



Republic of Kenya

Reversing the Trends
The Second National Health Sector Strategic Plan

**CLINICAL MANAGEMENT AND
REFERRAL GUIDELINES
Volume I**

**Clinical Guidelines for Management
and Referral of Common Conditions
at Level 1: The Community**

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List of Abbreviations

ACT	Artemisinin combination treatment
AIDS	Acquired immune deficiency syndrome
ART	Anti-retroviral therapy
ARV	Anti-retroviral drug
CHEW	Community health extension worker
CHW	Community health worker
DOTS	Directly observed therapy, short course
EFA	Education for All
FP	Family planning
GOK	Government of Kenya
HBC/HCBC	Home-based care / Home- and community-based care
HIV	Human immunodeficiency virus
IEC	Information, education and communication
ITN	Insecticide treated net
IUCD	Intrauterine contraceptive device
KEPH	Kenya Essential Package for Health
MDGs	Millennium Development Goals
MDR	Multiple drug resistant (TB)
MOH	Ministry of Health
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
NHSSP II	Second National Health Sector Strategic Plan 2005–2010
PEP	Post-exposure prophylaxis
PID	Pelvic inflammatory disease
PLWHA	Person/people living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission (of HIV)
STI	Sexually transmitted infections
TB	Tuberculosis
TBA	Traditional birth attendant
TT2	Tetanus toxoid
UNICEF	United Nations Children's Fund
VCT	Voluntary counselling and testing
WHO	World Health Organization

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Foreword

Following the articulation of the 1994 National Health Policy Framework, the Ministry of Health published the National Drug Policy, the Essential Drug List, and Clinical Guidelines and Referral Strategy. All these are important building blocks of the elaboration of the Kenya Essential Package for Health (KEPH) subsequently mooted in the second National Health Sector Strategic Plan (NHSSP II – 2005–2010). This volume is one of a three-volume set that comprises the latest edition of the Clinical Guidelines.

Intended as neither prescriptive nor restrictive, the guidelines are facilitative, enabling, and foundational. They provide a firm base for the attainment of equity and high standards in health care and the development of rational procurement and use of drugs by all prescribers, dispensers, hospital managers, and patients.

The guidelines are for the use of all clinicians who have the primary responsibility for diagnosis, management, and referral of outpatients and inpatients. They are also very useful to interns, medical students, clinical officers, pharmacists, and nurses in training – and generally to health professionals working in the clinical setting and especially those in rural facilities where it might be the only reference book.

The revision has been widely consultative, incorporating recent advances in disease management and emerging medical challenges of the 21st century. Efforts have been made to include the most recent recommendations of the Ministry of Medical Services (MOMS) and the Ministry of Public Health and Sanitation (MOPHS) specialized disease programme and the World Health Organization (WHO).

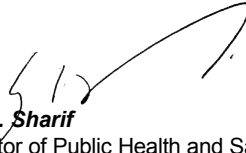
On behalf of the Ministry of Medical Services and the Ministry of Public health and Sanitation, many thanks are accorded to WHO, and to all contributors, reviewers, and the editors who have worked so hard to make the third edition of the guidelines a reality. We would like to acknowledge the technical guidance

provided by WHO in compiling these revised clinical and management guidelines, and the financial support for the process from the EC/ACP/WHO partnership USAID-MSH/SPS (Management Sciences for Health/Strengthening Pharmaceutical Systems) on meeting the health targets of the Millennium Development Goals (MDGs).

The regular and consistent use of the guidelines by clinicians countrywide can be expected to improve health care in Kenya and encourage the rational use of available drugs and thus contribute albeit in a modest way towards the realization of Vision 2030 of “creating an enabling environment for the provision of sustainable quality health care that is cost effective and accessible to all Kenyans”.



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Preface

The clinical guidelines the sector has been utilizing were developed in 2002. Since then, the sector has put in place a strategy to respond to declining trends in health impact observed over the previous decade. This updated edition of the guidelines represents part of that strategy, in particular by taking cognisance of the changes introduced by the Kenya Essential Package for Health (KEPH), with its emphasis on distinct levels of care – including the community – to be provided to defined cohorts of the human life-cycle. The new edition thus addresses key shortcomings in the previous versions that limited the ability of clinicians to provide a comprehensive package of effective health care.

Specifically, the guidelines have been updated in relation to:

- ♦ Defining care protocols by level of service delivery, recognizing the fact that the skills and facilities for care differ at the different levels of health care.
- ♦ Making available a clear, separate volume for management of conditions at the community level, in recognition of the fact that good health is nurtured – or destroyed – primarily at individual and household levels, rather than at the health facilities.
- ♦ Providing greater elaboration of the identification and preparation for referral of clients in case the presenting condition or state doesn't allow for management at the level where the client has presented.
- ♦ Updating management protocols to address current existing conditions and potential threats to the health of Kenyans.
- ♦ Including a process for monitoring and reviewing the guidelines.

For ease of reference and use, the guidelines are presented in 3 volumes:

- ♦ Volume 1: Management Guidelines for Level 1 (Community)
- ♦ Volume 2: Management Guidelines for Levels 2 and 3 (Primary Care)
- ♦ Volume 3: Management Guidelines for Levels 4–6 (Hospitals)

It is the hope of the sector that these guidelines will serve the users well as a

guide for the appropriate care expected to be delivered at each respective level in the health system, thus facilitating the realization of the Kenya Essential Package for Health at all levels. Any information that could be of use in improving the management protocols is welcome, and can be provided directly to the Office of the Director of Medical Services in the Ministry of Medical Services.

Introduction

Kenya's health sector aims to prevent ill health, and where this cannot be done, to address the medical and social implications of the resulting ill health. Clinical management relates to this by ensuring efficient and effective management of the implications of ill health. It complements the public health services by ensuring that a specified quality of essential medical care is made available as needed, when needed, and in appropriate amounts.

Rationale for Revision of Clinical Guidelines

The sector last issued revised clinical guidelines in 2002. The guidelines defined management approaches for the key conditions that were expected to be afflicting the Kenyan population at that time. The guidelines had a number of weaknesses, however, including the following:

- ♦ The health sector lacked a clear, comprehensive, evidence-based approach to service delivery. Such an approach is important as it provides the overall guidance for the services the sector intends to provide, plus the process for delivering the services.
- ♦ The mechanism for monitoring and updating the clinical guidelines was not clear. As a result, the new management protocols that have come up since the guidelines were developed have not been incorporated, such as for avian influenza, management of multi-drug resistant tuberculosis (MDR/XDR TB), use of artemisinin combination treatment (ACT) for management of malaria, use of anti-retroviral drugs (ARVs) in HIV management, non-communicable diseases, and injuries/violence management, among others.
- ♦ Guidelines for preparation and management of clients for physical referral were not included.

Besides these more or less innate shortcomings, the clinical guidelines predated the approach to service delivery grounded in the framework of 6 life-cycle cohorts and 6 levels of care, as set out in the second National Health Sector

Strategic Plan ((NHSSP II – 2005–2010).¹ Thus they did not take into consideration the new approach that calls for different capacities and different functions at the different service levels in the country. Significantly, there was no guidance on management of services at the community level, and the lack of a referral framework is a drawback that has become more apparent as the care level approach has become institutionalized. These updated guidelines attempt to address these shortcomings. In addition, they are aligned to the comprehensive multilevel service delivery approach defined by the Essential Package for Health (KEPH).²

Comprehensive Service Delivery Approach

The review of the 1st National Health Sector Strategic Plan (NHSSP I) in 2004 highlighted, amongst other issues, evidence of stagnating or downward trends in health indicators, especially in the key areas of maternal, newborn, and child health. To respond to this worrying trend, the health sector in Kenya initiated an accelerated reform process to halt, and then reverse, this trend.

The reform process is enshrined in NHSSP II, which states the midterm goal of the health sector as “To reduce health inequalities and reverse the downward trends in health-related outcome and impact indicators”. The plan’s defined strategic objectives are to:

- ♦ Increase equitable access to health services;
- ♦ Improve the quality and the responsiveness of services in the sector;
- ♦ Improve the efficiency and effectiveness of service delivery;
- ♦ Foster partnerships in improving health and delivering services; and
- ♦ Improve financing of the health sector.

As part of the reform process, the sector elaborated clear operational approaches to enable it to achieve its strategic objectives, as well as health service norms and standards.³ Investment plans now guide multi-year investment priorities for different key areas of the sector.⁴ The comprehensive service delivery approach is one of these operational approaches (refer to Figure A).

A comprehensive service delivery approach is based on provision of guidance – at community, dispensary/health centre, and hospital levels of care – on services to be provided, service standards to be attained, service inputs (human resource,

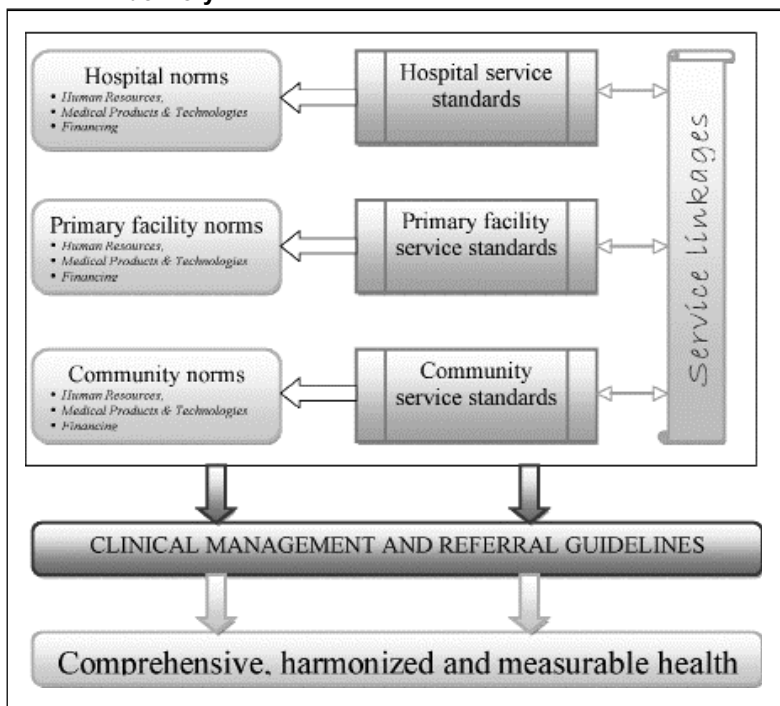
¹ Ministry of Health, *Reversing the Trends – The Second National Health Sector Strategic Plan of Kenya: NHSSP II – 2005–2010*, Nairobi, Kenya, 2005.

² Ministry of Health, *Reversing the Trends: The Second National Health Sector Strategic Plan of Kenya – The Kenya Essential Package for Health*, Nairobi, Kenya, 2007.

³ Ministry of Health, *Reversing the Trends: The Second National Health Sector Strategic Plan – Norms and Standards for Health Service Delivery in Kenya*, Nairobi, Kenya, 2006.

⁴ *Ministry of Medical Services Strategic Plan 2008–2012*, Ministry of Medical Services, Nairobi, Kenya, July 2008; *Ministry of Public Health and Sanitation Strategic Plan 2008–2012*, Ministry of Public Health and Sanitation, Nairobi, Kenya, December 2008.

Figure A: The comprehensive approach to health care service delivery



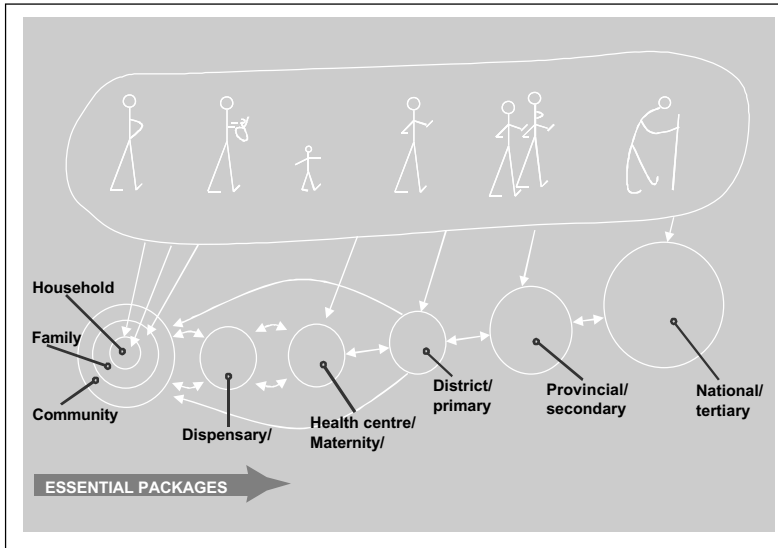
infrastructure, equipment) to be applied, and cross linkages of services. This comprehensive approach guides not only the investment priorities for service delivery at the administrative level, but also the form and content of clinical management.

The services to be provided for each level of care are defined in the Kenya KEPH). A particular focus of the package is the community level.⁵ The service linkages are defined in the Sector's Referral Strategy. These documents together describe the overall strategic approach for the sector, and are further elaborated.

The Kenya Essential Package for Health

KEPH is a life-cohort based approach to the delivery of health care services. Its main focus is to define the priority services that will ensure a healthy population at 6 distinct levels of the health system – from the community level up to tertiary

⁵ Ministry of Health, *Taking the Kenya Essential Package for Health to the Community: A Strategy for the Delivery of Level One Services*, Nairobi, Kenya, 2006.

Figure B: The KEPH system

hospitals – for each of 6 defined life cohorts. As a result, it defines in a comprehensive manner, the services the sector is to prioritize so as to maintain health at all the different stages of life.

The diagram in Figure B illustrates the 6 life-cycle cohorts defined by KEPH: pregnancy and the newborn (up to 2 weeks); early childhood (to 5 years); late childhood (6–12 years); adolescence and youth (13–24 years); adulthood (25–59 years); and the elderly (60+ years). The diagram also illustrates the linkages of the 6 levels of care that KEPH defines:

- ◆ Level 1: Community: Village/households/families/individuals
- ◆ Level 2: Dispensaries/clinics
- ◆ Level 3: Health centres, maternities, nursing homes
- ◆ Level 4: Primary hospitals – District and subdistrict hospitals
- ◆ Level 5: Secondary hospitals – Provincial hospitals
- ◆ Level 6: Tertiary hospitals – National hospitals

The expected services to be provided are described in Table A. The KEPH has the following key characteristics:

- ◆ The package puts emphasis on health (rather than disease), on rights (rather than needs), and on community empowerment to exercise their rights.
- ◆ It identifies and redefines 6 distinct functional levels of care. The community level is recognized as the first level of care where major decisions are made and interventions are done that have an immediate impact. The focus at the community level is on the promotion of family practices that preserve and promote health.

Table A: KEPH strategic interventions, by level and life-cycle cohort

Level 1 (Community)	Level 2 (Dispensary/ clinic)	Level 3 (Health centre)	Level 4 (Primary/ district/subdistrict hospital)	Level 5 (Secondary/ provincial hospital)	Level 6 (Tertiary/ national hospital)
Cohort 1: Pregnancy, delivery and newborn (to 2 weeks)					
Equip targeted communities with current knowledge and facilitate appropriate practices and attitudes leading to safe pregnancy and delivery of a healthy newborn	Ensure that health facilities are equipped to provide very basic ANC and refer all deliveries (regardless of risk analysis)	<p>a) Ensure that health centres are equipped to provide basic essential obstetric care</p> <p>b) Enhance health systems support for delivery of quality obstetric and newborn care</p> <p>c) Establish a functional supportive supervision system to ensure quality assurance</p> <p>d) Develop outreach programmes to serve “hard-to-reach” populations</p>	Ensure that facilities are equipped to provide essential comprehensive obstetric care	Ensure that facilities are equipped to provide essential obstetric care	Ensure provision of facilities to adequately manage mothers and newborn referred from lower levels
Cohort 2: Early childhood (0–5 years)					
Equip the community and health care providers with knowledge about the prevention of common childhood diseases and disabilities; and facilitate appropriate practices and attitudes leading to healthy child growth and development	<p>a) Develop an outreach programme to serve “hard-to-reach” populations</p> <p>b) Strengthen the promotion and prevention of common childhood illnesses, impairments, and disabilities</p> <p>c) Strengthen case management and surveillance of common childhood illnesses</p> <p>d) Establish a functional supportive supervision system to ensure quality assurance</p>	<p>a) Strengthen the prevention of common childhood illnesses, impairments, and disabilities</p> <p>b) Strengthen case management & surveillance of common childhood illnesses</p> <p>c) Enhance the health systems support for delivery of quality child health services</p> <p>d) Establish a functional supportive supervision system to ensure quality assurance</p> <p>e) Develop outreach programmes to serve the “hard-to-reach” populations</p>	Ensure availability of facilities to diagnose and appropriately manage sick children	Recognize and appropriately manage a sick child	Ensure provision of facilities to adequately manage children referred from lower levels

Continued

Table A, continued

Level 1 (Community)	Level 2 (Dispensary/ clinic)	Level 3 (Health centre)	Level 4 (Primary/ district/subdistrict hospital)	Level 5 (Secondary/ provincial hospital)	Level 6 (Tertiary/ national hospital)
Cohort 3: Late childhood 6–12 years)					
Equip the child with relevant knowledge and skills that promote healthy lifestyle, including psychosocial development	<p>a) Develop an outreach programme to serve hard-to-reach populations</p> <p>b) Strengthen the promotion and prevention of common illnesses, impairments, and disabilities in late childhood</p> <p>c) Strengthen the case management and surveillance of common late childhood illnesses</p> <p>d) Establish a functional supportive supervision system to ensure quality assurance</p>	Facilitate and support caregivers and community in the provision of a safe environment for child survival, growth, and development	<p>a) Ensure that the health team is able to recognize and appropriately manage a sick child and where necessary refer</p> <p>b) Facilitate rehabilitative care for disabilities, and integration of children with disabilities (CWDs)</p>	Strengthen provincial hospitals to diagnose and manage complicated childhood medical and surgical conditions	Ensure provision of facilities to adequately manage children referred from lower levels
Cohort 4: Adolescence and youth (13–24 years)					
Equip the youth with knowledge and life skills, and facilitate creation of a supportive environment to enhance adoption of healthy lifestyles for themselves and the community	Create an enabling environment for young people that discourages harmful practices, encourages psychosocial development, and prevents disease and injuries	Create an enabling environment for young people that discourages harmful practices and prevents disease and injuries	<p>a) Ensure availability and access to quality youth-friendly services to encourage appropriate care seeking amongst the youth</p> <p>b) Ensure provision of rehabilitative services for substance abusers</p>	<p>a) Ensure provision of comprehensive rehabilitative services for youth drug abusers</p> <p>b) Ensure access to quality youth-friendly referral services for management of complicated medical and surgical conditions</p>	Ensure provision of facilities to adequately manage youth referred from lower levels

Continued

Table A, continued

Level 1 (Community)	Level 2 (Dispensary/ clinic)	Level 3 (Health centre)	Level 4 (Primary/ district/subdistrict hospital)	Level 5 (Secondary/ provincial hospital)	Level 6 (Tertiary/ national hospital)
Cohort 5: Adulthood (25–59 years)					
Equip adults with knowledge and skills to facilitate creation of a supportive environment to enhance adoption of healthy lifestyles for themselves and the village	Provide information on and encourage utilization of recommended services for disease/injury prevention and facilitate creation of supportive environment to enhance adoption of healthy lifestyle.	Equip health facilities with staff who are able to conduct general medical and reproductive care assessment, disease/injury prevention and refer complicated cases to the district hospital	Ensure accessibility to quality curative services for adults with acute and chronic conditions	Ensure access to quality services for the diagnosis and management of complicated medical and surgical conditions	Ensure provision of facilities to adequately manage seriously ill adults referred from lower levels
Cohort 6: Elderly (60+ years)					
Equip the elderly persons, the community and health care providers with relevant knowledge on common old age diseases, impairments and disabilities in old age; and how to improve quality of life and enhance longevity	a) Provide information on and encourage utilization of recommended services for disease/injury prevention b) Refer difficult cases to the health centre	a) Provide information on and encourage utilization of recommended services for disease/injury prevention b) Refer cases to district hospital	a) Ensure early recognition and appropriate management of acute and chronic illnesses/injury as per recommended guidelines b) Provide appropriate comprehensive and special rehabilitation to older persons with chronic illnesses and disabilities at all levels	Ensure provision of facilities for the diagnosis and management of severe illnesses in old age	Ensure provision of facilities to adequately manage seriously ill older persons referred from lower levels

- ♦ Its overall thrust is on revitalizing health promotion and preventive care at the first 3 KEPH levels.
- ♦ It defines health needs at each level of human development – from birth to old age – and identifies comprehensive and cost-effective interventions required at each stage of the human life cycle.
- ♦ It recognizes the packages of health care services per level of care to be rendered by both public and private health service providers.

KEPH is expected to improve the quality of services at levels 1–4 so that clients have confidence in these levels of care, thus resulting in increased client utilization of the lower level health facilities. KEPH is also expected to improve the networking of providers and facilities at the different levels of the health system thereby ensuring continuity of care for those who need the services provided at the higher levels of the system.

Sector Norms and Standards

Norms and standards defined to guide the provision of KEPH services are a statement of the human resource, infrastructure, equipment, and financing inputs necessary to ensure efficient and effective delivery of health care services to the population in Kenya. Service delivery standards relate to the expectations of each level of care with regard to service delivery and the types of human resources needed to provide these expectations. Service delivery norms define the quantities of these resource inputs needed to efficiently, effectively, and sustainably offer the service delivery package. These norms and standards are defined on the basis of the following principles:

- ♦ **Units of service delivery:** The focus is on the function, as opposed to the physical level, as the function may also be provided by a higher level facility.
- ♦ **Equity in access and utilization:** All inhabitants of the country and its respective districts have equal right not only to access health services, but also to use them equally for equal need.
- ♦ **Relevance and acceptability:** Health care needs to be rooted in the cultural and social reality of the communities and to include user satisfaction in the health care delivery equation.
- ♦ **Continuity of care:** Care should be viewed in a continuum, from the start of the illness or the risk episode until its resolution irrespective of the level at which care is sought. This means that a functional referral and counter-referral system should exist to make sure that services are availed.
- ♦ **Integration of care:** Every contact is used to ensure that a comprehensive set of defined services is made available.
- ♦ **A comprehensive/holistic approach:** Health services need to consider all the dimensions of the persons and their environment, and maintain a permanent interaction and dialogue with clients.

- ♦ ***The involvement of individuals, households, and communities:***
Involvement is expressed in people taking up responsibility for their own health; it provides them with a sense of ownership of all they undertake relating to their health.

Referral Strategy

The categorization of KEPH into the 6 levels of care is primarily meant to rationalize the delivery of health services within the health system, for efficiency in the use of existing resources. The implication of this, however, is that the health service delivery unit a client may have direct access to may not be able to adequately manage their health care needs. The referral system is intended to address this shortcoming. A referral system is defined as a mechanism to enable clients' health needs be comprehensively managed using resources beyond those available where they access care. It is based on the premise that while capacity for health service delivery has to be rationalized around different levels of care, the services received by clients should not be determined only by the services available where they access care, but rather by the full scope of care the health system is able to provide in the country.

An effective referral chain, therefore, provides the linkages needed across the different levels of the health system – from level 1 (community) to level 6 (national hospitals). These linkages ensure that a given health care need of a client can be addressed irrespective of the level of the health system at which the client first physically accesses care. The referral system can thus be likened to an “elevator/lift” in a multistory building: facilitating forwards and backwards management of clients across different floors (levels of care).

The referral strategy thus guides the sector on building an effective referral system that responds to the needs of rural and poor populations, thereby contributing to the realization of Vision 2030, and the Millennium Development Goals (MDGs)

Process of Elaborating the Clinical Management Guidelines

This revision of the clinical management guidelines has been carried out in an extensive 3-year consultative process over 2006–2008. The process has been coordinated by the Government's top management in the Ministries in Health, through the offices of the technical directors – Director of Medical Services and Director of Public Health and Sanitation.

Technical coordination of the revisions was structured around the key disciplines of Medicine, Surgery, Obstetrics/Gynaecology, and Paediatrics. A lead technical

specialist from each of these areas was in charge of coordinating the internal consultation process in each of these areas. In addition, pharmacy specialists were involved to review and guide the definition of the medicines and medical products included in the management protocols, ensuring that the management protocols are harmonized with the Essential Medicines List.

Four stakeholder consultations were held over the 3 years, to ensure that the management protocols being defined were in line with the overall policy direction from the programme and Ministry levels, and that their implementation is feasible. These involved management and technical specialists in each of the respective areas, from the public and non public sectors.

Description of the Revised Clinical Management Guidelines

In line with the process described above, this new addition of the clinical management guidelines is based on the latest orientation for each condition expected to afflict the population in Kenya. These are both for conditions in existence, plus conditions that are recognized as threats to the population.

Management descriptions are comprehensive, based on the expected capacity at each level of care. Descriptions of each condition are set out in terms of how it presents, physical and laboratory investigations for diagnosis, and the appropriate management, including when referral is to be made.

The referral management includes:

- ♦ Identifying signs during client management that indicate referral should be considered.
- ♦ Preparing the client for referral.
- ♦ Arranging the required logistics for referral at the referring and receiving facility, plus during transport.
- ♦ Ensuring the receipt and emergency management of the client who has been referred.
- ♦ Managing the referred client by the referring facility when they return.

For relevance, alignment with the service delivery approach, and ease of use, the guidelines are presented in 3 volumes representing the major levels of care:

- ♦ Volume I: Clinical Management and Referral Guidelines for Community Care – Corresponding to level 1 of the health care system
- ♦ Volume II: Clinical Management and Referral Guidelines for Primary Care – Corresponding to levels 2 and 3 of the health care system
- ♦ Volume III: Clinical Management and Referral Guidelines for Hospital Care – Corresponding to levels 4–6 of the health care system

The Process of Physical Referral

Critical Inputs to Have at the Facility to Expedite Referral

Input category	Type of input	Description of needs	
		Description	Number
Equipment	Emergency tray		
	Emergency room		
	4x4 ambulance		
	Motorized bicycle		
Staff			
Supplies		Referral forms	3-month supply

Referral Instruments

1. Preparation of a client for referral

- 1.1 Referral for a pregnant mother
- 1.2 Referral of a child with a medical problem
- 1.3 Referral for a child with a surgical problem
- 1.4 Referral for an adolescent, adult, or elderly patient for a medical problem
- 1.5 Referral for an adolescent, adult, or elderly patient for a surgical problem

2. Handling of a client during referral

- 2.1 Referral for a pregnant mother
- 2.2 Referral of a child with a medical problem
- 2.3 Referral for a child with a surgical problem
- 2.4 Referral for an adolescent, adult, or elderly patient for a medical problem
- 2.5 Referral for an adolescent, adult, or elderly patient for a surgical problem

3. Receipt and emergency management of a client who has been referred

- 3.1 Referral for a pregnant mother
- 3.2 Referral of a child with a medical problem
- 3.3 Referral for a child with a surgical problem
- 3.4 Referral for an adolescent, adult or elderly patient for a medical problem
- 3.5 Referral for an adolescent, adult or elderly patient for a surgical problem

4. Follow up of a client who has been referred back

- 4.1 Referral for a pregnant mother
- 4.2 Referral of a child with a medical problem
- 4.3 Referral for a child with a surgical problem
- 4.4 Referral for an adolescent, adult, or elderly patient for a medical problem
- 4.5 Referral for an adolescent, adult, or elderly patient for a surgical problem

CHAPTER 1

Overview of Level 1 Services

1.1 Organization and Delivery of the Kenya Essential Package for Health (KEPH)

Guidelines for clinical management and referral at the community level are based on key principles of Kenya's Health Policy Framework 1994–2010 and the 2nd National Health Sector Strategic Plan (NHSSP II).¹ Service delivery places human capital development and a human rights approach at the core of its interventions. The Kenya Essential Package for Health (KEPH),² a key plank of NHSSP II, defines 6 levels of service delivery targeting the health needs of individuals through 6 defined cohorts of the human life cycle. The foundation of this 6x6 approach is level 1, the community.

The intention of the KEPH is to reduce fragmentation and improve continuity of care. It emphasizes the inter-connectedness of the various phases in human development, as attention during pregnancy improves the chances of a good delivery and a well-performed delivery puts the baby in an optimal state to face the challenges of that phase of life. This inter-connectedness equally applies to all the other phases in human life. Each phase requires a different complex of care interventions to respond to its specific needs, and each level of the health care system has its role in delivering those interventions according to its technical capacity.

These guidelines focus on the services summarized in Table 1.1, with additional comments that help provide a more complete picture of expected management. Each chapter is devoted to a phase in the life cycle and presents: key health messages, preventive and promotive care, and curative and referral care that is

¹ MOH, *Reversing the Trends – The Second National Health Sector Strategic Plan of Kenya: NHSSP II – 2005–2010*. Ministry of Health, Nairobi, Kenya, 2005.

² MOH, *Reversing the Trends: The Second National Health Sector Strategic Plan of Kenya – The Kenya Essential Package for Health*, Ministry of Health, Nairobi, Kenya, 2007.

possible at the community level, based on their capacity for care.

The community level of care is the foundation of the service delivery priorities, particularly those defined by the communities themselves. The primary focus at this level is health promotion and disease prevention, first aid and home-based care, based on capacity. The community level care must be linked to and supported by the facility based health system. This interface is managed by

The KEPH Life-Cycle Cohorts

1. Pregnancy and the newborn (up to 2 weeks of age)
2. Early childhood (2 weeks to 5 years)
3. Late childhood (6–12 years)
4. Youth and adolescence (13–24 years)
5. Adulthood (25–59 years)
6. Elderly (60+ years)

Table 1.1: Services needed during the life cycle of an individual

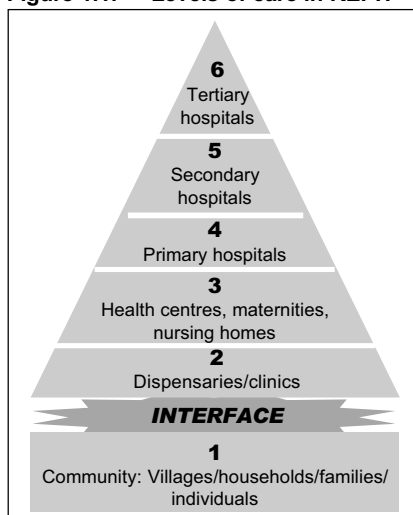
Life cycle		Services needed	
No	Phase	Promotive/Preventive	Curative
1.	Pregnancy and the newborn (up to 2 weeks of age)	ANC, nutritional care, IPT, TT2, BCG, PNC, breastfeeding, supplementary feeding FP services ITN promotion and use IPT and indoor spraying PMTCT Micronutrient supplements Hygiene, water, and sanitation	Birth plan for household preparedness Waiting arrangements to increase access to adequate delivery care Timely referral and transport system Use of skilled birth attendants, clean delivery, perinatal care, newborn care
2	Early childhood (2 weeks – 5 yrs)	ITN use, appropriate nutrition, expanded breastfeeding Growth monitoring EPI and vitamin A/Zn Psychological stimulation Physical/cognitive development	Community IMCI, home care of the sick child (pneumonia, malaria, diarrhoea, malnutrition, first aid) Recognition of danger signs, early care seeking, referral
3	Late childhood (6–12 years)	Essential school health programme Adequate nutritional care ITN promotion and use	Treatment and care of common ailments Appropriate feeding, timely treatment of infectious and parasitic diseases
4	Youth and adolescence (13–24 years)	RH and FP TT2 in schools HIV/AIDS/STI counselling Adequate nutritional care Prevention of accidents and drug abuse	First aid, treatment of common ailments DOTS, STI, and opportunistic infections Danger signs and referral
5	Adulthood (25–59 years)	Annual screening and medical examinations RH services, accident prevention Healthy lifestyles (exercises, recreation, nutrition)	First aid Treatment of common ailments ART and palliative care DOTS
6	Elderly (60+ years)	Annual screening and medical examinations Exercise and the promotion of general hygiene	Access to drugs for degenerative illnesses Danger signs and referral Home care of chronically ill

Level 1 – Community

linkage structures that are described in the Community Strategy:³ Community Health Committees (CHCs) are linked to the Health Facility Management Committees and the Health Stakeholder Forums through which households and individuals can participate and contribute to their own health and that of their village. This chapter focuses on those conditions to which level 1 care can make a significant contribution to clinical outcomes.

Figure 1.1 illustrates the levels of care from the community to the most complex tertiary care in the national teaching and referral hospitals.

Figure 1.1: Levels of care in KEPH



1.2 KEPH Objectives and Strategies

The objectives of the KEPH are part of the overall policy objectives of the NHSSP II, and intend to:

- ♦ Increase access to health care services by targeting part of its interventions at the community level,
- ♦ Integrate the different programmes in a client-centred orientation,
- ♦ Enhance the promotion of individual and community health, and
- ♦ Improve quality of care to build client satisfaction.

Strategies to attain these objectives are the following:

- ♦ Revitalizing community health structures with an emphasis on prevention, health promotion, and promotion of healthy lifestyles.
- ♦ Implementing the Community Strategy as defined by the Ministry of Health.
- ♦ Building capacity of clinical and public health workers at the community level.⁴
- ♦ Supporting and guiding FBOs and NGOs to scale up their community and preventive interventions.

³ MOH, *Taking the Kenya Essential Package for Health to the Community: A Strategy for the Delivery of LEVEL ONE Services*. Ministry of Health, Nairobi, Kenya, 2006.

⁴ MOH, *Enhancing Community Health Systems – Partnership in Action for Health: A Manual for Training Community Health Extension Workers; Linking Communities with the Health System: The Kenya Essential Package for Health at Level 1 – A Manual for Training Community Health Worker Key Health Messages for Level 1 of the Kenya Essential Package for Health – A Manual for Community Health Extension Workers and Community Health Workers*, all by Ministry of Health, Nairobi, Kenya, 2007.

