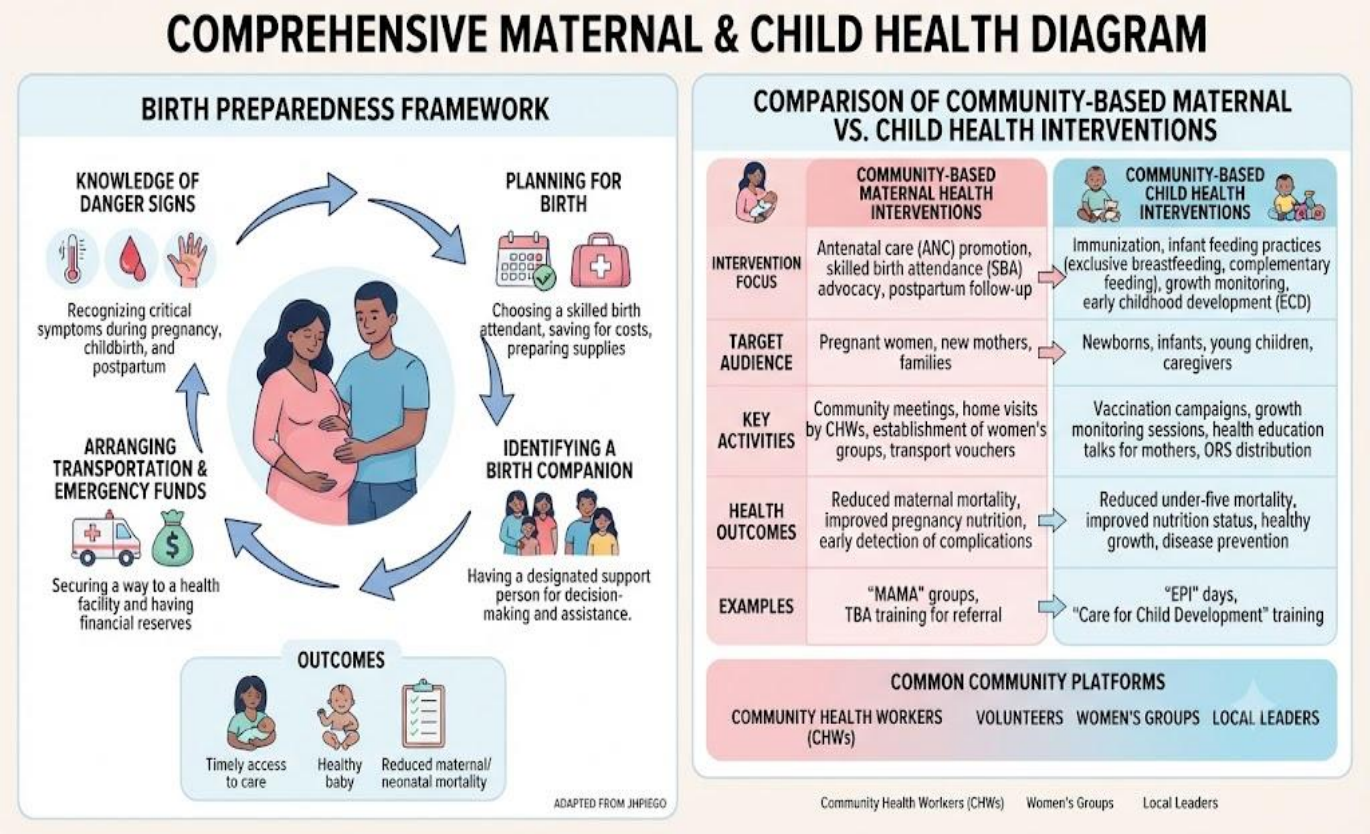

Figure 3.3: Community-based strategies for reducing maternal and child mortality

Pilot questions 3.3

1. What is birth preparedness counselling and what are its key elements?
2. What is community maternal death surveillance and response (CMDSR)?
3. What is community case management (CCM) and what conditions does it address?
4. Name two high-impact IYCF practices promoted at community level.
5. Why do most maternal and child deaths in Nigeria remain preventable despite available interventions?

Series Summary

This Series examined the causes of morbidity and mortality among women and children in Nigeria and the community-based strategies available to address them. The five direct obstetric causes of maternal death, haemorrhage, hypertensive disorders, sepsis, obstructed labour, and unsafe abortion complications, were described alongside indirect causes including malaria, anaemia, and HIV. Under-five mortality was examined through its leading causes of neonatal conditions, pneumonia, diarrhoea, and malaria, with malnutrition identified as an underlying factor in 45% of child deaths. Malaria in pregnancy was examined in detail, including its prevention through IPTp, ITNs, and case management.

Harmful traditional practices, including FGC and child marriage, were described alongside unsafe abortion, its magnitude (over one million annually), mortality contribution (34% of maternal deaths), and the role of post-abortion care as the minimum available health response. Community-based strategies for reducing maternal and child mortality were examined, including birth preparedness, community maternal death surveillance, community case management, and IYCF promotion, emphasising that sustainable impact requires integration of community health workers with facility-based services and empowered communities (SLOs 3.1 to 3.6).

Glossary of Terms

1. **Birth preparedness:** a process of planning for skilled delivery in advance, including saving for transport and facility costs, identifying a birth companion, and recognising danger signs.
2. **CCM (community case management):** treatment of common childhood illness including pneumonia, diarrhoea, and malaria at community level through trained community health workers.
3. **CMDSR:** Community maternal death surveillance and response; a system identifying and reviewing maternal deaths at community level to prevent similar deaths.

4. **Female genital cutting (FGC):** partial or total removal of the external female genitalia for non-medical reasons; a harmful traditional practice causing acute and long-term health complications.
5. **Haemorrhage:** excessive bleeding; the leading direct obstetric cause of maternal death globally and in Nigeria.
6. **IYCF:** Infant and Young Child Feeding; a set of evidence-based practices including exclusive breastfeeding and appropriate complementary feeding to optimise child nutrition.
7. **IPTp:** Intermittent preventive treatment in pregnancy; sulfadoxine-pyrimethamine given at each ANC contact from the second trimester to prevent malaria in pregnancy.
8. **Malaria in pregnancy:** a condition of heightened susceptibility to malaria and its complications during pregnancy, with consequences for both mother and baby.
9. **Post-abortion care (PAC):** treatment of complications arising from abortion, regardless of how the abortion was induced.
10. **Unsafe abortion:** a procedure for terminating a pregnancy performed by a person lacking the necessary skills or in an environment not meeting minimum medical standards.

Concept Check Questions [Series 3]

Objective questions

- The five direct obstetric causes of maternal death include haemorrhage, hypertensive disorders, _____ , obstructed labour, and unsafe abortion complications. (Linked to SLO 3.1)
- Malnutrition underlies approximately _____ % of all under-five deaths in Nigeria. (Linked to SLO 3.2)
- Prevention of malaria in pregnancy relies on IPTp, insecticide-treated bed nets, and effective _____ management. (Linked to SLO 3.3)
- Female genital cutting causes long-term complications including obstetric complications, sexual dysfunction, and _____ harm. (Linked to SLO 3.4)
- Post-abortion _____ (PAC) is the treatment of abortion complications regardless of how the abortion was induced. (Linked to SLO 3.5)
- Community _____ management extends treatment of pneumonia, diarrhoea, and malaria to community level through trained health workers. (Linked to SLO 3.6)

Short-answer questions

- Describe malaria in pregnancy, covering its consequences for mother and baby and the three prevention interventions. (Linked to SLO 3.3)
- Explain harmful traditional practices in Nigeria, giving three examples and their health consequences. (Linked to SLO 3.4)

Long-answer questions

- Discuss the causes of maternal morbidity and mortality in Nigeria and evaluate the community-based strategies available for their reduction. (Linked to SLOs 3.1, 3.6)
- Examine unsafe abortion in Nigeria, covering its magnitude, causes, consequences, and strategies for reduction. (Linked to SLO 3.5)

Answers to Concept Check Questions [Series 3]

Objective questions

1. Sepsis.
2. 45.
3. Case.
4. Psychological.
5. Care.
6. Case.

Short-answer questions

7. Malaria in pregnancy: pregnant women, especially primigravidae, have reduced immunity, making them more susceptible to infection and severe complications. Maternal consequences: severe anaemia, hypoglycaemia, pulmonary oedema, death. Fetal consequences: low birth weight, preterm delivery, intrauterine growth restriction, increased neonatal mortality. Prevention: IPTp with sulfadoxine-pyrimethamine from second trimester; insecticide-treated bed nets for all pregnant women; effective case management when malaria occurs.
8. FGC: involves removal of external female genitalia; acute complications include haemorrhage and infection; long-term complications include obstetric complications, sexual dysfunction, and psychological harm. Child marriage: marriage before age 18; increases risk of adolescent pregnancy, obstructed labour, and school dropout. Nutritional taboos during pregnancy: restriction of protein foods; causes maternal undernutrition and low birth weight.

Long-answer questions

9. **Basic response:** Direct obstetric causes: haemorrhage (leading cause), hypertensive disorders (pre-eclampsia/eclampsia), sepsis, obstructed labour, unsafe abortion complications. Indirect causes: malaria, anaemia, HIV, tuberculosis, sickle cell disease. Anaemia often from iron deficiency, malaria, and hookworm combined. Community

strategies: birth preparedness and complication readiness counselling (increases facility delivery, reduces delays); CMDSR (community review of maternal deaths generates community-owned prevention plans); community health workers bridging formal services and marginalised households.

Value-added response: The persistent discrepancy between Nigeria maternal mortality ratios and those of comparable economies reflects the systematic failure to address all three delays simultaneously. Programmes that invest heavily in facility emergency obstetric care without addressing delay 1 (community knowledge and decision-making) or delay 2 (transport and distance) achieve limited population-level impact because the women who die most frequently never reach the facilities. The most effective maternal health programmes combine facility strengthening with birth preparedness, transport schemes, and community health worker outreach as an integrated system.

10. **Basic response:** Magnitude: over one million unsafe abortions annually in Nigeria; approximately 34% of maternal deaths attributable to abortion complications; 212,000 women hospitalised annually. Causes: highly restrictive legal environment, limited contraceptive access, social stigma against seeking care, particularly for young and unmarried women. Consequences: haemorrhage, sepsis, uterine perforation, infertility, maternal death. Strategies: expand contraceptive access, comprehensive sexuality education for adolescents, universal post-abortion care availability, policy engagement on legal reform.