- ♦ Providing relevant and culturally adapted information to the users of the health services.
- ♦ Reducing the barriers to health care experienced by the poor and destitute through pre-payment schemes and waivers for essential services.
- ♦ Strengthening the referral system at the community level.

As indicated in Table 1.1, the top priorities at the community level include reproductive and child health, malaria, HIV/AIDS, STIs, and TB. Other focal areas are environmental health, health promotion, mental and dental health, rehabilitation, and home-based care. The “threats” affecting the pregnant mother and the newborn child during stage 1 of the life cycle that should be recognized at the community and managed or referred are maternal infections, anaemia, malaria, complicated and unsupervised deliveries, nutritional deficiencies, and postpartum haemorrhage. In response to these threats, KEPH calls for the following activities: the use of long-lasting impregnated bed nets (LLITN), essential antenatal (tetanus vaccine – TT2 – and intermittent preventive treatment for malaria – IPT) and postnatal care, family planning and child spacing, the use of skilled birth attendants, and general health education.

During the second phase, early childhood (age 2 weeks to 5 years), the environment of the child poses serious health threats. Malaria, diarrhoeal disease, upper respiratory infections and TB, worm infestations, and malnutrition all contribute to high mortality and morbidity figures. The community level integrated management of childhood illness (IMCI) approach provides a comprehensive package with proven efficacy for this cohort. It includes promotion of insecticide treated bed nets (ITNs), exclusive breastfeeding up to 6 months, appropriate nutrition advice, immunization, child weighing clinics, treatment of common conditions, and vitamin A distribution. Baseline figures are available from the 2003 Kenyan Demographic and Health Survey (KDHS).

The third phase of the life cycle brings challenges to the health of children aged 6–12 years that are similar to those of adults. However, these children are also still susceptible to malaria infections, suffer from various worm infestations, and have a relatively high risk for trauma and the associated injuries. The KEPH for this age group provides mainly school health programmes (de-worming), health education, and the promotion of physical activity (sports and various social activities).

During the phase of adolescence, new threats to the healthy development of individuals emerge. These are in particular related to behaviour changes like:

- ♦ Sexuality (STI, HIV/AIDS and risk of early pregnancy),
- ♦ Drug and substance abuse (alcohol and tobacco), and
- ♦ General professional development (school attendance).

KEPH services specifically targeted for this age group entail the provision of contraceptives, VCT centres for testing HIV prevalence, and promotion of anti-tobacco and anti-drinking habits.

Level 1 – Community

In adulthood, health is threatened both by well-known infections like malaria, TB, STIs, and HIV, and by non-communicable diseases such as heart disease, diabetes, and cancer, forming the so-called “diseases of affluence”, as well as by trauma/accidents and stress. It is for this age group that KEPH emphasizes the necessity to adopt a healthy lifestyle, including:

- ♦ Stopping smoking.
- ♦ Doing exercises or sports.
- ♦ Eating a balanced diet regularly.
- ♦ Avoiding stress.
- ♦ Avoiding unsafe sexual encounters.

The elderly suffer from various ailments — chronic diseases like hypertension, disabilities (eyes, ears), degenerative conditions (problems with walking, backaches, etc.), and mental disorders. For this cohort, KEPH at community level stresses regular medical screenings, promotion of a healthy lifestyle (exercise, sports, social activities), and access to drugs for degenerative illnesses.

1.3 Service Providers at Level 1

NHSSP II identifies the community level of care – beyond the dispensary – as part of the national health system. The Community Strategy identifies Community Health Workers (CHWs), and their supervisors, the newly commissioned Community Health Extension Workers (CHEWs), as the appropriate providers at this level. The CHWs strengthen the household-based caregivers and link to the CHEWs, who are in turn linked to level 2 and 3 facilities, thus creating a bridging or interface between the household and the formal health system.

The intention is to improve the health status of Kenyan communities by:

- ♦ Providing level 1 services for all cohorts and socio-economic groups, including the “differently-abled”, taking into account their needs and priorities.
- ♦ Building the capacity of the CHEWs and CHWs to provide services at level 1.
- ♦ Strengthening health facility–community linkages through effective decentralization and partnership for the implementation of level 1 services.
- ♦ Strengthening the community to progressively realize their rights to accessible and quality care and to seek accountability from facility-based health services.

Outside the formal health system, households themselves have important responsibilities for addressing members’ health needs at all stages in the life cycle. Among these are health promotion, disease prevention, contributions to the governance and management of health services, and knowing and claiming their rights to quality health services. The 2 community-level health worker cadres work with household members to achieve these aims, as itemized below.

1.3.1 Health Promotion

Health promotion comprises the following:

- ♦ Demonstrating a healthy diet for people at all stages in life in order to meet nutritional needs.
- ♦ Providing guidance on social capital to ensure mutual support in meeting daily needs as well as coping with shocks in life.
- ♦ Encouraging demand for quality health care and social entitlements as citizens.
- ♦ Monitoring health status for early detection of problems for timely action.
- ♦ Having individual physical exercises regularly.
- ♦ Ensuring gender equity.
- ♦ Using available services to monitor nutrition, chronic conditions, and other causes of disability.
- ♦ Encouraging emergency preparedness.

1.3.2 Disease Prevention

Disease prevention comprises the following:

- ♦ Controlling communicable diseases (HIV/AIDS, STI, TB, malaria) through behaviour change, lifestyle modification, and formation of healthy practices.
- ♦ Providing first aid and emergency preparedness services, treating injuries, and nursing common ailments.
- ♦ Practising good personal hygiene in terms of washing hands, using latrines, maintaining a clean home and environment, etc.
- ♦ Ensuring access to water treatment for safe drinking water.
- ♦ Demonstrating and encouraging integrated vector control measures.
- ♦ Ensuring adequate shelter and protection against disease vectors.
- ♦ Preventing accidents and abuse, and taking appropriate action when they occur.
- ♦ Promoting dialogue on sexual behaviour to prevent transmission of STIs.

1.3.3 Care Seeking and Compliance with Treatment and Advice

- ♦ Providing appropriate home care for sick household members.
- ♦ Completing scheduled immunizations of infants before their first birthday.
- ♦ Recognizing and acting on the need for referral or seeking care outside the home.
- ♦ Complying with recommendations by health workers in relation to treatment, follow up, and referral.
- ♦ Ensuring that every pregnant woman receives antenatal and maternity care services.

1.3.4 Governance and Management of Health Services

- ♦ Attending and taking an active part in meetings to discuss trends in coverage, morbidity, resources, and client satisfaction.
- ♦ Giving feedback to the service system either directly or through representation.

1.3.5 Claiming Rights

- ♦ Knowing what rights communities have in health.
- ♦ Building capacity to claim these rights progressively.
- ♦ Ensuring that health care providers in the community are accountable for effective health service delivery and resource use, and above all are functioning in line with the Citizen's Health Charter.

1.4 Structure of Service Provision at Level 1

As envisioned by KEPH and the Community Strategy, one level 1 service “unit” is designed to serve 5,000 people and will work with volunteer CHWs identified by the community and trained and supported by the CHEW. Accordingly, the implications of norms and standards for the community services are that:

- ♦ 1 CHW will serve 20 households or 100 people.
- ♦ 1 CHEW will supervise and support 25 CHWs.
- ♦ 1 level 1 unit will serve 5,000 people and will require
 - 50 CHWs
 - 2 CHEWs

CHWs, with the backing of the CHEWs, have an important role in health promotion, disease control, respect for human rights, and the governance and management of health services. They also have additional responsibilities in such areas as expanding the use of family planning, maternal, child, and youth services, promoting good hygiene and environmental sanitation, and monitoring care seeking and compliance with treatment and advice.

1.4.1 Family Health Care to Expand FP, Maternal, Child, and Youth Services

- ♦ Promoting MCH/FP, maternal care, seeking trained obstetric care, immunization, nutrition, community-based IMCI.
- ♦ Promoting improved adolescent reproductive health through household and community-based dialogue targeting behaviour formation, modification, and change.
- ♦ Facilitating the organization of community-based day-care centres.
- ♦ Maintaining a community-based referral system, particularly in emergencies.
- ♦ Paying for first contact health services provided by CHWs.

1.4.2 Hygiene and Environmental Sanitation

- ♦ Providing IEC (information, education and communication) for water, hygiene, sanitation, and school health.
- ♦ Demonstrating and promoting safe, effective disposal of excreta/solid waste.
- ♦ Improving water sources to ensure access to safe drinking water.
- ♦ Demonstrating and practising good food hygiene.
- ♦ Demonstrating good personal hygiene.
- ♦ Developing kitchen gardens.
- ♦ Organizing community dialogue and health days.

CHAPTER 2

Pregnancy and the Newborn (Birth to 2 Weeks)

Every year around the world over 515,000 women die from problems linked to pregnancy and childbirth. Some 1,400 women die every day from problems related to pregnancy and childbirth. Tens of thousands more experience complications during pregnancy, many of which are life-threatening for the women and their infants or leave them with severe disabilities. For every woman who dies, approximately 30 more develop serious, disabling problems.

The dangers of childbearing can be greatly reduced if a woman is healthy and well nourished before becoming pregnant, if she has a health checkup by a trained health worker at least 4 times during every pregnancy, and if the birth is assisted by a skilled birth attendant such as a doctor, nurse, or midwife. The woman should also be checked during the 12 hours after delivery and 6 weeks after giving birth.

More than 100 million women in developing countries who are married or living with men report that their needs for contraception remain unmet. Access to family planning services for everyone, including adolescents, would help prevent many maternal and child deaths and disabilities. Too many births, too close together, and births to adolescent girls, endanger women's lives and the lives of their children. Delaying a first pregnancy until a girl is at least 18 years of age will help ensure a safer pregnancy and delivery and will reduce the risk of her baby being born underweight.

2.1 Key Messages

- **Key Message 1** – Every household should make plans, organize resources, and have funds for quickly getting the pregnant woman, at any hour, to where she can be delivered by a skilled birth attendant. If possible, the woman should temporarily stay at a

place that is closer to a health facility or hospital as the delivery time nears, so that she is within reach of medical help, as well as ready to take action in case a danger sign is identified.

Although it is impossible to know ahead what sort of a birth one will have, it is worth thinking about some of the options a household might face when a woman goes into labour. A household must make some decisions in advance about what to do during labour, and how the woman is to be cared for. Making a plan will help household members consider what factors will make this birth an enriching and positive experience for the mother and the family.

Having a skilled birth attendant assist at the delivery in a health facility and check on the mother in the 12 hours after delivery reduces the likelihood of either the mother or the baby becoming ill or dying. During delivery, the skilled attendant knows:

- ◆ When labour has gone on for too long (over 12 hours) and an intervention is necessary.
- ◆ How to reduce the risk of infection (clean hands, clean instruments, a clean delivery area).
- ◆ What to do if the baby is in the wrong position.
- ◆ What to do if the mother is losing too much blood.
- ◆ When to cut the umbilical cord and how to care for it.
- ◆ What to do if the baby does not begin breathing right away.
- ◆ How to dry the baby and keep her or him warm after delivery.
- ◆ How to guide the baby to breastfeed immediately after delivery.
- ◆ How to deliver the afterbirth safely and care for the mother after the baby is born.
- ◆ How to put recommended eye medicine in the baby's eyes to prevent blindness.

After delivery, the skilled attendant will:

- ◆ Check on the woman's health in the 12 hours after birth and 6 weeks after delivery.
- ◆ Advise her on how to prevent or postpone another birth.
- ◆ Advise her on how to avoid sexually transmitted infections such as HIV.
- ◆ Advise her on how to reduce the risk of infecting her infant.

➤ **Key Message 2** – A pregnant woman needs to be checked at a clinic or health facility by a clinical officer, nurse, or doctor at least 4 times during every pregnancy and to sleep under an ITN to prevent malaria.

Every pregnancy deserves attention, as there is always a risk of something going wrong. These complications cannot always be predicted. Many dangers can be avoided if the woman goes to a health centre or to a skilled birth attendant when she first suspects she is pregnant. She should then have at least 4 checkups throughout each pregnancy and also be checked 12 hours and 6 weeks after

delivery. A skilled birth attendant (such as a doctor, clinical officer or nurse) will help ensure a safer pregnancy and healthy baby by:

- ♦ Checking the progress of the pregnancy so that if problems arise timely action can be taken.
- ♦ Checking for high blood pressure, which can be dangerous to both mother and child.
- ♦ Checking for anaemia and providing iron/folate supplements regularly.
- ♦ Giving the pregnant woman 2 injections to protect her and her newborn baby against tetanus.
- ♦ Giving antimalaria tablets (IPT), and using alternative preventive methods for those hypersensitive to sulphur.
- ♦ Preparing the woman for the experience of childbirth and giving advice on breastfeeding and caring for herself and her newborn.
- ♦ Providing voluntary and confidential HIV testing and counselling, and if HIV positive providing treatment to prevent transmission of HIV to the baby. All women have the right to voluntary and confidential HIV testing and counselling.

All families need to know about special risk factors and be able to recognize the warning signs of possible problems such as bleeding or abdominal pain during pregnancy. The major warning signs are:

- ♦ Anaemia, paleness inside the eyelids, and becoming very tired or out of breath easily.
- ♦ Swelling of legs, arms, or face.
- ♦ The foetus moves very little or not at all.
- ♦ Spotting or bleeding from the vagina during pregnancy or profuse or persistent bleeding after delivery.
- ♦ Severe headaches.
- ♦ Severe or persistent vomiting.
- ♦ High fever.
- ♦ The water breaks before due time for delivery.
- ♦ Convulsions.
- ♦ Prolonged labour.

► **Key Message 3** – A pregnant woman needs the best foods available to the family: milk, fruits, vegetables, meat, fish, eggs, grains, and beans. All these foods are safe to eat during pregnancy.

Women will feel stronger and be healthier during pregnancy if they eat foods that are rich in iron, vitamin A, and folic acid. Their babies will be healthier as well. These foods include meat, fish, eggs, green leafy vegetables, and orange or yellow fruits and vegetables. Health workers can provide pregnant women with iron tablets to prevent or treat anaemia.

► **Key Message 4** – Every pregnant woman should receive confidential counselling and testing for HIV, for appropriate action to be taken to avoid passing the infection to the baby.

HIV counselling and testing can help in early detection of HIV infection and in enabling those who are infected to get the support services they need, manage other infectious diseases they might have, and learn about living with HIV/AIDS and how to avoid infecting others. Counselling and testing can also help those not infected to remain uninfected through safer sex practices. If the result of an HIV test is negative, this means the person tested is not infected or it is too early to detect the virus. The HIV blood test may not detect the virus up to 6 months after infection. The test should be repeated after 6 months.

Households and communities should demand and support confidential HIV/AIDS counselling, testing, and information to help protect adults and children from the disease. An HIV test can help couples decide whether to have children. If one partner is infected, he or she could infect the other while attempting to conceive. CHWs can prepare pregnant women to demand prevention of mother to child transmission (PMTCT) services at the clinic so they can make informed choices for the services. Among others, health workers can:

- ◆ Promote use of dual methods of family planning.
- ◆ Facilitate exploration of infant feeding options and support systems.
- ◆ Encourage women to gain access to early medical care such as anti-retroviral drugs (ARVs), STD treatment, malaria treatment, TB therapy, and obstetric care.

Empowering women and promoting safer sex, condom use, and better detection and treatment of STIs can reduce HIV infection in women. If a woman discovers that she is HIV-positive, she needs emotional support and counselling to help her make decisions and plan for her future. Pregnant women need to know:

- ◆ That treatment with specified medicines during pregnancy can greatly reduce the risk of passing the infection to the infant.
- ◆ That special care during pregnancy and delivery can reduce the risks of passing the infection to the infant.
- ◆ There are different options for feeding their infants and the related risks. Health workers can assist in identifying a feeding method that can maximize the infant's chance of growing up healthy and free of HIV.
- ◆ Babies born to women who are infected with HIV and who have not received medication have about a 1 in 3 chance of being born with HIV and more than 2/3 of the infants infected with HIV may die before they are 5 years old.

► **Key Message 5** – Pregnancy before the age of 18 and after 35 years of age or within 2 years of a previous delivery increases the health risks for the mother and her baby. The health risks of pregnancy and childbirth increase after 4 pregnancies.

A girl is not physically ready to begin bearing children until she is about 18 years of age. Childbirth is more likely to be difficult and dangerous for an adolescent than for an adult. Babies born to very young mothers are much more likely to die in the first year of life. The younger the mother is, the greater are the risks to her and her baby. Young women need special help to delay pregnancy. Young

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women and their families should be given information about the risks of early pregnancy and how to avoid them.

The risk of death for young children increases by nearly 50% if the space between births is less than 2 years. One of the greatest threats to the health and growth of a child under the age of 2 is the birth of a new baby. Breastfeeding for the older child stops too soon, and the mother has less time to prepare the special foods a young child needs. She may not be able to provide the care and attention the older child needs, especially when the child is ill. As a result, children born less than 2 years apart usually do not develop as well, physically or mentally, as children born 2 years apart or more.

A woman's body needs 2 years to recover fully from pregnancy and childbirth. The risk to the mother's health is therefore greater if births come too close together. The mother needs time to get her health, nutritional status, and energy back before she becomes pregnant again. Men need to be aware of the importance of a 2-year space between births and the need to limit the number of pregnancies to help protect their family's health. If a woman becomes pregnant before she is fully recovered from a previous pregnancy, there is a higher chance that her new baby will be born too early and weigh too little. Babies born underweight are less likely to grow well, more likely to become ill, and 4 times more likely to die in the first year of life than babies of normal weight.

A woman's body can easily become exhausted by repeated pregnancies, childbirth, breastfeeding, and caring for small children. After 4 pregnancies, especially if there has been less than 2 years between births, she faces an increased risk of serious health problems such as anaemia ('thin blood') and haemorrhage (heavy loss of blood). A baby is at greater risk of dying if the mother has had 2 or more pregnancies. Family planning is one of the most powerful ways of improving the health of women and children. Health clinics should offer advice to help people choose a family planning method that is acceptable, safe, convenient, effective and affordable.

Exclusive breastfeeding can delay the return of the mother's fertility for approximately 6 months after childbirth. Exclusive breastfeeding provides a woman with 98% protection from pregnancy, but only if her baby is under the age of 6 months, her menstrual periods have not returned, and the baby is breastfed on demand and exclusively.

- ▶ **Key Message 6** – Fathers/men should be involved in the reproductive health of the family. Family planning is the responsibility of both men and women; every couple should decide on and use a family planning method to delay pregnancy, space births, and limit the number of children they have.

Men as well as women must take responsibility for preventing unplanned pregnancies. They should have access to information and advice from a health

worker so that they are aware of the various methods of family planning that are available. Information can also be obtained from a doctor, nurse, teacher, family planning clinic, and youth or women's organization.

Delaying the next pregnancy by using modern contraceptive methods allows complete recovery of the mother, enough space for the growth and development of the child born, and having the number of children that a household can care for.

- ▶ **Key Message 7** – Physical abuse of women and children is a serious public health problem and is unacceptable. Abuse during pregnancy is dangerous both to the woman and to the unborn baby.

If a pregnant woman is abused, she and the foetus can be seriously harmed. Pregnant women who are physically abused may be unable to have any more children. Members of her family should be aware of these dangers and she should be protected from her abuser.

- ▶ **Key Message 8** – Every woman has the right to health care, especially during pregnancy and childbirth. Health care providers should be available and should treat women with respect.
- ▶ **Key Message 9** – All pregnant women should be screened for disabilities and impairments and advised on the best and suitable methods of delivery for them.

All women have the right to the services of a skilled birth attendant such as a doctor, nurse, or midwife, and to emergency obstetric care if needed. Quality health care enables women to make informed decisions about their health by offering information and counselling. It should be easy for women who need maternal care to reach the health facility, and cost should not prevent women from using these services. Health care providers should have the skills needed to provide quality care. They should be trained to treat all women with respect, to be sensitive to cultural norms and practices, and to respect women's right to confidentiality and privacy.

- ▶ **Key message 10** – Initiate breastfeeding at birth, within the first 1 hour of delivery, and breastfeed the infant exclusively for 6 months.

Do not give any fluid even water before the age of 6 months. Refer any child with oral thrush as well as mothers with breast problems such as breast engorgement or breast abscess and cracked nipples. Teach new mothers how to position and attach baby to the breast from birth.

- ◀ **Wash hands with soap before feeding or breastfeeding the baby, after cleaning the baby's faeces, and after visiting the toilet.**

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There should be support for HIV-positive women on safe breastfeeding for infants and proper nutrition uptake and production. Babies identified as malnourished should be provided with nutritious food and supplements for the first 6 months. An outcome of enhanced community sensitization will be reduction of stigma associated with exclusive breastfeeding and an increase in the number of women visiting health facilities for HIV counselling and testing.

- ▶ **Key Message 11** – Ensure that the baby is immunized against tuberculosis at birth (BCG), and gets all the vaccines as per schedule on the Child Welfare Card.
- ▶ **Key Message 12** – Keep the baby’s umbilical cord clean and dry after delivery and avoid any local applications to the umbilical cord. (Do not apply soot, ash, saliva, Vaseline, or soil)

Avoid dipping the baby in water until after the cord falls off. Bathe the infant with a soft cloth dipped in warm water. Keep the infant warm always by wrapping him/her in warm clothes. Keep the baby close to the body whenever possible. Avoid wrapping the infant with wet clothes and promptly change any soiled clothes.

- ▶ **Key Message 13** – Ensure a child’s birth has been notified and registered and that the child has a birth certificate. In addition, the child health card is an important document that must be kept safe. It has all the information about child immunization and growth.
- ▶ **Key Message 14** – Follow instructions given at the health facility for each service.
- ▶ **Key Message 15** – All women should visit the health facility for routine postnatal checkup and counselling 6 weeks after delivery.
- ▶ **Key Message 16** – All newborns should be screened for any disabilities and impairments after delivery in order to plan for any corrective measures to aid the newborn.

After delivery some newborns are found to have physical disabilities, e.g., cleft palates, blindness, paralysed legs or arms. Some disabilities or impairments are not evident immediately after birth, e.g., being deaf and mute. Newborns need to be screened for impairments using appropriate methods and tools. The earlier this happens after birth the better it is for taking the appropriate corrective measures. This is another reason, among many others, that all pregnant women deliver at health facilities attended to by skilled health workers.

Some causes of disability and impairments:

- ◆ Heredity.
- ◆ Drugs consumed by their mothers during pregnancy.
- ◆ Diseases like malaria, syphilis, and gonorrhoea.
- ◆ Delayed births – the mother is over the age of 40.

- **Key Message 17** – All newborn babies need to be protected from infections that may interfere with their growth and development by following good child care practices.

The following child care practices are recommended:

- ◆ Initiate breastfeeding at birth, within the first 1 hour of delivery.
- ◆ Breastfeed the infant exclusively for 6 months.
- ◆ Do not give any fluid even water before the age of 6 months.
- ◆ Refer any child with oral thrush.
- ◆ Mothers with breast problems such as breast engorgement/breast abscess and cracked nipples should seek immediate medical attention.
- ◆ Check for any congenital abnormality and if present seek medical attention.
- ◆ Ensure the infant is immunized against tuberculosis at birth (BCG).
- ◆ Ensure the infant is given an eye medicine at birth (tetracycline eye ointment).
- ◆ Ensure the child gets all the vaccines as per schedule on the Child Welfare Card.
- ◆ Take the child to the nearest facility for vitamin A starting at 6 months and then after every 6 months until the child is 5 years.
- ◆ Keep the child's umbilical cord clean and dry after delivery and avoid any local applications to the umbilical cord. (Do not apply soot, ash, saliva, Vaseline, or soil).
- ◆ Avoid dipping the baby in water until the cord falls off. Clean the infant with a soft cloth dipped in warm water.
- ◆ Keep the infant warm always by wrapping him/her in warm clothes.
- ◆ Keep the baby close to the body, whenever possible.
- ◆ Protect children from indoor air pollution.
- ◆ Dispose of children's faeces safely.
- ◆ Wash hands before preparing meals, before eating, before feeding the child, after handling child's faeces, and after visiting a latrine.
- ◆ Ensure drinking water is safe.
- ◆ Avoid cultural practices harmful to children.
- ◆ Take child for de-worming every 6 months from age 2 years.
- ◆ Ensure child receives zinc supplements with every episode of diarrhoea.

The mother of a newborn baby needs to be taught how to position and attach the baby to facilitate successful breastfeeding. Follow the guide below:

- ◆ Teach correct positioning and attachment for breastfeeding:
 - The first lesson is to show the mother how to hold her infant. Proper holding of the infant is called correct positioning and has the following characteristics:
 - Infant's head and body are straight, with the infant facing her breast and with infant's nose opposite her nipple.
 - Infant's body is held close to the mother's body.
 - The mother holds the infant by supporting infant's whole body and not just the neck and shoulders.
 - Teach mother how to correctly attach child.
 - Let mother demonstrate the correct way to attach after you have shown her.

- Follow-up with a visit to reassess if mother has correctly changed behaviour.
- The second lesson is to show the mother how to attach the infant to her breast and help her achieve the attachment.
- The correct attachment of the infant to the breast is achieved by following the following instructions:
 - Touch her infant's lips with her nipple.
 - Wait until her infant's mouth is opening wide.
 - Move her infant quickly onto her breast, aiming the infant's lower lip well below the nipple.
 - Ensure the chin of the baby touches her breast, and that there is more areola above the mouth than below.
 - Ensure that the lower lip of baby is turned outward and that the infant is sucking effectively
- ♦ If breastfeeding seems to be impossible because of a problem of either the baby or the mother, refer to the nearest health facility for information on alternative feeding.
- ♦ If mother complains of problem with breast(s), assess:
 - Dryness or cracking at or around the nipple.
 - Swelling (engorgement) and/or pain of the breast.
 - If any of these problems are present, then the mother has a breast problem. Refer her immediately to the nearest health facility.

➤ **Key Message 18** – There are some risk factors that have been shown to be associated with worse outcome for pregnancy.

The following risk factors have been associated with poor outcomes of a pregnancy:

- ♦ An interval of less than 2 years since an earlier birth.
- ♦ First pregnancy, especially for a mother who is under 18 or a over 35 years of age.
- ♦ A woman who has had 4 or more deliveries.
- ♦ A woman who has had a previous premature birth or baby weighing less than 2kg at birth.
- ♦ A woman who has had a previous difficult or caesarean delivery.
- ♦ A woman who has had a previous miscarriage or stillbirth.
- ♦ A woman who weighs less than 38kg and measures less than 5 feet in height.
- ♦ A woman who has been through infibulation or genital cutting.

2.2 Communication of the Key Messages

These messages should be communicated to the households through dialogue, using the following framework:

- ♦ **Assessment:** Discuss with the client to identify their immediate needs. The need could also be obvious from the child health card (weight for age, immunization, etc.), or observing behaviour.

- ♦ Alternatives: Discuss what the client would do to improve the situation or reach the next level of care and assess the adequacy of or gaps in proposed action.
- ♦ Options: Both the client and the caregiver suggest options.
- ♦ Options appraisal: Select the doable referral options based on available resources.
- ♦ Plan of action: Map out what is to be done.
- ♦ Action: Carry out the plan and follow up.
- ♦ Assessment and feedback: Assess action and feed back to the client and the caregivers through regular meetings.

2.3 Antenatal and Delivery Care

CHEWs, CHWs, and community members should stress the importance of all pregnant women attending antenatal care and having a skilled attendant at delivery. All pregnant women in the community should be identified and referred to the nearest health facility. Male partners and family members should be encouraged to support the pregnant women by providing adequate and nutritious food, ensuring adequate rest, and providing money for transport and cost of ANC and delivery. Pregnant women should take nutritious foods and vitamin and mineral supplements provided at the antenatal clinic. The CHEW, CHW, and community should recognize and refer when they notice danger signals during pregnancy, labour and delivery, and after delivery.

2.3.1 Danger Signs in Pregnancy

Danger signs include the following:

- ♦ Any vaginal bleeding
- ♦ Severe headache or blurred vision
- ♦ Swelling in the face and hands
- ♦ Convulsions or fits
- ♦ High fever
- ♦ Heavy vaginal discharge
- ♦ Very pale palms of hands or nail beds
- ♦ Premature labour or lower abdominal pains
- ♦ The baby slowing in movement or not moving at all

2.3.2 Delivery

Danger signs in labour include:

- ♦ Labour pains for more than 12 hours
- ♦ Water breaks without labour for more than 12 hours
- ♦ Cord, arm, or leg prolapse – appearing first during delivery
- ♦ Other danger signs are those that have been cited under pregnancy:
 - Any vaginal bleeding

- Severe headache or blurred vision
- Swelling in the face and hands
- Convulsions or fits
- High fever
- Heavy vaginal discharge
- Very pale palms of hands or nail beds
- Premature labour or lower abdominal pains
- The baby slowing in movement or not moving at all

2.4 Care of the Newborn Baby

2.4.1 Care of the Baby at Delivery

At delivery, dry the baby with a clean cloth. While drying, observe breathing, muscle tone, and colour. If all is normal, remove the wet cloth, wrap baby in a dry one and give to mother to initiate breastfeeding. This should be within half an hour of birth. Ensure good positioning and attachment. Cover baby well to prevent over cooling. Keep baby warm next to the mother (skin to skin is the best way of keeping baby warm). Examine the baby carefully to exclude congenital malformation.

2.4.2 Care of a Newborn

Encourage exclusive breastfeeding (no water). Babies should be fed on demand at least 8 times in 24 hours. HIV-positive mothers who have chosen not to breastfeed should be encouraged to cuddle their babies. Observe the cord for bleeding and keep it clean. Give oral polio vaccine (OPV “0”) and BCG.

All expectant mothers should be taught about cord care. They need to know that babies often acquire infection through the cord. If they deliver in the community, it is important to stress that the cord should be cut with clean instrument. Harmful practices need to be discouraged. The cord should be kept dry until it drops off. The baby should be brought to the health facility immediately a problem is noticed, e.g., poor feeding or the skin turns yellow. A baby who has delayed crying after delivery should be brought urgently to a health facility for assessment and care.

2.4.3 Signs of Bacterial Infection in an Infant

Watch for the following signs that are often found in a sick young baby aged 0 to 2 months:

- ♦ Fever
- ♦ Being cold to touch
- ♦ Refusal to feed or poor feeding, including suckling

- ◆ Unable to suck or sucking poorly
- ◆ Skin yellow/blue
- ◆ Yellowness of the eyes or skin
- ◆ Red, swollen eyes or eye discharge
- ◆ Pus draining from the ear
- ◆ Fewer than normal movements
- ◆ Abnormal movement of any part of the body, convulsions
- ◆ Redness of the cord, umbilical discharge
- ◆ Fast breathing
- ◆ Rigidity of the body
- ◆ Bulging anterior fontanelle
- ◆ Having diarrhoea
- ◆ Having dehydration
- ◆ Having blood in stool

➤ ***Refer infants with such signs to the nearest health facility.***

2.5 Congenital Abnormalities

For a variety of reasons, babies may be born with certain types of abnormalities. Among these are:

- ◆ Wind pipe and food pipe:
 - This may present as an opening between the windpipe and the food pipe and leads to frothing at the mouth and choking during breastfeeding.
 - What to do: Refer immediately to a health facility.
- ◆ Heart disease of the newborn:
 - Recognition:
 - Difficulty with feeding, coughing and choking while feeding
 - Blue colouration of mouth and skin
 - Failure to grow
 - What to do: Refer to health facility.
- ◆ Cleft lip and palate:
 - Clefts of the lip and palate are the most commonly encountered congenital malformations. When they are particularly severe, they may pose feeding problems for the affected babies right from birth.
 - What to do: Refer to the health facility.
- ◆ Ano-rectal conditions:
 - Recognition:
 - Pain, painless bleeding, perianal mass, discharge, failure to pass stools after birth, passing stool through penis, etc.
 - What to do: Refer to a health facility.
- ◆ Ophthalmia neonatorum (conjunctivitis of the newborn)
 - Recognition: Copious pus discharge from both eyes in the first month of life.
 - What to do: Apply tetracycline eye ointment, then refer to the nearest health facility.

CHAPTER 3

Early Childhood

(2 Weeks to 5 Years)

The first 5 years of a child's life, particularly the first 3 years, are the foundation of future health, growth, and development. During this period, children learn faster than at any other time. Babies and young children develop more rapidly and learn more quickly when they receive love and affection, attention, encouragement, and mental stimulation, as well as nutritious meals and good health care.

All children have the right to legal registration at birth, health care, good nutrition, education, and protection from harm, abuse, and discrimination. It is the duty of parents and governments to ensure that these rights are respected, protected, and fulfilled.

A child who has completed immunization on time and has been given proper nutrition has a better chance of survival than one who has not, and is more apt to interact, play, and learn. This will reduce the family's expenditure on health care, the child's absence from school due to illness, and the parents' loss of income when they have to care for a sick child.

3.1 Child Development

3.1.1 Normal Development

Besides nutrition, children need appropriate stimulation in order to reach their development potential. Both parents and health workers need to know the normal developmental milestones, while recognizing that these will vary from child to child. Parents can be taught how to make their children simple culturally appropriate toys with materials available. Perhaps most important of all is that parents should be encouraged to spend time with their young children.

- **Key Message 1** – Give affection, attention, and stimulation in addition to good nutrition for proper development. From an early age children learn how to behave by imitating the behaviour of those closest to them.

In the first 5 years of life children develop 90% of their adult-size brain. Children may fall behind in both academic and social skills if during these years they are not exposed to the right kinds of stimulation. Unfortunately, this gap only gets wider as children grow older. From an early age they need lots of intellectual, emotional, and physical stimulation. Reading aloud and activities that develop speech and language can all benefit a child by encouraging mental and physical development. There are many ways to encourage your child's early development. Parents need to recognize the importance of early education.

Skin-to-skin contact and breastfeeding within 1 hour after birth help babies achieve better growth and development and establish contact with their mother. Being kept close to the mother and breastfed on demand provides the infant with a sense of security. The baby needs to suckle for comfort as well as nutrition.

Learning begins at birth, and care and affection during the first years help a child to thrive. Children's minds develop rapidly when they are talked to, touched, and cuddled, and when they see familiar faces, hear familiar voices, and handle different objects. They respond to facial expressions, hugs, and positive interaction. They learn quickly when they feel loved and secure from birth and when they frequently play and interact with family members. Children who feel secure usually do better in school and cope more easily with the difficulties of life. Touch, hearing, smell, sight, and taste are learning tools the young child uses to explore the surrounding world. In fact, any loving, responsive, affectionate interactions will help your child develop normally.

The most important way children develop and learn is through interaction with others. Babies and small children should therefore not be left alone for long periods of time, as this delays their physical and mental development. Caregivers can help children learn and grow by giving them new and interesting things to look at, listen to, hold, and play with. Parents or caregivers should talk, read, or sing to infants and young children. Even if children are not yet able to understand the words, these early "conversations" develop their language and learning capacities. The more often parents and caregivers talk and respond to the child, the quicker he or she learns. Reading to your child fosters speech and language development.

All children – girls as well as boys – have the same physical, mental, emotional, and social needs. They have the same capacity for learning and need for affection, attention and approval. All children need to be encouraged and praised when they learn to do and say new things. Children are often frightened of strangers or the dark. Children whose reactions are laughed at, punished or ignored may grow up shy and unable to express emotions normally. If caregivers

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are patient and sympathetic when a child expresses strong emotions, the child is more likely to grow up happy, secure, and well balanced.

Physical punishment or displays of violence can harm the child's development. Children who are punished in anger are more likely to become violent themselves. Clear explanations about what to do, firm rules about what not to do, and praise for good behaviour are more effective ways of encouraging children to become full and productive members of the family and community. Both of the parents, as well as other family members, need to be involved in caring for the children. The father's role is especially important. The father can help meet the child's needs for love, affection, and stimulation and ensure the child receives a good quality education, good nutrition, and appropriate health care. The father can help ensure that the environment is safe and free of violence. Fathers can also perform household tasks, particularly when the mother is pregnant or breastfeeding.

Teaching children in their mother tongue first helps them to develop their ability to think and express themselves. Children learn language quickly and easily through songs, family stories, rhymes, and games. Crying is a young child's way of communicating needs. Responding promptly to the child's cry by holding and talking soothingly will help establish a sense of trust and security. Children's emotions are real and powerful. They may become frustrated if they are unable to do something or have something they want.

Early learning is facilitated by having toys, and if possible books that can be used at different stages of development. All children need a variety of simple materials to play with that are suitable for their stage of development. Toys need not be expensive. Many can be made by parents within the household: water, sand, cardboard boxes, empty tins, torn clothes, etc., are just as good as toys bought from a shop.

From the age of 3 years children can be enrolled into an early childhood development centre if available within the community or parents can be assisted to form one. If not attendance to a nursery school may be also helpful.

3.1.2 Development Milestones

Parents and caregivers need to know the major milestones that show the child is developing normally. They also need to know when to seek help and how to provide a caring and loving environment for a child with a physical or mental disability.

The following guide gives parents an idea of how children develop, but they should know that there are differences in the growth and development of all children. Slow progress may be normal or may be due to inadequate nutrition, poor health, lack of stimulation or a more serious problem. If parents have specific concerns they are encouraged to discuss the child's progress with a

trained health worker or a teacher. The health care provider should also be checking development of all children in their care.

3.1.2.1 BIRTH TO 1 MONTH

At this age the baby:

- ◆ Exhibits survival reflexes of rooting, sucking, and swallowing.
- ◆ Can see and hear.
- ◆ Cries when in need of food or comfort.
- ◆ Responds when held.

Parents and caregivers should be advised about the following:

- ◆ Make skin-to-skin contact and breastfeed within 1 hour of birth.
- ◆ Support the baby's head when the baby is held upright.
- ◆ Massage and cuddle the baby often.
- ◆ Always handle the baby gently, even when one is tired or upset.
- ◆ Breastfeed frequently.
- ◆ Talk, read, and sing to the child as often as possible.
- ◆ Visit the health worker with the infant 6 weeks after birth.

Parents and caregivers should watch for the following warning signs:

- ◆ Poor suckling at the breast or refusing to suckle.
- ◆ Little movement of arms and legs.
- ◆ Little or no reaction to loud sounds or bright lights.
- ◆ Crying for long periods for no apparent reason.

3.1.2.2 BY 2–3 MONTHS

At this age the baby is able to do the following:

- ◆ Smile.
- ◆ Know mother's face.
- ◆ Can hold (support) the head.
- ◆ Coo.

3.1.2.3 BY 6 MONTHS

At this age the baby:

- ◆ Reaches for and holds objects.
- ◆ Can turn over.
- ◆ Makes a lot of noise.
- ◆ Likes to be talked to.
- ◆ Knows many faces.
- ◆ Smiles at many people.
- ◆ Many can sit without support.
- ◆ Responds to own name.
- ◆ Explores objects with hands and mouth.
- ◆ Rolls both ways.

Advice that should be given to parents and caregivers:

- ◆ Lay the baby on a clean, flat, safe surface so she or he can move freely and reach for objects.

- ♦ Prop or hold the baby in a position to see what is happening nearby.
- ♦ Talk, read, or sing to the child as often as possible.

Warning signs to watch for:

- ♦ Stiffness or difficulty moving limbs.
- ♦ Little or no response to sounds, familiar faces, or the breast.
- ♦ Refusing the breast or other foods.

3.1.2.4 BY 9 MONTHS

At this age the infant:

- ♦ Can crawl.
- ♦ Stands supported.
- ♦ Rejects strangers (by crying).
- ♦ Understands when talked to.
- ♦ Can pick things up with thumb and forefinger.

Advice for parents and caregivers:

- ♦ Point to objects and name them.
- ♦ Talk and play with the child frequently.
- ♦ Use mealtimes to encourage interaction with all family members.
- ♦ If the child is developing slowly or has a physical disability, focus on the child's abilities and give extra stimulation and interaction. Do not leave a child in the same position for many hours.
- ♦ Make the area as safe as possible to prevent accidents.
- ♦ Help the child experiment with spoon/cup feeding.

3.1.2.5 BY 12 MONTHS

At this age the infant:

- ♦ Stands unsupported and begins to walk.
- ♦ Has 1 or 2 words.
- ♦ Gives things to other people.
- ♦ Understands simple instructions.
- ♦ Enjoys playing and clapping.
- ♦ Starts holding objects such as a spoon and cup and attempts self-feeding.

3.1.2.6 BY 15 MONTHS

At this age the child:

- ♦ Can walk.
- ♦ Speaks at least 10 words and understand more.
- ♦ Points at known things.

3.1.2.7 BY 18 MONTHS

At this age the child:

- ♦ Can pick up things from the ground.
- ♦ Can point at parts of the body.
- ♦ Knows names of family members.
- ♦ Asks for things.
- ♦ Speaks at least 15 words.



Immunizing baby

3.1.2.8 BY 2 YEARS

At this age the child:

- ♦ Can run.
- ♦ Knows and says own name.
- ♦ Speaks simple sentences.
- ♦ Can feed self.
- ♦ Can be toilet trained.
- ♦ Scribbles on paper.
- ♦ Knows "hot" or its equivalent.
- ♦ Jumps with both feet.
- ♦ Imitates older people.
- ♦ Plays by himself.



Teach children early about personal hygiene

3.1.2.9 BY 3 YEARS

At this age the child:

- ♦ Can balance on 1 foot.
- ♦ Talks with other people.
- ♦ Likes to help.
- ♦ Undresses without help.
- ♦ Begins to ask questions.



and the importance of a healthy diet

3.1.2.10 BY 4 YEARS

At this age the child:

- ♦ Can jump on 1 foot.
- ♦ Can climb.
- ♦ Wants to play with other children.
- ♦ Can be helpful.
- ♦ Washes hands and cleans teeth.
- ♦ Enjoys listening to stories.

3.1.2.11 BY 5 YEARS

At this age the child:

- ♦ Can listen and pay attention for longer periods.
- ♦ Makes friends with other children.
- ♦ Is responsible.
- ♦ Knows places around the home well.

3.1.3 Development in Children with Disabilities and Special Needs

Disabilities range from physical (involving limbs), eye (visual impairment) and ear (hearing impairment) problems, to mental retardation and chronic organ dysfunction, e.g., heart. Some of these may be obvious at birth, but others may become apparent only over time. Warning signs at any age include the following:

- ♦ The child does not make sounds in response to others.
- ♦ The child does not look at objects that move.
- ♦ The child is listless and does not respond to the caregiver.

All children grow and develop in similar patterns, but individually they develop at their own pace. By observing young children to see how they respond to touch, sound, and sight, parents can identify signs of possible developmental problems or disabilities. If a child is developing slowly, parents and caregivers can help by spending extra time with the child, playing and talking with the child, and massaging the child's body. If the child does not respond to stimulation and attention, parents and caregivers need to seek help. Taking early action is very important in helping children with disabilities reach their full potential. Parents and caregivers need to encourage the greatest possible development of the child's abilities.

A girl or boy with a disability needs extra love and protection. Like all children, such a child needs to be registered at birth or soon afterwards, breastfed, immunized, given nutritious food, and protected from abuse and violence. Children with disabilities should be encouraged to play and interact with other children. A child who is unhappy or experiencing emotional difficulties may behave abnormally. Examples include suddenly becoming unfriendly, sad, lazy, unhelpful or naughty; crying often; becoming violent with other children; sitting alone instead of playing with friends; or suddenly having no interest in usual activities or school work and losing appetite and sleep.

Children who are anaemic, malnourished, or frequently sick may become fearful and upset more easily than healthy children and will lack the drive to play, explore, and interact with others. These children need special attention and encouragement to eat.

3.2 Child Nutrition

Nutrition means how the food we eat makes our bodies grow and protects us from illness. Thus the body requires food in order to stay alive, repair and replace body tissues, grow and develop, and build immunity. Good nutrition makes those things possible. Children are not just little adults; their nutritional needs are different if they are to grow and thrive. All children from conception onwards require adequate nutrition for growth, development, and normal function. Both under and over nutrition are undesirable and lead to disability. Currently, 35% of children less than 5 years in Kenya are stunted. It is known that poor nutrition leads to poor school performance. A brain that is not given enough food in the first 2 years does not function well later on in life. Sadly, the damage is not reversible. It is therefore very important to ensure that children be fed well from birth onwards. Nutritional needs vary according to the rate of growth.

3.2.1 Types of Food and Food Groups

All foods have a food value (nutrients). There are 3 food groups:

- ♦ **Energy giving foods:**
 - These foods provide energy and warmth, e.g., sugar, honey, cassava, potatoes, maize, millet, rice, cooking oil, butter.

- ♦ **Body building foods**
 - These are foods that are useful for growth and repair; examples are meat, chicken, fish, insects, eggs, groundnuts, beans, peas, and cereals.
 - ♦ **Protective foods**
 - These are foods that protect the body against diseases and assist in digestion. These include vegetables and fruits.
- ← **Water is essential for blood and other body liquids and also the cells of the body, although it is not considered as a food.**

3.2.2 Factors Influencing the Availability and Absorption of Nutrients in the Body

The following factors influence the availability and absorption of food nutrients in the body:

- ♦ The way food is prepared: E.g. overcooking may destroy some vitamins.
- ♦ Quantity: The body must get enough of each nutrient.
- ♦ Balance: Some nutrients require the presence of other nutrients in order to function properly, e.g., calcium needs vitamin D to be absorbed effectively.
- ♦ Quality: E.g., protein from animal sources is better utilized by the body than that from plants.
- ♦ Health condition of individual: Some diseases prevent the absorption of food.
- ♦ Food characteristic: Something in the food may prevent the absorption of specific nutrients, e.g., phytates prevent iron and zinc absorption.

3.2.3 Feeding Children from Birth to 5 years

Table 3.1 summarizes an appropriate approach to feeding infants and young children. Following this approach will ensure that these young children are well fed. The subsequent sections look at the children's specific needs as they grow.

3.2.3.1 0–6 MONTHS: AGE OF EXCLUSIVE BREASTFEEDING

- ▶ **Key Message 2** – Breast milk ALONE is the only food and drink an infant needs for the first 6 months. No other food or drink, not even water, is needed during this period.

Having the baby start to breastfeed soon after birth stimulates the production of the mother's breast milk. It also helps the mother's uterus contract, reducing the risk of heavy bleeding or infection for the mother. The baby should be allowed to breastfeed as often as he or she wants. Colostrum, the thick yellowish milk the mother produces in the first few days after birth, is safe and the perfect food for newborn babies. It is very nutritious and helps protect the baby against infections. Breast milk is the best food a young child can have. Breast milk is easy for the baby to digest. It also promotes the best growth and development and protects against illness. Even in hot, dry climates, breast milk meets a young baby's need for fluids. Water or other drinks are not needed during the first 6

Table 3.1: How to feed young children well

Age of child	Type of feeding	How to feed
Birth to 6 months	Exclusive breast milk	Breastfeed as often as the child wants during the day and also during the night; feed at least 8 times in 24 hours. No other food or milk or fluid (including water) should be given for healthy babies except medicines including ORS when indicated.
6–12 months	Breastfeed on demand Begin complementary foods	If not breastfeeding give 500ml of milk. Introduce enriched complementary foods like “uji” mixed with milk, sugar or oil, mashed green vegetables, and proteins (plant or animal sources). Also give fresh fruit juice or mashed fruit. Feed 3 times a day if breastfed and 5 times a day if not breastfed.
13–24 months	Breastfeed on demand Family foods	As above. Continue energy rich foods at least 5 times a day.
24–60 Months	Family foods	Continue energy rich foods at least 5 times a day. 2 tea cups of milk daily.

months. Breast milk is the baby’s “first immunization”. Giving a baby any food or drink other than breast milk increases the risk of diarrhoea and other illnesses. The protection is greatest when breast milk alone is given for the first 6 months and breastfeeding continues well into the second year and beyond.

Almost every mother can breastfeed successfully. Those who might lack the confidence to breastfeed need the encouragement and practical support of the baby’s father and their family, friends, and relatives. Many new mothers need encouragement and help to begin breastfeeding. A community health worker, another woman who has successfully breastfed, or a member of a women’s breastfeeding support group can help a mother overcome uncertainties and prevent difficulties. How the mother holds her baby and how the baby takes the breast in the mouth are very important. Holding the baby in a good position makes it easier for the baby to take the breast well into the mouth and suckle. (This was discussed fully in Chapter 2)

Animal’s milk, infant formula, powdered milk, teas, sugar drinks, water, and cereal foods are inferior to breast milk. Commercially prepared breast milk substitutes are largely nutritionally adequate but are expensive. For example, to feed 1 baby for 1 year requires 20kg (about 40 tins) of infant formula. Using breast milk substitutes, such as infant formula or animal’s milk, can be a threat to infants’ health. This is particularly the case if parents cannot afford sufficient substitutes, or do not always have clean water with which to mix them.

Sometimes the mother thinks she does not have enough breast milk because her baby is crying a lot. Crying is not always a sign that the baby needs other foods or drinks. It normally means that the baby needs to be held and cuddled more. Some babies need to suckle the breast for comfort. More suckling will

produce more breast milk. Mothers who fear that they do not have enough breast milk often give their babies other food or drink in the first few months of life. This causes the baby to suckle less often, so less breast milk is produced. The mother will produce more milk if she does not give the child other food or drink and breastfeeds often.

For such a mother the following is recommended:

- ♦ Check to see if baby is growing well. A baby who is gaining 0.5–1.0kg per month is growing well and taking in enough breast milk.
- ♦ Reassure her that she is producing enough milk.
- ♦ She can continue breastfeeding exclusively.
- ♦ Advise her to feed as often and for as long as the baby wants, including during the night.

If regular weighing shows that a breastfed baby under 6 months is not growing well, however, advise on the following:

- ♦ The child may need more frequent breastfeeding. At least 8–12 feeds during a 24-hour period may be necessary.
- ♦ Allow baby to suckle at each breast as long as he wants.
- ♦ Check positioning and attachment.
- ♦ The mother should avoid giving other fluids or food. Water or other fluids may be reducing the intake of breast milk.
- ♦ The child may be ill and should be taken to a trained health worker.

Bottles should not be given to breastfed babies because the sucking action for these is very different from suckling at the breast. Using bottles could cause the mother to produce less breast milk and the baby to reduce or stop breastfeeding. Breastfeeding can provide an opportunity for a mother to rest. Fathers and other family members can help by encouraging the mother to rest quietly while she breastfeeds the baby. They can also make sure the mother has enough food and help with household tasks.

- **Key Message 3** – Bottle-feeding can lead to the illness and death of the baby. If a woman cannot breastfeed her infant, the baby should be fed with breast milk or a breast milk substitute from an ordinary clean cup.

Unclean bottles and teats cause diarrhoea and ear infections. Diarrhoea is deadly for babies. The best food for a baby who cannot be breastfed is milk expressed from the mother's breast. Breast milk can be stored for up to 8 hours at room temperature without going bad. Keep it in a clean, covered container. The breast milk should be given from a clean, open cup. Even newborns can be fed with an open cup, which can be easily cleaned. The best food for any baby whose own mother's milk is not available is the breast milk of another healthy mother.

If breast milk is not available, a nutritionally adequate breast milk substitute should be fed to the baby by cup. Infants who are fed breast milk substitutes are

at greater risk of death and disease than breastfed infants. It is important to boil and then cool the water and carefully follow the directions for mixing breast milk substitutes. Feeding the baby breast milk substitutes can cause poor growth or illness if too much or too little water is added or the water is not clean.

3.2.3.2 6–24 MONTHS: AGE OF COMPLEMENTARY FEEDING

- **Key Message 4** – From the age of 6 months to 2 years, children need to be fed other foods, in addition to sustained breastfeeding.

Any infant older than 6 months of age needs other foods and drinks. Breast-feeding should also continue until the child is 2 years or older because it is an important source of energy, protein and other nutrients such as vitamin A and iron. Breast milk helps protect against disease for as long as the child breastfeeds.

From the age of 6 months to 1 year, breastfeeding should be offered before other foods, to be sure the infant takes plenty of breast milk every day. The child's diet should include vegetables, grains or any other staple food, nuts and pulses, fruit, and some oil, as well as fish, eggs, chicken, meat, or dairy products to provide vitamins and minerals. Baby's food needs to be specially prepared to be suitable for complementary feeding. Content (balance of nutrients), consistency and taste as well as frequency of meals are important. In the second year, breastfeeding should be offered after meals and at other times. A mother can continue to breastfeed her child for as long as she and the child wish.

The general guidelines for complementary feeding are:

- ◆ Continue to breastfeed on demand day and night, and start adding other foods (2 meals a day at 6–8 months, 3–4 meals a day at 8–12 months).
- ◆ From 12 to 24 months: Breastfeed frequently and give family foods 5 times a day.
- ◆ From 24 months onward: Continue breastfeeding if both mother and child wish and give family foods 5 times a day.
- ◆ Babies fall ill frequently as they begin to crawl, walk, play, and drink and eat foods other than breast milk. A sick child needs plenty of breast milk. Breast milk is a nutritious, easily digestible food when a child loses appetite for other foods.
- ◆ Breastfeeding can comfort a child who is upset.

HIV infected mothers who choose to breastfeed should exclusively breastfeed for 6 months. If the baby is not HIV infected, usually a mother is advised to wean the baby at the time of complementary feeding. Women who are infected should be advised by a health worker on how to reduce the risk of infecting the child as well as ensuring adequate nutrition for their babies.

A child's stomach is smaller than an adult's, so a child cannot eat as much at a meal. But children's energy and body-building needs are great. So it is important that children eat frequently to provide for all their needs. Foods such as mashed

vegetables, a little chopped meat, eggs, or fish should be added to the child's food as often as possible. A small amount of oil may also be added.

If meals are served in a common dish, younger children may not get enough food. Young children should have their own plate or bowl of food to ensure they can eat what they need and so the parent or caregiver can see how much they have eaten. Young children may need encouragement to eat and may need help in handling food or utensils. A child with a disability may need extra help eating and drinking.

3.2.3.3 2–5 YEARS: AGE OF EATING FAMILY FOODS

- ▶ **Key Message 5** – The child needs to be fed nutritious food 5 times a day using family food with or without breastfeeding. Child still needs 2 tea cups of milk if not breastfeeding.

Children this age are often on an adult diet, but the diet may not be nutritious enough for them. Besides, these children are often left to fend for themselves and end up not getting enough food for their needs. Parents need to recognize that at this age the child is still growing and requires a nutritious food. Food may not need special preparation, but it does need to be given frequently and the parent/caregiver needs to monitor the intake. Some of these children may have started nursery school and may thus fit in existing early childhood development (ECD). The ECD programmes should have a strong child feeding component.

3.2.4 The Micronutrients

Children up to 5 years are prone to micronutrient deficiency especially vitamin A, zinc, iron, and iodine.

3.2.4.1 VITAMIN A

It is necessary for all children up to 5 years to be given a vitamin A capsule obtained from a health worker at 6 monthly intervals starting at 6 months. If a child has not received vitamin A, the caregiver should be told the importance and advantages of vitamin A intake and should be given the national schedule for vitamin A supplementation. A child who has not received vitamin A should be referred to a health facility.

3.2.4.2 IRON

Even mild anaemia in infants and young children can impair intellectual development. Anaemia in children under 2 years of age may cause problems with coordination and balance, and the child may appear withdrawn and hesitant. This can limit the child's ability to interact and may hinder intellectual development. Iron supplements given to pregnant women protect both the women and their babies.

Malaria and hookworm can cause or worsen anaemia. Malaria can be prevented by sleeping under a mosquito net that has been treated with a recommended insecticide. Children living in areas where worms are highly endemic should be treated 2 to 3 times a year with a recommended antihelminthic medication. Good hygiene practices prevent worm infestation.

3.2.4.3 IODINE

Iodized salt should be used to prepare children's food. Small children should not be given unsalted food. Salt will not harm them as long as not too much of it used.

3.2.5 Factors That Promote Good Nutrition

3.2.5.1 GOOD AGRICULTURE

These include the following:

- ♦ Clearing the land at the right time.
- ♦ Planting sufficient food crops.
- ♦ Use of fertilizers and advice from instructors.
- ♦ Timely harvesting and proper storage of food to avoid losses to pests.
- ♦ Good transport system to get enough good food to all regions.
- ♦ Enough cultivatable land for sufficient food crops and also cash crops for income.

3.2.5.2 IN URBAN CENTRES

- ♦ Planning and budgeting for food.
- ♦ Buying a variety of food.
- ♦ Avoiding unhealthy food buys.

3.2.5.3 A HEALTHY ENVIRONMENT

- ♦ Safe and sufficient water for drinking, cooking, cleaning, etc.
- ♦ Enough fuel for adequate cooking.
- ♦ Use of latrines and raising the general standards of sanitation.

3.2.5.4 GOOD EDUCATION

- ♦ Spreading knowledge on good nutrition and child health in schools, families, and communities.
- ♦ Showing ways of improving present attitudes and practices. Special emphasis should be given to good nutrition.

3.2.5.5 A HEALTHY FAMILY LIFE

- ♦ Control of alcoholism to avoid waste of money and manpower.
- ♦ Family size. All the children are likely to receive enough good food and attention if the family is small.
- ♦ When parents are away from home for work, it is important to ensure that children get enough food.
- ♦ Care of children from broken or incomplete families.

- **Key Message 6** – During an illness, children need to continue to eat and drink regularly. After an illness, children need at least 1 extra meal every day for at least a week.

When children are sick, their appetite decreases and their body uses the food they eat less effectively. If this happens several times a year, the child's growth will slow or stop. It is essential to encourage a sick child to eat and drink. This can be difficult, as a child who is ill may have greatly reduced appetite. It is important to keep offering foods the child likes, a little at a time and as often as possible. Extra breastfeeding is especially important.

Dehydration is a serious problem for children with diarrhoea. Drinking plenty of liquids will help prevent dehydration. If illness and poor appetite persist for more than a few days, the child needs to be taken to a health worker. The child is not fully recovered from an illness until he or she weighs about as much as when the illness began

- ◄ **When recovering from diarrhoea or any other illness, children need at least 1 extra meal every day for 2 weeks to make up what they had lost.**

3.2.6 Growth Monitoring and Promotion

More than half of all childhood deaths are associated with malnutrition. Malnutrition weakens the body's resistance to illness. Poor diet, frequent illness, and inadequate or inattentive care of young children can lead to malnutrition. If a woman is malnourished during pregnancy, or if her child is malnourished during the first 2 years of life, the child's physical and mental growth and development may be slowed. This slowing of growth and development cannot be made up for when the child is older, but rather will affect the child for the rest of his or her life. Children have the right to a caring, protective environment and to nutritious food and basic health care to protect them from illness and promote growth and development.

- **Key Message 7** – It is important for a child to be measured (weight and height) regularly from birth to the age of 5 years. If a child has not gained weight for about 2 months then something is wrong. A child who does not increase in height appropriately in the first 2 years will remain short (stunted) for the rest of his/her life.

Serial weight and height measurement and recording on the growth chart should be done as part of the maternal and child health (MCH) programme. All children up to age 5 years should be weighed and measured regularly. Regular increases in weight and height are signs that a child is growing and developing well. For the first year of life a child should be monitored monthly. Thereafter at least every 2 months for the second and third years of life and less frequently until the age of 5 years. Each young child should have a growth chart that is marked every time

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the child is measured. A line is drawn that shows how well the child is growing. If the line goes up, the child is doing well. Parents are thus encouraged and should be happy that their child is doing well. A line that stays flat or goes down or goes too high is a cause for concern.

Parents and health care workers need to understand the continued need for growth monitoring after the measles vaccine at 9 months. This doesn't always happen. As the child grows bigger it becomes more difficult to carry him/her to the clinic and it may be that the mother has a new baby and the older child is no longer a priority for her. Growth monitoring at community level may help to reach all children. This can easily be done by the CHWs, who are encouraged to make community growth monitoring a strong component. The community health workers can be trained and supported to carry out this activity. They together with the parent need to visualize the growth of children and seek help if the child is not growing appropriately.

If a child does not gain weight for 2 months, he or she may not be getting enough nutritious food, may be sick, or may need more attention and care. Parents and health workers need to act quickly to discover the cause of the problem.

If a child is not regularly gaining weight or growing well, there are some important questions to ask:

- ♦ Is the child eating often enough? A child needs to eat 3 to 5 times a day. A child with disabilities may require extra help and time for feeding.
- ♦ Is the child receiving enough food? If the child finishes his or her food and wants more, the child needs to be offered more.
- ♦ Do the child's meals have too little "growth" or "energy" foods? Foods that help the child grow are meat, fish, eggs, beans, nuts, grains, and pulses. A small amount of oil will add energy.
- ♦ Is the child refusing to eat? If the child does not seem to like the taste of a particular food, other foods should be offered. New foods should be introduced gradually.
- ♦ Is the child sick? A sick child needs encouragement to eat small, frequent meals. After an illness, the child needs an extra meal every day for a week. Young children need extra breast milk for at least a week. A child who is frequently ill should be checked by a trained health worker.
- ♦ Is the child getting enough foods with vitamin A to prevent illness? Breast milk is rich in vitamin A. Other foods with vitamin A are liver, eggs, dairy products, yellow and orange fruits and vegetables, and many green leafy vegetables. If these foods are not available in adequate amounts, a child needs a vitamin A capsule twice a year.
- ♦ Is the child being given breast milk substitutes by bottle? If the child is younger than 6 months, exclusive breastfeeding is best. From 6 to 24 months breast milk continues to be the best milk as it is an important source of many nutrients. If other milk is given, it should be fed from a clean, open cup, rather than from a bottle.

- ♦ Are food and water kept clean? If not, the child will often be ill. Raw food should be washed or cooked. Cooked food should be eaten without delay. Leftover food should be thoroughly reheated. Water should come from a safe source and be kept clean. Clean drinking water can be obtained from a regularly maintained, controlled, and chlorinated piped supply. Clean water can also be obtained from protected springs or wells. If water is drawn from ponds, streams, springs, wells, or tanks, it can be made safer by boiling or chlorinating. Are faeces put in a latrine or toilet or buried? If not, the child may frequently get worms and other sicknesses. A child with worms needs deworming medicine from a health worker.
- ♦ Is the young child left alone much of the time or in the care of an older child? If so, the young child may need more attention from adults and more stimulation, especially during meals.

The following advice is appropriate for mothers.

- ♦ Well babies less than 6 months old need no other milk or food apart from breast milk.
- ♦ Adding oil, margarine or sugar, and milk, egg, or well chopped groundnuts makes *uji* and other foods energy rich and helps young children grow well.
- ♦ Feed often (at least 5 times a day) – small children have small stomachs.
- ♦ Feed older children at least 5 times a day.
- ♦ Feed sick children at least 1 extra meal per day and continue for 1–2 weeks after they recover.
- ♦ Continue to take interest in what the child feeds on even, in the school years. Inform both parents and children of possible poor school performance if not fed well.
- ♦ Avoid overfeeding and limit non nutritious snacks, especially if the child is overweight.

Table 3.2: Growth chart findings and appropriate recommendations

Age	Growth chart shows	Recommendations
0–6 Months	Poor or no weight gain for 1 month	Breastfeed as many times as possible, day and night. Check that mother is breastfeeding properly and that her diet is adequate.
	Poor or no weight gain for 2 months	As above. In addition, the mother should be encouraged to eat and drink enough. Refer child for investigation. Child may have hidden illness.
7–12 months	Poor or no weight gain	Breastfeed as often as child wants. Give adequate servings of enriched complementary feed at least 3 times a day if breastfed and 5 times if not breastfed.
13–24 months	No/poor weight gain for 1 month	Continue breastfeeding. Check diet composition and how much child takes. Advise on how to enrich the food. Feed 3 main meals. Give snacks at least 2 times between meals.
24 months and over	Poor or no weight gain for 2 months	Continue feeding as above. Take history and refer.
	Poor or no weight gain	Child should eat half as much food as the father. Child should be encouraged to eat with other children, but should have an adequate serving of food served separately. Take history and refer.

3.2.7 Food and Environmental Hygiene

- **Key Message 8** – Wash your hands thoroughly with soap or ash and water after contact with faeces, and before touching food or feeding children.

Hands should always be washed with soap or ash and water after defecating, after cleaning the baby's bottom, and immediately before feeding children, handling food, or eating. Young children frequently put their hands in their mouths, so it is important to keep the household area clean and to wash children's hands often with water and soap or ash, especially before giving them food. The following hygiene measures can help to prevent diarrhoea:

- ◆ Food should be prepared and thoroughly cooked just before eating.
- ◆ All utensils used for food must be kept clean.
- ◆ Food left standing can collect germs that can cause diarrhoea.
- ◆ After 2 hours cooked foods are not safe unless they are kept very hot or very cold.
- ◆ Drinking water must be treated or boiled.
- ◆ All refuse should be buried, burned, or safely disposed of to stop flies from spreading disease.
- ◆ All households should have a toilet/latrine that is used by everybody.

3.2.7.1 SUMMARY OF GOOD NUTRITION PRACTICES

Maternal Factors

- ◆ Good nutritional status of the mother.
- ◆ Avoid maternal depletion syndrome: The 4 too's: Too young (to have a baby), Too many (children), Too close (between subsequent deliveries), and Too old (to have children).

Child Feeding Factors

- ◆ Breastfeeding initiated within an hour of birth unless the mother or baby is too sick.
- ◆ Exclusive breastfeeding for the first 6 months (without addition of water).
- ◆ Advise mother in case of hiccups and ensure burping after breastfeeding. Introduction of complementary food after 6 months.
- ◆ Continue breastfeeding until child is 2 years and above.
- ◆ Adequacy of diet involves quantity and quality of food. Variety is important.
- ◆ How the food is given: frequency and encouraging children to eat.
- ◆ Using food in its most natural state: Processing and storage of cooked foods may destroy nutrients. It is important that children be given freshly prepared foods if possible.
- ◆ Continued feeding during illness and giving extra after recovery from illness.

Food Security Factors

- ◆ Availability of food in terms of food production/wise buys.

Food Supplementation

- ◆ The foods we eat may not contain enough nutrients. Because of lifestyle changes people consume more refined foods that lack important nutrients. The way the food is prepared may destroy the nutrients, e.g., overcooking. Supplementary feeding is therefore necessary. Children require supplementation with vitamin A, iron, and zinc.

← Healthy household dialogue

The CHW promotes key healthy practices through dialogue with mother or caregiver. Dialogue should involve:

- ◆ Asking
- ◆ Praising
- ◆ Asking for alternative actions
- ◆ Identifying options
- ◆ Adding to those actions and
- ◆ Identifying doable options
- ◆ Summarizing
- ◆ Checking understanding and agreement

3.2.7.2 KEY HEALTH PRACTICES

For Growth Promotion and Development

- ◆ Breastfeed babies exclusively for 6 months.
- ◆ Introduce appropriate complementary foods from 6 months whilst continuing breast feeding up to 24 months.
- ◆ Promote mental and psychosocial development by responding to child's needs for care and by playing, talking and providing a stimulating environment.
- ◆ Ensure that your child's birth is registered and receives a birth certificate.
- ◆ Ensure the child's growth is monitored every month up to 2 years. Continue monitoring till age 5 years.
- ◆ Take child for de-worming after every 6 months from age 2 years.