Value-added response: The argument for expanding access to safe abortion in Nigeria is fundamentally a public health argument rather than a moral one: the current legal framework does not prevent abortions but only ensures that they occur unsafely, at great cost in maternal lives and morbidity. Countries that have liberalised abortion laws have consistently seen dramatic reductions in abortion-related maternal mortality without increases in overall abortion rates, because the effect of liberalisation is to shift abortions from unsafe to safe provision rather than to increase their total number.

Answers to Pilot Questions [Series 3]

Part 3.1

6. Haemorrhage, hypertensive disorders of pregnancy (pre-eclampsia and eclampsia), sepsis, obstructed labour, and complications of unsafe abortion.
7. Any three of: malaria, anaemia, HIV, tuberculosis, sickle cell disease.
8. Neonatal conditions, pneumonia, diarrhoeal diseases, and malaria.
9. Approximately 45% of all child deaths.
10. Low birth weight, preterm delivery, and intrauterine growth restriction.

Part 3.2

11. Female genital cutting involves partial or total removal of the external female genitalia for non-medical reasons. Acute complications: haemorrhage and infection. Long-term complications: chronic pain and obstetric complications (also acceptable: sexual dysfunction and psychological harm).
12. Any three of: child marriage, uvulectomy, scarification, nutritional taboos during pregnancy, prolonged labour practices delaying emergency care.
13. Approximately 34% of maternal deaths in Nigeria.
14. Post-abortion care is the treatment of complications arising from abortion, regardless of how the abortion was induced.
15. Any three of: expand access to contraception, provide comprehensive sexuality education for adolescents, ensure universal availability of post-abortion care, engage policymakers on legal reform.

Part 3.3

1. Birth preparedness counselling prepares families for skilled delivery in advance. Key elements: planning for skilled delivery, saving money for transport and facility costs,

identifying a birth companion, recognising danger signs, and knowing where to go for emergency care.

2. CMDSR is a system for identifying and reviewing maternal deaths at community level, engaging community members, health committees, and PHC staff in case reviews to understand why deaths occurred and generate community-owned action plans to prevent similar deaths.
3. CCM extends treatment of common childhood illness to community level through trained community health workers. It addresses pneumonia, diarrhoea, and malaria.
4. Exclusive breastfeeding for the first six months of life and appropriate complementary feeding introduction from six months.
5. Because the gap between available interventions and impact reflects implementation challenges: reaching the most marginalised households, including those in hard-to-reach and conflict-affected areas, with consistent, high-quality services requires well-supported community health workers and integrated community-facility systems that remain inadequately resourced in many Nigerian settings.

References and Attributions [Series 3]

Textual references

6. World Health Organization. (2019). Trends in maternal mortality 2000 to 2017. WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.
7. National Population Commission Nigeria and ICF. (2019). Nigeria demographic and health survey 2018. NPC and ICF.
8. Say, L., Chou, D., Gemmill, A., et al. (2014). Global causes of maternal death: A WHO systematic analysis. The Lancet Global Health, 2(6), e323-e333.
9. National Open University of Nigeria (NOUN). (2023). Maternal and child health/reproductive health education course material. NOUN Press.

Figures, Plates, Tables, and Boxes

11. Figure 3.1: Causes of maternal and child mortality in Nigeria Attribution: AI generated using prompt "Generate a two-panel diagram showing the direct obstetric causes of maternal mortality and the leading causes of under-five mortality in Nigeria." Suggested OER search string: "maternal mortality causes Nigeria haemorrhage eclampsia under-five mortality neonatal pneumonia malaria OER"
12. Figure 3.2: Harmful traditional practices and unsafe abortion in Nigeria Attribution: AI generated using prompt "Generate a two-panel diagram showing Nigerian HTPs with health consequences, and the magnitude, consequences, and prevention of unsafe abortion." Suggested OER search string: "harmful traditional practices FGM child marriage Nigeria unsafe abortion post-abortion care prevention OER"
13. Figure 3.3: Community-based strategies for reducing maternal and child mortality Attribution: AI generated using prompt "Generate a two-panel diagram showing the birth preparedness framework and a comparison of community-based maternal versus child health interventions." Suggested OER search string: "birth preparedness community maternal death surveillance community case management IYCF Nigeria OER"

Course code: COM 407

Course title: Maternal and Child Health/Reproductive Health Education

Course credit load: 1 Unit

Series 4: Reproductive Health and Rights

- **Part 4.1: Concepts and Scope of Reproductive Health**
  - Sub Part 4.1.1: Definition and components of reproductive health
  - Sub Part 4.1.2: Reproductive rights and their basis
  - Sub Part 4.1.3: International frameworks for reproductive health
- **Part 4.2: Adolescent Reproductive Health**
  - Sub Part 4.2.1: Adolescent development and sexual behaviour
  - Sub Part 4.2.2: Consequences of adolescent pregnancy
  - Sub Part 4.2.3: Adolescent reproductive health programmes in Nigeria
- **Part 4.3: Gender, Violence, and Reproductive Health**
  - Sub Part 4.3.1: Gender roles and their effect on reproductive health
  - Sub Part 4.3.2: Gender-based violence and its health consequences
  - Sub Part 4.3.3: Addressing gender and violence in reproductive health programmes

Introduction

Reproductive health encompasses far more than the biological processes of reproduction. It includes sexual health, access to contraception, freedom from reproductive coercion, the right to make decisions about one's own body, and protection from gender-based violence. In Nigeria, where reproductive rights are constrained by restrictive laws, gender inequality, and cultural norms, understanding both the concept of reproductive health and the social context that shapes it is essential for any community health practitioner.

The aim of this Series is to define reproductive health and reproductive rights, examine international frameworks guiding reproductive health policy, explore adolescent reproductive health as a priority concern, and address the relationship between gender, violence, and reproductive health outcomes.

We shall commence by defining reproductive health, reproductive rights, and the international frameworks that guide their promotion. Next, we will examine adolescent reproductive health including development, consequences of pregnancy, and programme responses. Finally, we will close by examining gender roles, gender-based violence, and strategies for addressing these within reproductive health programmes.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- **SLO 4.1** define reproductive health and enumerate its components,
- **SLO 4.2** explain reproductive rights and the international frameworks underpinning them,
- **SLO 4.3** describe adolescent reproductive health and the consequences of adolescent pregnancy,
- **SLO 4.4** describe adolescent reproductive health programmes in Nigeria,
- **SLO 4.5** explain how gender roles influence reproductive health outcomes, and

- **SLO 4.6** describe gender-based violence, its health consequences, and programmatic responses.

4.1 Concepts and Scope of Reproductive Health

4.1.1 Definition and components of reproductive health

The International Conference on Population and Development (ICPD), Cairo 1994, defined reproductive health as a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. This definition encompasses sexual health, the right to a satisfying and safe sex life, and the capability to reproduce and the freedom to decide if, when, and how often to do so.

The components of reproductive health include: family planning services and information; maternal health including safe motherhood; prevention and treatment of sexually transmitted infections including HIV; safe abortion where legal, and post-abortion care; treatment of infertility; prevention and management of reproductive tract infections; sexual health education; and prevention and management of gender-based violence. These components collectively address the full reproductive life course from adolescence through the post-reproductive years.

Fill in the blank: Reproductive health, as defined at the ICPD Cairo 1994, encompasses the capability to reproduce and the freedom to decide _____ , when, and how often to do so.

4.1.2 Reproductive rights and their basis

Reproductive rights are the rights of individuals and couples to decide freely and responsibly the number, spacing, and timing of their children and to have the information and means to do so; to attain the highest standard of sexual and reproductive health; and to make decisions concerning reproduction free from discrimination, coercion, and violence. These rights are grounded in international human rights law, including the Universal Declaration of Human Rights, the

Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and the Convention on the Rights of the Child.

In Nigeria, reproductive rights are constrained by restrictive abortion legislation, limited access to contraception for unmarried adolescents, cultural and religious norms that subordinate women's reproductive decision-making to male or family authority, and legal and social frameworks that do not adequately protect women from reproductive coercion. Health practitioners have a professional obligation to understand, promote, and protect the reproductive rights of the individuals and communities they serve, regardless of their personal views on contested social questions.

Fill in the blank: Reproductive rights include the right to decide freely the number and spacing of children, to attain the highest standard of reproductive health, and to make decisions concerning reproduction free from discrimination, coercion, and _____ .

4.1.3 International frameworks for reproductive health

The Programme of Action of the ICPD (Cairo, 1994) is the foundational international framework for reproductive health, shifting the global discourse from population control to individual reproductive rights and reproductive health as a development priority. It established 20-year targets for universal access to reproductive health services, female education, and reduction of maternal and child mortality, subsequently extended and updated through the ICPD+5 (1999), ICPD+20 (2014), and the Nairobi Summit on ICPD25 (2019).

The Sustainable Development Goals (SDGs), particularly SDG 3 (good health and well-being) and SDG 5 (gender equality), embed reproductive health and reproductive rights within the broader 2030 development agenda, with specific targets for universal access to sexual and reproductive health services, ending preventable maternal mortality, and ensuring universal access to contraception. Nigeria has committed to these frameworks and has developed national reproductive health policies aligned with them, though implementation gaps between policy and practice remain substantial.

Fill in the blank: The Programme of Action of the ICPD (Cairo, 1994) shifted the global discourse from population _____ to individual reproductive rights and reproductive health as a development priority.