For Disease Prevention

- ◆ Wash hands before preparing meals, before feeding the child, after handling child's faeces and after visiting the latrine.
- ◆ Dispose of faeces safely
- ◆ Treat or boil drinking water.
- ◆ Protect children from indoor air pollution.
- ◆ Protect children from malaria by ensuring that they sleep under insecticide treated bed nets (ITNs).
- ◆ Provide appropriate care for HIV/AIDS children.
- ◆ Prevent child abuse and neglect, and take action when it does occur.
- ◆ Take child to complete full course of immunization before first birthday.
- ◆ Involve fathers in the care of their children and in the reproductive health of the mother.
- ◆ Take appropriate actions to prevent and manage childhood injuries and accidents.

For the Sick Child

- ♦ Continue to feed and offer more food and fluids when the child is sick.
- ♦ Give child appropriate home treatment for infections.
- ♦ Reduce fever by appropriate dressing and sponging.
- ♦ Follow instructions regarding treatment and advice.
- ♦ Recognize when sick children need treatment outside the home and seek care from an appropriate health worker.

3.3 Child Immunization

Many very serious diseases can be prevented by immunization, but only if the vaccine is given BEFORE the disease strikes. It is essential that infants complete the FULL number of immunizations – otherwise the vaccines may not work. The immunizations are most effective if they are given at the ages specified, or as close to those ages as possible. If for any reason a child has not had the full series of immunizations in the first year of life, it is extremely important to have the child fully immunized as soon as possible. National Immunization Days help to intensify the children's immunity.

One of the main reasons why parents do not bring a child for immunization is that the child has a fever, a cough, a cold, diarrhoea, or some other illness on the day the child is to be immunized. Each of these illnesses is considered a minor illness. It is safe to immunize a child who has a minor illness. It is safe to immunize all children, including those who are disabled or malnourished. After an injection, the child may cry or develop a fever, a minor rash, or a small sore at the injection site. This is normal and the mother should not be worried. Meanwhile, breastfeed frequently or give the child plenty of liquids and foods. A child who develops a high fever should be taken to the health care provider.

3.3.1 Childhood Vaccines

- **Key Message 9** – Immunization is urgent. Every child needs a series of immunizations during the first year of life. A child who is not immunized is more likely to suffer illness, become permanently disabled, or become undernourished and die.

It is essential that all parents know why, when, where, and how many times their children should be immunized. Parents also need to know that it is safe to immunize a child even if the child has an illness or disability or is suffering from malnutrition. Children who are immunized are protected from these dangerous diseases, which often lead to disability or death. All children (boys and girls) have the right to this protection. Half of all deaths from whooping cough, a third of all cases of polio, and a quarter of all deaths from measles occur in children under 1 year old. Children who survive these diseases are weakened and may not grow well or may be permanently disabled. They may die later from malnutrition and other illnesses.

Children must be immunized early in life. The following diseases can be prevented by vaccination.

3.3.1.1 TETANUS

Pregnant women need to be immunized to protect themselves and their infants from tetanus. Tetanus bacteria or spores, which grow in dirty cuts, can be deadly without a tetanus immunization. In certain situations mothers give birth in unhygienic conditions. This puts both mother and child at risk of getting tetanus, a major killer of newborn infants. If a pregnant woman is not immunized against tetanus and tetanus bacteria or spores enter her body, her life will also be at risk. These germs can grow if the umbilical cord is cut with an unclean knife or if anything unclean touches the end of the cord. Any tool used to cut the cord should first be cleaned and then boiled or heated over a flame and allowed to cool. For the first week after birth, the baby's umbilical cord must be kept clean.

Immunizing a woman with at least 2 doses of tetanus toxoid before or during pregnancy protects not only the woman but also her newborn for the first weeks of the baby's life. Thereafter the vaccine is included in the doses the baby gets from 6 weeks.

← **All pregnant women should check to make sure they have been immunized against tetanus.**

3.3.1.2 POLIOMYELITIS

All children, everywhere, need to be immunized against polio. The signs of polio are a floppy limb or the inability to move. For every 200 children who are infected, one will be disabled for life.

3.3.1.3 WHOOPING COUGH

This is a severe disease if contracted early in life. Children cough for a long time. The cough is associated with vomiting. Children develop malnutrition and may suffer brain damage. Immunization effectively protects children against this disease.

3.3.1.4 TUBERCULOSIS

Tuberculosis often presents as a cough of long duration. The germs causing tuberculosis may spread from the lungs to the brain, bone, and any other part of the body. Death and disabilities are common. Even though the child is not fully protected from getting tuberculosis, the severe forms of the disease are prevented by vaccination.

3.3.1.5 MEASLES

All children need to be immunized against measles. Measles is a major cause of malnutrition, poor mental development, and hearing and visual impairments. The signs that a child has measles are a fever and rash that have lasted for 3 days or more, together with a cough, runny nose, or red eyes. Measles can cause death. Vaccination prevents development of measles disease and its complications.

3.3.1.6 MENINGITIS

This is an infection around the brain that is rapidly fatal and may be associated with severe sequelae for those who survive. Some of the causes of meningitis can now be prevented by vaccination. Haemophilus influenzae-b meningitis and Meningococcal meningitis can be vaccinated against.

3.3.1.7 HEPATITIS

Hepatitis is an infection of the liver that causes severe liver damage and is associated with cancer of the liver in some people who are infected with this organism. There is now an effective vaccine that can be given to prevent this infection.

3.3.2 Nutrition and Immunity

Good nutrition boosts the body's response to infection. A malnourished child has poor immunity and thus gets infected very easily. Breast milk and colostrum (the thick yellow milk produced during the first few days after birth) provide protection against pneumonia, diarrhoea and other diseases. Protection lasts for as long as the child is breastfed. Vitamin A helps children fight infections and prevents blindness. Vitamin A is found in breast milk, liver, fish, dairy products, some orange and yellow fruits and vegetables, and some green leafy vegetables. In areas of vitamin A deficiency, children aged 6 months and older should be given vitamin A capsules or liquid when they are immunized. Vitamin A is also an important part of measles treatment.

3.3.2.1 IMMUNIZATION OF THE MOTHER: TETANUS

The mother should receive tetanus immunizations on the following schedule:

- ♦ 1st dose: As soon as she knows she is pregnant.
- ♦ 2nd dose: 1 month after the 1st dose, and no later than 2 weeks before her due date.
- ♦ 3rd dose: 6– 12 months after the 2nd dose, or during the next pregnancy.
- ♦ 4th dose: 1 year after the 3rd dose, or during a subsequent pregnancy.
- ♦ 5th dose: 1 year after the 4th dose, or during a subsequent pregnancy.

3.3.2.2 IMMUNIZATION OF THE CHILD AND VITAMIN A

CHW checks the immunization and vitamin A status of the child, and if incomplete advises the mother accordingly and refers the child to the nearest health facility (see Table 3.3). There should be a follow up of the child monthly until the status is adequately changed. The child's vitamin A status should also be checked.

For every vaccine the caregiver should know the advantages for that vaccine and those for a fully immunized child. The child should be referred to a health facility for immunization. The caregiver should be commended for the vaccines given and should be advised about future vaccines. Consequently the vaccination schedule could be as shown below:

Table 3.3: Immunization schedule

Type of immunization	Age of child	Remarks
BCG: Against TB	Immediately after birth	Or at first contact with child after birth
Polio: Against poliomyelitis Birth polio	Birth polio given at birth	Or at first contact with child before 6 weeks
1st polio	1st polio given at 6 weeks	Or at first contact with child after 6 weeks
2nd polio	2nd polio given at 10 weeks	Or at second contact with child after 10 weeks
3rd polio	3rd polio given at 14 weeks	Or at third contact with child after 14 weeks
Pentavalent (DPT-HepB-Hib): Against 5 diseases		
1st dose	1st – given at 6 weeks	Or at first contact with child after 6 weeks
2nd dose	2nd – given at 10 weeks	Or at 2nd contact with child after 10 weeks
3rd dose	3rd – given at 14 weeks	Or at 3rd contact with child after 14 weeks
Measles: Against measles	At 9 months	Or at first contact with child after 9 months

- ♦ At birth: BCG, OPV0
- ♦ At 2 months: OPV 1, DPT-HepB-Hib 1
- ♦ At 3 months: OPV 2, DPT-HepB-Hib 2
- ♦ At 4 months: OPV 3, DPT-HepB-Hib 3
- ♦ At 9 months: Measles, yellow fever (yellow fever vaccine is given in selected districts)

3.3.2.3 VITAMIN A ADMINISTRATION

Vitamin A administration should be carried at the following ages:

- ♦ 6 months
- ♦ 1 year
- ♦ 1 1/2 years
- ♦ 3 years
- ♦ 3 1/2 years
- ♦ 4 years
- ♦ 4 1/2 years
- ♦ 5 years

- **All parents and caregivers should take their children to complete full course of immunization before first birthday. They should ensure that each of their children have a Clinic Card.**

3.4 Care of Sick Children Aged 2 Months to 5 Years and Disease Prevention

- **Key Message 10** – It is important that parents and caregivers recognized a child with severe illness and seek help from a trained health care worker as soon as possible.

3.4.1 Signs to Observe in an Infant 0–2 Months

When a young infant aged 0–2 months is sick, the following features may be observed in the infant:

- ◆ Either fever or feels cold
- ◆ Unable to suck or sucks poorly
- ◆ Rigidity or feels floppy
- ◆ Yellowness of the eyes or skin
- ◆ Bulging fontanelle
- ◆ Pus draining from the ear
- ◆ Pus draining from the eye
- ◆ Difficult or fast breathing
- ◆ Abnormal movements or convulsions

← ***An infant showing such features is sick and should be taken without delay to the nearest health facility for review and appropriate management by a trained health worker.***

3.4.2 Recognizing a Sick Child

It is of great importance for a mother to recognize when her child is sick. It is especially important for her to understand the seriousness of 3 major manifestations of illness: fever, difficulty in breathing, and diarrhoea. Such a child may need to be urgently reviewed by a qualified health worker for appropriate management.

3.4.2.1 IMPORTANT SIGNS OF ILLNESS IN A CHILD TO BE NOTED BY CAREGIVER

- ◆ Ask about the **3 main features**:
 - Cough or difficult in breathing
 - Diarrhoea
 - Fever (which may be present in case of malaria, measles, pneumonia, meningitis)
- ◆ Signs that suggest that the **child is in danger**:
 - Child not able to drink or breastfeed
 - Child vomits everything
 - Child has had convulsions
 - Child lethargic or unconscious

- ♦ Signs that indicate that the **child is seriously ill**:
 - Cough, difficult breathing or fast breathing (>50 per minute, chest in-drawing)
 - Dehydration (skin pinch going back slowly), blood in stools
 - Fever
- ♦ Signs of **other problems** the child might have, including:
 - Malnutrition and anaemia
 - Immunization status
 - Other problems the mother has mentioned.

3.4.2.2 WHAT TO DO

The 3 main features could represent 3 major disease groups that are responsible for severe illness in children and mothers/caregivers have a very important role in preventing deaths due to these illnesses by seeking advice from the CHW .

Early recognition of these illnesses and prompt taking of the sick children to the health facility is vital in order to reduce severe illness and deaths among the children.

- **When a sick young child needs urgent referral to the nearest health facility.**

The following signs of illness indicate a bacterial infection that requires prompt treatment:

- ♦ Refusal to feed
- ♦ Convulsions
- ♦ Umbilical discharge
- ♦ Yellowness of the eyes
- ♦ Eye discharge

3.4.3 Child with Diarrhoea

- **Key Message 11** – Diarrhoea kills children by draining water from the body. As soon as diarrhoea starts, give extra fluids as well as regular foods and fluids to the child. A child's life is in danger if there are several watery stools within an hour or if there is blood in the faeces. Seek immediate help from a trained health worker.

3.4.3.1 DEFINITION OF DIARRHOEA

This is a situation in which a person passes loose or watery stool more than 4 times in 24 hours. The more numerous the watery stools, the more dangerous the diarrhoea. A child with diarrhoea should be given drinks as often as possible until the diarrhoea stops. Drinking lots of liquids helps to replace the fluids lost during diarrhoea.

- **Danger signs in diarrhoea: A child with diarrhoea who is very ill may be:**
 - ♦ Unable to drink or breastfeed
 - ♦ Lethargic or unconscious
 - ♦ Vomiting everything

Without treatment a child with these signs is likely to die within a short time. The child should be taken to the nearest health facility urgently. It may be difficult but the caregiver should try to give sips of ORS or any other fluid on the way to the health facility.

Features That Require Health Facility Care

The following signs show that the child has lost water (dehydrated) from the body and needs care at a health facility:

- ♦ Lethargy
- ♦ Sunken eyes
- ♦ Sunken fontanel
- ♦ Inelastic skin: Skin of the abdomen pinched goes back very slowly
- ♦ Irritable or restless

A child with any 2 of these signs needs to get to a health facility as soon as possible. The caregiver should try to give sips of ORS on the way to clinic, and continue breastfeeding

Diarrhoea with No Dehydration

A child with diarrhoea but not any of the signs (no dehydration) given above has not lost as much water and can usually be managed at home. For such a child the caregiver or mother should:

- ♦ Give locally available home-based fluids.
- ♦ Continue breastfeeding.
- ♦ Avoid giving aerated drinks, sweetened fruit, juices, spicy drinks, coffee, because these are likely to make the diarrhoea worse.
- ♦ Give home available fluids by a cup or a spoon.
- ♦ Give small quantities at frequent intervals.
- ♦ Continue to feed the child with foods as well.
- ♦ As far as possible, give a variety of fluids. This helps to balance the salt and sugar intake.
- ♦ Give oral rehydration salts (ORS) mixed with the proper amount of clean water.

3.4.3.2 EXAMPLES OF HOME AVAILABLE FLUIDS

- ♦ The following fluids should be given during diarrhoea:
 - Rice water
 - Vegetable soup
 - Soups of chicken, fish, meat
 - Coconut water
 - Milk
 - Fresh fruit juice (not sweetened)
- ♦ The following fluids should not be given during diarrhoea:
 - Aerated drinks like Coke, Fanta, etc.
 - Fruit juices (sweetened)
 - Coffee

➤ ***While at home the caregiver should watch out for the following signs that indicate that the child is getting worse:***

- ◆ Passes several watery stools in 1 hour.
- ◆ Passes blood in the faeces.
- ◆ Vomits frequently.
- ◆ Has a fever.
- ◆ Not able to drink/breastfeed.
- ◆ Refuses to eat.
- ◆ Has sunken eyes.
- ◆ Looks weak or is lethargic.
- ◆ Has had diarrhoea for more than 1 week.

➤ ***If there are any of these signs, the child should be taken to the nearest health facility as soon as possible.***

Diarrhoea usually stops after 3 or 4 days. If it lasts longer than 1 week, caregivers should seek help from a trained health worker. Give the child an extra meal every day while recovering from diarrhoea, for at least 2 weeks.

Preparation of ORS Solution

- ◆ Supplies needed include:
 - Measuring jar (1/2 litre container has 500g of fluid)
 - ORS packet (500g preparation)
 - Spoon
 - Bowl
 - A big container to dissolve the ORS
 - Clean boiled water
 - Basin of water
 - Soap for hand washing
- ◆ Steps required to make ORS:
 - Wash your hands with soap and water, and dry them.
 - Measure 1 litre of clean water.
 - Pour water into the container.
 - Pour all the ORS powder from 1 packet into the water.
 - Mix well until the powder is completely dissolved.
 - Taste the solution. It should be a bit sweet and no saltier than tears.
 - Keep it for not more than 12 hours after preparation and throw away the unused solution. If more is needed, dissolve a new ORS packet for giving to the child.
 - Once the ORS is mixed, give it to the child as follows (also see Table 3.5):
 - Child under 2 years: 1/2 to 1 small cup for every loose stool.
 - Child over 2 years: 1–2 small cups for every loose stool
 - Continue to give ORS until the diarrhoea stops

➤ **If a child vomits wait 10 minutes and give again.**

Caregivers should be told:

- ♦ That giving fluids can be life saving.
- ♦ To breastfeed more frequently and longer at each feeding, and not to stop giving other foods.
- ♦ To give frequent small sips from a cup or spoon or as much as the child will take. Use a spoon to give fluids to a young child.
- ♦ If the child vomits, to wait 10 minutes and then continue, but more slowly.
- ♦ To continue giving extra fluid until the diarrhoea stops.

On the other hand, the CHWs should teach and support the mothers and caregivers to:

- ♦ Give the child extra fluids as soon as diarrhoea starts as well as regular foods
- ♦ Give the child an extra meal a day while recovering from diarrhoea, for at least 2 weeks.
- ♦ Wash hands with soap before feeding or breast feeding, after cleaning the baby's faeces or using toilet.
- ♦ Recognize danger sign and the lead action.

➤ ***Take the child to a health facility if not able to drink, becomes sicker, or develops fever.***

3.4.3.3 FEEDING DURING DIARRHOEAL ILLNESS

A child with diarrhoea loses weight and can quickly become malnourished. A child with diarrhoea needs all the food and fluid he or she can take. Food can help stop the diarrhoea and help the child recover more quickly. If the child is around 6 months of age or older, parents and caregivers should encourage the child to eat as often as possible, offering small amounts of soft, mashed foods or foods the child likes. These foods should contain a small amount of salt. Soft foods are easier to eat and contain more fluid than hard foods.

Recommended foods for a child with diarrhoea are well-mashed mixes of cereals and beans, fish, well-cooked meat, yoghurt and fruits. A teaspoon or 2 of oil can be added to cereal and vegetables. Foods should be freshly prepared and given

Table 3.4: Guidelines for giving ORS to children with diarrhoea

Type of diarrhoe	Age of child	Amount of fluid to give
Diarrhoea with no dehydration	2–24 mons	5–10 tablespoonfuls after every loose stool. Caregiver to receive packets of half-litre (500ml sachet) ORS
Diarrhoea with some dehydration	2 yrs and above	10–20 tablespoonfuls after every loose stool
	2–3 mons	200–400ml over 4 hours
	4–12 mons	400–700ml over 4 hours
	12–24 mons	700–900ml over 4 hours
	24 mon – 5 yrs	900–1,400ml

Note:

- Child to be given the solution while being prepared to be taken to health facility and while on the way to the health facility.
- Show caregiver the size of container that can measure the amount of fluid shown.

to the child 5 or 6 times a day. After the diarrhoea stops, extra feeding is vital for a full recovery. At this time, the child needs to eat an extra meal a day, or breastfeed more every day, for at least 2 weeks. This will help the child replace the energy and nourishment lost due to diarrhoea.

A child is not fully recovered from diarrhoea until he or she is at least the same weight as when the illness began. Vitamin A capsules and foods that contain vitamin A help a child recover from diarrhoea. Foods that contain vitamin A include breast milk, liver, fish, dairy products, orange or yellow fruits and vegetables, and green leafy vegetables. Diarrhoea usually cures itself in a few days. The real danger is the loss of fluid and nutrients from the child's body, which can cause dehydration and malnutrition.

A child with diarrhoea should never be given any tablets, antibiotics or other medicines unless these have been prescribed by a trained health worker. The best treatment for diarrhoea is to drink lots of fluids and oral rehydration salts (ORS) properly mixed with water.

➤ **Measles frequently causes severe diarrhoea. Immunizing children against measles prevents this cause of diarrhoea.**

3.4.3.4 PREVENTING DIARRHOEA

Children and adults can swallow germs that cause diarrhoea if faeces touch the household's drinking water, food, hands, utensils or food preparation surfaces. Flies that settle on faeces and then on food also transmit the germs that cause diarrhoea. Covering food and drinking water protects them from flies. All faeces, even those of infants and young children, carry germs and are therefore dangerous. If children defecate without using the latrine or toilet, their faeces should be cleaned up immediately and put down the toilet or buried. Keeping latrines and toilets clean prevents the spread of germs.

There are 4 steps to be taken to limit the spread of diarrhoea:

- ◆ Dispose all faeces in a latrine or toilet or bury them
- ◆ Wash hands with soap or ash and water after contact with faeces
- ◆ Use treated water for drinking
- ◆ Wash, peel or cook all foods.

3.4.4 Child with Cough (Respiratory Infection)

Many respiratory infections – like the common cold – can be treated at home, but a cough can also indicate the presence of a serious disease. Caregivers need to be told how to assess the child with a cough and the signs to watch for that may indicate a more serious problem.

- **Key Message 12** – A child with a cough or cold should be kept warm and encouraged to eat and drink as much as possible. If the

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child is breathing rapidly or has fever take the child immediately to a health facility for treatment.

Children with coughs, colds, runny noses, or sore throats who are breathing normally can be treated at home and will recover without medicines. They need to be kept warm, but not overheated, and be given plenty to eat and drink. Medication should be used only if prescribed by a health worker. A child with a fever should be sponged or bathed with cool but not cold water. In areas where malaria is common, the fever could be dangerous. The child should be checked by a health worker immediately.

The nose of a child with a cough or cold should be cleared often, especially before the child eats or goes to sleep. A moist atmosphere can make breathing easier, and it will help if the child breathes water vapour from a bowl of hot but not boiling water. A breastfed child who has a cough or cold may have difficulty in feeding. Breastfeeding helps to fight the illness and is important for the child's growth and therefore the mother should continue to breastfeed often. If a child cannot suckle, the breast milk can be expressed into a clean cup and the child can then be fed from the cup.

Children who are not breastfed should be encouraged to eat or drink small amounts frequently. When the illness is over, the child should be given an extra meal every day for at least a week. The child is not fully recovered until he or she is at least the same weight as before the illness.

The CHWs teach and support the mothers and caregivers to:

- ♦ Keep child with cough or cold warm and continue normal feeding and drinking.
- ♦ Recognize fever and seek the attention of a health worker immediately.
- ♦ Recognize the following danger signs and take child urgently to a health facility:
 - Not able to drink or breastfeed.
 - Vomits everything.
 - Convulsions.
 - Not alert, not responding, uninterested in surroundings (lethargic or unconscious).

The child should be taken immediately to a health clinic or a trained health worker if any of the following are present:

- ♦ The child is breathing much more quickly than usual: for a child 2 to 12 months old – 50 breaths a minute or more; for a child 12 months to 5 years old – 40 breaths a minute or more
- ♦ The child is breathing with difficulty or gasping for air.
- ♦ The lower part of the chest sucks in when the child breathes in, or it looks as though the stomach is moving up and down.
- ♦ The child has had a cough for more than 2 weeks.
- ♦ The child is unable to breastfeed or drink.
- ♦ The child vomits frequently.

These signs indicate a serious disease, like pneumonia or TB. Any child presenting with abnormal features needs to be taken to the health facility or a health worker. A child who has been coughing for 2 weeks or more should be taken to the health facility for a TB test immediately.

3.4.4.1 COMMON COLD (ACUTE RHINITIS, CORYZA)

This is an acute viral infection of the respiratory tract with inflammation of all the airways including the nose, paranasal sinuses, throat, larynx, and often the trachea and bronchi, usually without fever. There is nasal obstruction, watery running nose, sneezing, sore throat, cough, watery red eyes, headache, and general malaise. Young infants may have difficulty breastfeeding due to blocked nostrils.

What to do:

- ◆ Most colds resolve spontaneously in 7–10 days, so no medication is needed.
- ◆ Ensure adequate food and fluid intake, especially for the young infant who may have difficulty feeding.
- ◆ Keep the child warm, breastfeed frequently, and clear a blocked nose if it interferes with feeding.
- ◆ Avoid giving aspirin.
- ◆ Do not give antihistamines and cough depressants.
- ◆ Give paracetamol if there is fever.
- ◆ Take child to health facility if breathing is difficult, or if feeding becomes a problem.
- ◆ Remember antibiotics are of no value in viral infections.

← ***Refer all young infants (0–2 months) and any child who develops difficulty in breathing to the nearest health facility.***

3.4.4.2 DIFFICULT BREATHING

The following features are noted in a child who has difficult breathing:

- ◆ Chest in-drawing
- ◆ Fast breathing:
 - 60 breaths or more in a baby under 2 months of age
 - 50 breaths or more per minute in a child 2 months up to 12 months
 - 40 breaths or more per minute in a child 12 months to 5 years

← ***This means pneumonia, which is a severe disease. Refer urgently to the nearest health facility.***

If a health worker provides antibiotics to treat pneumonia, it is important to follow the instructions and give the child all the medicine for as long as the instructions say, even if the child seems better.

- **Key Message 13** – If the child is coughing 1 or 2 weeks or more, she/he should be taken 1 or a TB test immediately. Early diagnosis and prompt treatment is the only way to control TB.

Tuberculosis (TB) is a disease caused by bacteria. The bacteria usually attack the lungs, but TB can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB is spread through the air from one person to another. The bacteria are put into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected.

TB in children is always contracted from an adult in close contact with the child. All adults who have TB should have their children examined. Alternatively if the child is diagnosed first, screen the adults in the household for TB. Though not all people who get infected become sick, babies and young children are more likely to get active disease because they have weak immune systems. It is even more likely for children with HIV infection to get TB. Ensure that the adult with TB and on treatment is taking the drugs. The success of tuberculosis treatment depends on strict adherence to treatment. WHO DOTS (Directly Observed Treatment Short Course) can be used if adherence is uncertain.

BCG vaccination, although not totally protective, reduces the risk of severe/complicated TB. Through dialogue, with the mother or caregiver, it is important to:

- ♦ Ensure that the child is taken to a health facility where accurate diagnosis can be made and the child treated.
- ♦ Trace the adult who infected the child and make sure that he/she is treated at the same time as the child.
- ♦ Remember that treatment for TB takes a minimum of 6 months.
- ♦ All the doses should be taken as prescribed. If this is not done, the disease is likely to flare up and then the bacteria may be resistant.

3.4.5 Child with Fever

The presence of a fever means that a child has an infection. The common causes in young children are:

- ♦ Malaria
- ♦ Measles
- ♦ Pneumonia (with cough)
- ♦ Sepsis in young infants
- ♦ Ear infection

Children with a fever should be kept cool for as long as the fever persists by:

- ♦ Sponging or bathing with cool (not cold) water.
- ♦ Reducing covering of the child to only a few clothes.

BUT:

- **Key Message 14** – A child with a fever should be examined immediately by a trained health worker and receive an appropriate treatment as soon as possible.

The following signs indicate danger in children with fever:

- ♦ History of convulsions or convulsion at the time of contact
- ♦ Lethargy or unconsciousness
- ♦ Child unable to breastfeed
- ♦ High fever
- ♦ Vomiting everything
- ♦ Stiff neck
- ♦ Cough with fast breathing or difficult breathing

If child has any of the above signs, suspect any of the following,

- ♦ Very severe febrile disease
- ♦ Malaria,
- ♦ Pneumonia
- ♦ Measles

Refer such a child urgently to the nearest health facility for appropriate management. Give paracetamol to relieve pain and fever but do not delay the referral.

3.4.5.1 MALARIA

A child with a fever believed to be caused by malaria needs to be given immediate antimalaria treatment as recommended by a health worker. If children with a malarial fever are not treated within a day, they might die. A health worker can advise on what type of treatment is best and how long it should continue. A child with malaria needs to take the full course of treatment, even if the fever disappears rapidly. If the treatment is not completed, the malaria could become more severe and difficult to cure.

Common complications of malaria include:

- ♦ Anaemia
- ♦ Enlarged spleen
- ♦ Convulsions

How to Deal with Malaria

- ♦ Refer to health facility for treatment.
- ♦ Child will be given Coartem tablets according to child's age and paracetamol for fever.
- ♦ Continue breastfeeding and feeding the child.
- ♦ Give fluids to the child.
- ♦ Follow up to ensure completion of course of treatment.

It is worth remembering that ***not all fevers are due to malaria***. Consequently take such children to the nearest health facility for diagnosis.

Malaria burns up energy, and the child loses a lot of body fluid through sweating. The child should be offered food and drink frequently to help prevent malnutrition and dehydration.

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Frequent breastfeeding prevents dehydration and helps the child fight infections, including malaria. Children with malaria should be breastfed as often as possible.

- ▶ **Key Message 15** – Malaria is transmitted through mosquito bites. Sleeping under a mosquito net treated with a recommended insecticide helps to prevent malaria. All children should sleep under a treated mosquito net.

All members of the community should be protected against mosquito bites, and especially between sunset and sunrise when mosquitoes are most active. Mosquito nets, curtains, or mats that are dipped in a recommended insecticide kill mosquitoes that land on them. Use special permanently treated mats, or conventional nets, curtains, or mats that are dipped in insecticide regularly. Usually, the conventional nets need to be re-treated when the rains begin, at least every 6 months, and after every third wash. There are new chemicals that treat the nets and give them a protective effect for more than 6 months. Trained health workers can advise on safe insecticides and re-treatment schedules. Babies and other small children should sleep under a treated mosquito net. Nets are free from public clinics or highly subsidized from local shops in rural areas. The family should buy at least one big net, which the small children can sleep under. Breastfed babies should sleep with their mothers under a net. Treated mosquito nets should be used throughout the year, even during times when there are fewer mosquitoes.

- ▶ **Key Message 16** – Families and communities can prevent malaria by removing stagnant pools of water and cutting grass and bushes around their dwellings to stop mosquitoes from breeding.

Mosquitoes breed in selected non-polluted water pools, holes and streams – for example, in ponds, swamps, puddles, pits, clean water drains, open fields, and slow running streams. Malaria affects the whole community. Everyone can work together to acquire and use a net and to organize regular treatment of mosquito nets with insecticide. Communities should ask all health workers and political leaders in their regions to help them prevent and control malaria.

Measures to prevent and control of malaria include

- ◆ Destroying mosquito breeding sites by filling in or draining places where water collects.
- ◆ Draining all stagnant water around the living places.
- ◆ Clearing the compound – this includes cutting short the vegetation and destroying discarded containers that can hold water.
- ◆ Using high spread oil on stagnant waters.
- ◆ Covering water containers or tanks.
- ◆ Using insecticides at household level (indoor residual spraying) and aerial sprays.
- ◆ Discouraging mosquitoes by:

- Using mosquito nets
- Using repellents – mosquito coil, jelly
- Wearing clothes that cover the body and limbs in the evening.
- ♦ Treating the sick properly.

3.4.5.2 MEASLES

Measles is a viral infection characterized by rash on the body and fever. It is extremely contagious. It is also preventable through immunization.

Mode of Transmission

It is an air borne and communicable disease which is spread through droplets. It generally occurs in epidemics amongst children.

Signs and Symptoms

- ♦ Severe cold with high fever
- ♦ Cough
- ♦ Watery red eyes (discharge)
- ♦ Nasal discharge
- ♦ General body rash
- ♦ White spots inside the mouth

Suspect measles if the child has fever, feels hot now or in the last 3 days, and has generalized rash and any of the following: Cough, runny nose, red eyes.

Predisposing Factors

- ♦ Overcrowding
- ♦ Lack of measles immunization
- ♦ Measles outbreak

Prevention and Control

- ♦ Good nutrition
- ♦ Immunization
- ♦ Proper ventilation
- ♦ Referral of suspected cases

Measles immunization for is given to infants who are 9 months or above irrespective of whether they have suffered from measles/measles like illness. Infants 6 months and above should be immunized against measles in the following circumstances:

- ♦ Siblings to a child with measles illness.
- ♦ Children living in crowded places, refugee camps, children's homes.
- ♦ Children admitted to hospital for any condition (age 6–9 months).
- ♦ Children in a locality with measles epidemic.

Complications

- ♦ Watery diarrhoea
- ♦ Sore mouth
- ♦ Otitis media

3.4.5.3 EAR INFECTION

The mother or caregiver is usually able to tell whether a child has an ear infection. Such a child could have 1 or more of the following:

- ♦ There is pain or swelling involving the ear.
- ♦ Child rubs or pulls the ear frequently.
- ♦ There may be fluid coming from the ear.

The following criteria can be used to interpret the signs in a child with respect to ear infection:

- ♦ If none of the above features is present, then there is no ear infection.
- ♦ If 1 of the above signs is present, then ear infection is a possibility.
- ♦ If there is there swelling behind the ear, mastoiditis should be considered.

For a child with ear infection, give 1 dose of paracetamol and take the child to the health facility urgently. If the ear has been discharging for more than 2 weeks, then chronic ear infection is considered.

If a child has a chronic ear infection, show the caregiver how to clean the ear by dry wicking using a clean cloth. The child should be taken to the nearest health facility for appropriate management.

If there are no signs of chronic ear infection, then the child is likely to be having acute ear infection.

3.4.5.4 TYPHOID

Typhoid may present as persisting fever. Any child with persisting fever should be taken to the nearest health facility for appropriate management. The main strategies for preventing typhoid are basically hygienic practices, such as:

- ♦ Ensure safe drinking water through boiling or treatment with chlorine based substances.
- ♦ Boil milk for home consumption.
- ♦ Practise hygienic waste disposal.

In addition, typhoid can be prevented by vaccine.

3.5 Malnutrition

Poor nutrition results when the body is not given the right food or when the body is not given enough food – or even too much food. Sometimes it is a result of chronic illness like TB, heart disease, and many other conditions

3.5.1 Detecting Malnutrition

Many diseases relate to nutrition deficiencies. They range from mild, like being underweight, to severe forms like marasmus and kwashiorkor. A child suffering from these diseases can be identified during growth monitoring when the child

health card shows weight loss or no weight gain. The child may begin to show visible wasting or oedema of both feet. Refer such a child urgently to the nearest health facility for appropriate management.

When there is poor nutrition the child may be:

- ♦ Underweight or wasted: Lower weight than expected for age.
- ♦ Overweight or obese: Weight higher than expected for age.
- ♦ Stunted: Shorter than expected for age.

Serious types of malnutrition include:

- ♦ Kwashiorkor
- ♦ Marasmus
- ♦ Obesity

If there is weight loss or no weight gain shows after plotting the weight on the child health card graph, the CHW usually gives nutrition advice and checks on the household until weight gain is satisfactory. If there is no improvement after 1 month the child should be referred to a health facility for evaluation and appropriate management. The caregiver or mother needs to understand the problems noted and should be involved in decisions made relating to the care of the child.

3.5.2 What Action to Take

It is necessary to try to determine whether malnutrition is related to not enough food (or too much) or to deficiencies in nutrients. To do this, assess breastfeeding practices, and what else the child is feeding on. Weigh the child every week. If the child has not gained weight for 2 consecutive weeks, refer to the nearest health facility.

If weight is not very low for age:

- ♦ Congratulate the caregiver.
- ♦ Show the mother how well the child is doing on the weight chart.
- ♦ Work out with the mother how to mix available nutritious food from the 3 food groups.
- ♦ Show her how to provide sensory stimulation once child is over the acute phase of the illness and takes interest in surroundings.

Advise all caregivers to take the child urgently to the nearest health facility if any of the following features occur:

- ♦ Visible wasting or (marasmus).
- ♦ Oedema of both feet (kwashiorkor).
- ♦ Very low weight for age.

3.5.3 Kwashiorkor

Kwashiorkor is a disease caused by bad feeding. It usually occurs when the child stops breastfeeding and is given mostly carbohydrates and not enough proteins.

Kwashiorkor is seen mostly in children between 6 months and 3 years of age, although it also occurs in older children.

A child with kwashiorkor:

- ♦ Has swelling of the legs.
- ♦ Also has hands and face that become swollen.
- ♦ Has skin that becomes light in colour.
- ♦ Sometimes has skin that peels.
- ♦ Has reddish hair that pulls out easily.
- ♦ Is uninterested in anything that goes on around him.
- ♦ Has weak, wasted muscles.

3.5.4 Marasmus

Marasmus is a disease caused by starvation. The child does not get enough to eat. Marasmus develops as a result of lack of food and also as a result of chronic illness, e.g., tuberculosis.

A child with marasmus:

- ♦ Is thin and wasted.
- ♦ Has wrinkled skin over the bones.
- ♦ Has a face like that of an old man.
- ♦ Has bright eyes and is very alert.
- ♦ Is hungry and quickly accepts food.

The following factors have been found to contribute to the developing of marasmus in a child:

- ♦ Breakdown in family structure, e.g., divorce/ death of parents.
- ♦ Alcoholism.
- ♦ Lack of knowledge on proper diet.
- ♦ Problems relating to food availability:
 - Shortage of food
 - Selling of food reserve to outside markets
 - Poor production of food
 - Poor food storage and misuse of food
 - Cultural practices – Certain foods (often the most nutritious) reserved only for men, foods restricted during some illness, belief in bewitching.

3.5.5 Micronutrient Deficiency

Micronutrients are the vitamins and minerals the body requires to function properly. Sometime the amount of the micronutrient can be very small, but even so can have a big impact if it is not included in the diet. Major micronutrients are vitamins A, B, C, and D, and minerals like iron. A few of these, and how to ensure that children get enough of them, are described below.

3.5.3.1 VITAMIN A DEFICIENCY

Vitamin A is a retinol ester that can either be ingested or synthesized within the body from plant carotene. It is important in maintenance of the integrity of the skin and body membranes, immunity, and night vision. Deficiency results in increased morbidity and mortality from infectious diseases. Vitamin A supplementation has been shown to result in 23–34% reduction of all childhood mortality (6–59 months), 50% reduction in measles mortality and 33% reduction in diarrhoeal disease mortality.

☛ **Vitamin A deficiency is a major cause of illness and blindness among poor communities worldwide.**

Eye Manifestations of Vitamin A Deficiency

Early during deficiency of vitamin A there is reversible dry cornea and night blindness. Subsequently, irreversible damage of the cornea that may be associated with rupture and/or scarring occurs and results in blindness.

Preventing Vitamin A Deficiency

The following strategies are recommended for preventing vitamin A deficiency in the community:

- ♦ Encourage families to consume vitamin A rich foods:
 - Animal products – Liver, milk, kidneys.
 - Plant sources – Dark green leafy vegetables, yellow fruits and vegetables.
- ♦ Provide vitamin A supplementation.

3.5.3.2 VITAMIN D DEFICIENCY

Vitamin D deficiency is common in some parts of the country. It usually occurs during the second half of the first year.

Manifestations of Vitamin D Deficiency

Children with vitamin D deficiency present with

- ♦ Poor growth.
- ♦ Delayed or regressed milestones.
- ♦ Recurrent respiratory infections in form of pneumonia.
- ♦ Weak or deformed bones (rickets).

Strategies for Preventing Vitamin D Deficiency

Strategies for prevention of vitamin D deficiency among children within the community include the following:

- ♦ Expose children to sunlight with minimal clothing for 30–60 minutes a day.
- ♦ Supplement diet with multivitamins containing vitamin D for infants born premature.
- ♦ Ensure children get adequate calcium and phosphate, usually in form of milk.

3.5.6 Managing Malnutrition Cases at Community Level

Community members should be helped to do the following:

- ♦ Identify the root cause.
- ♦ Assist the family to identify the cause of the problem and possible solutions.
- ♦ Set a plan of action with the family.
- ♦ Make a follow up.

3.6.7 Consequences of Malnutrition

The following are consequences of malnutrition in a child:

- ♦ Retardation of growth and development for the child.
- ♦ Child may not do well in school
- ♦ The child becomes vulnerable to common diseases.

3.5.8 Preventing Malnutrition

The following strategies are recommended at the community level for prevention of malnutrition:

- ♦ Educate the community on proper nutrition, e.g., encourage mothers to give eggs to their children instead of selling them.
- ♦ Immunize children within the community to prevent childhood infections such as measles.
- ♦ Ensure adequate and diversity of food production with emphasis on locally available foods.
- ♦ Encourage family planning within the community.
- ♦ Promote breastfeeding and proper complementary feeding within the community.
- ♦ Promote early detection and adequate treatment of acute and chronic infections as well as other diseases.

For more information, also refer to Section 3.2 on nutrition.

3.6 Anaemia

A child who is anaemic is weak and not able play or learn well in school. Anaemia may be caused by not eating the right foods, by infections such as malaria, or by blood loss in the stool especially if there are worms in the intestines that suck blood from the child. The first step to take to prevent anaemia is therefore to ensure an adequate diet that contains plenty of green leafy vegetables, some meat, and eggs. In addition, it is necessary to protect the child from malaria and ensure cleanliness in the home environment to prevent worm infections.

The following advice should be given to mothers within the community:

- ♦ Give balanced and adequate diet to all children. This should include iron and folate containing foods like meat, fish, eggs, dark green leafy vegetables, and yellow fruits.
- ♦ Provide adequate diet to prevent growth failure due to malnutrition.
- ♦ Check for anaemia:
 - Look/Ask/Check for palmar pallor by comparing child's palm with yours or that of the caregiver. If anaemia is present the child should be referred to a health facility for proper diagnosis and treatment.
 - In case of severe palmar pallor, refer the child urgently to the nearest health facility for appropriate management.

3.7 Home Accidents and Poisoning

- **Key Message 17** – Many serious injuries can be prevented if parents and caregivers watch young children carefully and keep their environment safe. Poisons, medicines, bleach, acid, and liquid fuels such as paraffin (kerosene) should never be stored in drinking bottles. All such liquids and poisons should be kept in clearly marked containers out of children's sight and reach.

Children between 18 months and 4 years old are at high risk of death and serious injury. As much as possible, anything that may be dangerous for active young children should be stored safely away, out of their reach. The main causes of injuries in the home are:

- ♦ Burns from fires, stoves, ovens, cooking pots, hot foods, boiling water, steam, hot fats, paraffin lamps, irons, and electrical appliances.
- ♦ Cuts from broken glass, knives, scissors, or axes.
- ♦ Falls from cots, windows, tables, and stairs.
- ♦ Choking on small objects such as coins, buttons, or nuts.
- ♦ Poisoning from paraffin (kerosene), insecticide, bleach, and detergents.
- ♦ Electrical shock from touching broken electrical appliances or wires, or poking pins or knives into electric outlets.

- **Protect children from fires. Avoid leaving small children locked up in houses.**

3.7.1 Accidents

3.7.1.1 INJURIES

Every year, 750,000 children die from injuries. Another 400 million are seriously hurt. Many injuries lead to permanent disability and brain damage. Injuries are a major cause of death and disability among young children.

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The most common injuries are falls, burns, drowning, and road accidents. Most of these injuries happen in or near the home. Almost all can be prevented. Many would be less serious if parents knew what to do when an injury happens.

Wells, tubs, and buckets of water should be covered. Families who live near rivers/lakes/sea must make sure that young children are not left alone or under care of small children when playing near open waters. A small toddler can drown in just a basin or bucket of water.

Young children do not think before they run onto the road. Families need to watch them carefully. Children should not play near the road, particularly if they are playing with balls. Children should be taught to walk on the side of the road, facing traffic if possible. It is preferable that children younger than 5 years are not left to cross a road unaccompanied by an older person.

When crossing the road, young children should be taught to:

- ♦ Stop at the side of the road.
- ♦ Look both ways for any vehicles, bicycles, motorcycles, or other traffic.
- ♦ Hold the hand of another person.
- ♦ Walk and not run across the road.

Older children should be encouraged to look after younger children and to set a good example. Bicycle accidents are a frequent cause of injury and death among older children. Families can prevent bicycle accidents if they make sure that children with bicycles are trained in road safety. Children should wear helmets or protective headgear when biking.

Children are at high risk of serious injury if they travel in the front seat of a car or unsupervised on the back of a truck.

Burns and scalds are among the most common causes of serious injury among young children. Children need to be prevented from touching cooking stoves, boiling water, hot foods, and hot irons. Burns often cause serious injury and permanent scarring, and some are fatal. The great majority of these are preventable.

Burns can be prevented by:

- ♦ Keeping young children away from fires, matches, and cigarettes.
- ♦ Keeping stoves on a flat, raised surface out of the reach of children. If an open cooking fire is used, it should be made on a raised mound of clay, not directly on the ground.
- ♦ Turning the handles of all cooking pots away from the reach of children.
- ♦ Keeping petrol, paraffin, lamps, matches, candles, lighters, hot irons, and electric cords out of the reach of young children.

Falls are a common cause of bruises, broken bones, and serious head injuries. Serious falls can be prevented by:

- ♦ Discouraging children from climbing onto unsafe places.
- ♦ Using railings to guard stairs, windows, or balconies.
- ♦ Keeping the home clean and well lit.

Broken glass can cause serious cuts, loss of blood, and infected wounds. Glass bottles should be kept out of the reach of young children, and the house and play area should be kept free of broken glass. Young children should be taught not to touch broken glass; older children should be taught to dispose of any broken glass safely. Knives, razors, and scissors should be kept out of the reach of young children. Older children should be trained to handle them safely. Sharp metal objects, machinery, barbed wire, and rusty cans can cause badly infected wounds. Children's play areas should be kept clear of these objects. Household refuse, including broken bottles and old tins, should be disposed of safely.

Other injuries around the home can be prevented by teaching children the dangers of throwing stones or other sharp objects and of playing with knives or scissors.

In case of cuts and abrasions, the following is recommended:

- ♦ Clean well with soap and water.
- ♦ Take the child to the nearest health facility if the following occur:
 - The cut becomes septic.
 - The child becomes weak, or gets more sick.
 - The child shows no improvement within 2 days or gets more sick.

3.7.1.2 INHALATIONS

Children should be protected from any inhalations – fumes, smoke, pesticide mist, etc. Some inhalations affect children's health. Indoor inhalation from smoke may lead to chest problems in young children, e.g., difficulty in breathing and wheezing as in asthma.

3.7.1.3 FOREIGN BODIES IN THE EARS

How to recognize:

There is a history of foreign body insertion into the ear, pain, or discomfort in ear. There may also be discharging ear, disturbing noise (insects), and bleeding (traumatic insertion). Bleeding from the ear and external evidence of trauma may suggest that a foreign body may have entered into the middle ear.

3.7.1.4 FOREIGN BODIES IN THE WIND PIPE (CHOKING)

Play and sleeping areas should be kept free of small objects such as buttons, beads, coins, seeds, and nuts. Very young children should not be given groundnuts (peanuts), hard sweets, food with small bones or seeds, or toys with small parts. Coughing, gagging, and high-pitched, noisy breathing **or the inability to make any sound at all** indicate breathing difficulty and possible choking. Choking is a life-threatening emergency. Caregivers should suspect an infant is choking when he or she suddenly has trouble breathing, even if no one has seen the child put something into the mouth. And it is important to keep an

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eye on crawling babies and toddlers – you may not hear them choking. It is advisable that all people caring for small children be taught to dislodge foreign bodies in the throat (figures 3.1 and 3.2). This would save lives, as often a child dies as soon as there is complete blockage of the wind pipe.

Figure 3.1: How to manage the choking infant

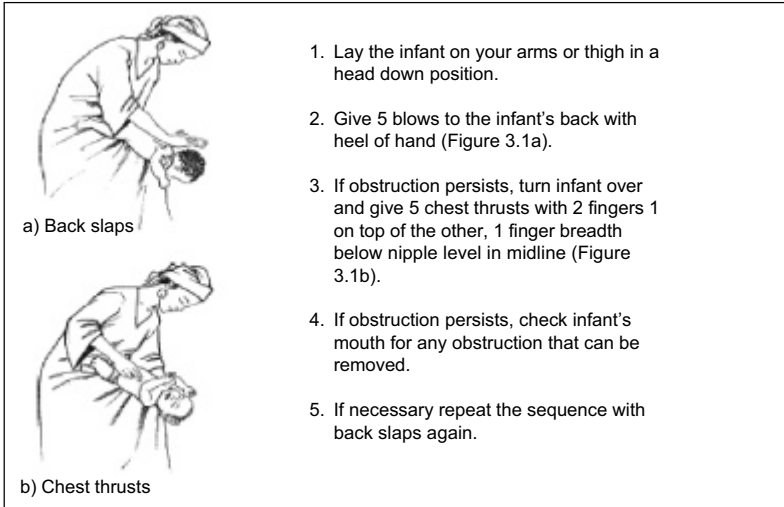
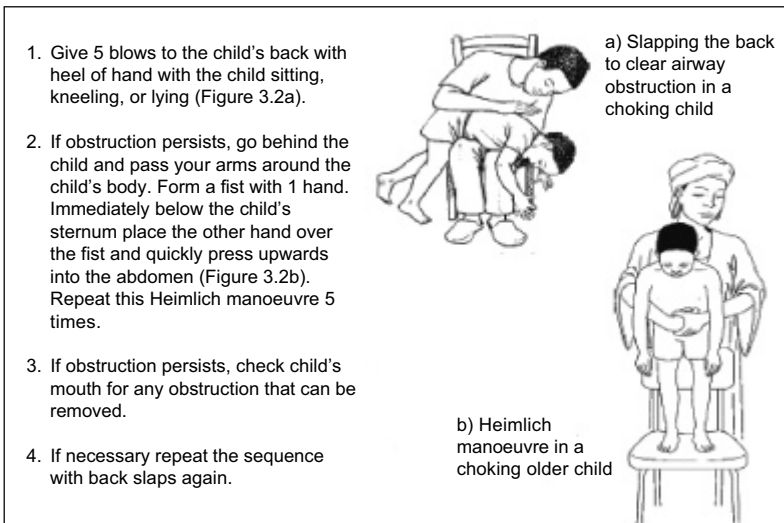


Figure 3.2: How to manage the choking child



3.7.1.5 FOREIGN BODIES IN THE FOOD PASSAGE

The commonest objects are coins, fish or meat bones.

How to recognize:

There is usually pain in the chest (retrosternal) and/or in the back, or painful swallowing, pooling of saliva in the mouth, or regurgitation of food.

In such a situation, it is recommended that:

One should not try to remove the foreign body, but rather take the affected child to the nearest health facility. There should also be community education about the dangers of children playing with foreign bodies in their mouths.

3.7.2 Poisoning

Poisoning is common in children under 3 years of age. Poisoning is a serious danger to small children. Bleach, insect and rat poison, paraffin (kerosene), and household detergents can kill or permanently injure a child. Some common poisons are paracetamol, aspirin, pesticides (organophosphates), and paraffin. Other poisons include drugs being taken by any member of the family. It does no good to wonder how a child could swallow something that tastes terrible – adults often urge children to eat foods or take medicines that taste bad to the child.

3.7.2.1 WHAT TO DO IN CASE OF POISONING

- ◆ Suspect poisoning when a previously well child suddenly falls sick.
- ◆ Try to identify the type of poison the child has taken.
- ◆ Carry the container to the health facility.
- ◆ Do not give the child anything to drink, and do make the child vomit.
- ◆ In the case of insecticides like diazinon, remove the child's clothing and give the child a bath.

➤ ***In all cases take the child to a health facility as soon as possible.***

➤ ***Many poisons do not need to be swallowed to be dangerous.*** They can kill, cause brain damage, or cause blindness or permanent injury if they:

- ◆ Are inhaled.
- ◆ Get onto the child's skin or into the eyes.
- ◆ Get onto the child's clothes.

3.7.2.2 PREVENTION OF POISONING

Keep dangerous items out of reach of young children. If poisons are put in soft drink or beer bottles, jars or cups, children may drink them by mistake. All medicines, chemicals and poisons should be stored in their original containers, tightly sealed. Detergents, bleaches, chemicals and medicines should never be left where children can reach them. They should be tightly sealed and labelled. They should also be locked in a cupboard or trunk or put on a high shelf where children cannot see or reach them.

Medicines meant for adults can kill small children. Medicine should only be given to a child if it was prescribed for that child and never be given to a child if it was prescribed for an adult or some other child. Medication should only be used as prescribed by the health worker. Aspirin is a common cause of poisoning. It should be kept out of the reach and sight of children.

3.8 Chronic Illnesses/Disorders

The important message here is adherence (compliance) to drugs prescribed for the illness. Support of the community will help such parents. This can be achieved by forming support groups of other community members who must cope with the same situation.

3.8.1 Allergic Rhinitis

This is characterized by seasonal sneezing, running nose, nasal congestion, itching, and often conjunctivitis and sore throat. Symptoms vary in severity from day today or hour to hour.

Recommended Management Options

- ♦ Avoid the precipitating factor (whatever it is that causes the allergic reaction).
- ♦ Give analgesics to control discomfort.
- ♦ Use of Piriton in severe cases may be of value.

3.8.2 Skin Conditions

Skin problems may result from allergies, parasites, bacteria, funguses, or virus infection.

3.8.2.1 ATOPIC ECZEMA

Atopic eczema often affects children in a family with a history of asthma and allergic rhinitis. Onset of this condition is usually in the first 2–3 months of life. The child has itching, chronicity, or repeated attacks, with rashes, and scaling and change of skin colour. The lesions tend to be behind the knee or in the front of elbow joints.

Recommended Management Options

- ♦ Educating parents on the natural history of the disease,
- ♦ Avoiding predisposing factors known to bring about or aggravate the attack (food, clothing, soap, etc.).
- ♦ Keeping the skin moist by using emulsifying ointment.
- ♦ Using Piriton to alleviate itch.
- ♦ Using topical steroids for severe cases, but only be at the direction of a trained health care provider and generally for not more than 7 days.
- ♦ Taking the child to the nearest health facility for appropriate management.

3.8.2.2 SUPERFICIAL FUNGAL INFECTIONS

The most common superficial fungal infection in children affects the head but it can affect other parts of the body as well. It spreads within the family. Children with this condition are to be treated at a health facility. The parents should be made to know that for the treatment to be effective, it must be given over a long time. If more than 1 child is affected, then all affected children should be treated at the same time to avoid reinfection.

3.8.2.3 SCABIES

Scabies is caused by the human itch mite and spreads through intimate personal contact, facilitated by overcrowding and poor hygiene. Transmission via bedding or clothing is infrequent. It presents as intense itching that is worse at night or after a hot shower. Scabies occurs predominantly on the finger webs, wrists, and elbows, but also affects the buttocks. In babies the whole body may be affected. Secondary infection causes rashes that are often purulent in nature.

Recommended Management Options

All family members are to be treated at the same time.

3.8.2.4 JIGGERS

Jiggers, also known as sand fleas, usually affect the feet and toes and can be extensive. They are common in some geographical areas. They grow in dusty floors so it is important to keep floors free of dust. Anybody in the household who has a few infestations should have them removed as soon as possible.

3.8.3 Heart and Blood Vessel Diseases in Children

Most heart diseases in young children are congenital while those in older children may be either acquired or congenital. The heart may also be affected by other disorders like pneumonia, anaemia, and malnutrition.

3.8.3.1 SIGNS AND SYMPTOMS

A young baby who gets tired quickly or has to pause many times during a breastfeed, looks breathless, or is just not growing well, or has an unusual colour (blue) is suspected to have a heart problem and should be taken to a health facility for examination.

3.8.3.2 RECOMMENDED MANAGEMENT OPTIONS

The child should be taken to a health facility for proper diagnosis and care. At home let the child regulate his/her physical activities. If the child is put on medication, caregivers should follow instructions. Ensure adequate feeding

3.8.3.4 AVAILABLE PREVENTIVE STRATEGIES

Acquired disease like rheumatic heart disease can be prevented by avoiding overcrowding as much as possible and early treatment of sore throat with effective antibiotics.

3.9 The Child with Disability

Common disabilities include physical disability, e.g., cerebral palsy, blindness, and hearing impairment. It is important for young children to be screened for disabilities and impairments.

3.9.1 Cerebral Palsy

This is a disorder caused by a defect or lesion of the developing brain of a foetus. Abnormalities associated with cerebral palsy include deafness, visual defects, speech difficulties, mental retardation, convulsions, low muscle tone and lack of balance, and growth retardation. Depending on the degree of the brain injury, the child will have delayed development. So the milestones outlined earlier may or may not be achieved. Common causes include a difficult childbirth (child did not cry at birth) and infections in the brain. The child should be recognized as early as possible and exercise of the affected limbs initiated by a trained physical therapist. These health care workers will work with the caregiver to assist the child's development. The main aim is to prevent contractures and abnormal pattern of movements and to train other movements and coordination. Depending on the degree of disability, the child experienced therapist can train the child to attain some degree of independence. Home training programme for the parents is the most important part and should include anal sphincter control and stool softeners where necessary.

All the accompanying problems should be dealt with at the same time. A multidisciplinary approach is the best way to manage these children. Parents are encouraged to bring their children early for care and not hide them from the public. The diagnosis should be discussed with the parents to prevent them from going to a lot of different doctors. Adequate explanation should be given to the caregivers and their role in the care should be clearly spelt out. They also need to be informed that there is no cure, but that many children who take the prescribed treatment are positively helped and depending on the severity may be able to lead an independent life.

3.9.2 Childhood Blindness

Causes of childhood blindness include congenital cataract, corneal diseases, measles, congenital glaucoma, retinoblastoma, trachoma, refractive errors, vitamin A deficiency, and conjunctivitis.

3.9.2.1 INDICATIONS OF CHILDHOOD BLINDNESS

Features manifested vary depending on underlying conditions but may include:

- ♦ Poor vision – delayed smiling in infants
- ♦ Squint (lazy eye)
- ♦ White pupil
- ♦ Growth in the eye
- ♦ Protruding eyeball

3.9.2.2 RECOMMENDED MANAGEMENT OPTIONS

The following needs to be done for a child suspected of having childhood blindness:

- ♦ Take the child to the nearest health facility immediately for evaluation and appropriate management
- ♦ If eye is ulcerated, apply tetracycline eye ointments and take the child to the health facility urgently.
- ♦ Never use traditional eye medicines in the eye.
- ♦ Use no other medication without prescription.

➤ ***A lot of eye conditions are preventable with good eye hygiene.***

3.9.3 Hearing Impairment

A child with hearing impairment does not respond to noises or when spoken to. Parents usually spot this early and bring the child to a health facility. If this happens the parents' judgement should be taken seriously and not disregarded. On the other hand, some parents delay seeking help.

Children with hearing impairment can achieve a lot if expert care is taken. In either case the child needs referral to an institution specializing in dealing with hearing impairment.

3.9.4 Generalized Seizures (Epileptic Fits)

Management of a child having an epileptic attack includes the following:

- ♦ Place patient on their side with head turned to the same side.
- ♦ Remove or loosen tight fitting clothing around the neck.
- ♦ Do NOT attempt to insert any instrument into the mouth to avoid tongue biting as this may have already happened
- ♦ Shield the patient from too many eager observers.
- ♦ Allow the seizure to complete its course without physically attempting to hold down the patient. However, remove patient from danger, e.g., fire.
- ♦ After an attack, take the child to the nearest health facility for assessment and treatment.

In case of fever-related convulsions:

- ♦ Reduce the temperature, including tepid sponging and giving antipyretic.
- ♦ Anticonvulsant drug therapy is unnecessary unless the child is convulsing at the time of presentation.
- ♦ Educate parents that recurrences are common, but they can reduce them by using paracetamol and tepid sponging as soon as child becomes feverish.

3.10 Summary

3.10.1 Working with the Community to Care for Young Children

The following points summarize how to work with the community to care for the young children in the community:

- ♦ Educate family and community members on health promoting care of children.
- ♦ Breastfeed infant exclusively for 6 months.
- ♦ Introduce nutritious complementary foods to infants from the age of 6 months, but breastfeeding should continue through the child's second year and beyond.
- ♦ Give children beyond 2 years nutritious foods and 2 cups of milk – a balanced diet in 3 meals a day and 2 snacks.
- ♦ Expose all infants and young children to the sun for 30–60 minutes every day for strong bones.
- ♦ Ensure that all children are given vitamin A supplementation every 6 months.
- ♦ For all caregivers, try to give their children stimulation and affection to ensure social, physical, and intellectual development.
- ♦ Monitor the growth of all children of a monthly basis from birth to age 2, and thereafter at least every 2–3 months until 5 years of age.
- ♦ Complete all immunizations by first year of birth.
- ♦ Keep child health cards and use to monitor child immunization and growth.
- ♦ Encourage fathers to be involved in the care of their children.
- ♦ Ensure that all children sleep under a treated mosquito net to prevent mosquito bites.
- ♦ DO NOT keep poisons, medicines, bleach, acid, and liquid fuels such as paraffin in drinking bottles. Store such liquids and materials in clearly marked containers out of children's sight and reach.
- ♦ Watch young children when playing and keep their environment safe to avoid accidents.
- ♦ Refer all children with disability and encourage the parents not hide them.
- ♦ Foster community participation in all health promoting activities.

3.10.2 Care of Sick Child and Health Care Seeking Behaviour

The features of a sick child need to be recognized and caregivers made aware of the urgency of taking such children to the nearest health facility to facilitate optimum care and favourable outcome:

- ♦ Recognize fever and seek the attention of a health worker immediately.
- ♦ Recognize the following danger signs and take child to a health care facility urgently:
 - Not able to drink or breastfeed
 - Vomits everything

- Convulsions
- Not alert, not responding, disinterested (lethargic or unconscious)
- Difficult breathing
- Chest in drawing
- ♦ If convulsing now, show caregiver how to position the child. Do not put any object into the mouth.
- ♦ Recognize warning signs showing that the child's growth and development are faltering and seek help as soon as possible.
- ♦ Support transportation of child to the nearest health facility in any way.
- ♦ Support and ensure adherence to treatment of children with chronic diseases and encourage formation of support groups.
- ♦ Encourage the community not to stigmatize specific conditions such as epilepsy, deafness, or HIV infection.

CHAPTER 4

Late Childhood (5–12 Years)

Having ensured a child's survival up to 5 years, it is important to continue promoting healthy practices through the late childhood. Improved health allows for better physical and cognitive development in children and thereby produces a more productive population, while sound education promotes acquisition of the knowledge, attitudes, and practices necessary for healthy living and better disease control and prevention. Ill health in this period is partly due to sanitation/water/hygiene related factors, housing factors, parasitic infections, and macro- and micronutrient deficiencies. Education For All (EFA), one of the Millennium Development Goals, cannot be achieved without urgent attention to the health of school-aged children.

Ideally, children aged 5–12 years spend most of their time in school but are still under parental control. Cooperation between parents and teachers is thus important to the care of these children. To ensure the mental and psychological health of children it is essential to provide a positive and safe physical and psychosocial environment. Children need to be taught life skills early in their formative years. And they need good nutrition to prevent nutritional deficiencies that impede effective learning and realization of their full productive potential. This is the responsibility of the parents with the help of school health programmes.

4.1 School Health

School health programmes provide health education and some health services to promote the overall health, hygiene, and nutrition of children. In addition, a “comprehensive health-promoting school” is a school that is constantly strengthening its capacity as a healthy setting for living, learning, and working.

A school health programme is an integrated set of planned school-based strategies, activities, and services designed to promote the optimal physical, mental, social, and educational development of students and to improve the

health of the community. Such a programme involves, supports, and works with the local community and is thus based on community needs, resources, standards, and requirements. It is coordinated by several government ministries but especially those concerned with health and education. To be comprehensive these programmes must include the following aspects:

- ♦ Moral values and life planning skills
- ♦ Disease prevention and nutrition
- ♦ Food safety
- ♦ Water, environmental sanitation, and hygiene
- ♦ Special needs and rehabilitation.
- ♦ School infrastructure and environmental safety

4.1.1 The Objectives of a School Health Programme

The objectives of the school health programme are to:

- ♦ Promote health and nutrition in schools through positive lifestyle activities to enhance learning.
- ♦ Prevent nutritional deficiencies and promote the nutritional status of school children through nutritional interventions to improve concentration span and cognitive ability.
- ♦ Enhance enrolment, retention, and completion rates particularly of girls and the disadvantaged/vulnerable children (for example those with disabilities).
- ♦ Facilitate safe and healthy environments, conducive for learning, and the development of well-rounded individuals.
- ♦ Enhance coordination of school health interventions among relevant Ministries and stakeholders.
- ♦ Promote access to school health interventions in educational institutions.
- ♦ Encourage participation of teachers and school children as agents of change for good health practices in their schools, families, and communities
- ♦ Enhance the mobilization and coordination of resources for school health interventions.
- ♦ Promote disease surveillance in the school in order to facilitate early detection and treatment of disease and to prevent complications from diseases. This is achieved by:
 - Training the key resource teacher on detection of simple ailments and injuries, and how to manage them and when to refer for further treatment.
 - Organizing outreach services from nearest health facilities.
 - Treating minor ailments.
 - Providing first aid as well as facilities for emergency treatment in all schools. Boarding schools should have sick bays, while day schools should have a sanatorium.
 - Reporting episodes of diarrhoea and fevers to the nearest health facility.
 - Ensuring that all children enrolling in school are immunized against immunizable childhood diseases.
 - Facilitating the immunization of children who are not yet immunized.
 - Providing for routine immunization and for any other immunization that may be deemed necessary for school children.

4.1.2 Strategies for Reaching School Health Objectives

The key strategy is to implement a skill-based health curriculum intended to impart the knowledge, values, and life skills a person needs to apply in life. At minimum, it should address the following issues at all levels of education:

- ♦ Moral values and life planning skills
- ♦ Drug and substance abuse, HIV/AIDS prevention, gender issues, moral values, health and development, child rights, and protection.
- ♦ Water, environmental sanitation, and hygiene.
- ♦ Personal hygiene, food hygiene, vector and vermin control.
- ♦ Disease prevention and nutrition.
- ♦ All the preventable diseases, through health seeking behaviour, disease surveillance, de-worming, screening and treatment of minor illnesses, first aid, nutrition/school feeding/micronutrient deficiency control, HIV/AIDS prevention, and behaviour and lifestyle.
- ♦ Special needs (autism, epilepsy, albinism, chronic illness, visual impairment, hearing impairment) and rehabilitation including mental health and psycho-social health.
- ♦ School infrastructure and environment.
- ♦ Physical education, lighting/ventilation, personal safety/injury prevention, transport, management and sanitation facilities.

All the sections of the skills-based health curriculum should be directed and run by adequately trained key resource teachers.

4.2 Promoting the Health and Development of the School Age Child

Besides formal schooling, children learn by trying things, comparing results, asking questions, and meeting challenges. As long as the child is protected from danger, struggling to do something new and difficult is a positive step in the child's development. Both home and school are the venues for this learning.

4.2.1 Mental and Psychological Development

- **Key Message 1** – Promote mental and psychological development by responding to the child's need for care and by playing and talking with the child. Encourage children to play and explore because it helps them learn and develop socially, emotionally, physically, and intellectually.

Involve fathers in the care of their children. Play and interaction with the father helps strengthen the bond between the father and the child. This interaction is also important for intellectual development.

Children play because it is fun, but playing is also key to their learning and development. Playing builds children's knowledge and experience and helps develop their curiosity and confidence. Children like to pretend. This should be encouraged as it develops the child's imagination. It also helps the child understand and accept the ways other people behave. Play develops the skills of language, thinking, planning, organizing, and decision making. Parents can also encourage emotional development by playing games with their children. Stimulation and play are especially important if the child has a disability.

The examples set by adults and older children are the most powerful influences in shaping a child's behaviour and personality. Children learn by copying what others do, not what others tell them to do. If adults shout and behave violently, children will learn this type of behaviour. If adults treat others with kindness, respect, and patience, children will follow their example. Family members and other caregivers can help children learn by giving them simple tasks with clear instructions, providing objects to play with, and suggesting new activities, but without dominating the child's play. Watch closely and follow the child's ideas. Children are constantly changing and developing new abilities. Caregivers should notice these changes and follow the child's lead to help her or him develop more quickly.

Moderate amounts of daily physical activity are recommended for people of all ages. A school programme should have provision for sports and physical activity for all children. Physical activities help to build and maintain healthy bones, muscles, and joints, prevent or delay the development of high blood pressure, and help reduce blood pressure in some children with hypertension. While promoting physical activity is important this should be done in such a way as to avoid excessive amounts of physical activity that can lead to injuries and bone weakening. It should also take into consideration the limitations on children with conditions such as sickle cell disease and heart ailments.

Discipline both at home and in school is essential for adequate socialization throughout a person's life. Kind but firm guidance is important in all areas. Excessive force must never be used as this may lead to grievous harm and the child may rebel rather than follow the disciplinary measures used.