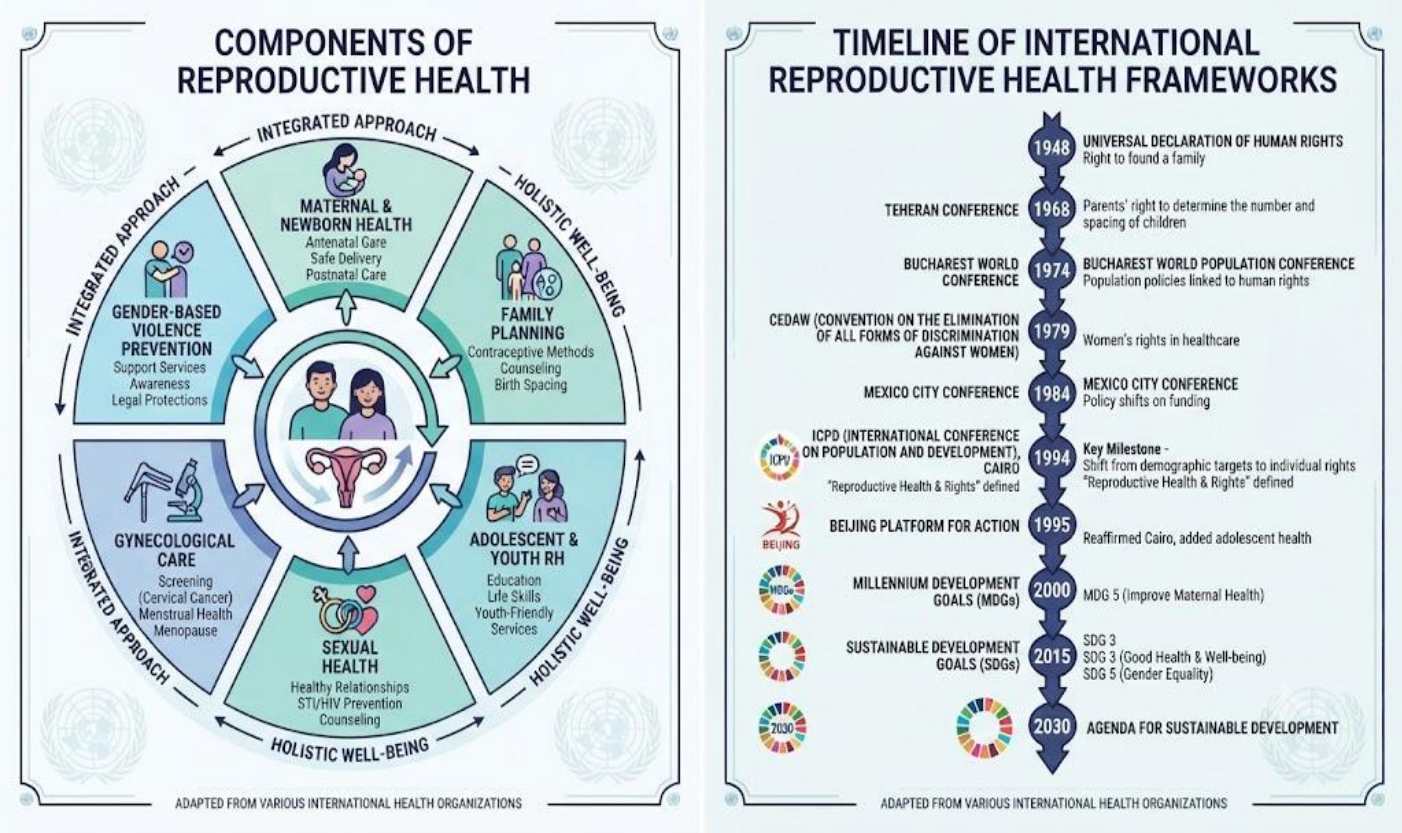

Figure 4.1: Components of reproductive health and key international frameworks

Pilot questions 4.1

1. State the ICPD definition of reproductive health.
2. Name five components of reproductive health.
3. What are reproductive rights?
4. Name two international human rights instruments that ground reproductive rights.
5. What was the significance of the ICPD Programme of Action for reproductive health?

4.2 Adolescent Reproductive Health

4.2.1 Adolescent development and sexual behaviour

Adolescence (ages 10 to 19 years) is characterised by rapid physical, cognitive, emotional, and social development, including the onset of puberty and the emergence of sexual interest and behaviour. In Nigeria, a significant proportion of adolescents become sexually active before age 18, with the 2018 NDHS reporting that 23% of women aged 20 to 24 had their first sexual intercourse before age 15. Many sexually active adolescents lack access to accurate information about contraception, sexually transmitted infections, and pregnancy, and face social stigma that prevents them from seeking reproductive health services.

Adolescent sexual behaviour in Nigeria is shaped by peer influence, media, religious values, parental attitudes, and the quality of sexuality education received. Comprehensive sexuality education (CSE), providing age-appropriate, accurate information about sexual and reproductive health, is critical for equipping adolescents with the knowledge and skills to make informed, safe decisions. In Nigeria, CSE remains controversial and inconsistently implemented in schools, contributing to the high rates of adolescent pregnancy and STI exposure observed nationally.

Fill in the blank: Comprehensive _____ education (CSE), providing age-appropriate, accurate information about sexual and reproductive health, is critical for equipping adolescents with the knowledge to make informed, safe decisions.

4.2.2 Consequences of adolescent pregnancy

Adolescent pregnancy, defined as pregnancy in a girl aged 10 to 19 years, carries substantially higher health risks than pregnancy in adult women. Physical risks include obstructed labour and vesico-vaginal fistula (VVF) due to the immature pelvic size of young adolescents; anaemia; eclampsia; and higher rates of low birth weight and neonatal mortality. Nigeria has one of the highest rates of VVF globally, largely attributable to obstructed labour in young adolescent mothers without access to emergency obstetric care.

Beyond physical consequences, adolescent pregnancy has significant social and economic effects: early school dropout reduces lifetime earning potential and perpetuates cycles of poverty; social stigmatisation affects mental health and social integration; and the dependent adolescent mother is less able to care adequately for her child, increasing the child risk of malnutrition, poor growth, and developmental delay. Preventing adolescent pregnancy through contraceptive access, education, and elimination of child marriage is therefore both a health priority and a development imperative.

Fill in the blank: Adolescent pregnancy carries the risk of vesico-vaginal fistula (VVF), caused by obstructed labour in young adolescents with immature pelvic size, contributing to Nigeria having one of the highest rates of _____ globally.

4.2.3 Adolescent reproductive health programmes in Nigeria

Nigeria has developed national policies and programmes targeting adolescent reproductive health, including the National Reproductive Health Policy, the National Adolescent Health and Development Policy (NAHDP), and the National Sexuality Education Curriculum. These frameworks identify adolescents as a priority population for reproductive health services and mandate youth-friendly health services (YFHS) at PHC facilities, designed to be accessible, confidential, non-judgemental, and sensitive to the specific needs of young people.

In practice, the implementation of adolescent reproductive health programmes remains fragmented and under-resourced. Youth-friendly health services are inconsistently available, and many health workers lack training in adolescent-sensitive communication. Community-based programmes, including peer education through trained youth health ambassadors, school health sessions, and community youth clubs, complement facility-based services and have shown effectiveness in improving adolescent knowledge of reproductive health and contraceptive uptake in several Nigerian states.

Fill in the blank: Youth-friendly health services (YFHS) at PHC facilities are designed to be accessible, confidential, non-judgemental, and sensitive to the specific needs of _____ people.

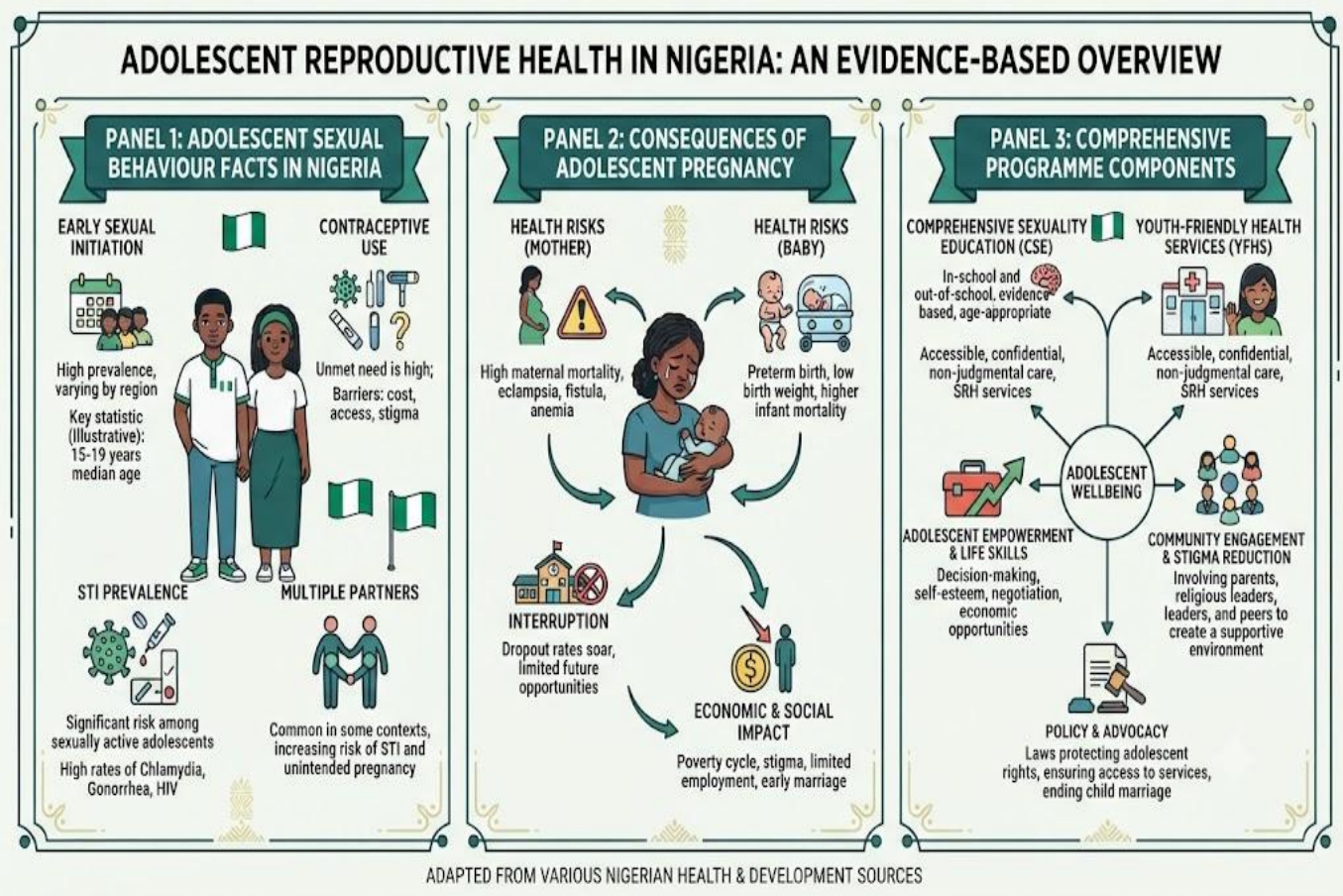

Figure 4.2: Adolescent reproductive health: development, consequences of pregnancy, and programme responses

Pilot questions 4.2

1. Define adolescence.
2. Name three physical consequences of adolescent pregnancy.
3. What is vesico-vaginal fistula and why is it associated with adolescent pregnancy?
4. Name three social consequences of adolescent pregnancy.
5. What are youth-friendly health services (YFHS)?

4.3 Gender, Violence, and Reproductive Health

4.3.1 Gender roles and their effect on reproductive health

Gender refers to the socially constructed roles, behaviours, activities, and attributes that a society considers appropriate for men and women. In Nigeria, traditional gender norms frequently assign women a subordinate role in reproductive decision-making, expecting them to defer to husbands or male family members on decisions about contraceptive use, timing of pregnancy, attendance at antenatal care, and facility delivery. These norms directly undermine women's ability to exercise their reproductive rights and contribute to poor reproductive health outcomes.