- **Key Message 2** – Introduce sexuality education at focal points (home, church, and school).

Children need to learn about their bodies and how to behave at different ages. This education is based on the age of the child. They need to learn about adults who may try to sexually harass or molest them.

Some cultural norms in this age period include circumcision of boys and genital cutting of girls. While circumcision of boys may be advantageous, female genital cutting can cause dangerous complications during childbirth and mental health problems for girls and women. The events in these ceremonies often include

information on how the child should behave sexually. Good behavioural practices should be encouraged and harmful ones discouraged.

► **Key Message 3** – All children should attend school.

High quality education in these early years makes a huge difference to a child's life and future. Children who receive better early education are more likely to succeed in both school and in life. In school as in life, consistent support from parents is crucial to sustaining confidence and a sense of achievement. Parents and teachers need to create a conducive environment for learning.

Children must be protected from heavy labour and should never be expected to work long hours or to do work that is hazardous or interferes with schooling.

Girls should be given the same opportunities in schooling as boys. Being able to read and write helps women protect their own and their family's health. Girls who have at least seven years of schooling are less likely to become pregnant during adolescence and are more likely to marry later than those with little or no education.

4.2.2 Nutrition for School Age Children

► **Key Message 4** – Ensure children receive a balanced diet in 3 or more meals a day. A good diet during this period is essential for better learning in school. Avoid junk food, which may lead to obesity and other ill health later on in life.

Good nutrition is key to better learning and development of children. Disease and poor nutrition negatively affect learning and may result in disability or loss of life. Schools and parents should therefore take measures to prevent diseases and maintain good nutrition. To maintain good nutrition, the following is therefore important:

- ◆ Ensure that the food offered is nutritious and of good quality and enough quantity.
- ◆ Carry out nutrition assessment and counselling.
- ◆ Encourage proper eating habits, with emphasis on locally available foods.
- ◆ Require regular health checks for food handlers at school.
- ◆ Ensure that the school feeding programme includes food provided by the school, a snack from home, and supplementary feeding.
- ◆ Involve the community in planning, mobilization of resources, and management of school feeding programmes.
- ◆ Promote hygienic food production, preparation, and safe storage.

Parents need to recognize the importance of a good diet to adequate growth and learning in school. As much as possible a child should not go to school without having eaten anything. Organized feeding throughout the time the child is in school may help to prevent hunger that affects learning. Parents may pack food

for the child to eat at school, or organize some form of school feeding programme. In high cost schools, food and snacks sold in school shops/ canteens should be healthy. Parents and teachers are responsible for this.

A nutritious diet includes beans and other pulses, grains, green leafy vegetables, and red/yellow/orange vegetables and fruits. Whenever possible, milk or other dairy products, eggs, fish, chicken, and meat should be included.

4.2.3 Worm Infestation

- ▶ **Key Message 5** – All children should be de-wormed at least twice a year.

Intestinal worms are extremely common. Children are particularly susceptible to intestinal worm infection and schistosomiasis through contaminated soil and water, respectively. There are different types of worms that live in the intestines and sometimes travel to other sites in the body and cause problems. Intestinal worm infestation and schistosomiasis can result in chronic, long-lasting health problems. Chronic infections can retard mental and physical development. Worm infections also often make children ill, leading to school absenteeism and decreased school performance. A large number of tapeworms or roundworms in the intestines may cause intestinal obstructions, while hookworms may cause anaemia. Pinworms may cause irritation and frequent itching of the anus. KEPH calls for annual de-worming of all school children. See Table 4.1 for a summary.

4.2.3.1 PREDISPOSING FACTORS FOR WORM INFESTATION

These are:

- ♦ Soil contaminated salads and other foods eaten raw.
- ♦ Contaminated soil that may be carried long distances on footwear into houses or vehicles.
- ♦ Consumption of uninspected meat.
- ♦ Indiscriminate disposal of faeces.

Table 4.1: Summary of worms, modes of transmission, and prevention methods

Types	Mode of transmission	Prevention
Hookworm	Mature hookworm eggs passed in stool, get into the soil from where they gain entry into the human body when exposed to contaminated soil.	Using latrines Wearing shoes Not eating soil Washing hands with soap or sand
Roundworm	Eggs passed in stool may contaminate soil or uncooked vegetables. Human beings may swallow these eggs through contaminated food.	Using latrines Not eating soil Washing hands with soap or sand
Tapeworm	Eating of raw or undercooked beef or pork	Cooking meats well
Bilharzia/ Schistosome	Snails near stagnant pools of water	Clear water sources, use latrines

- ♦ Lack of latrines.
- ♦ Walking barefoot.

4.2.3.2 CONSEQUENCES OF WORM INFESTATION

These are:

- ♦ Malnutrition
- ♦ Anaemia
- ♦ Intestinal obstruction
- ♦ Poor educational performance.

4.2.3.3 PREVENTION AND CONTROL OF WORM INFESTATION

These measures include the following:

- ♦ Wearing of shoes will help prevent infestations, especially of hookworm.
- ♦ All people should use latrines, including small children.
- ♦ Latrines should be located well away from sources of water.
- ♦ All should wash their hands with soap after defecating, after changing the baby's nappy, before handling food, before feeding the baby, and before eating.
- ♦ Only inspected meat should be eaten.
- ♦ Households and school canteens should boil/cook food thoroughly, especially pork and beef.
- ♦ All fruit and vegetables eaten raw should be thoroughly washed, rinsed, and dried.
- ♦ Per Ministry of Health guidelines, regular de-worming campaigns should be conducted in schools twice a year.
- ♦ All school age children should be treated, including those out of school.
- ♦ For effective worm control, the school curriculum should emphasize health promotion with emphasis to safe water, environmental sanitation and hygiene.

4.2.4 Malaria Control

Malaria contributes significantly to school absenteeism and poor academic performance. All efforts should be made to ensure prevention and timely treatment of malaria in all schools.

All schools should maintain a stock of anti-malaria medication for treatment of fever. Indoor residual spraying (IRS) should be done in boarding and day schools within epidemic-prone districts. Children should sleep under ITNs to prevent malaria. School compounds should be cleared of brush and discarded containers, which can provide mosquitoes with breeding places.

4.2.5 Healthy Habits

- **Key Message 6** – Parents and teachers should support and encourage children to maintain good hygiene practices.

Personal hygiene refers to the steps you take to keep clean and healthy. Hygiene is what keeps and promotes the health of people and the community. Children from an early age should be taught how to care for themselves and their environment. Good personal hygiene protects people from falling ill by removing substances that allow bacteria to grow on and in their bodies.

4.2.5.1 KEEPING HANDS AND BODY CLEAN

The World Health Organization has recently launched World Hand Washing Day in the belief that the most important thing people can do to prevent the spread of illness is to wash their hands. Practices that children should maintain include:

- ◆ Washing hands frequently, especially before eating and after visiting the toilet.
- ◆ Taking a bath at least once a day to remove dirt, dead skin cells, and body odour.
- ◆ Brushing teeth after every meal to keep your teeth and gums healthy, and your breath odour free.
- ◆ Getting frequent exercise.
- ◆ Eating healthy foods.
- ◆ Having adequate sleep daily.
- ◆ Drinking only water that is boiled or treated with chlorine-based materials (Jik).

➤ **Washing hands is more involved than just dashing them in a sprinkle of water.** To wash hands properly: use soap, scrub the palms together, scrub the back of each hand, wash each finger and between the fingers, rinse in running water if available (or pour some clean water over your hands), and dry on a clean towel or allow to air dry. Also scrub your fingernails with a small brush.

4.2.5.2 ORAL HEALTH

By the very nature of their dietary habits, children are especially vulnerable to poor oral health. Good habits started in childhood will help to ensure a healthy mouth through life.

Therefore train and encourage children to:

- ◆ Practise good oral hygiene, e.g., regular brushing of teeth.
- ◆ Develop good dietary habits, discourage biscuits, sweets, sodas.
- ◆ Seek professional advice on oral health regularly.
- ◆ Join or form oral health clubs.
- ◆ Have an oral health check up once a year.

4.2.6 Drug and Substance Abuse

- **Key Message 7** – Parents and teachers should initiate dialogue with children to discuss the dangers of drug and substance abuse.

A drug is any chemical that produces a therapeutic or non-therapeutic effect in the body. Most foods are not drugs, but alcohol is a drug and not a food. Some

drugs used to treat illness can also be abused if they are not used for the specific purpose of treatment. Teenagers may become involved in drug abuse during adolescence when they feel immune to the problems others face. This is enhanced by peer pressure from others in the group, i.e., need to be identified with the group.

The children who use alcohol and tobacco at a young age are prone to using other drugs later. Some will experiment and stop. Others will develop a dependency, moving on to more dangerous drugs and causing significant harm to themselves and possibly others.

Children at risk of developing serious alcohol and drug problems include those:

- ♦ With a family history of substance abuse
- ♦ Who are depressed
- ♦ Who have low self-esteem
- ♦ Who feel like they don't fit in or are out of the mainstream

4.2.6.1 DRUGS ABUSED

The following are the drugs that are often abused in Kenya:

- ♦ Alcohol
- ♦ Tobacco
- ♦ Prescribed medications (such as diazepam)
- ♦ Inhalants (glue)
- ♦ Marijuana
- ♦ Cocaine
- ♦ Heroin

4.2.6.2 CONSEQUENCES OF DRUG ABUSE

Among the consequences of drug abuse are:

- ♦ Chronic drug addiction
- ♦ School failure
- ♦ Accidents due to poor judgment
- ♦ Violence
- ♦ Impairment or deterioration of some bodily systems/functions/organs, including the brain
- ♦ Unplanned and unsafe sex
- ♦ Loss of self-respect and the respect of family
- ♦ Death from overdose

4.2.6.3 MANAGEMENT OPTIONS FOR DRUG ABUSE

Parents can help through early education about drugs, open communication, good role modelling, and early recognition if problems are developing. If there is any suspicion that there is a problem, parents must find the most appropriate intervention for their child. Parents are encouraged to seek consultation from a mental health professional when making decisions about substance abuse treatment for children or adolescents. It is neither safe nor wise to simply assume that one's own child would never abuse drugs.

4.3 Care of Children with an Illness

- **Key Message 8** – Seek health care as soon as illness appears and follow the instructions given at the health facility for each service.

Common conditions in the age group include infestations with worms, eye infections, skin infections, and coughs and colds.

The school needs to recognize infectious conditions and put strategies in place to prevent their spread to other children. In addition, some children will have chronic illnesses such as asthma, epilepsy, diabetes, and HIV infection. Some of these chronic diseases may be associated with stigmatization. Both parents and teachers need to educate the children about these disorders to allow the affected children to fit comfortably in the school system.

4.3.1 Conjunctivitis

Conjunctivitis is an infection of the eyes characterized by irritation and inflammation of the eyelids (inflammation of conjunctiva).

Transmission occurs by the following avenues:

- ◆ Contaminated hands
- ◆ Through flies from an infected person
- ◆ During delivery, from a mother suffering from gonorrhoea to the infant

Signs and Symptoms

The following are the common signs of conjunctivitis:

- ◆ Red watery eyes
- ◆ Irritation of the eyes
- ◆ Feeling as though the eyes have sand
- ◆ Puss discharge from the eyes.
- ◆ Sticky eyelids, especially in early morning (dried pus)

Prevention and Control Measures

These include the following:

- ◆ Improved hygiene
- ◆ Wash face and hands often with water using soap. This should be repeated especially after touching wounds.
- ◆ Mass treatment during outbreaks
- ◆ Fly control

Management Options

- ◆ If the eyes are runny, red, and producing pus, gently wash away the pus with clean cloth dipped in warm water.
- ◆ Apply tetracycline eye ointment.
- ◆ Refer to the nearest health facility if there is no improvement.

4.3.2 Skin Disorders

4.3.2.1 SCABIES

Scabies is an infestation of the skin by a small mite resulting in a disease characterized by itching and a rash on the skin.

Signs and Symptoms

- ♦ Severe itching
- ♦ Rashes between the fingers and toes, and on elbows, wrists, armpits, buttocks, and genital areas
- ♦ Constant scratching because of the itching
- ♦ There may be secondary bacterial infection resulting in blisters, sores, and pus

Predisposing Factors

- ♦ Poor personal hygiene
- ♦ Over crowded areas with poor sanitation
- ♦ Inadequate water supply
- ♦ Sharing of clothing and bedding

Mode of Spread

- ♦ Direct contact with an infected person
- ♦ Direct contact with towels, clothes, bedding used by infected persons

Prevention, Control, and Management

- ♦ Ensure there is adequate supply of clean water.
- ♦ Encourage high standards of personal hygiene.
- ♦ Change and wash all bedding, dry in the sun, then iron.
- ♦ Use antiseptic soaps and apply benzyl benzoate (obtained from a health facility) on the whole body as directed.
- ♦ Have the infected persons bathe with soap and warm water.
- ♦ Refer to health facility.
- ♦ Discourage sharing of clothes.

4.3.2.2 FUNGAL SKIN INFECTIONS

These are mainly ringworm infections, especially of the head, and are very common in school children. They are spread by close contact and sharing of hair brushes and combs. Prevent spread by encouraging children not to share their towels, brushes, and combs. For children who use hair salons, the same should apply. Treatment involves use of antifungal applications, which can be obtained from a health facility. Teachers in school should encourage treatment of all affected children.

4.3.2.3 BACTERIAL SKIN INFECTIONS

These may be few lesions or involve larger skin areas. Some of them predispose to kidney disease so they can be dangerous to the child in the long run. The child should be taken to a health facility for treatment.

4.3.2.4 WOUNDS

A wound is a cut or a tear in the skin, which can be superficial or deep. Wounds are painful and can easily become infected. They are normally caused by cuts, burns, scratches, animal bites, or assault with sharp objects.

Predisposing Factors

- ◆ Indiscriminate disposal of sharp objects
- ◆ Climbing trees, especially children
- ◆ Stray animals
- ◆ Open fireplaces

Management Options

- ◆ Keep the wound clean by cleaning with salty water.
- ◆ Refer to the hospital for further management.
- ◆ Practise first aid and good personal hygiene.
- ◆ For large wounds with excessive bleeding, apply pressure on or around the wound to stop the bleeding. But take care not to tie too tightly as it may damage the part beyond the wound. Take the child to a health facility as soon as possible.

Prevention

- ◆ Ensure proper disposal/storage of sharp objects.
- ◆ Cage animals/kill the stray ones.
- ◆ Use sharp equipments carefully.

4.3.3 Nose Bleeding

The following is recommended:

- ◆ Immediate: Sit the patient up (to avoid aspiration).
- ◆ Pinch the nose for 10–20 minutes. This is usually sufficient to stop bleeding.
- ◆ Apply ice (if available) or cold packs on the bridge of the nose.
- ◆ Refer to health facility if pressure fails to stop the bleeding or for recurrent nose bleeds.

4.4 Children with Chronic Disorders

4.4.1 Eye Care

Refractive problems in children may interfere with the children's ability to learn as they may not be able to see what the teacher has written on the board or read their books. Visual impairment needs to be identified as early as possible.

The following is recommended:

- ◆ Visual acuity check before admission to school.
- ◆ Regular school screening programmes in collaboration with special needs teachers.

- ♦ For the child with a refractive error:
 - Corrective spectacles will be necessary.
 - Encourage the child to wear these whenever needed.

4.4.2 Children on Regular Medication

Several diseases require that children take medication on an ongoing basis, including while the child is at school. Compliance and adherence to medications is important in all these conditions. In all these cases, parents and teachers as well as the child need to work together so that the child does not miss the required medication. Teachers also should know that the child may need to miss school in order to go for regular follow up at a health facility. In other instances the child may need to be protected or exempted from specific school activities. Some of these are mentioned below.

4.4.2.1 DIABETES

Most children with diabetes will be on insulin. They may or may not need an extra dose in school. Most important is the need to eat regularly to prevent hypoglycaemia. This is most critical before, during, or after strenuous exercise.

4.4.2.2 ASTHMA

Some children's asthmatic attack may be provoked by exercise. In these cases the child will need to take a dose of medication before the exercise.

4.4.2.3 EPILEPSY

The child will need to be excused from taking part in dangerous sports like swimming or those involving heights. If a child has a seizure at school the teachers should be able to place the child out of danger as well as positioning them well to avoid aspiration should they vomit. Sometimes these children also need to be protected from discrimination. Education of the affected children and the schoolmates is important. Other children need to know that the condition is not infectious, so they can interact freely with the affected child.

4.4.2.4 HEART DISEASE AND SICKLE CELL DISEASE

The limitation here will be on strenuous exercise. The child should be allowed to limit exercise as tolerated by the condition. These children are also prone to infections, so they need to be helped to maintain strict hygiene and to seek medical care as soon as they fall sick.

4.4.2.5 HIV INFECTED CHILDREN

Many children with perinatal transmission are surviving into school going age. There is need for them to take their medication regularly. But they may face stigma at school and this can interfere with taking the medicines as well as learning. Teachers and school children need proper education to help HIV infected children to fit into regular school. Disclosure to infected children from the

age of 7 years may help them cope with the illness, but even then such a child needs a lot of support from people around them.

4.4.2.6 SUPPORT GROUPS AND HOLIDAY CAMPS

Support groups can be formed by parents of the children with help of the CHW. In these groups parents share experiences and help each other in the care of the affected children. Holiday camps help the children learn more about the disease they have. They get to understand that they are not isolated. They also learn about the importance of taking regular medicines that may control the condition they are suffering from.

4.5 Children with Disability

These include physical, hearing, and visual impairment, and mental retardation. Some causes are listed in Section 3.9 on the child 2 weeks to 5 years. Although some disabilities occur in the early period, a child – or anyone – can become disabled at any age as a result of infections or injury. Special needs will depend on the degree of disability. In all cases the following are recommended:

- ♦ Carry out screening for early diagnosis and placement of children with special needs.
- ♦ Sensitize the school community including guardians on these conditions in order to remove any stigma and help cope with these conditions.
- ♦ Uphold, recognize, and respect at all times the dignity of the disabled.
- ♦ Provide rehabilitative services to the children as much as possible.
- ♦ Ensure school infrastructure takes into consideration the children with special needs.
- ♦ Address the various problems of children with emotional, mental, and conduct or behavioural problems that may present, such as school refusal, school truancy, delinquency, alcohol, tobacco and substance abuse and dependence, aggressive behaviour; bullying, and other antisocial behaviours. If not addressed, these problems may lead to poor academic performance and school dropout.
- ♦ Provide mental health education and promotion as well as counselling.
- ♦ Instil the value of physical activity by providing physical education and sports activities.
- ♦ Encourage professional rehabilitation, which is a process that assists people with disabilities to develop or strengthen their physical, mental, and social skills to meet their individual/collective specific skills.

CHWs and teachers can contribute to the wellbeing of children (and even adults) with disability and their rehabilitation in many ways. They can, for example:

- ♦ Educate the community about the causes of disability and what they need to do.
- ♦ Locate and identify the disabled in the community.
- ♦ Facilitate referral arrangements for people with disabilities to appropriate service centres.

Level 1 – Community

- ♦ Make arrangements for disabled people to get help on their disability in the community or in the nearest centres with trained personnel.
- ♦ Facilitate integration of disabled children in community activities.
- ♦ Keep records and track the progress of disabled children in the community.
- ♦ Develop among the disabled a positive image, a sense of self-reliance, and full integration into the community by helping them:
 - To take care of themselves
 - To move around with little help by providing walking aids if needed
 - To carry out household activities
 - To attend school
 - To communicate with others

In addition, people with disability can be assisted in different ways, depending on the type of disability. Such assistance can be:

- ♦ Provision of training and equipment for mobility – crutches, wheelchairs.
- ♦ Speech training for those with speech problems.
- ♦ Surgical correction of sight problems and provision of spectacles.
- ♦ Training in sign language.
- ♦ Referral for specialist care.
- ♦ Provision of special schools or classes attached to a school for children without disability.

- **As much as possible children with disability should attend normal schools to enable them to integrate well with people without disability. Such an arrangement allows the children without disability to recognize these children as part of normal society.**

CHAPTER 5

Adolescence and Youth (13–24 Years)

For this target group the task of the CHWs and households is to focus on behaviour formation, modification, and development towards health seeking as well as accessing available reproductive health services. Healthy behaviours can be promoted through peer and parental information, education, and guidance. The CHWs and households can also supply preventive commodities.

5.1 Reproductive Health

5.1.1 Pregnancy and Complications of Pregnancy

Around the world, 15 million adolescent women become pregnant each year.⁵ Adolescents who become pregnant face increased risks of death and illness. A key reason for this is that young women's bodies may not be mature enough to handle the stress of pregnancy and childbirth. At menarche, girls are approximately 4% below full height and 12–18% below full pelvic growth. Women below age 20 are especially likely to suffer from pre-eclampsia and eclampsia, obstructed labour, and iron deficiency anaemia. Young women also have an increased risk of preterm delivery.⁶

According to data from WHO and UNICEF, young women with unplanned pregnancies often risk unsafe abortion. Other research in 11 African countries revealed that self-aborting or seeking abortion from unqualified practitioners is a likely choice for a pregnant, unmarried adolescent.⁷

⁵Population Reference Bureau (*PRB*) and Center for Population Options (*CPO*). 1994, "A special focus on reproductive health", *PRB and CPO Fact Sheets*, Washington, D.C.

⁶T.O. Scholl and T. Reilly, 1994, "Anemia, iron and pregnancy outcome", *Br J Obstet Gynaecology*, 101: 858.

⁷John M. Paxman and Ruth J. Zuckerman, 1987, *Laws and Policies Affecting Adolescent Health*, Geneva: World Health Organization, Geneva.

- **Key Message 1** – Early childbearing, unsafe abortion, and STDs threaten adolescents' health and future fertility, while delaying sex and delaying pregnancy through abstinence is the safest way to prevent STD and HIV infections.

Millions of adolescents are sexually active. A recent study found that 8 out of 10 Kenyan adolescents had engaged in sexual activity before the age of 20, and 13% of 14-year-old girls said they had already been pregnant (and either had children or procured an abortion).⁸ These adolescents are clearly not using modern contraceptives or protecting themselves against STDs and pregnancy. Pregnant adolescents face many challenges. Compared with a woman who delays childbearing until her twenties, a woman who has her first child before age 17 is likely to experience a difficult birth that can cause serious health problems for herself and her baby. These mothers are also likely to receive less education, be out of work, have a lower paying job, and be separated from their partners. Young, unmarried mothers have been forced to turn to prostitution to support themselves and their children. For young men, early fatherhood can disrupt educational plans and increase economic responsibilities.

Sexuality education programmes can be effective in teaching young people important decision making and communication skills, which will help them resist peer pressure to have sex and make responsible decisions about initiating sex. Sex education does not increase sexual activity. In fact, it can delay the start of sexual activity and lead to protective behaviour once sexual activity begins.

- **Key Message 2** – Sexually active adolescents should use protection during sex to protect themselves from pregnancy, STDs, and HIV. They should seek health care as soon as any illness manifests and follow all the instructions given at a health facility.

The safest way to prevent pregnancy and disease is to avoid sexual intercourse. For those who are sexually active, male and female condoms, used correctly and consistently, provide the best protection against STDs while also preventing pregnancy. Adolescents may need special counselling about how to avoid pregnancy and STDs. Many adolescents lack the skills necessary for abstinence or successful method to use or lack the discipline to use a method consistently.

To help ensure contraceptive use among sexually active adolescents, contraceptive information and services must be readily and easily available. This service is emphasized in the KEPH line up of health care objectives for this age cohort.

- **Key Message 3** – Parents can help young people protect themselves from risky behaviours by having regular dialogue with them.

⁸African Centre for the Study of Adolescence, Nairobi, Kenya, October 2009.

Young people need to understand the risks involved. Parents, guardians, or the person in the community in charge of rites of passage can warn young people about the risk of disease and unplanned pregnancy. One way to begin the discussion with school aged children is to ask them what they have heard. If any of their information is wrong, take the opportunity to provide them with the correct information. Talking with and listening to young people is very important. If the parent is uncomfortable with the discussion, he or she can ask a teacher, a relative, or someone who is good at discussing sensitive issues for advice on how to talk to the child about this.

5.1.1.1 ABORTION (MISCARRIAGE)

Abortion is termination of pregnancy before the foetus is able to survive on its own. This is generally taken as 28 weeks of pregnancy, but with advancement in modern knowledge, skills, and technology the definition has come down in some developed countries to 22 weeks. Abortion may occur spontaneously as a disease condition or may be induced. In Kenya induced abortion may be legal (therapeutic) or illegal. It may also be safe or unsafe.

The World Health Organization (WHO) defines unsafe abortion as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both.

Illegally induced unsafe abortion by mainly unqualified people is associated with incompleteness, infection, injuries of genital and internal organs, and death. According to Kenya's National Adolescent Reproductive Health and Development Policy (2003), the majority of those seeking care for unsafe abortion complications are below 25 years. Worldwide, unsafe abortions cause about 78,000 maternal deaths – including an estimated 2,000 in Kenya – every year.

5.1.1.2 RECOMMENDATION IN CASE OF ABORTION

Community members need to recognize that bleeding in early pregnancy is a danger signal and the pregnant woman (or girl) must be referred to the nearest health facility. A woman with vaginal bleeding in pregnancy requires humane treatment regardless of how the bleeding started, whether spontaneously or induced. Community residents should avoid stigmatization and direct their efforts first to save life and protect health before other considerations. Many lives could be saved if people set aside judgemental attitudes and provide humane care that is the basic right of all members of the community. Timely referral should be provided for such a patient to a health facility where post abortion care (PAC) services are available.

5.1.2 HIV and AIDS

- **Key Message 4** – AIDS is an incurable but preventable disease. HIV, the virus that causes AIDS, spreads through unprotected sex, transfusions of unscreened blood, contaminated needles and syringes, and from a mother to her unborn baby.

Level 1 – Community

AIDS is caused by the human immunodeficiency virus (HIV). This is one of a group of viruses known as retroviruses. The virus is found in body fluids – blood, semen, vaginal fluid, faeces, etc. It damages the body's defence system. People infected with HIV usually live for years without any signs of the disease. They may look and feel healthy, but they can still pass on the virus to others.

AIDS is the late stage of HIV infection. People who have AIDS grow weaker because their bodies lose the ability to fight off illnesses. In adults, AIDS develops 7 to 10 years after infection, on average. AIDS is not curable, but ARVs and a healthy lifestyle can help people with AIDS live healthier for longer periods.

In Kenya, the main mode of HIV infection is through unprotected sexual intercourse, during which the semen, vaginal fluid, or blood of an infected person passes into the body of another person. Transfusion of infected blood is another way of transmitting the virus, and Kenya is working to ensure the safety of this process. The virus can also be passed from an infected pregnant woman to her baby, either in the womb, during birth, or with breastfeeding. All blood for transfusions should be screened for HIV. And all pregnant women should be tested for HIV and availed appropriate drugs to protect the mother's health and prevent transmission to the baby.

HIV rates are much higher among teenage girls than teenage boys. Teenage girls are more susceptible to HIV infection because:

- ♦ Young girls may not understand the risk or may be unable to protect themselves from sexual advances.
- ♦ Their vaginal membranes are thinner and more susceptible to infection than those of mature women.
- ♦ They are sometimes targeted by older men who seek young women with little or no sexual experience because they are less likely to be infected.

It is NOT possible to contract HIV from touching those who are infected, hugging them, or shaking their hands. Coughing or sneezing will not spread the disease. HIV cannot be transmitted through toilet seats, telephones, plates, glasses, eating utensils, towels, bed linen, swimming pools, or public baths. HIV is not spread by mosquitoes or other insects.

School-aged children should be provided with age-appropriate information on HIV/AIDS and life skills before they become sexually active. Education at this stage has been shown to delay sexual activity and to teach responsibility with regard to sex.

- ▶ **Key Message 5** – Everyone who is sexually active should contact a health worker or go to a voluntary counselling and testing (VCT) centre to receive confidential counselling and testing.

HIV counselling and testing can help in the early detection of HIV infection. It is also the gateway to support services including ARV therapy, help with managing

other infectious diseases they might have, and learning about living with HIV/AIDS and how to avoid infecting others. Counselling and testing can also help those not infected to remain uninfected through education about safer sex. If the result of an HIV test is negative, this means the person tested is not infected or it is too early to detect the virus. The HIV blood test may not detect infection up to the first 6 months. The test should be repeated 6 months after any possible exposure to HIV infection. Since an infected person can transmit the virus at any time, it is important to use a condom during sex or to avoid penetration.

Families and communities should demand and support confidential HIV/AIDS counselling and testing, as well as information to help protect adults and children from the disease. It is possible to stop HIV from spreading to the next generation if young people know the facts about HIV transmission, abstain from sex, and have access to condoms.

Girls have the right to refuse unwanted and unprotected sex. Parents and teachers should discuss this issue with girls and boys to make them aware of girls' rights, to teach boys to respect girls as equals, and to help girls avoid or defend themselves against unwanted sexual advances.

- **Key Message 6** – Parents and teachers can help young people protect themselves from HIV/AIDS by talking with them about how to avoid getting and spreading the disease, including the correct and consistent use of male or female condoms.

Young people need to understand the risks of HIV/AIDS. Parents, teachers, health workers, guardians or the person in the community in charge of rites of passage can warn young people about the risk of HIV/AIDS, other STIs and unplanned pregnancy. It can be awkward to discuss sexual issues with young people. One way to begin the discussion with school-aged children is to ask them what they have heard about HIV/AIDS. If any of their information is wrong, take the opportunity to provide them with the correct information. Talking with and listening to young people is very important. If parents are uncomfortable with the discussion, they can ask a teacher, a relative, or someone who is good at discussing sensitive issues for advice on how to talk to the child about this.

One critical point of information is that there is no vaccination and no cure for HIV/AIDS. Prevention is the only protection against the disease. Young people also need to be empowered to refuse sex and should be encouraged to share information on sexuality and HIV/AIDS regularly with parents. This will clarify many issues received from various media that might be inappropriately presented.

Condoms can save lives by preventing the sexual transmission of HIV. Everyone has the right to voluntary and confidential counselling and testing for HIV/AIDS and the right to be protected from discrimination of any kind related to their HIV/AIDS status. Because HIV can be passed from one person to another through

infected blood, unsterilized needles or syringes, most often those used for injecting drugs, can be a vehicle for transmission. Used razor blades, knives, or tools that cut or pierce the skin also carry some risk of spreading HIV. Nothing should be used to pierce a person's skin unless it has been sterilized.

Injections should be given only by a trained health worker. A new or fully sterilized needle and syringe should be used for each person – child or adult – being immunized. Sharing needles and syringes with anyone, including family members, may transmit HIV or other life-threatening diseases. No one should share needles or syringes. Parents should ask the health worker to use a new or sterilized needle for every person. Any kind of cut using an unsterilized object such as a razor or knife can transmit HIV. The cutting instrument must be fully sterilized for each person, including family members, or rinsed with bleach and/or boiling water.

Any instrument that is used to cut a newborn's umbilical cord must be sterilized. Particular care should be taken when handling the placenta and any blood from the delivery. Protective (latex) gloves should be used if available. Equipment for dental treatment, tattooing, facial marking, ear piercing, and acupuncture is not safe unless the equipment is sterilized for each person. The person performing the procedure should take care to avoid any contact with blood during the procedure.

5.1.3 Other Sexually Transmitted Diseases

- ▶ **Key Message 7** – Young people who have a sexually transmitted infection (STI) are at greater risk of getting HIV and of spreading HIV to others. People with STIs should seek prompt treatment and avoid sexual intercourse or practise safe sex.

HIV is not the only sexually transmitted infection (STI) to be concerned about. STIs are infections that are spread through sexual contact, either through the exchange of body fluids (semen, vaginal fluid, or blood) or by contact with the skin of the genital area (particularly if there are lesions such as blisters, abrasions or cuts, often caused by the STI itself). STIs often cause serious physical suffering and damage. Any STI, such as gonorrhoea or syphilis, can increase the risk of catching or transmitting HIV. Persons suffering from an STI have a 5–10 times higher risk of becoming infected with HIV if they have unprotected sexual intercourse with an HIV-infected person when compared with those without STI.

5.1.3.1 COMMUNITY LEVEL PRIORITIES FOR DEALING WITH SEXUALLY TRANSMITTED INFECTIONS

STIs can also be transmitted from mother to child (vertical transmission), i.e., in utero, during birth, or soon after birth. Like HIV, Some can also be transmitted through blood transfusion, contaminated needles, syringes, specula, gloves, and skin piercing and cutting instruments. It is important to counsel clients who may

have problems related to sexually transmitted infections, refer them to sources of care, and support them where prolonged care is required in terms of compliance and quality home care. The following interventions are priorities at community level:

- ♦ Advocacy and promotion of behaviour change
- ♦ Prevention of blood borne infection
- ♦ Reduction of STD prevalence
- ♦ Prevention of mother to child transmission of HIV
- ♦ Strengthening epidemiological and research activities
- ♦ Prevention of AIDS including care and support to the affected and infected
- ♦ Mitigation of socio-economic impact of AIDS

5.1.3.2 FEATURES AND MANAGEMENT OF SEXUALLY TRANSMITTED DISEASES

Other sexually transmitted disease can be suspected in the presence of:

- ♦ Urethral discharges, lumps, and ulcers.
- ♦ Discharge from the penis or female genitalia, with pain on passing urine.
- ♦ Swellings and wounds in the genitalia.

The following is recommended for those suspected on having infection:

- ♦ Abstain or avoid indiscriminate sex (stick to 1 partner), avoid multiple or anonymous partners, prostitutes, or any other person with multiple sex partners.
- ♦ Use condoms correctly, e.g., avoid oil-based lubricants with male condoms.
- ♦ Avoid alcohol or drug abuse, which may lead to irresponsible sexual behaviour.
- ♦ Treat STIs promptly and appropriately.
- ♦ Avoid negative cultural practices.