Gender norms also affect men's reproductive health behaviours: traditional masculine norms in many Nigerian communities discourage men from seeking health care, discussing sexual health concerns, or engaging with family planning services, contributing to higher rates of undiagnosed STIs and lower male involvement in reproductive health. Engaging men as partners and advocates in reproductive health, rather than treating reproductive health as exclusively a women's concern, has been shown to improve reproductive health outcomes for both men and women in multiple programme contexts.

Fill in the blank: Traditional gender norms in Nigeria frequently expect women to defer to husbands or male family members on decisions about contraceptive use, timing of pregnancy, and _____ delivery, directly undermining women's reproductive rights.

4.3.2 Gender-based violence and its health consequences

Gender-based violence (GBV) refers to violence directed against a person on the basis of their gender, including physical, sexual, emotional, and economic violence. Intimate partner violence (IPV), sexual assault, and rape are the most common forms affecting women's reproductive health, with the 2018 NDHS reporting that 31% of women aged 15 to 49 had experienced physical violence since age 15. GBV has direct reproductive health consequences: sexual violence causes sexually transmitted infections, unwanted pregnancy, and physical injury to the reproductive tract.

Beyond the immediate physical consequences, GBV causes severe psychological trauma (post-traumatic stress disorder, depression, anxiety), restricts women's freedom of movement and ability to seek health care, and creates environments of fear that undermine health-seeking behaviour. GBV is both a cause and a consequence of reproductive health inequity: women with

limited autonomy, educational attainment, and economic independence are more vulnerable to violence, and experiencing violence further reduces autonomy and access to services.

Fill in the blank: Gender-based violence has direct reproductive health consequences including sexually transmitted infections, unwanted pregnancy, and physical injury to the _____ tract.

4.3.3 Addressing gender and violence in reproductive health programmes

Effective reproductive health programmes must integrate gender-transformative approaches, addressing not merely individual knowledge and behaviour but the social norms and power structures that constrain women's reproductive autonomy. This includes training health workers in gender-sensitive communication that does not reinforce discriminatory norms; integrating GBV screening and referral into antenatal care and reproductive health clinic contacts; providing safe, confidential pathways for GBV survivors to access health and psychosocial support; and engaging communities in norm-change processes around gender roles and violence.

Engaging men and boys as active partners in reproductive health and gender equality is increasingly recognised as essential. Male engagement programmes that address masculine norms, promote shared responsibility for contraception and child health, and build men's skills to support rather than control their partners' reproductive health decisions have demonstrated positive impacts on reproductive health outcomes. Integrating GBV prevention into community health worker training and building referral pathways to legal aid, shelter, and psychosocial services are equally important system requirements.

Fill in the blank: _____ -transformative approaches in reproductive health programmes address the social norms and power structures that constrain women's reproductive autonomy, beyond individual knowledge and behaviour change.

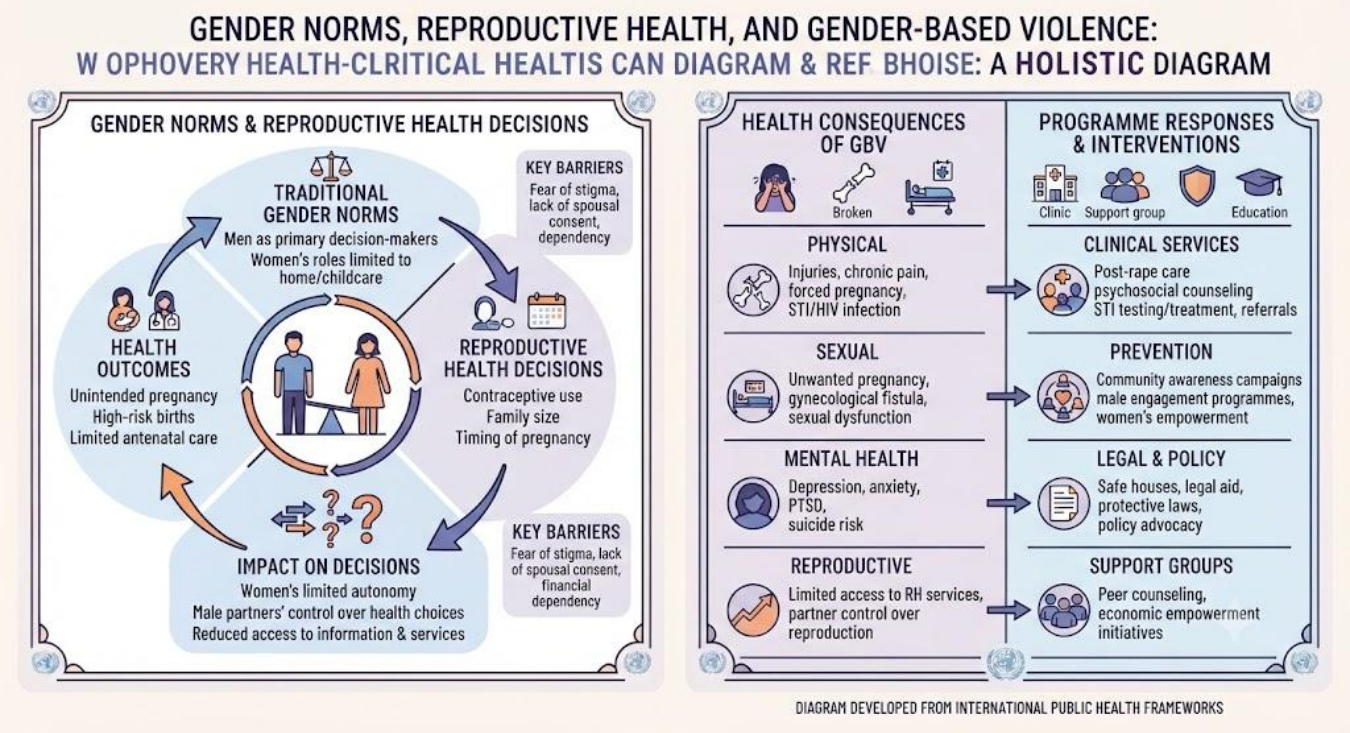

Figure 4.3: Gender, gender-based violence, and reproductive health

Pilot questions 4.3

1. Define gender and explain how it differs from sex.
2. How do traditional gender norms in Nigeria undermine women's reproductive rights?
3. Define gender-based violence and name three forms.
4. Name three direct reproductive health consequences of GBV.
5. Name two components of a gender-transformative approach in reproductive health programmes.

Series Summary

This Series examined reproductive health and rights as a framework and a field of practice. Reproductive health was defined using the ICPD Cairo 1994 definition, with components spanning family planning, safe motherhood, STI prevention, post-abortion care, infertility management, and gender-based violence prevention. Reproductive rights were described as grounded in international human rights instruments, constrained in the Nigerian context by restrictive laws, cultural norms, and gender inequality. The ICPD Programme of Action and the SDGs were identified as the principal international frameworks guiding reproductive health policy.

Adolescent reproductive health was examined through puberty and sexual behaviour, the significant physical and social consequences of adolescent pregnancy including VVF, and the national policy and programme responses including youth-friendly health services and peer education. The Series concluded by examining gender roles and their effects on reproductive autonomy, gender-based violence including its prevalence and health consequences, and the gender-transformative programme approaches required to address structural barriers to reproductive health, including male engagement and GBV integration into routine health service contacts (SLOs 4.1 to 4.6).

Glossary of Terms

1. **Adolescent pregnancy:** pregnancy in a girl aged 10 to 19 years, carrying higher health risks than adult pregnancy including obstructed labour and VVF.
2. **Comprehensive sexuality education (CSE):** age-appropriate, accurate education about sexual and reproductive health enabling adolescents to make informed, safe decisions.
3. **Gender:** socially constructed roles, behaviours, and attributes that a society considers appropriate for men and women.

4. **Gender-based violence (GBV):** violence directed against a person on the basis of their gender, including physical, sexual, emotional, and economic forms.
5. **Gender-transformative:** describing programme approaches that address social norms and power structures, not merely individual knowledge and behaviour.
6. **ICPD:** International Conference on Population and Development; the 1994 Cairo conference that established reproductive health and rights as a global development priority.
7. **Intimate partner violence (IPV):** physical, sexual, or emotional violence by a current or former intimate partner.
8. **Reproductive health:** a state of complete physical, mental, and social well-being in all matters relating to the reproductive system and its functions and processes.
9. **Reproductive rights:** the rights of individuals and couples to decide freely the number, timing, and spacing of children and to make reproductive decisions free from coercion and violence.
10. **Vesico-vaginal fistula (VVF):** an abnormal opening between the bladder and vagina, typically caused by prolonged obstructed labour, resulting in continuous urinary incontinence.
11. **Youth-friendly health services (YFHS):** health services specifically designed to be accessible, confidential, non-judgemental, and sensitive to the needs of young people.

Concept Check Questions [Series 4]

Objective questions

- Reproductive health encompasses the capability to reproduce and the freedom to decide _____ , when, and how often to do so. (Linked to SLO 4.1)
- Reproductive rights include the right to make reproductive decisions free from discrimination, coercion, and _____. (Linked to SLO 4.2)
- The ICPD Programme of Action (1994) shifted global discourse from population _____ to individual reproductive rights. (Linked to SLO 4.2)
- Adolescent pregnancy causes vesico-vaginal fistula (VVF) through obstructed labour due to the immature _____ size of young adolescents. (Linked to SLO 4.3)
- Youth-friendly health services are designed to be accessible, confidential, non-judgemental, and sensitive to the needs of _____ people. (Linked to SLO 4.4)
- _____ -transformative approaches address the social norms and power structures constraining women's reproductive autonomy. (Linked to SLO 4.6)

Short-answer questions

- Define reproductive health and list five of its components. (Linked to SLO 4.1)
- Describe the consequences of adolescent pregnancy, covering both physical and social dimensions. (Linked to SLO 4.3)

Long-answer questions

- Discuss reproductive rights and the international frameworks that underpin them, with reference to the Nigerian context. (Linked to SLO 4.2)
- Evaluate gender-based violence as a reproductive health challenge in Nigeria, covering its prevalence, consequences, and programme responses. (Linked to SLOs 4.5–4.6)

Answers to Concept Check Questions [Series 4]

Objective questions

1. If.
2. Violence.
3. Control.
4. Pelvic.
5. Young.
6. Gender.

Short-answer questions

7. Reproductive health (ICPD 1994): a state of complete physical, mental, and social well-being in all matters relating to the reproductive system and its functions. Five components: family planning; maternal health; STI prevention and treatment; safe abortion and post-abortion care; treatment of infertility (also acceptable: sexual health education, prevention of gender-based violence, management of reproductive tract infections).
8. Physical: obstructed labour and VVF (abnormal bladder-vagina opening causing incontinence); anaemia; eclampsia; low birth weight and higher neonatal mortality. Social: school dropout reducing lifetime earning potential; social stigmatisation affecting mental health; reduced ability to provide adequate child care, increasing the child's risk of malnutrition and developmental delay.

Long-answer questions

9. **Basic response:** Reproductive rights: the right to decide freely the number, spacing, and timing of children; attain the highest standard of reproductive health; make reproductive decisions free from discrimination, coercion, and violence. Grounded in: Universal Declaration of Human Rights, CEDAW, Convention on the Rights of the Child. International frameworks: ICPD Programme of Action 1994 (shifted from population control to reproductive rights); ICPD+5, ICPD+20, Nairobi Summit 2019; SDG 3

(health) and SDG 5 (gender equality) embed reproductive health in 2030 agenda. Nigerian context: restricted by abortion law, limited adolescent contraceptive access, cultural norms subordinating women's decision-making.

Value-added response: Nigeria's formal commitment to international reproductive health frameworks sits alongside substantial domestic constraints that limit their implementation. The ICPD Programme of Action explicitly states that reproductive rights apply to all individuals regardless of marital status, yet Nigerian health services routinely deny contraception to unmarried adolescents in violation of this principle. Bridging the gap between international commitment and domestic practice requires not only policy change but health worker training, community norm change, and legal reform, addressing simultaneously the supply-side, demand-side, and rights-side constraints on reproductive health access.

10. **Basic response:** Prevalence: 2018 NDHS reports 31% of women aged 15-49 experienced physical violence since age 15. Forms: intimate partner violence, sexual assault, rape, emotional and economic violence. Reproductive health consequences: STIs from sexual violence, unwanted pregnancy, physical injury to reproductive tract, severe psychological trauma (PTSD, depression), restricted health-seeking behaviour. Programme responses: GBV screening and referral integrated into ANC and reproductive health contacts; safe confidential pathways for survivors; gender-transformative approaches addressing norms and power structures; male engagement programmes addressing masculine norms; referral pathways to legal aid, shelter, and psychosocial services.

Value-added response: The integration of GBV screening into routine antenatal and reproductive health service contacts is one of the most evidence-supported and under-implemented reproductive health interventions in Nigeria. ANC attendance offers perhaps the highest-frequency health system contact for the women most vulnerable to IPV, yet most ANC providers have not been trained to screen, respond to, or refer GBV survivors. Training health workers and establishing confidential referral pathways within existing service contacts represents a high-leverage, low-additional-cost improvement to existing services that could dramatically expand the reach of GBV support.

Answers to Pilot Questions [Series 4]

Part 4.1

6. Reproductive health (ICPD 1994): a state of complete physical, mental, and social well-being, not merely the absence of disease, in all matters relating to the reproductive system and its functions and processes.
7. Any five of: family planning; maternal health; STI prevention and treatment including HIV; safe abortion and post-abortion care; treatment of infertility; prevention and management of reproductive tract infections; sexual health education; prevention and management of gender-based violence.
8. Reproductive rights are the rights of individuals and couples to decide freely and responsibly the number, spacing, and timing of their children; to attain the highest standard of sexual and reproductive health; and to make reproductive decisions free from discrimination, coercion, and violence.
9. Universal Declaration of Human Rights and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).
10. It shifted the global discourse from population control to individual reproductive rights and reproductive health as a development priority, establishing 20-year targets for universal access to reproductive health services, female education, and reduction of maternal and child mortality.

Part 4.2

11. Adolescence is the transitional period between childhood and adulthood, defined by WHO as ages 10 to 19 years, characterised by rapid physical, cognitive, emotional, and social development.
12. Any three of: obstructed labour and VVF; anaemia; eclampsia; low birth weight; higher neonatal mortality.
13. VVF is an abnormal opening between the bladder and vagina that causes continuous urinary incontinence. It is associated with adolescent pregnancy because young

adolescents have immature pelvic dimensions that make prolonged obstructed labour more likely when delivering without emergency obstetric care.

14. Any three of: school dropout; social stigmatisation; reduced earning potential; reduced capacity to provide adequate child care; psychological harm.
15. YFHS are health services specifically designed to be accessible, confidential, non-judgemental, and sensitive to the specific needs of young people, enabling adolescents to seek reproductive health care without fear of stigma or disclosure.

Part 4.3

1. Gender refers to the socially constructed roles, behaviours, activities, and attributes that a society considers appropriate for men and women, as distinct from sex, which refers to biological differences between males and females.
2. Traditional gender norms frequently expect women to defer to husbands or male family members on decisions about contraceptive use, timing of pregnancy, ANC attendance, and facility delivery, directly preventing women from exercising their reproductive rights.
3. GBV is violence directed against a person on the basis of their gender. Three forms: intimate partner violence, sexual assault, and rape (also acceptable: emotional violence, economic violence).
4. Sexually transmitted infections; unwanted pregnancy; physical injury to the reproductive tract.
5. Any two of: training health workers in gender-sensitive communication; integrating GBV screening and referral into ANC contacts; engaging men as partners and advocates in reproductive health through male engagement programmes; integrating GBV prevention into community health worker training; addressing community gender norms through norm-change processes.

References and Attributions [Series 4]

Textual references

6. United Nations. (1994). Programme of action of the International Conference on Population and Development. UN.
7. World Health Organization. (2015). Sexual health, human rights and the law. WHO Press.
8. National Population Commission Nigeria and ICF. (2019). Nigeria demographic and health survey 2018. NPC and ICF.
9. National Open University of Nigeria (NOUN). (2023). Maternal and child health/reproductive health education course material. NOUN Press.

Figures, Plates, Tables, and Boxes

11. Figure 4.1: Components of reproductive health and key international frameworks Attribution: AI generated using prompt "Generate a two-panel diagram showing components of reproductive health and a timeline of international reproductive health frameworks." Suggested OER search string: "reproductive health components ICPD Cairo 1994 reproductive rights SDGs international frameworks OER"
12. Figure 4.2: Adolescent reproductive health: development, consequences of pregnancy, and programme responses Attribution: AI generated using prompt "Generate a three-panel diagram on adolescent reproductive health in Nigeria covering sexual behaviour facts, pregnancy consequences, and programme components." Suggested OER search string: "adolescent reproductive health Nigeria YFHS peer education VVF adolescent pregnancy consequences OER"
13. Figure 4.3: Gender, gender-based violence, and reproductive health Attribution: AI generated using prompt "Generate a two-panel diagram showing gender norms effects on reproductive health decisions and the health consequences of GBV with programme responses." Suggested OER search string: "gender norms reproductive health gender-based violence GBV consequences male engagement Nigeria OER"

Course code: COM 407

Course title: Maternal and Child Health/Reproductive Health Education

Course credit load: 1 Unit

Series 5: Contraception, STIs, and Immunisation

- **Part 5.1: Family Planning and Contraception**
  - Sub Part 5.1.1: Importance and benefits of family planning
  - Sub Part 5.1.2: Methods of contraception
  - Sub Part 5.1.3: Contraceptive counselling and method selection
- **Part 5.2: Sexually Transmitted Infections**
  - Sub Part 5.2.1: Classification and epidemiology of STIs in Nigeria
  - Sub Part 5.2.2: Prevention, diagnosis, and management of STIs
  - Sub Part 5.2.3: HIV/AIDS: transmission, prevention, and treatment
- **Part 5.3: Immunisation and Synthesis**
  - Sub Part 5.3.1: Principles and benefits of immunisation
  - Sub Part 5.3.2: The Nigerian immunisation schedule and challenges
  - Sub Part 5.3.3: Synthesis: MCH and reproductive health education in practice

Introduction

This final Series brings together three essential pillars of reproductive and child health practice: contraception, which enables individuals to make informed decisions about the number and spacing of children; sexually transmitted infections, which represent a major, often preventable, burden of reproductive morbidity; and immunisation, which remains the single most cost-effective child health intervention available. Together, these topics complete the practical clinical and health education competencies required for MCH and reproductive health practice in Nigeria.

The aim of this Series is to describe the benefits and methods of family planning, the classification and management of STIs including HIV, and the principles and challenges of immunisation, concluding with a synthesis of MCH and reproductive health education in practice.

We shall commence by examining family planning and contraception, covering methods and counselling. Next, we will examine STIs, their prevention, diagnosis, and management, with emphasis on HIV. Finally, we will close by revisiting immunisation and synthesising the course themes in the context of MCH and reproductive health education practice.

Series Learning Outcomes

Upon completing this Series, you should be able to:

- **SLO 5.1** explain the importance and benefits of family planning,
- **SLO 5.2** describe the major methods of contraception and the principles of contraceptive counselling,
- **SLO 5.3** classify sexually transmitted infections and describe their epidemiology in Nigeria,
- **SLO 5.4** describe the prevention, diagnosis, and management of STIs including HIV/AIDS,

- **SLO 5.5** explain the principles and benefits of immunisation and describe the Nigerian immunisation schedule, and
- **SLO 5.6** synthesise MCH and reproductive health education competencies in the context of Nigerian health practice.

5.1 Family Planning and Contraception

5.1.1 Importance and benefits of family planning

Family planning enables individuals and couples to decide freely the number, timing, and spacing of pregnancies. Its benefits operate at multiple levels: for women, it reduces the risk of maternal death by avoiding high-risk pregnancies (too young, too old, too frequent, too many); for children, it improves survival by allowing adequate birth spacing of at least two to three years, reducing neonatal mortality and undernutrition; and for families and communities, it enables greater investment in each child's education, nutrition, and health.

At the population level, family planning reduces the total fertility rate, slowing population growth in contexts where rapid population growth outpaces economic development and service provision. Nigeria total fertility rate of approximately 5.3 children per woman (NDHS 2018) reflects a contraceptive prevalence rate of only 17%, among the lowest in sub-Saharan Africa. Increasing contraceptive prevalence is a national health priority with direct implications for maternal and child health outcomes, health system sustainability, and economic development.

Fill in the blank: Nigeria contraceptive prevalence rate of only _____ % (NDHS 2018) is among the lowest in sub-Saharan Africa, reflecting a high total fertility rate with significant implications for maternal and child health.

5.1.2 Methods of contraception

Contraceptive methods are classified into natural (fertility awareness-based) and artificial (hormonal, barrier, and long-acting) categories, and by effectiveness into highly effective

(greater than 99% with perfect use), moderately effective (90 to 99%), and less effective (less than 90%) methods. Long-acting reversible contraceptives (LARCs), including intrauterine devices (IUDs) and implants, are the most effective reversible methods and are being promoted in Nigeria due to their high efficacy independent of user compliance, reducing the typical-use versus perfect-use effectiveness gap.