Each and every treatment of STIs must include the 4 C's:

- ♦ Compliance: With the full drug course and follow up
- ♦ Counselling: On safer sexual behaviour.
- ♦ Condoms: How to use properly.
- ♦ Contact tracing: Notification and treatment of partner(s).

➡ ***Refer the person with a suspected STI to the nearest health facility.***

5.1.4 Home- and Community-Based Care for People with HIV and AIDS

With the availability of ARVs, infection with HIV is no longer regarded as an almost immediate death sentence. Nevertheless, people who are HIV-positive do face health problems and may become sicker from ordinary illnesses than uninfected people. They are also vulnerable to a range of potentially deadly ailments like cancers, meningitis, TB and others. It is therefore important for people to know their HIV status so that they can know how to manage illness.

Level 1 – Community

Where people are reluctant to be tested, the following conditions suggest HIV/AIDS infection:

- Gradual weight loss
- Persistent fever
- Chronic diarrhoea
- Skin conditions
- Chronic cough (more than 2 weeks), and
- Oral thrush.

A well balanced diet, good rest, and regular exercise help to maintain health. Excessive alcohol drinking and smoking should be avoided, and prompt attention should be sought for any health problem. Social care includes counselling persons living with HIV/AIDS (PLWHAs) to be helped to cope with the condition. With the patient's consent other family members can be involved. Available social support systems should be utilized. Home- and community-based care stems from the understanding between the patient, the patient's family, community members, and health workers.

5.1.4.1 HOME-BASED CARE FOR HIV/AIDS PATIENTS

Home- and community-based care (HCBC) is grounded in the philosophy that most people with serious, even terminal illnesses, that require frequent medical attention may be treated effectively in their own homes by trained service providers. HCBC is extended from the hospital or health facility to their homes through family participation and community involvement. It is a collaborative effort by the PLWHA, the hospital, the family, and the community. HCBC consist of:

- ♦ Clinical management: This includes early diagnosis, rational treatment, and planning for follow up care of HIV-related illness
- ♦ Nursing care: This includes care given to promote and maintain good health, hygiene, good nutrition, and comfort to ensure a cheerful life despite the illness.
- ♦ Counselling: This includes stress and anxiety reduction, promoting positive living, and helping individuals make informed decisions on HIV testing, planning for the future and behavioural change, and involving sexual partner(s) in such decisions.
- ♦ Social support: This includes information and referral to support groups, welfare services, and legal advice for individuals and families, including surviving family members and, where feasible, the provision of material assistance.

5.1.4.2 OBJECTIVES OF HOME- AND COMMUNITY-BASED CARE

These comprise the following:

- ♦ To facilitate the continuity of care of the PLWHA from the health facility to the home and community.
- ♦ To promote family and community awareness of HIV/AIDS prevention and care.

- ♦ To empower the family and the community with the knowledge needed to ensure long-term care and support.
- ♦ To raise the acceptability levels of PLWHAs by the family/community in order to reduce the stigma associated with AIDS.
- ♦ To streamline the patient/client referral from the institutions into the community and from the community to appropriate health and social facilities.
- ♦ To facilitate quality community care for the infected and affected.

5.1.4.3 KEY PLAYERS AND THEIR ROLES IN HOME- AND COMMUNITY-BASED CARE

All of those involved in HCBC – the PLWHA, the health facility/hospital, the family, and the community – have their role to play and must collaborate to ensure an effective, caring approach.

The role of the health facility in HCBC is:

- ♦ Making the initial diagnosis and delivering clinical care,
- ♦ Recruiting the PLWHA into the programme, identifying needs at various levels and preparing the PLWHA for discharge home.
- ♦ Preparing the family caregiver for the caring responsibility at home.
- ♦ Supplying and providing drugs and basic home nursing supplies.

The role of the family caregiver includes:

- ♦ Caring for the PLWHA at home, collaborating with other care providers, e.g., religious institutions, support groups, and health and social institutions.
- ♦ Consulting and involving the PLWHA on matters concerning them, accepting the reality of the situation.
- ♦ Helping the PLWHA to prepare for death when the time comes.

The responsibility of the PLWHA is to:

- ♦ Identify the primary or alternative caregiver of his/her choice.
- ♦ Participate in the care process.
- ♦ Participate in planning for the future by writing a will.
- ♦ Identify own spiritual/pastoral needs.
- ♦ Resolve to take personal responsibility to stop the further transmission of HIV.
- ♦ Advocate for behaviour change and inform the partner of his/her HIV status.

The role of the community incorporates:

- ♦ Accepting the situation of the PLWHA and accepting the family.
- ♦ Collaborating with existing agencies to meet the needs of those infected.
- ♦ Forming support groups, advocating for the rights of the PLWHA.
- ♦ Supporting the family of the PLWHA.

The CHW works with the affected household to encourage:

- ♦ Improved nutrition.
- ♦ Early diagnosis and treatment of opportunistic infections and compliance with instructions.
- ♦ Intensified counselling on healthy behaviours and spiritual guidance.

- ♦ Adequate education for caregivers/relatives on proper patient handling.
- ♦ Referral of the affected person(s) to the nearest health facility if the need arises.
- ♦ A caring, loving approach by family caregivers.
- ♦ Specific practical care procedures in the home, such as:
 - Monitoring the PLWHA's weight every 2 months.
 - Availing a balanced diet to meet increased energy needs.
 - Maintaining high level of sanitation, food hygiene, and water safety.
 - Practising positive living including safer sex by the PLWHA.
 - Seeking prompt treatment for all opportunistic infections and symptoms.
 - Doing physical activity or exercises regularly.

In the larger community, the official responsibilities for the CHWs may be stated as:

- ♦ Creating community awareness about HIV/AIDS services.
- ♦ Promoting and distributing information, education, and communication (IEC) materials and condoms.
- ♦ Working to the best of their ability to enhance the quality of the service delivered to the community.
- ♦ Playing a key role in the functioning of the referral systems at the community level.
- ♦ Explaining the benefits of voluntary counselling and testing for HIV (VCT):
 - If people know that they are HIV-negative, they are able to protect themselves from being infected. And if they are positive, VCT is an entry point to care and support. People who test positive will get accurate information about HIV, safer sexual practices, and how to access ARVs. Those who are pregnant will be advised on prevention of mother to child transmission.
 - HIV and AIDS and other sexually transmitted infections can be detected, and through the counselling other problems encountered especially during adolescence can be discussed, such as unplanned pregnancy, substance use and abuse, sexual harassment, and other forms of abuse. Promoting peer support and HIV and AIDS counselling in schools through authorized counsellors.
- ♦ Discouraging discrimination against HIV-positive learners, teachers, staff, and other community members. Students will be provided with guided reading to continue their education in case of school absence.

5.1.4.4 HIV TRANSMISSION AND PREVENTION

As noted above, HIV is not transmitted by casual contact or even by close nonsexual body contact that occurs at work, school, or at home. Table 5.1 summarizes typical modes of transmission and personal and clinical measures to prevent transmission.

5.1.4.5 POST-EXPOSURE PREVENTION AND CARE

Anyone can be accidentally exposed to HIV infection, for example in the case of a road accident, attendance at childbirth, or accidental needle stick injury.

Table 5.1: Modes of transmission and preventive measures for HIV infection

Mode of transmission	Preventive measures
Sexual relations: Vaginal intercourse (majority of cases), anal or oral sex	Abstain from sex (most ideal) Avoid risky sex practices like casual sex and multiple sex partners Use condoms Treat STIs promptly and effectively (STIs increase risk of HIV transmission)
Mother-to-baby: During childbirth, breastfeeding (30–40% transmission rate), or in utero	Counsel HIV-positive women during antenatal period on infant feeding options, and family planning Avoid pooling and sharing of breast milk in nurseries Encourage exclusive breastfeeding and avoid mixed feeding for the first 4 months Administer ARV (Nevirapine) to both mother and infant
Blood transfusion: If blood not properly screened	Select and defer donors with risky sexual behaviour or belonging to risky groups Avoid unnecessary transfusions Ensure that all blood is screened
Blood-contaminated instruments: Needles and skin piercing instruments	Ensure that sterile needles/syringes are used at all times Ensure that tools for ear-piercing, circumcision, acupuncture, tattooing, etc., are sterile

Immediate measures include decontaminating the skin by washing thoroughly with soap; squeezing out a wound and letting blood flow freely; flooding the eyes with large amounts of clean water. In addition, post-exposure care includes: allaying anxiety and referring for HIV pre- and post-test counselling.

5.1.5 Sexual Assault

Community members need to know that sexual assault and rape are violent crimes that are punishable by high fines and lengthy prison terms. Although directed predominantly against women and children, sexual assault may also be directed at boys and men. Under Kenyan laws (Children Act, Sexual Offences Act) it is a crime to have sex with a woman without her consent or by use of force, duress, or pretence. A girl below 18 years of age is not legally deemed to be able to give consent (Children Act). Neither are women with mental illness. Intercourse with children below 18 years and with mentally challenged women is rape, whether the survivor has given consent or not.

Community members should be sensitized to be supportive and non-judgmental of women and children who complain or are known to have been sexually assaulted. They need to be referred to health centre or hospital for protective treatment, counselling, and other care as quickly as possible.

It is important to seek medical care first before reporting to police to avoid losing valuable time. Early reporting facilitates the timely initiation of prophylaxis, which needs to be given within 72 hours for optimum effect. The following prophylaxis against the various potential outcomes is recommended:

- ♦ HIV protection – Refer to the nearest health facility for ARVs as per national guidelines for post-exposure prophylaxis (PEP).

- ♦ Pregnancy protection – For emergency contraceptive pill at the nearest health facility.
- ♦ STD/STI protection – For antibiotics at the nearest facility as per national guidelines. At the medical facility, collection and preservation of vital medical and legal evidence is taken to assist in any legal proceedings that might follow.

Community programmes should facilitate respect for women and girls, gender equity, and the need to report suspects to police. The police officers should be trained to handle sexual abuse cases with care and compassion. Communities should be discouraged from protecting perpetrators, e.g., by making private settlements, as this serves to foster impunity and perpetuate the crime. Ideally all perpetrators should face the law.

5.2 Drug and Substance Abuse

A drug is any synthetic or natural chemical substance that produces an effect in the body. Drugs may be therapeutic or non-therapeutic. Most foods are not drugs, and alcohol is a drug and not a food. Some drugs used to treat illness can be abused if they are not used for the specific purpose of treatment. Adolescents may become involved in drug abuse for a variety of reasons. At this age they feel that they are immune to the problems others face. This perception is enhanced by peer pressure, i.e., the need to be identified with a group. Some teens will experiment and stop; others will develop a dependency, moving on to more dangerous drugs and causing significant harm to themselves and possibly others. The youth who use alcohol and tobacco at a young age are prone to using other drugs later.

5.2.1 Risks Associated with Substance Abuse

Parents can help through early education about drugs, open communication, good role modelling, and early recognition of developing problems. If there is any suspicion that there is a problem, parents must find the most appropriate intervention for their child. Parents are encouraged to seek consultation with a mental health professional when making decisions about substance abuse treatment for children or adolescents.

- **Key Message 8** – Parents should initiate dialogue with their children to discuss the dangers of drug and substance abuse.

Commonly abused substances in Kenya include tobacco, Cannabis sativa (bhang), khat (miraa), opioids (heroin), cocaine, and solvents (glue, petrol, wood varnish). Many substances are taken by people who want to feel “high” for one reason or another. They may be trying to avoid perceived stressful conditions, or they may just like the feeling. The problem is that attaining the high becomes the imperative in their life, and it may take more and more of the substance to reach the desired state. At this point the person is addicted and stopping the use of the

substance will likely require hospitalization or in-house treatment at a rehabilitation centre. Sadly, addiction often goes unchecked and may result in serious health damage or even death.

Among the consequences of drug abuse are the following:

- ♦ Chronic drug addiction
- ♦ School failure
- ♦ Accidents due to poor judgment
- ♦ Violence
- ♦ Unplanned and unsafe sex
- ♦ Serious damage to bodily functions and organs, including the brain
- ♦ Death

Use of tobacco, alcohol and banned substances is detrimental to the health and learning of children. All educational institutions should be environments free of tobacco, alcohol, and drugs. The Teachers Service Commission regulations should apply in the control and use of alcohol by teachers. The handling and use of hard drugs and banned substances are criminal offences subject to the provisions of the relevant Laws of Kenya. No person should be permitted to send a child to procure, collect, or deliver cigarettes, alcohol, or any illegal or banned substances.

- ◀ **Cigarette and alcohol promotion should be limited in all types of media, particularly media that influence children’s knowledge, attitudes, and practise.**

5.2.2 Recognizing and Coping with Substance Abuse in a Child or Teenager

The following features in an individual child suggest use and abuse of drugs and addictive substances:

- ♦ Self-neglect
- ♦ Slovenliness
- ♦ Deteriorating school performance
- ♦ Excessive sleeping or almost manic wakefulness
- ♦ Rough appearance
- ♦ The appearance of new, rather unsavoury looking friends who are not known to the parents
- ♦ Withdrawal and secretiveness with even old, known friends
- ♦ Increasing and unexplained demand for money from caregivers
- ♦ Involvement in petty crime (pilfering)
- ♦ Running away from home

Commonly Abused Drugs

- ♦ Alcohol
- ♦ Tobacco
- ♦ Prescribed medications (such as diazepam)

- ♦ Inhalants (glue)
- ♦ Marijuana
- ♦ Cocaine, especially crack cocaine, which is cheaper, often more readily available, and instantly addictive
- ♦ Heroin

Those Who Are at Risk of Drug and Substance Abuse

Teenagers at risk of developing serious alcohol and drug problems include those:

- ♦ With a family history of substance abuse
- ♦ Who are depressed
- ♦ Who have low self-esteem
- ♦ Who feel like they don't fit in, or are out of, the mainstream

Recommendation in Case of Suspected Drug Abuse

For children suspected of abusing drugs or using addictive substances, the following is recommended:

- ♦ Carry out patient/family education/counselling.
- ♦ Provide alternative leisure activities.
- ♦ Provide work/school rehabilitation.
- ♦ Involve community agencies, e.g., religious organizations, alcoholic anonymous/narcotic anonymous, where available.
- ♦ Refer to the nearest health facility.

5.2.3 Drugs in the School

The school curriculum should:

- ♦ Impart knowledge about the dangers of tobacco, alcohol, and substance use and abuse.
- ♦ Instil proper attitudes against the use of tobacco, alcohol, and banned substances.
- ♦ Teach skills to enable children to avoid such behaviour.

All schools should have a guidance counsellor to address the social, mental, and psychological needs of students. The guidance counsellor should be trained to identify students at risk of substance abuse so as to provide preventive counselling. Students found to be using or possessing drugs or banned substances should be referred for necessary treatment and rehabilitation.

The MOH should provide youth-friendly treatment and rehabilitation services with adequate facilities, staff, and resources to address mental and reproductive health issues, along with tobacco, alcohol, and substance use and abuse. Companies producing or selling tobacco or alcohol should not be allowed to use their logo (which is an advertisement) when promoting any project in a school.

- **All schools should establish surveillance mechanism to identify users/ collaborators in use of drugs, alcohol, and cigarettes within the school population.**

5.3 Good Nutrition and Other Appropriate Healthy Behaviour

- **Key Message 9** – All youth require sufficient foods that are nutritionally balanced for their growth and development, both mentally and physically. Since the youth are in their main developmental phase, their rations should be increased.

Healthy eating is associated with proper growth and development. Proper nutrition also reduces the risks of contracting diseases like heart disease, cancer, and stroke. These diseases are often associated with lifestyle changes, where people do not eat nutritious foods. If the youth do not get proper and nutritious foods, then chances of developing these diseases in later years increase. Fad diets, with their unbalanced intake of nutrients, have potential for negative long-term health impact. Thus teenagers and youth should strive for a diet regimen that contains the 3 food groups, carbohydrates, proteins, and vitamins. These foods help in providing energy, building the body organs, and protecting the body from illnesses as they assist in digestion.

- **Key Message 10** – Observe key behaviours for disease prevention.

Youth and adolescents should observe some key healthy behaviours to enhance their own wellbeing. Among these are:

- ◆ Sleeping under ITNs to prevent malaria.
- ◆ Using boiled or treated water for drinking.
- ◆ Maintaining good personal hygiene.
- ◆ Avoiding use of alcohol, cigarettes, and drugs.
- ◆ Developing life skills to resist peer pressure and avoid risky areas and behaviour.
- ◆ Consuming an adequate diet, in terms of both quality and quantity.
- ◆ Preventing unwanted pregnancy through family planning – or abstinence.
- ◆ Using condoms when sexually active since these can prevent both pregnancy and infections. Condoms can safely be supplied through CHWs, local shops, and peers.

Parents have an important role in developing and sustaining these habits. It is also particularly important that:

- ◆ Parents establish and maintain communication with their children that is open, firm, but non-judgemental.
- ◆ Both parents be involved in the care of their adolescents (psychosocial, spiritual, emotional).
- ◆ Parents discuss sexuality issues with their adolescent children.

5.4 Mental Health

About 450 million people worldwide are affected by mental, neurological, or behavioural problems at any time and of these about 873,000 people die by suicide every year. Mental illnesses are common to all countries and cause immense suffering. People with these disorders are often subjected to social isolation, poor quality of life, and increased mortality. These disorders are the cause of staggering economic and social costs. Mental health can be described as the balance between the individual, their social group, and the larger environment. It is a fine balance; when the 3 components are in harmony the individual has a sense of wellbeing and is able to handle any environmental issues and social conditions. An upset to the balance can have serious mental and emotional impacts. Teenagers are particularly vulnerable to emotional and mental upsets.

The changes occurring in our societies have both positive and negative aspects. Some of these changes have led to role reversals, e.g., women become sole bread winners after their spouses migrate to urban areas looking for jobs. These changes may lead to insecurity in some of the people causing nervousness, uneasiness, restlessness, tension, and sleeplessness. All these symptoms are signs of anxiety.

Kenyan youth are often under tremendous pressure – to succeed in school so as to pass make-or-break national examinations, to find a job and earn a living in an economy that is not generating sufficient employment opportunities, to find some balance between traditional and modern lifestyles, to keep up with “trendy” friends and schoolmates, to resist the lure of risky behaviours. The pressures are sometimes enough to cause depression, anxiety, and behaviour and eating problems. Suicides among Kenyan youth are distressingly common.

- **Key Message 11** – Any person having difficulties in performing simple chores at home and in work places, as well as relating to people, should be taken to a health worker for examination.

People presenting with symptoms of anxiety need to be reassured and encouraged to continue with their life as best as possible. People with mental disorders are some of the most neglected people in the world. In many communities, mental illness is not considered a real medical condition, but viewed as a weakness of character or as a punishment for immoral behaviour. Even when people with mental disorders are recognized as having a medical condition, the treatment they receive is often less than humane. People with mental illness are also thought to be violent and they often invoke fear despite the fact that they are far more likely to be the victims of violence rather than the perpetrators.

Mental illness should be suspected in the presence of the following in a person:

- ◆ Irritability
- ◆ Person neglecting his health and personal hygiene

- ♦ Bouts of hyperactivity
- ♦ Depression
- ♦ Lack of appetite

Recommended Action

Refer such a person to the nearest health facility.

Suicide Attempts

These are unsuccessful attempts to end one's own life. These attempts are commonly due to severe depression or substance abuse.

How to Recognize Suicide Attempts

- ♦ There are suicide threats.
- ♦ The following underlying mental conditions may be present:
 - Depression
 - Schizophrenia
 - Under influence of alcohol/drugs
 - Under severe social problems or stress
 - Personality disorder

➤ ***Take any suicide attempt very seriously – the next attempt may succeed. Refer to the nearest health facility.***

5.5 Management of Selected Illnesses and Other Conditions

Adolescents and youth are subject to many if not most of the same types of illnesses and health conditions that affect mature adults. But because adolescents are still growing and developing, some of these conditions may have more serious impacts.

5.5.1 Blood Diseases

5.5.1.1 ANAEMIA

Anaemia is shortage of blood, which can be caused by bleeding, destruction of blood cells by infections, e.g., malaria and poor dietary intake, or by failure to make more blood.

Features Suggestive of Anaemia

These include the following:

- ♦ Patients complain of weakness
- ♦ Poor appetite
- ♦ Dizziness
- ♦ Lethargy
- ♦ Breathlessness

- ♦ Swelling of feet
- ♦ Whiteness of the eye lids and tongue

Recommended Action

Refer to the nearest health facility.

Prevention

The following are recommended preventive strategies:

- ♦ Balanced diet
- ♦ Proper waste disposal
- ♦ Cook vegetables and meat properly before eating
- ♦ Regular de-worming

5.5.1.2 SICKLE CELL DISEASE

This is an inherited condition that commonly features anaemia.

Features Suggestive of Sickle Cell Disease

It may present with:

- ♦ Severe pain
- ♦ Pallor
- ♦ Severe joint pains
- ♦ Yellowness of eyes and urine
- ♦ Frequent infections

Recommended Action

Refer to the nearest health facility.

Recommended Preventive Strategies against Crisis

- ♦ Reduce exposure to extreme temperatures like cold.
- ♦ Avoid strenuous exercise.
- ♦ Avoid infections.
- ♦ Avoid activities that cause sweating hence dehydration.
- ♦ Seek hospital care as soon as possible.

5.5.2 Acute Injuries, Trauma, and Selected Emergencies

5.5.2.1 BEE STINGS

Bee and wasp stings cause sharp pain followed by intense itching. Signs usually subside within a few hours.

Recommended Action

- ♦ Ensure the stinger is removed; scrape out, do not pull with tweezers as this can release more poison.
- ♦ Relieve pain with aspirin or paracetamol, and relieve itching with calamine lotion or a paste of bicarbonate of soda (baking soda) and water.

There may be need to refer to the nearest health facility for treatment with systemic antihistamines if the pain is too severe due to multiple stings. Moreover, some people are allergic to bee stings and may develop a severe reaction that can kill; such cases need urgent referral to a larger health with intensive care facilities.

5.5.2.2 ANIMAL BITES

These include bites by humans, snakes, dogs and other domestic animals, and wild animals. Any mammal (including humans) may carry rabies. Saliva from a rabid animal may contain large numbers of the rabies virus, which gets inoculated through a bite or any laceration or break in the skin. ***Rabies is fatal if the person is not treated in time.***

Recommended Action

- ◆ In event of a bite, move patient to health facility ***immediately***.
- ◆ In event of a wild dog being sighted within the community, warn the surrounding community.
- ◆ Clean wound with water while awaiting transportation to health facility.
- ◆ Do not apply tourniquet.

Prevention

- ◆ Provide community education on the risks of animal bites and dangers of stray dogs in the community.
- ◆ Facilitate community eradication of stray dogs.
- ◆ Facilitate community dog vaccination programmes.

5.5.2.3 POISONING

Poisoning can be acute or chronic. Acute poisoning is often life threatening and should always be treated as an emergency even if the immediate threat to life is not obvious. Always take the remaining substance or container to the health facility for identification. Table 5.2 summarizes the clinical signs and recommended actions for poisoning by a number of common substances.

Prevention

CHWs should carry out health education to the community to let them know about farm or household chemicals known to cause accidental or suicidal poisoning, how to store them safely, and how to avoid poisoning.

5.5.2.4 ABDOMINAL INJURIES

Abdominal injuries (to spleen, liver, bladder, gut) are a common cause of preventable death and prompt treatment is important.

Signs and symptoms of blunt injuries can be masked by injuries elsewhere, e.g., broken bones, broken ribs, or injured spine or even head injuries. If a patient has multiple injuries assume the abdomen is involved until this is ruled out.

Table 5.2: Clinical features and treatment of common acute poisonings

Substance	Clinical features	Recommended action
Mineral acids, e.g., hydrochloric acid (HCl), sulphuric acid (H ₂ SO ₄)	Excruciating pain in the mouth and throat, pain in swallowing, stomach pains, vomiting which may include blood, sweating	Lethal dose if concentrated – 20ml Give plenty of water or milk orally Do not give alkalis Do not induce vomiting
Alkalis, e.g., sodium hydroxide	As above	As above Do not give acids
Organochlorine, e.g., DDT, aldrin, dieldrin	Excitement, tremors, convulsions with respiratory failure due to convulsions	Refer urgently to the health facility
Organophosphates, e.g., diazinon	Headaches, weakness, vomiting, stomach pain, profuse cold sweating, excess salivation, muscular twitching, diarrhoea, convulsions, difficult breathing.	Remove clothes, wash skin, induce vomiting, and refer to health facility
Bipyridilium herbicide, e.g., (paraquat, grammosine)	Sore mouth and throat, progressive deterioration	Refer to health facility
Rodenticide (majority are oral anticoagulant based)	Generalized bleeding	Refer to health facility
Chloroquine (mistaken for abortifacient)	Convulsions, increased heart beat	Encourage vomiting Refer to health facility
Methyl alcohol (methanol)	Drunk state, drowsiness, muscle weakness, blurred vision, blindness, coma, seizures	Refer to health facility
Carbon monoxide (automobile exhaust, charcoal <i>jiko</i> , acetylene gas)	Headache, dizziness, confusion, slurred speech, convulsions, coma	Keep <i>jikos</i> in open places Refer to health facility
Digoxin	Lack of appetite, nausea, vomiting, confusion, fast heart beat, deterioration in general state of health	Discontinue drug Refer to health facility
Iron ferric salts (FeSO ₄): Vitamins with iron	Vomiting, abdominal pain, pallor, cyanosis, diarrhoea, shock	Induce vomiting Refer to health facility
Isoniazid	Convulsions, coma	Induce vomiting if patient is awake Refer to health facility
Lead: lead salts, solder paints, painted surfaces	Thirst, abdominal pain, vomiting, diarrhoea, confusion, mental disturbances	Refer to health facility
Mercury: All mercury compounds, diuretics, mercuric chloride	Stomach pains, vomiting, not passing urine, gum swelling and ulceration, mental disturbances	Induce vomiting Refer to health facility
Opiates/narcotics (drug abuse)	Drowsiness, shallow breathing, muscle stiffness, respiratory failure	Induce vomiting Refer to health facility Carry the offending drugs for identification
Warfarin sodium	Bleeding tendencies	Refer to health facility

Features of Abdominal Injury

Of important value are the pulse rate, respiratory rate, and temperature. There may be pain and obvious bruises or abdominal wall wounds. Abdominal swelling could be due to either gas or blood: this is a serious sign. Blood in urine occurs in bladder injuries and bloody stools in rectal injuries.

Recommended Modes of Action

- ♦ If accident occurs, remove patient from cause of trauma.
- ♦ Apply clean materials over severe wounds.
- ♦ Keep patient warm.
- ♦ Refer to health facility immediately.
- ♦ Pay attention to airway, breathing, and circulation (ABC).
- ♦ In general, place the patient on the side while waiting for transport as well as during transportation.
- ♦ **Take care not to bend the back:** Keep the patient as flat horizontally as possible to avoid possible injury to the spine, by having 3 or more people lift the patient.

Prevention

- ♦ Provide community education on accident prevention in the home, the workplace, and the community in general.
- ♦ Provide seminars and workshops with employers on health and safety issues in the workplace.

5.5.2.5 CHEST INJURY

Common objects causing injury are knives, arrows, spears, and bullets.

Recommended Modes of Action

- ♦ Ensure patient's airway.
- ♦ Remove patient from site of injury and avoid injury to yourself.
- ♦ Take precautions to avoid further injury, for example to possible spinal injuries.
- ♦ Apply clean dressing to open chest wounds. Such a dressing can be life saving.
- ♦ Do not remove any impacted objects like arrows in the patient.
- ♦ Refer immediately to a health facility able to handle the situation.

Prevention

- ♦ Provide community education on methods of reducing injury in the work place and home.

5.5.2.6 FACIAL AND JAW INJURY

This injury can present with an apparently frightening clinical picture, but do not panic. The bones of the face are prone to being injured. The nose, the cheek, and the jaw bones are the most prone to injury. Injury to the teeth and the supporting bone occurs quite frequently. Such injuries arise through falls, road traffic accidents, sporting activities, and interpersonal violence.

Recommended Mode of Action

- ♦ Remove the injured from the site of injury.
- ♦ Restore the airway and breathing.
- ♦ Control bleeding if palate is collapsed on roof of mouth – scoop with finger and try to elevate.
- ♦ If tongue is pushed back in the throat, pull forwards with fingers. Lay patient on side.
- ♦ Support jaw with cloth to get normal alignment.
- ♦ Apply pressure to other bleeding sites present.

Prevention

- ♦ Educate the community on trauma reduction, e.g., road safety campaigns.
- ♦ Clearly mark danger areas on roads, workplaces, schools, etc.
- ♦ Arrange referral to health facility.

5.5.2.7 HEAD INJURY

With the high number of road traffic accidents and assaults, this is a fairly common injury.

Recommended Mode of Action

- ♦ In event of head injury, extract patient with care from injury site with special precautions for possible neck or spinal injuries.
- ♦ Be on the lookout for possible primary causes of injury, for example alcohol.
- ♦ Refer to nearest facility for resuscitation.
- ♦ Document the circumstances of the injury, the state of the patient at the time of injury, and when referral is effected.

Prevention

- ♦ Facilitate community programmes to reduce head injury, especially drivers through drink drive campaigns and road safety programmes (helmets, seat belts).
- ♦ Enforce road safety regulations.

5.5.2.8 EYE TRAUMA

The eye is a delicate external organ and is so easy to injure. Eye injuries are generally classified as penetrating and non penetrating.

Recommended Mode of Action

- ♦ Refer to health facility.
- ♦ **Do not** attempt to remove foreign bodies.

5.5.2.9 FRACTURES

Most fractures are due to trauma.

Features Suggestive of Fracture

- ♦ Pain, swelling, loss of function
- ♦ Abnormal movements and deformity

- ◆ Signs of blood loss, lack of pulse, cold extremity, bleeding
- ◆ Skin wound may be present

Recommended Mode of Action

- ◆ Splint the fracture.
- ◆ Refer to nearest facility.

Prevention

- ◆ Community education to reduce the risk of accidents.

5.5.2.10 JOINT AND TENDON INJURIES

These are usually due to sports injuries, road accidents, assault, and occupational hazards and may be classified as: dislocations, fracture dislocations, or ligament injuries. Ligament injuries may occur following twisting, traction, or bending forces. Any joint of the limbs may be affected.

Features Suggestive of Joint and Tendon Injuries

In general joint injuries present with:

- ◆ Pain
- ◆ Swelling
- ◆ Loss of function
- ◆ Deformity and crepitus (if there is an associated fracture)

Diagnosis to be confirmed at the health facility.

Recommended Mode of Action

- ◆ Splint the dislocation/fracture.
- ◆ Refer to health facility.

5.5.2.11 THE MULTIPLY INJURED PATIENT

A patient who is injured in more than 2 body areas is termed a multiply injured patient.

Recommended Mode of Action

Provide first aid in the following order:

1. **Airway:** Position the head and with the finger, clear blood, mucus, and foreign bodies from the mouth, while carefully lifting the jaw.
2. **Breathing:** Check air entry into the chest. If not breathing start mouth to mouth respiration. Place a piece of cloth or perforated polythene over the mouth to reduce the risk of HIV transmission.
3. **Bleeding:** Make a quick inspection for obvious bleeding; stop these with firm pressure or bandaging.
4. Splint any broken long bones in the position found to avoid further damage during transportation.
5. Place dressing available on all open wounds especially chest wounds.
6. Reassure the patient and keep the patient warm.

7. Place patient on the side if able to do so without causing further injury. This will avoid suffocation due to inhalation. Take care in case of suspected neck injury.
8. Urgently transport patient to the nearest facility able to handle the patient.
9. Avoid movement of spine. Lift patient with 3 to 4 people to maintain a horizontal position. Sacks could be used.

Prevention

- ♦ Provide community education on the risks of domestic, industrial, and other accidents.

5.5.2.12 BURNS

The majority of burns are caused by heat, which may be open flame, contact heat, or hot liquids (scalds). Others are chemical, electric, friction, sunburn, and irradiation.

Recommended Action

- ♦ Should a burn occur, remove victim from the scene of injury. Do not expose yourself or others to same injury.
- ♦ Roll the victim or wrap in blanket or other clothing to extinguish flames and use cold water.
- ♦ Do not remove charred clothing.
- ♦ Cover burnt areas with clean material (cloth). Do not apply anything like chemicals, lotions, Vaseline, brake fluid, or traditional treatments.
- ♦ Do not break blisters.
- ♦ Get patient to a health facility as soon as possible.

Prevention

- ♦ Provide community education on the dangers of house and office fires.
- ♦ Advocate for enforcement of statutory regulations relating to fire safety.
- ♦ Promote the practise of fire drills in the work place, schools, and other vulnerable areas.

CHAPTER 6

Adulthood (25–59 Years)

Community level health care tasks for this cohort focus on health and care seeking behaviour through dialogue, community-based delivery of various services, and home care. Community care also supports compliance with treatment relating to conditions that require long-term regimens such as tuberculosis, HIV, hypertension, and diabetes. Besides these, action may also be taken to prevent diseases, for example by improving water supplies and sanitation. Referral services can be problematic in rural communities and must remain an area of concern.

6.1 Reproductive Health

- **Key Message 1** – People who have a sexually transmitted infection (STI) are at greater risk of getting HIV and of spreading HIV to others. People with STIs should seek prompt treatment and avoid sexual intercourse or practise safer sex.

People who suspect that they have an STI should seek prompt treatment from a health worker in order to be diagnosed and get treatment. They should avoid sexual intercourse or practise safer sex (non-penetrative sex or sex using a condom). If they are found to have an STI, they should tell their partner. If both partners are not treated for an STI, they will continue infecting each other with the STI. Most STIs are curable.