Hormonal methods include combined oral contraceptive pills, progestogen-only pills, injectable contraceptives (the most widely used method in Nigeria), and contraceptive implants. Barrier methods include male condoms (which also protect against STIs) and female condoms and diaphragms. Permanent methods include male and female sterilisation. Emergency contraception (levonorgestrel taken within 72 hours of unprotected sex) is available in Nigeria but remains under-utilised due to limited awareness and stigma. Each method has specific indications, contraindications, and side effect profiles that must be considered in counselling.

Fill in the blank: Long-acting reversible contraceptives (LARCs), including intrauterine devices and _____ , are the most effective reversible contraceptive methods, promoted in Nigeria due to high efficacy independent of user compliance.

5.1.3 Contraceptive counselling and method selection

Effective contraceptive counselling respects client autonomy, provides accurate and balanced information, and enables the client to make a voluntary, informed method choice free from coercion. The GATHER framework (Greet, Ask, Tell, Help choose, Explain how to use, Return for follow-up) provides a structured approach to contraceptive counselling, ensuring that all essential information is conveyed and that client concerns and preferences are explored. Counselling must be conducted in a language the client understands, in a confidential setting, and without judgement of the client's circumstances or choices.

Method selection should account for the client's reproductive intentions (spacing versus limiting), health status and medical eligibility for specific methods (using the WHO Medical Eligibility Criteria for Contraceptive Use as a reference), preference for hormonal versus non-hormonal methods, STI risk (favouring dual protection with condoms where relevant), and ability to comply with method requirements. Switching or discontinuing a method is the client's

right; addressing side effect concerns and facilitating method switching, rather than dismissing concerns and allowing discontinuation without alternative, is essential for sustaining contraceptive use.

Fill in the blank: The _____ framework (Greet, Ask, Tell, Help choose, Explain, Return) provides a structured approach to contraceptive counselling ensuring essential information is conveyed and client preferences are explored.

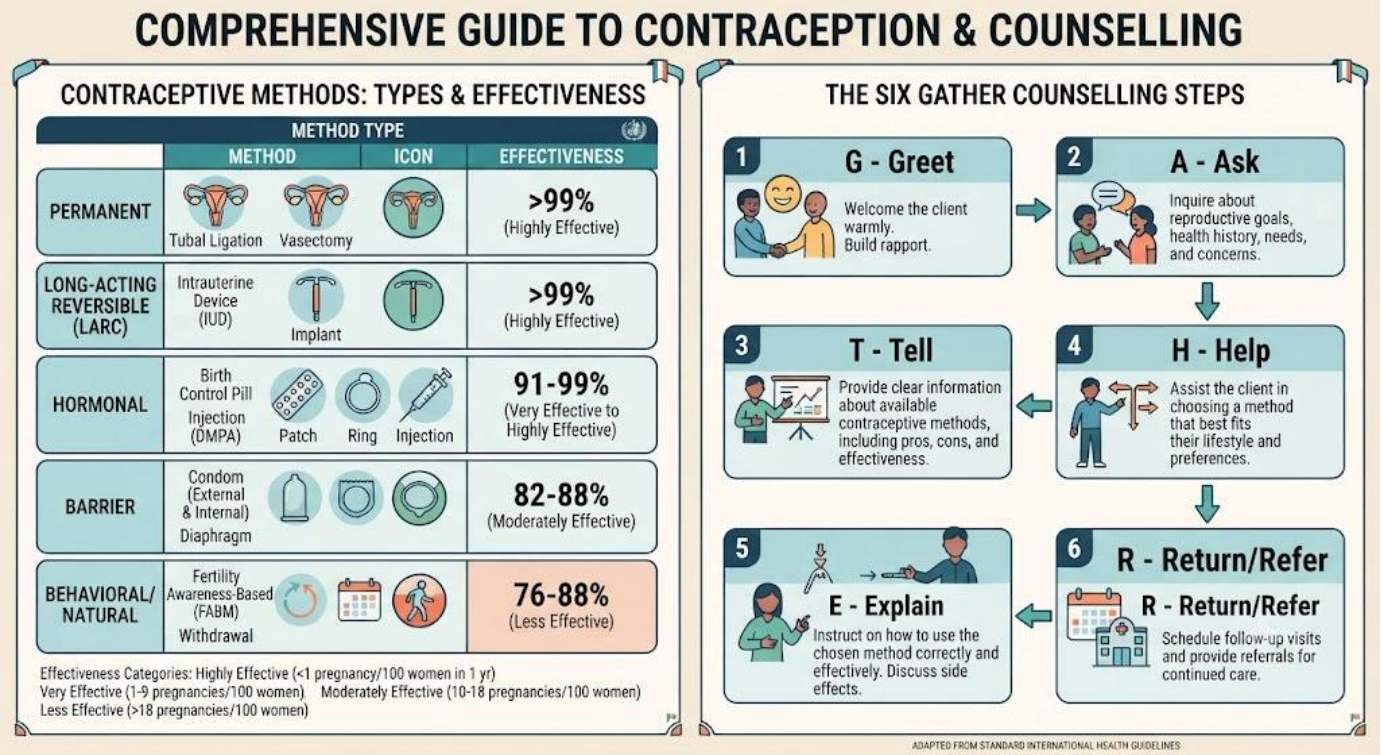

Figure 5.1: Contraceptive methods and the GATHER counselling framework

Pilot questions 5.1

1. Name three benefits of family planning at the individual level.
2. Why is Nigeria contraceptive prevalence rate a national health concern?
3. What are LARCs and why are they promoted in Nigeria?
4. Name four categories of contraceptive method.
5. What does the GATHER framework stand for in contraceptive counselling?

5.2 Sexually Transmitted Infections

5.2.1 Classification and epidemiology of STIs in Nigeria

Sexually transmitted infections (STIs) are infections transmitted primarily through sexual contact, though some (including HIV and syphilis) can also be transmitted through blood, vertical (mother-to-child) routes, and contaminated instruments. STIs are classified by causative agent: bacterial STIs include gonorrhoea (Neisseria gonorrhoeae), syphilis (Treponema pallidum), chlamydia, and chancroid; viral STIs include HIV, herpes simplex virus (HSV), human papillomavirus (HPV), and hepatitis B; and parasitic STIs include trichomoniasis and pubic lice.

Nigeria carries a high STI burden. HIV prevalence among adults aged 15 to 49 is approximately 1.4% nationally, with higher rates among certain populations. Gonorrhoea, chlamydia, and syphilis are among the most prevalent bacterial STIs, with high rates of asymptomatic infection meaning the true burden substantially exceeds detected cases. Untreated STIs cause significant reproductive morbidity including pelvic inflammatory disease, tubal infertility, ectopic pregnancy, and neonatal infections, and STI-related genital ulcer disease substantially increases HIV transmission risk.

Fill in the blank: Untreated STIs cause significant reproductive morbidity including pelvic inflammatory disease, tubal infertility, ectopic pregnancy, and neonatal infections, and also substantially increase _____ transmission risk.

5.2.2 Prevention, diagnosis, and management of STIs

STI prevention uses the A-B-C-D framework: Abstinence, Being faithful to a single uninfected partner, Consistent and correct Condom use, and Diagnosis and treatment of STIs and their partners. Male latex condoms, used consistently and correctly, are highly effective against both STI transmission and pregnancy. HPV vaccination for adolescent girls before sexual debut prevents cervical cancer, one of the leading causes of cancer mortality among women in Nigeria. Hepatitis B vaccination, incorporated into the childhood immunisation schedule, prevents hepatitis B-related liver disease.

Syndromic management (treating STIs based on recognisable clinical syndromes, such as urethral discharge or genital ulcer, without awaiting laboratory confirmation) is the predominant STI management approach in Nigerian PHC facilities, given limitations in laboratory capacity. While less precise than aetiological diagnosis, syndromic management ensures that symptomatic patients receive timely treatment and are counselled on partner notification. Treatment uses recommended antibiotic regimens, including for gonorrhoea where increasing antimicrobial resistance necessitates regular guideline updates.

Fill in the blank: _____ management treats STIs based on recognisable clinical syndromes without awaiting laboratory confirmation, enabling timely treatment in PHC settings with limited diagnostic capacity.

5.2.3 HIV/AIDS: transmission, prevention, and treatment

HIV (Human Immunodeficiency Virus) is transmitted through unprotected sexual intercourse (the predominant route in Nigeria), contaminated blood and blood products, sharing of needles and syringes, and mother-to-child transmission during pregnancy, labour, delivery, or breastfeeding. AIDS (Acquired Immunodeficiency Syndrome) is the advanced stage of HIV infection, characterised by severe immune suppression and the occurrence of opportunistic infections. Without treatment, the median time from HIV infection to AIDS is approximately ten years.

Prevention of HIV in Nigeria relies on a combination prevention approach: sexual transmission prevention through condom promotion, reduction of concurrent partnerships, and treatment as prevention (undetectable viral load eliminates sexual transmission); prevention of mother-to-child transmission (PMTCT) through HIV testing in pregnancy, antiretroviral therapy for HIV-positive pregnant women, and safer infant feeding; and harm reduction for people who inject drugs. Antiretroviral therapy (ART), provided free of charge through the national HIV programme, controls viral replication, restores immune function, prevents AIDS-defining illness, and enables people living with HIV to live long, healthy lives.

Fill in the blank: Treatment as prevention of HIV works because achieving an _____ viral load through antiretroviral therapy eliminates the risk of sexual transmission to partners.

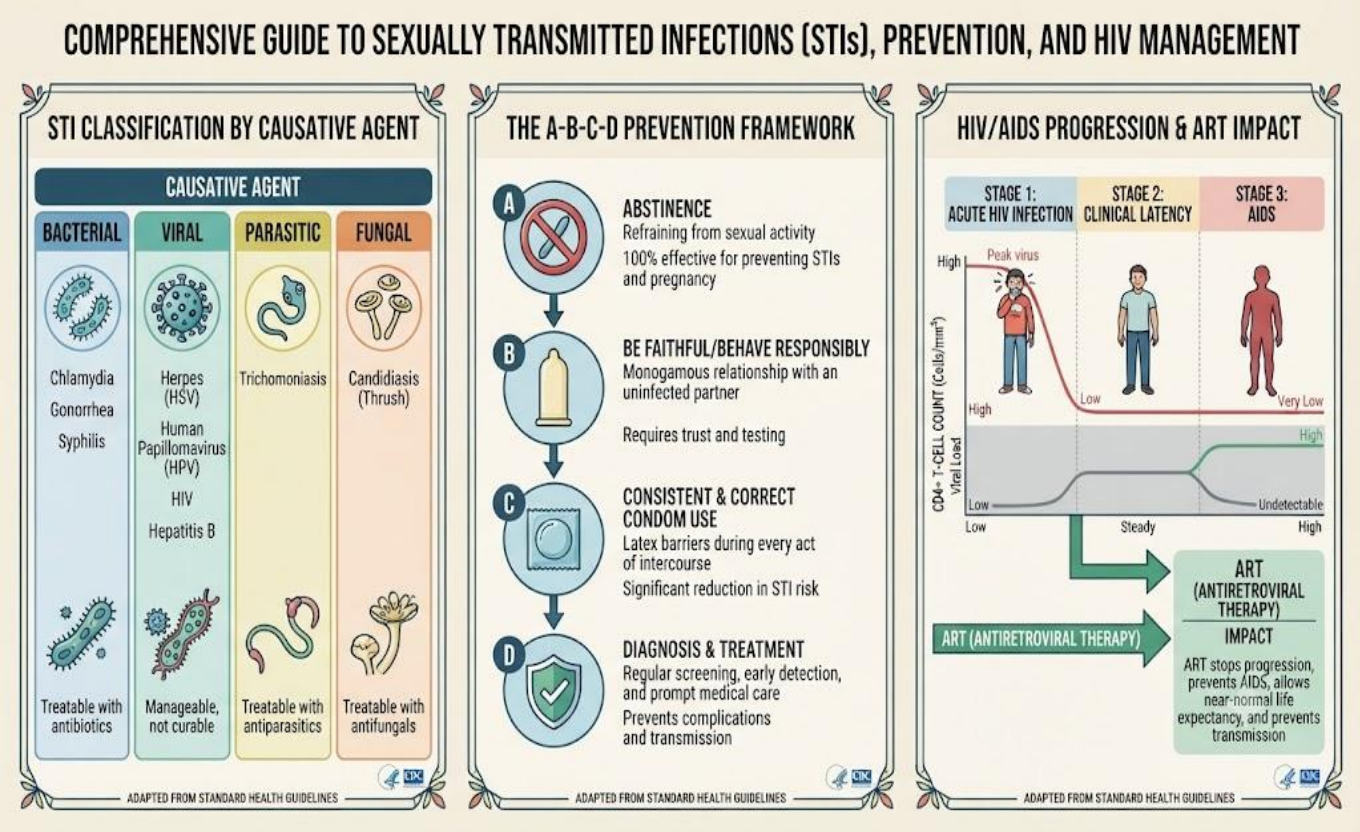

Figure 5.2: STI classification, prevention, and HIV management

Pilot questions 5.2

1. Classify STIs by causative agent and give two Nigerian examples of each type.
2. Name three reproductive health consequences of untreated STIs.
3. What does the A-B-C-D framework for STI prevention stand for?
4. What is syndromic management of STIs?
5. Name three routes of HIV transmission in Nigeria.

5.3 Immunisation and Synthesis

5.3.1 Principles and benefits of immunisation

Immunisation confers protection against infectious disease by stimulating the immune system to produce a response similar to that produced by natural infection, without the disease itself. The two types of immunity produced are active immunity (the vaccinated person produces their own

antibodies and memory cells, providing long-lasting protection) and passive immunity (pre-formed antibodies are transferred, as in maternal antibody transfer to the foetus, providing immediate but temporary protection). Herd immunity, protecting even unvaccinated individuals when vaccination coverage is sufficiently high, is the population-level benefit of immunisation programmes.

The benefits of immunisation extend beyond the individual: at the population level, successful immunisation programmes have eradicated smallpox (globally) and eliminated wild poliovirus from Nigeria (2020), and have dramatically reduced the burden of measles, meningitis, yellow fever, and tetanus. The return on investment in immunisation is among the highest of any health intervention, with estimates suggesting every dollar invested in childhood immunisation generates approximately US$44 in economic returns through reduced treatment costs and improved productivity.

Fill in the blank: _____ immunity protects even unvaccinated individuals when vaccination coverage in a population is sufficiently high to prevent sustained disease transmission.

5.3.2 The Nigerian immunisation schedule and challenges

The Nigerian routine immunisation schedule, delivered through the NPI, includes vaccines against tuberculosis (BCG at birth), hepatitis B, polio, diphtheria, pertussis, tetanus, Haemophilus influenzae type b (pentavalent vaccine at 6, 10, and 14 weeks), pneumococcal disease, rotavirus, measles, yellow fever, meningitis (Men A), and HPV for adolescent girls in selected states. Immunisation is provided free of charge at all government PHC facilities and is also delivered through community outreach sessions and national immunisation days targeting specific diseases.

Despite this comprehensive schedule, full immunisation coverage in Nigeria remains below 50% nationally, with significant rural-urban and geopolitical zone disparities. Key challenges include: cold chain failures (vaccines requiring refrigeration are often damaged by power outages); stockouts of vaccines and supplies; health worker shortages and inadequate training; community vaccine hesitancy fuelled by misinformation and historical distrust; and access barriers in

conflict-affected and hard-to-reach communities. Addressing these challenges requires simultaneous investment in infrastructure, human resources, demand generation, and community engagement.

Fill in the blank: Key challenges to immunisation coverage in Nigeria include cold chain failures, vaccine _____ , health worker shortages, community vaccine hesitancy, and access barriers in conflict-affected areas.

5.3.3 Synthesis: MCH and reproductive health education in practice

This course has traced a coherent arc from the foundations of family health, through the organisation of MCH services, the major causes of maternal and child morbidity and mortality, the framework of reproductive rights, and the practical content of contraception, STI management, and immunisation. A consistent theme throughout has been the gap between available knowledge, proven interventions, and adequate systems on one hand, and their consistent, equitable delivery to all Nigerian families on the other.

Bridging this gap requires health practitioners who combine technical competence with the communication skills, cultural sensitivity, and community engagement capacity to translate knowledge into action at household and community level. The health educator who understands both what families need and how to reach them with that knowledge, respecting their autonomy, addressing their barriers, and supporting them to make informed decisions, embodies the integrated MCH and reproductive health education practice that this course has sought to develop.

Fill in the blank: Bridging the gap between available MCH and reproductive health knowledge and equitable service delivery requires practitioners with technical competence, communication skills, cultural _____ , and community engagement capacity.

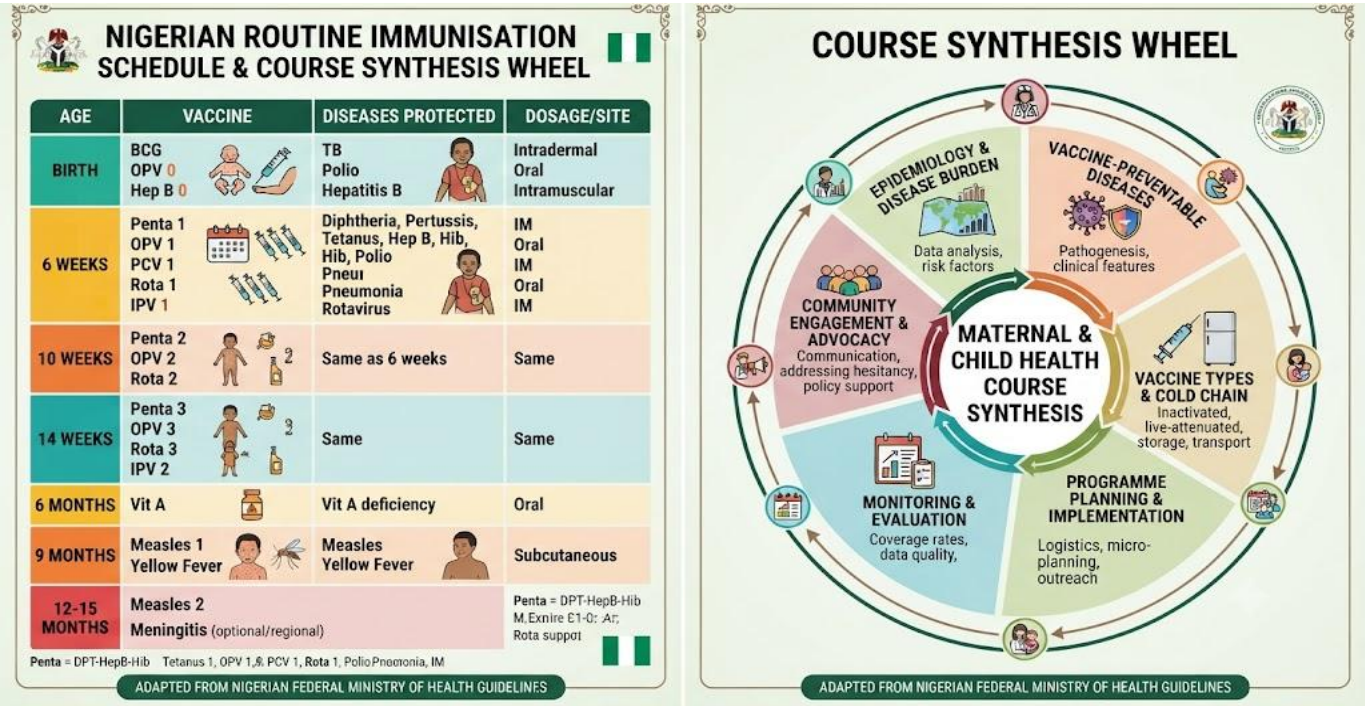

Figure 5.3: The Nigerian immunisation schedule and synthesis of MCH and reproductive health education

Pilot questions 5.3

1. Distinguish between active and passive immunity.
2. What is herd immunity?
3. Name five vaccines in the Nigerian routine immunisation schedule.
4. Name three challenges to achieving adequate immunisation coverage in Nigeria.
5. What qualities should a health practitioner possess to bridge the gap between MCH knowledge and equitable service delivery?

Series Summary

This final Series examined contraception, STIs, and immunisation as essential practical competencies for MCH and reproductive health practice. Family planning was described through its benefits for women, children, and communities, its low uptake in Nigeria (17% CPR), and the range of contraceptive methods from natural to LARC to emergency contraception, with the GATHER framework providing a structured counselling approach. STIs were classified by causative agent (bacterial, viral, parasitic), their epidemiology in Nigeria was described, and the A-B-C-D prevention framework, syndromic management, and HIV/AIDS transmission, prevention, and ART were examined.

Immunisation was reviewed through the principles of active and passive immunity, herd immunity, and the population-level impact of successful programmes. The Nigerian routine immunisation schedule was described alongside the key challenges of cold chain failure, stockouts, health worker shortages, vaccine hesitancy, and access barriers. The Series and course concluded with a synthesis establishing that bridging the gap between available MCH and reproductive health knowledge and its equitable delivery to all Nigerian families requires practitioners combining technical competence with communication skill, cultural sensitivity, and community engagement capacity (SLOs 5.1 to 5.6).

Glossary of Terms

1. **Active immunity:** immunity produced when the vaccinated or infected person generates their own antibodies and memory cells, providing long-lasting protection.
2. **ART (antiretroviral therapy):** drug treatment that suppresses HIV replication, restores immune function, prevents AIDS-defining illness, and eliminates the risk of sexual transmission at undetectable viral load.
3. **Contraceptive prevalence rate (CPR):** the percentage of women of reproductive age currently using a method of contraception.

4. **GATHER framework:** Greet, Ask, Tell, Help choose, Explain how to use, Return for follow-up; a structured approach to contraceptive counselling.
5. **Herd immunity:** population-level protection against disease transmission when vaccination coverage is sufficiently high to prevent sustained spread, protecting even unvaccinated individuals.
6. **HIV:** Human Immunodeficiency Virus; a virus transmitted through sexual contact, blood, and mother-to-child routes that attacks the immune system, leading to AIDS if untreated.
7. **LARC (long-acting reversible contraceptive):** a highly effective reversible contraceptive method including IUDs and implants, effective independent of user compliance.
8. **PMTCT:** prevention of mother-to-child transmission; interventions preventing HIV transmission from mother to baby during pregnancy, delivery, or breastfeeding.
9. **Passive immunity:** immunity conferred by transfer of pre-formed antibodies, as in maternal antibody transfer to the foetus; immediate but temporary.
10. **Syndromic management:** treatment of STIs based on recognisable clinical syndromes without awaiting laboratory confirmation.

Concept Check Questions [Series 5]

Objective questions

- Nigeria contraceptive prevalence rate of _____ % (NDHS 2018) is among the lowest in sub-Saharan Africa. (Linked to SLO 5.1)
- Long-acting reversible contraceptives (LARCs) include IUDs and _____ , and are promoted for high efficacy independent of user compliance. (Linked to SLO 5.2)
- Untreated STIs increase _____ transmission risk through STI-related genital ulcer disease. (Linked to SLO 5.3)

- _____ management treats STIs based on clinical syndromes without awaiting laboratory confirmation. (Linked to SLO 5.4)
- _____ immunity protects even unvaccinated individuals when vaccination coverage is sufficiently high. (Linked to SLO 5.5)
- Cold chain failures, vaccine _____ , health worker shortages, and vaccine hesitancy are key challenges to immunisation coverage in Nigeria. (Linked to SLO 5.5)

Short-answer questions

- Describe the benefits of family planning at the individual, family, and population levels. (Linked to SLO 5.1)
- Explain the prevention of HIV using the combination prevention approach, including PMTCT. (Linked to SLO 5.4)

Long-answer questions

- Discuss contraception in Nigeria, covering the benefits of family planning, the range of methods available, and the principles of contraceptive counselling. (Linked to SLOs 5.1–5.2)
- Evaluate immunisation in Nigeria, covering the principles and benefits of immunisation, the routine schedule, and the challenges limiting coverage. (Linked to SLO 5.5)

Answers to Concept Check Questions [Series 5]

Objective questions

1. 17.
2. Implants.
3. HIV.
4. Syndromic.
5. Herd.
6. Stockouts.

Short-answer questions

7. Individual: reduces risk of maternal death from high-risk pregnancies; allows birth spacing improving maternal recovery and child health. Family: enables greater investment in each child's education, nutrition, and health. Population: reduces total fertility rate, slowing population growth; reduces maternal and child mortality at national level, improving health system sustainability and economic development.
8. Sexual transmission prevention: condom promotion, reducing concurrent partnerships, treatment as prevention (undetectable viral load eliminates sexual transmission risk). PMTCT: HIV testing in pregnancy, ART for HIV-positive pregnant women, safer infant feeding (exclusive breastfeeding for HIV-positive women on ART, or formula feeding where safe and affordable). Harm reduction: providing clean needles and syringes for people who inject drugs to prevent blood-borne transmission.

Long-answer questions

9. **Basic response:** Benefits: individual level (reduces maternal mortality, prevents high-risk pregnancies, improves birth spacing); family level (greater investment per child in education, nutrition, health); population level (reduces TFR, slows population growth). Nigeria CPR 17%, TFR 5.3 (NDHS 2018). Methods: natural (fertility awareness); hormonal (pills, injectables, implants); barrier (male condom, female condom); LARCs (IUD, implant, most effective); permanent (sterilisation); emergency contraception. GATHER counselling: Greet, Ask, Tell, Help choose, Explain, Return; voluntary informed choice, medical eligibility, side effect management, method switching support.

   Value-added response: Nigeria CPR of 17% represents one of the most significant missed opportunities in health system performance: the interventions required to increase it are proven, relatively inexpensive, and available, yet demand-side barriers (male resistance, misinformation about side effects, religious objections), supply-side failures (stockouts, health worker shortages), and policy gaps (inadequate provision for unmarried adolescents) combine to keep uptake persistently low. Achieving the national FP2030 target of 27% CPR

by 2030 will require simultaneous investments in community demand creation, supply chain strengthening, and policy reform, not any single intervention in isolation.

10. **Basic response:** Principles: active immunity (vaccinee generates own antibodies and memory cells, long-lasting); passive immunity (pre-formed antibody transfer, temporary); herd immunity (community protection at high coverage, protects unvaccinated). Benefits: individual protection; eradication of smallpox; Nigeria wild poliovirus elimination 2020; dramatic reductions in measles, meningitis, yellow fever, tetanus; high economic return (US$44 per dollar invested). Schedule: BCG, hepatitis B, polio, pentavalent (DPT-HBV-Hib), pneumococcal, rotavirus, measles, yellow fever, meningitis A, HPV (adolescent girls). Challenges: cold chain failures, vaccine stockouts, health worker shortages, vaccine hesitancy (misinformation, historical distrust), access barriers in conflict-affected and hard-to-reach communities.

Value-added response: Nigeria achievement of wild poliovirus elimination in 2020 demonstrates that even the most challenging immunisation targets are achievable when the political commitment, community engagement, and operational investment are aligned. The same approach that worked for polio, including community mobilisers, tracking of missed children, rapid response to rumours, and engagement of traditional and religious leaders, provides the template for improving coverage for all vaccines in the schedule. The challenge is applying this level of programme intensity sustainably across the full immunisation schedule rather than only for diseases with the highest political visibility.

Answers to Pilot Questions [Series 5]

Part 5.1

6. Any three of: reduces risk of maternal death from high-risk pregnancies; allows adequate birth spacing reducing neonatal mortality; improves birth spacing allowing better child nutrition; enables greater investment in each child's health and education.

7. Because with only 17% CPR and a TFR of 5.3, Nigeria has among the highest fertility rates globally, with direct implications for maternal and child mortality, health system sustainability, and economic development.
8. LARCs are long-acting reversible contraceptives including IUDs and implants. They are promoted in Nigeria because of their very high effectiveness regardless of user compliance, reducing the gap between perfect-use and typical-use effectiveness.
9. Natural (fertility awareness-based), hormonal, barrier, long-acting reversible (LARCs), permanent (sterilisation), and emergency contraception.
10. Greet, Ask, Tell, Help choose, Explain how to use, Return for follow-up.

Part 5.2

11. Bacterial (gonorrhoea, syphilis, chlamydia, chancroid), viral (HIV, herpes simplex, HPV, hepatitis B), parasitic (trichomoniasis, pubic lice).
12. Pelvic inflammatory disease, tubal infertility, and ectopic pregnancy.
13. A: Abstinence; B: Being faithful to a single uninfected partner; C: Consistent and correct Condom use; D: Diagnosis and treatment of STIs and their partners.
14. Syndromic management treats STIs based on recognisable clinical syndromes (such as urethral discharge or genital ulcer) without awaiting laboratory confirmation, enabling timely treatment in settings with limited diagnostic capacity.
15. Unprotected sexual intercourse, contaminated blood and blood products (including needle sharing), and mother-to-child transmission during pregnancy, labour, delivery, or breastfeeding.

Part 5.3

1. Active immunity: the vaccinated or infected person produces their own antibodies and memory cells, providing long-lasting protection. Passive immunity: pre-formed

antibodies are transferred (as in maternal antibody transfer), providing immediate but temporary protection.

2. Herd immunity is population-level protection against disease transmission when vaccination coverage is sufficiently high to prevent sustained spread, protecting even unvaccinated individuals.
3. Any five of: BCG, hepatitis B, oral polio vaccine, pentavalent vaccine (DPT-HBV-Hib), pneumococcal vaccine, rotavirus vaccine, measles vaccine, yellow fever vaccine, meningococcal A vaccine, HPV vaccine.
4. Any three of: cold chain failures, vaccine stockouts, health worker shortages and inadequate training, community vaccine hesitancy, access barriers in conflict-affected and hard-to-reach communities.
5. Technical competence in MCH and reproductive health, communication skills, cultural sensitivity, and community engagement capacity.

References and Attributions [Series 5]

Textual references

6. World Health Organization. (2018). Medical eligibility criteria for contraceptive use (5th ed.). WHO Press.
7. National Population Commission Nigeria and ICF. (2019). Nigeria demographic and health survey 2018. NPC and ICF.
8. UNAIDS. (2022). Global AIDS update 2022: In danger. UNAIDS.
9. National Open University of Nigeria (NOUN). (2023). Maternal and child health/reproductive health education course material. NOUN Press.

Figures, Plates, Tables, and Boxes

11. Figure 5.1: Contraceptive methods and the GATHER counselling framework Attribution: AI generated using prompt "Generate a two-panel diagram showing contraceptive methods classified by type with effectiveness, and the six GATHER counselling steps." Suggested OER search string: "contraceptive methods IUD implant injectable pill condom GATHER counselling framework family planning Nigeria OER"
12. Figure 5.2: STI classification, prevention, and HIV management Attribution: AI generated using prompt "Generate a three-panel diagram showing STI classification, the A-B-C-D prevention framework, and HIV/AIDS progression with ART." Suggested OER search string: "STI classification bacterial viral Nigeria HIV AIDS prevention ABCD framework ART antiretroviral OER"
13. Figure 5.3: The Nigerian immunisation schedule and synthesis of MCH and reproductive health education Attribution: AI generated using prompt "Generate a two-panel diagram showing the Nigerian routine immunisation schedule and a course synthesis wheel." Suggested OER search string: "Nigeria immunisation schedule NPI vaccines BCG polio measles MCH reproductive health synthesis OER"