A man infected with an STI may have pain or discomfort while urinating, or may have a discharge from his penis. Such a man may also have sores, blisters, bumps, and rashes on the genitals or inside the mouth. A woman infected with an STI may have discharge from the vagina that has a unusual colour or bad smell, pain or itching around the genital area, and pain or unexpected bleeding from the vagina during or after intercourse. More severe infections can cause fever, pain in the abdomen, and infertility.

◀ **Be aware that many STIs in women and some STIs in men may have no symptoms at all.**

It is worth noting that not every problem in the genital area is an STI. There are some infections, such as candidiasis (yeast) and urinary tract infections, that are not spread by sexual intercourse but cause great discomfort in the genital area.

- ▶ **Key Message 2** – All people are at risk of HIV infection. Avoid getting HIV by abstaining from sex, sticking to a regular partner, or using condoms correctly and consistently.

Mutual fidelity between two uninfected partners protects them both from HIV/AIDS. The more sex partners people have, the greater the risk that one of them will contract HIV and pass it on. However, anyone can have HIV/AIDS – it is not restricted to those who have many sex partners. A blood test is the most accurate way to tell if someone is infected with HIV. An infected person may look completely well.

A condom should always be used during all penetrative sex unless it is absolutely certain that both partners are free of HIV infection. A person can become infected on even 1 occasion of unprotected penetrative sex (sex without a condom). Condoms must be used for vaginal and anal intercourse for HIV prevention. Condoms with lubrication already on them are less likely to tear during handling or use. If the condom is not lubricated enough, a water-based lubricant, such as silicone or glycerine, should be added. If such lubricants are not available, saliva can be used. Lubricants made from oil or petroleum should never be used because they can damage the condom. Condoms should never be re-used.

A safe alternative to the male condom is the female condom. The female condom is a soft, loose-fitting polyurethane sheath that lines the vagina. It has a soft ring at each end. The ring at the closed end is used to put the device inside the vagina and to hold it in place during sex. The other ring stays outside the vagina and partly covers the labia. Before sex begins, the woman inserts the female condom with her fingers. Unlike the male condom, the female condom can be used with any lubricant – whether water-based, oil-based, or petroleum-based – because it is made from polyurethane. It can also be inserted some hours before intercourse, but it must be removed immediately afterwards. And it can be cleaned and re-used.

Drinking alcohol or taking drugs interferes with judgment. Even those who understand the risks involved and the importance of safer sex may become careless after drinking or using drugs.

- ▶ **Key Message 3** – All adults over 25 years should undergo regular checkups for ailments that may present in later years especially due to lifestyle changes. Checkups should be carried out at least once a year. All people need to know their HIV status, visit a VCT centre to receive confidential counselling and testing.

Health checkups assist in detecting health conditions that might develop into chronic health problems later in life. The earlier we start carrying out these checkups the better for our health as we grow older. When health problems are detected early, before advancing into serious conditions, then remedial actions can be taken through lifestyle changes, treatment, or surgical interventions. During checkups different tests are carried out depending on the person's age, since some diseases are common in certain age groups. Diseases that can be detected through checkups are hypertension, diabetes, and cancers (cervical, breast, prostate, rectum, lung, etc.).

6.2 Physical Exercise

Physical activity is one of the most important things you can do to maintain your physical and mental health and quality of life as you get older. Walking, stretching, and keeping your muscles in good condition will help you to maintain your independence. To stay independent you need to be able to bend, lift, carry, and move around easily. Inactivity makes your body age faster; it leads to declines in bone strength, muscle strength, heart and lung fitness, and flexibility.

- **Key Message 4** – To maintain your health and independence as you grow older you need to keep yourself active. Physical activity ensures that your body organs function effectively due to the stimulus in your systems.

Being active reduces the risk of getting the following:

- ◆ Falls and Injuries
- ◆ Heart disease
- ◆ Obesity
- ◆ High blood pressure
- ◆ Adult-onset diabetes
- ◆ Osteoporosis
- ◆ Stroke
- ◆ Depression
- ◆ Colon cancer
- ◆ Premature death

How to Stay Active

If you are not already physically active, start slowly and build up the following:

- ◆ Gentle reaching, bending, and stretching exercises.
- ◆ Lift weights, do resistance activities.
- ◆ Do the activities you are doing now, more often.
- ◆ Take the stairs instead of the lift.

If you have any health problem, check with a doctor or other health care provider before starting an exercise programme. They can help tailor a programme to your fitness level and the requirements of your condition.

6.3 Managing Illness

6.3.1 Acute Illnesses

6.3.1.1 PNEUMONIA IN ADULTS

Presenting Features

This is an infection of the lungs that presents with breathlessness, cough with or without sputum that might be rust coloured, and sometimes also fever and stabbing chest pain on breathing.

Management Options

Refer to the nearest health facility.

6.3.1.2 FEVER

This is hotness of the body, which is almost always a sign of disease. People who develop fever must be referred to the nearest health facility.

6.3.1.3 JAUNDICE

This is yellowness of the eyes. It is always a sign of disease. People who develop yellowness of eyes should be taken to the nearest health facility.

6.3.1.4 MALARIA

Malaria is a disease caused by parasites that are transmitted by the bite of an infected female mosquito. It causes severe headache, fever, nausea, vomiting, stomach pains, diarrhoea, joint pains, dizziness, chills, body weakness, yellowness of the eyes, swelling on the left side of the abdomen, and shortage of breath. People suffering from these symptoms should be treated at a health facility.

➤ **All people suspected to have malaria should be sent to the nearest health facility.**

Prevention

Preventive strategies for malaria include the following:

- ♦ Cover exposed skin in the evenings.
- ♦ Always sleep under an insecticide treated net (ITN).
- ♦ Participate in indoor residual spraying (IRS) campaigns in epidemic prone areas.

6.3.1.5 MENINGITIS

This is an infection of the brain and spinal cord commonly caused by bacteria and other organisms.

Presenting Features

Common symptoms include headache at the back of the head, neck stiffness and pain, altered level of consciousness, fever, vomiting, and convulsions. Coma

is likely to develop unless appropriate treatment is given immediately. Meningitis can be easily confused with malaria.

Management Options

☛ *Refer immediately to the nearest health facility.*

6.3.1.6 TETANUS (LOCKJAW)

This is a disease caused by bacterial contamination of wounds anywhere on the body, but most commonly on the leg. Untreated tetanus can kill.

Presenting Features

The patient has locking of the jaw, stiffness of the neck, stiffness and pain in the stomach, violent spasms of muscles that can result in breaking the muscles, rigid arching of the back muscles, pain on swallowing, and difficulty in breathing.

Management Options

Refer immediately to the nearest health facility.

Preventive Strategies

- ♦ Clean cut wounds with water and soap.
- ♦ For people with open wounds:
 - ☛ *Refer to the health facility for vaccination.*

6.3.1.7 DIARRHOEAL DISEASES

Diarrhoea is defined as the occurrence of at least 3 loose or watery stools in a day. Commonest causes of diarrhoea include bacteria, viruses, worms, and fungi.

Management Options

- ♦ Give plenty of fluids, such as water, soda, tea, juice, porridge, ORS where available.
- ♦ Encourage the affected patient to eat.
- ♦ Refer to health facility.

6.3.1.8 ABDOMINAL PAINS

Patients with severe stomach pains, particularly if accompanied by vomiting, should be referred to the nearest health facility.

Acute Abdomen

Central in this group of conditions is a severe, sudden onset abdominal pain. The term acute abdomen is a symptomatic diagnosis and not definitive. It is important that a variety of diagnoses be suspected and appropriately managed. Common causes of abdominal pain are medications, gastroenteritis, peptic ulcer disease, acute erosive gastritis, appendicitis, acute cholecystitis, acute pancreatitis, acute intestinal obstruction, renal colic, diverticulitis, ectopic pregnancy, ruptured/ twisted ovarian cyst, urinary tract infection, and pelvic inflammatory disease.

Management Options

The general management options include the following:

- ♦ Get patient to a medical facility immediately.
- ♦ Advise patient not to take anything orally.
- ♦ Reassure the patient.

Prevention

- ♦ Community education on common causes of obstruction like hernias
- ♦ Improved hygiene and sanitation

6.3.2 Chronic Illnesses

6.3.2.1 TUBERCULOSIS

Tuberculosis (TB) is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs. However, TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB is spread through the air from one person to another. The bacteria are discharged into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected. TB in the lungs or throat can be infectious. This means that the bacteria can be spread to other people. TB in other parts of the body, such as the kidney or spine, is usually not infectious.

Presenting Features

People with the following symptoms should be advised to go for sputum test at the nearest health centre:

- ♦ Cough that lasts for 2 or more weeks
- ♦ Coughing up blood or blood stained sputum
- ♦ Chest pain, fever and night sweats, and weight loss

Management Options

- ♦ Refer suspected cases to the health facility.
- ♦ Support those on treatment to complete their treatment.

Prevention and Control

Strategies for prevention and control of tuberculosis include the following:

- ♦ Effective treatment of all positive tuberculosis cases.
- ♦ Community-based support for the patient throughout the treatment period, so as to complete it and get cured. Once a patient has been confirmed to be suffering from TB and a decision to manage him/her within the community, the patient is assigned to their respective CHW.
- ♦ Proper ventilation.
- ♦ Covering mouth when coughing.
- ♦ Avoiding spitting, or spitting into a handkerchief or paper that can be thrown away safely.
- ♦ Seeking treatment for those affected at once.
- ♦ Contact tracing.
- ♦ Defaulter tracing.

The Role of CHWs in TB Management, Prevention, and Control

- ◆ Directly observed treatment short course (DOTS): The value of this form of treatment is to ensure that the patient finishes his/her medication and thus does not default.
- ◆ Contact tracing.
- ◆ Defaulter tracing: All patients who stop taking their medication should be traced and be brought back for treatment. Defaulter tracing is initiated if a patient misses treatment for more than 3 days in the intensive phase and more than 1-month collection during the continuation phase and then report is given to the supervisor for action.

In filling this role, the CHW will:

- ◆ Assist the patient to go through the period of at least the initial phase (2 months) of treatment by seeing that they have actually swallowed the medicines in their presence.
 - ◆ Collect supplies and other requirements for the patient from the health facility at least twice per month.
 - ◆ Indicate on the patient's appointment card that the drugs have been swallowed in their presence.
 - ◆ Assist the patient to recognize any side effect and refer them to the health facility for advice.
 - ◆ Refer any patient who may develop any complications.
 - ◆ Meet regularly with the supervisor to discuss any constraints or matters concerning the patient.
 - ◆ Remind patients to come for sputum smear examination follow ups at 2, 5, and 8 months.
 - ◆ Avail the patient's clinic card to the supervisor or health facilities for data entry into the TB treatment register every month.
 - ◆ Involve the community to ensure support for the patient throughout the treatment period through DOTS. This will ensure completion of medication and thus lead to cure.
- **If the CHW will be away from the area for some time, the patient and supervisor should be informed so that a substitute can be arranged during that period.**

See also Section 6.5 for more ways to involve the community in TB control.

What Is Required to Meet the Needs of the Chronically Ill

- ◆ Help with general household chores.
- ◆ Psychological support: This includes stress and anxiety reduction, promoting positive living, and helping individuals make informed decisions as they seek care, and involving partner(s) in such decisions.
- ◆ Nursing care including personal hygiene: This includes care given to promote and maintain good health, hygiene, good nutrition, and comfort to ensure a cheerful life despite the illness.
- ◆ Clinical care, including palliative care. This includes early diagnosis, rational treatment, and planning for follow-up care of HIV-related illness.

- ♦ Food and nutrition.
- ♦ Environmental cleanliness.
- ♦ Social support: Includes information and referral to support groups, welfare services, and legal advice for individuals and families, including surviving family members, and where feasible the provision of material assistance.
- ♦ Referral to the health facility.

6.3.2.2 ASTHMA

Presenting Features

Asthma presents with attacks of difficulty in breathing with wheezing and noises in the chest when breathing.

Management Options

Refer to the nearest health facility.

6.3.2.3 CHRONIC OBSTRUCTIVE LUNG DISEASES OR PUS IN THE CHEST

Presenting Features

- ♦ May present as cough particularly early in the morning, wheezing, and sputum production.
- ♦ Difficulty in breathing, cough, and fever
- ♦ Chest pain and chest deformity

Management Options

- ♦ Refer to the nearest health facility.

6.3.2.4 LUNG CANCER

More cases are being seen in Kenya, and the association with smoking is high.

Presenting Features

- ♦ Long-term cough and chest pain
- ♦ Coughing blood
- ♦ Wheezing or noises in the chest when breathing
- ♦ There may be swollen lymph nodes in the area
- ♦ Loss of appetite and loss of weight

Management Options

- ♦ Refer all suspected cases for medical checks. In presence of chronic cough with blood in sputum and difficulties in breathing, refer immediately.

Prevention

- ♦ Community action plan to reduce the risk factors, such as smoking
- ♦ Enforcement of antismoking legislation
- ♦ Encouraging regular medical checkups

6.3.2.5 DISEASES OF THE BRAIN, NERVES, AND SPINAL CORD

These are conditions affecting the central nervous system (CNS) and may present with headache, vomiting, alterations in level of consciousness, or enlarged head size. The patient may also have paralysis and/or loss of sensation of a part of the body, as well as blurred, double vision or loss of vision.

Headache is the commonest symptom of brain disease and is commonly secondary to some other cause, although a great percentage are due to unidentified causes and are often referred to as primary headache disorders.

Management Options

- ♦ Headache does not always mean serious disease, and mild headaches can be relieved by a common pain killer like paracetamol.
- ♦ Refer to the nearest health facility a patient having severe and persistent headache.

Preventive Strategies

Avoiding known triggers to headaches, e.g., dehydration, adopting consistent sleeping patterns and minimization of environmental stress.

EPILEPSY

Epilepsy is a clinical syndrome characterized by the presence of recurrent seizures.

Presenting Features

Sudden jerky movements in the legs and arms, frothing, biting of tongue, uncontrolled passing of urine, and loss of consciousness.

Management Options

During an epileptic attack:

- ♦ Patient should be placed on the left side with head turned to the same side.
- ♦ Tight fitting clothing around the neck should be removed or loosened.
- ♦ Dentures should be removed.
- ♦ No attempt should be made to insert any instrument into the mouth to avoid tongue biting, as this may have already happened.
- ♦ Patient should not be surrounded by too many eager observers.
- ♦ Seizure should be allowed to complete its course without physically attempting to hold down the patient. However, remove patient from danger, e.g., fire
- ♦ Take the patient to the health facility.

Patient Education

- ♦ Avoid becoming drunk especially drinking sprees during weekends.
- ♦ Eat at regular intervals.
- ♦ Try to manage stress, physical or mental, as it may precipitate a seizure.
- ♦ Avoid sleep deprivation.
- ♦ Never swim alone and take all precautions when swimming.

- ♦ Avoid operating heavy or sharp edged machinery.
- ♦ To prevent burns, make or place a protective shield around *jikos*.

COMA

Coma is a state in which the patient is unarousable and unresponsive to external stimulation. It is usually due to severe brain diseases that in turn might also be related to severe diseases in other body organs.

Management Options

- ♦ Ensure the patient is breathing.
- ♦ Refer to the nearest health facility while making sure that the neck is pulled backwards, the mouth is open, and the tongue is not falling back behind the throat.
- ♦ Release tight clothing and clear any secretions around the mouth, including vomitus.
- ♦ Transport the patient lying on the side.

6.3.2.6 MENTAL DISORDERS

This is a group of diseases characterized by a wide range of abnormal behaviours. They may present with aggressiveness, violence, withdrawal and depression, lack of proper reasoning, exaggeration of feeling a disease even where there is no evidence of disease, excitement, and being over-religious. Or they may have no symptoms at all.

Management Options

Refer to the nearest health facility but ensure family and community support.

ANXIETY

This is a condition in which an individual feels unexplainably insecure. There is an unpleasant, vague, and diffuse feeling of apprehension. Usually the threat is unknown and the patient's functioning becomes impaired. Pathological anxiety includes the following:

- ♦ Panic disorder: Dramatic in presentation
- ♦ Phobias: Fears that are out of proportion
- ♦ Obsessive compulsive disorder: Irresistible urge to act
- ♦ Generalized anxiety disorder

Presenting Features

Empty feeling in the stomach, lightness in chest, pounding heart, perspiration, urge to void, dizziness, light headedness.

Management Options

Refer to the nearest health facility.

SLEEP DISORDERS

These could be lack of sleep or excessive sleep. Either condition can be due to serious underlying medical conditions, particularly if of recent onset.

Management Options

Refer to the nearest health facility.

6.3.2.7 DIABETES MELLITUS

Diabetes mellitus is a disease of too much sugar in the blood.

Presenting Features

Passing a lot of urine frequently, feeling thirsty/drinking a lot of water, feeling excessively hungry, and having body weakness, with weight loss.

Management Options

- ◆ Refer all suspected cases to the health facility.
- ◆ When sugar goes very high, patients with diabetes develop altered consciousness, may become confused and even comatose. When the blood sugars go very low they become confused, sweat a lot, and may go into coma. Give sugar if they can still swallow and refer to health facility immediately.
- ◆ Teach patients how to avoid foot injury. Hospital occupational therapist should advise patients on foot care.
- ◆ Stress that patients with any injury, however minor, should seek medical advice.
- ◆ Remind all diabetic patients to:
 - Eat regularly.
 - Carry sweets or glucose and chew them if they experience any symptoms of hypoglycaemia
 - Always carry “Diabetic Alert” card with them.
 - Join any branch of the Kenya Diabetic Association for support and “continuing education.”

6.3.2.8 JOINT AND BONE CONDITIONS

JOINT PAIN

Joint pain can be caused by infections, injuries, changes due to aging, or straining.

Presenting Features

General malaise, joint pains, joint mobility not affected, joint not red, not warm, not tender or only slightly tender.

Management Options

The following is recommended:

- ◆ For mild cases, use mild remedies like aspirin or paracetamol.
- ◆ Apply warm compresses to the affected joints.
- ◆ Rest the joints, avoid strenuous exercise.
- ◆ Refer to the nearest health facility.

Preventive Strategies

- ◆ Reduce weight
- ◆ Wear better fitting shoes

GOUT

Excruciating joint pain, usually in single joint and commonly the big toe. It usually follows consumption of meat products and alcohol.

Management Options

- ♦ Refer to the health facility.
- ♦ Avoid aspirin.

Preventive Strategies

- ♦ Avoid alcohol consumption.
- ♦ Avoid heavy consumption meat.

JOINT INFECTIONS

These are acute infections of the joint space.

Presenting Features

- ♦ Fever, chills, and irritability.
- ♦ Swollen, warm, very tender joint(s).
- ♦ Loss of function of the joint.
- ♦ Many joints may be affected.

Management Options

- ♦ Splint the joint.
- ♦ Give pain killers.
- ♦ Refer to health facility.

BONE INFECTION

The condition may be acute or chronic.

Presenting Features

Pain is the major presenting symptom. The severity increases with time. There is fever, and the patient becomes toxic. The main physical signs are localized tenderness, loss of function of the limb, and swelling. Commonly involved bones are those of the legs and arms.

Management Options

Refer to a health facility.

BONE GROWTHS

A common problem affecting all age groups. They can be benign or malignant.

Presenting Features

Swellings or deformities develop on any part of the bones of the body. These may be slow growing and painless or relatively rapid growing and painful. Most of the slow and painless swellings are benign, while the rapid developing and painful ones can be malignant conditions. Benign conditions affecting the joints or growing next to nerves may present with pain.

Management

Refer to a health facility for investigation and appropriate management.

LOWER BACK PAIN

Management Options

- ♦ Conduct community education on correct body posture at work, sleeping, etc.
- ♦ Educate the community on techniques of lifting heavy objects.
- ♦ Improve the working environment in order to reduce the incidence of lower back pain.
- ♦ Refer to health facility.

6.3.2.9 THROAT CANCER

Presenting Features

- ♦ Commonly first presents as neck mass.
- ♦ Other symptoms may include congestion, runny nose, bleeding nose, ear pain.
- ♦ The voice may be hoarse.

Management Options

- ♦ Conduct community education programmes for prevention and early detection.
- ♦ Refer all cases to hospital for further evaluation and management.

6.3.2.10 DIFFICULTY IN SWALLOWING

Presenting Features

May develop suddenly or slowly

Management Options

Refer all cases to the health facility.

6.3.2.11 SWOLLEN LYMPH GLANDS

This is the swelling of the lymph glands particularly the neck, armpits, and groin. It is almost always a sign of serious disease. Refer such cases to the nearest health facility.

6.3.2.12 WORMS AND OTHER PARASITES

The commonest cause of these is ingesting food and water contaminated by faeces, as a result of poor sanitation. They include amoebiasis and roundworms.

Presenting Features

Those affected may present with diarrhoea, abdominal pain, passing blood in stool, or passing worms in stool. They may also complain of headache and dizziness.

Management Options

Refer to the nearest facility.

Preventive Strategies

- ♦ Boil drinking water and use latrines consistently.
- ♦ Wash hands before eating, and after use of latrines.
- ♦ Dispose of waste properly.
- ♦ Wash vegetables and fruits before cooking and eating.
- ♦ Take de-worming medicine regularly.
- ♦ Boil milk before drinking or using.

6.3.2.13 HEARTBURN AND ULCERS

In this condition patients has pain in the stomach and chest that is burning in nature. The pain may be made worse by food, hunger, or after taking some drugs. This pain is commonly due to ulcers in the gullet, stomach, or small intestine.

Management Options

Refer to the nearest health facility.

Preventive Strategies

- ♦ Avoid any foods that in the patient's experience give pain.
- ♦ Avoid obviously acidic foods, e.g., cola drinks.
- ♦ Limit alcohol intake and smoking.
- ♦ Take bed rest in acute attacks.
- ♦ Avoid pain killers unless prescribed in the health facility.
- ♦ Give antacids.

6.3.2.14 BLEEDING FROM THE GULLET, STOMACH, AND INTESTINES

Vomiting blood usually occurs from ulcers in the gullet, stomach, or small intestine. This is serious and such patients should be referred immediately to the nearest health facility.

At the lower end of the gut, bleeding from the anus is caused by:

- ♦ Haemorrhoids
- ♦ Ulcers in the large intestine, which include cancers and injury
- ♦ Bleeding disorders

Management Options

Refer to the nearest health facility.

6.3.2.15 BACTERIAL INFECTIONS OF THE MOUTH

The mouth is a favourite habitat for many disease causing organisms. Common sites and sources of bacterial infection in the mouth and facial area include:

- ♦ Decayed teeth
- ♦ Root remnants in the jaws
- ♦ Gum infection
- ♦ Injured tissues

Management Options

- ◆ Conduct community education programmes to promote dental health.
- ◆ Offer community outreach services to reach community.
- ◆ Hold community action weeks/months to address dental health.
- ◆ Refer affected individuals to health facility.

6.3.2.16 HERPES INFECTIONS

The herpes group of viruses and especially Herpes zoster constitutes one of the most common causes of lesions in the mouth and face. The lesions are usually of acute onset manifesting with irritating pain. Where there is underlying HIV infection, fulminating Herpes zoster infection may cause extensive damage of the mouth leading to spontaneous falling out of teeth and destruction of the affected jaw segments.

Management Options

- ◆ Conduct community education.
- ◆ Do not touch these lesions without gloved hands.
- ◆ Refer to nearest health facility.

6.3.2.17 GROIN HERNIAS

This is a protrusion of abdominal contents into the groin, which at times can go down into the scrotum.

Presenting Features

Bulge presenting at the groin and may increase with straining. May at times present with sudden pain and may get stuck such that the contents of the hernia fail to return to the abdomen. If this happens it is life threatening.

Management Options

Refer to the health facility for examination.

6.3.2.18 WOUNDS AND GROWTHS/SWELLINGS OF THE SKIN

Presenting Features

Ulcers are mainly found in the lower limbs but may occur on any part of the body. A boil (abscess) is the accumulation of fluid following a localized infection. This results in pus formation and can occur in almost any part of the body.

Management Options

Refer persistent wounds and boils to the nearest health facility. Soothe painful boils with warm compresses.

6.3.2.19 SKIN DISEASES

Skin diseases can be due to allergic reactions, infections, or many other causes. They present with itching, burning sensations, pain, and dryness of skin.

Management Options

- ♦ Ringworm – Apply Whitfield ointment.
- ♦ Scabies – Apply benzyl benzoate.
- ♦ Jiggers – Soak in paraffin.

Preventive Strategies

- ♦ Avoid synthetic clothing.
- ♦ Avoid letting the skin dry excessively, e.g., by using harsh soaps like bar soaps such as Sunlight, Ushindi, etc.
- ♦ Keep clothing clean and iron if possible to destroy any disease organisms.
- ♦ Bathe regularly and keep the body clean.
- ♦ Avoid clothing, shoes, body applications (lotions, cosmetics, etc.), and foods known to cause skin allergies to the individual.

6.3.2.20 GENITOURINARY DANGER SIGNS AND SYMPTOMS

Urinary tract and kidney infections cause pain and discomfort in the urinary tract and may not necessarily be sexually transmitted. Kidney diseases present as reduction or increase in the amount of urine, passing blood stained urine, swelling of the feet, early morning swelling of the face, nausea and vomiting, and loss of appetite.

Men may experience swelling of the scrotum, pain of the testis, passing blood in the urine, and urinary retention, which are all significant urinary signs signifying problems. They may be caused by conditions like water in the scrotum, twisting of the testis, and prostate enlargement.

➔ **Refer all such patients urgently to the nearest health facility.**

6.3.3 Diseases Affecting Women

6.3.3.1 PELVIC SWELLINGS

Unexplainable swelling in the lower abdomen requires examination in a health facility. Such swellings may or may not be painful and may or may not be associated with other symptoms. In any case, community members should seek care in a health facility urgently, as some swellings may be an indication of serious diseases. Examples of swellings in the lower abdomen include:

- ♦ Pregnancy
- ♦ Distended bladder
- ♦ Uterine fibroids
- ♦ Tube-ovarian swellings
- ♦ Ovarian cyst or growth
- ♦ Cancers

All cases of unexplainable abdominal masses should be referred to a health facility.

6.3.3.2 MENSTRUAL DISTURBANCES

Most women suffer some form of menstrual disturbance in their lifetime. Because they may be a symptom of serious illness, women are advised to seek help from health facilities for any menstrual disturbances experienced. The common types are discussed below.

LACK OF PERIODS (AMENORRHOEA)

This refers to the absence of menstruation for 2 months or more. It is a symptom and its significance depends on the underlying cause. In *primary amenorrhoea* the woman has never menstruated. A girl who reaches 16–18 years without menstruating should be examined in a health facility and referred to appropriate level for care. *Secondary amenorrhoea* refers to cessation of the periods after menstruation has been established. Two varieties are hidden periods and true amenorrhoea (primary and secondary).

Hidden Periods

These are due to mechanical blockage of the genital tract. The blockage prevents the outflow of menstrual blood in cases of congenital imperforate hymen or vaginal membrane. Such persons should be referred to hospital for incision of imperforate hymen or excision of the vaginal membrane.

True Amenorrhoea

This can be normal as is the situation before puberty, during pregnancy, during lactation, and after the menopause. It may be abnormal, however, and may be due to disturbances of hormones from various causes. Primary amenorrhoea is investigated after age 18 and secondary amenorrhoea at any age when 2 or more unexplained cycles are missed.

Irregular periods, or too heavy or prolonged periods, and painful periods (dysmenorrhoea) are also investigated. These conditions may or may not be associated with underlying physical disease. Women with these problems should be referred to the hospital.

PREMENSTRUAL TENSION

Women with this condition experience discomfort in the lower abdomen and back 7–10 days before their periods. They have a sensation of distension or pelvic engorgement. There is relief after the flow begins. They may also experience nervous irritability, depression, headache, listlessness, mild oedema, and breast discomfort.

Such women should be given paracetamol 1g TDS then referred to the nearest health facility.

6.3.3.3 CANCERS OF THE GENITAL TRACT

The commonest cancers of the genital tract arise from the neck of the uterus (cervix), the body of uterus (endometrium), the vulva, and the ovaries. The

CHEW, CHWs/CORPs, and community residents should be sensitized on the danger signs of cancer of the genital tract. They should refer all women suspected of having cancer to health facilities for examination. Members of the community should also be sensitized with respect to seeking annual routine gynaecological checkups including simple cancer screening in dispensaries and health centres.

Danger Signs of Genital Cancer

These include:

- ♦ Abnormal uterine bleeding – during intercourse, on straining, outside normal period
- ♦ Foul smelling vaginal discharge
- ♦ Swelling in lower abdomen
- ♦ Ulcer or swelling on vulva

Preventive/Health Promotion Activities

Communities should be sensitized on healthy lifestyles that reduce risks of reproductive tract cancers. These lifestyles include:

- ♦ Avoiding STDs and STIs or getting prompt effective treatment when affected.
- ♦ Regular screening – annual Pap smear or visual inspection with acetic acid (VIA) or visual inspection with Lugol’s iodine (VILI) to prevent cancer of the cervix (neck of the womb).
- ♦ Avoiding multiple sex partners.
- ♦ Getting vaccination for HPV to prevent cancer of the cervix.
- ♦ Early referral to the health facility for suspected cases.

6.3.3.4 INFECTION IN THE PELVIS (PELVIC INFLAMMATORY DISEASE, PID)

This is an inflammation of pelvic organs. It is essentially a consequence of sexually transmitted infections such as gonorrhoea and chlamydia trachomatis, but can follow puerperal sepsis or unsafe abortion. Tuberculosis is another cause of chronic PID. PID is a major cause of infertility if not treated promptly and effectively. Danger signals for PID include the following:

- ♦ Lower abdominal pain
- ♦ Fever
- ♦ Purulent vaginal discharge
- ♦ Painful sexual intercourse
- ♦ Low back pains

Give ibuprofen 400mg TDS and refer women suspected to have PID to the nearest health facility for examination and treatment.

Prevention Strategies

- ♦ Practising the “ABC’s” of safer sex (abstinence, being mutually faithful, condom use).
- ♦ Promptly treating STDs/STIs and abnormal vaginal discharge.
- ♦ Using only approved facilities for maternity and post abortion care.

6.3.3.5 ABSCESSES AND FISTULAE

Bartholin's Abscess

This is a boil-like swelling located on either side of the vaginal opening. The swelling is very painful and tender. Give ibuprofen 400mg TDS and refer to the nearest hospital.

Genital Fistulae

A fistula is an abnormal opening between the genital tract and the urinary or alimentary tracts. Such openings may occur singly or in combination. Continuous leaking of urine or faeces or both through the vagina are indicators of this problem.

Common causes of genital fistulae include the following:

- ♦ Obstructed labour
- ♦ Instrumental deliveries, caesarean section, hysterectomy
- ♦ Malignancies

← **This condition can be corrected with surgery. Refer affected women to hospital (levels 4–6).**

Preventive Strategies

Prevention is by proper management of labour, preferably by a skilled attendant, and ensuring early referral to avoid prolonged and obstructed labour.

To note is that very young mothers are more prone to fistulae because their bodies are not mature enough to handle a pregnancy and birth. One way to decrease the incidence of fistula in the population is for women to wait until they are at least 18 before becoming pregnant.

6.3.3.6 BREAST CONDITIONS

Breast disease presents in a variety of forms as lumps, breast pain, nipple discharge, and breast ulcers or eczema.

Management Strategies

- ♦ Community education on the dangers of breast disease
- ♦ Encourage and teach women self breast examination

← **Refer women with breast lumps to nearest health facility urgently.**

6.3.4 Infertility

Infertility, although not necessarily a disease, is the failure to conceive after a year of sexual intercourse without contraception. The causes can involve the man, the woman, or both of them. Therefore it is unjustified to blame only the woman in cases of infertility. The CHEW and CHWs/CORPs should provide information to community members on how fertilization occurs, the requirements,

and why this fails to happen in some cases. Community members should be made aware that there are many causes of infertility that can be treated in health facilities. They should be advised to go to hospital for any infertility concerns. It is important for the couple to undergo investigations and treatment together, to support each other, and to avoid blaming each other.

6.4 Family Planning (FP)

The essence of family planning is that “everyone should plan their family so that all children are born when wanted, expected, and welcome”. The health benefits of family planning play a major role in protecting the lives of infants, children, women, and the family as a whole. Family planning also contributes to community and national development. Communities, districts and countries are able to plan and provide adequate infrastructure, amenities, and services for the people.

The CHEW, CHWs, and community members should be involved in community-based distribution (CBD) of appropriate methods according to the National Family Planning Guidelines (MOH/DRH 2005). Appropriate methods for this approach are the pill and the condom (male/female). These methods are also distributed through kiosks, shops, and pharmacies. The community-based distributors should also counsel and refer individuals and couples who require other methods (IUCD, injectables, implants, voluntary surgical contraception, i.e., tubal ligation and vasectomy) to the health facilities.

Trained CBDs/CHWs/CORPs can provide the following family planning services:

- ♦ Condoms: Counselling and provision of service.
- ♦ Lactation amenorrhoea method (LAM): Counselling, support, and referral for the service.
- ♦ The pill (combined oral contraceptives (COC), progesterone only pill (POP), and emergency contraceptive pill (ECP): Counselling, provision of some of the services, and referral for some of the other services.
- ♦ Injectables, IUCD, implants, natural family planning, tubal ligation, vasectomy: Counselling and referral for the services.

6.5 Community TB Control

Clinical measures for controlling and managing TB were presented above in Section 6.3.2.1. Here the discussion turns to messages and approaches that aim to get the whole community on board in the fight against TB.

- **Key Message 5** – Tuberculosis is a curable disease, if it is diagnosed and treated early, regardless of the HIV status.

The following is important to know about tuberculosis:

- ♦ The biggest difference between HIV and TB is that TB can be cured.
 - ♦ Curing TB is a personal choice even for a person with HIV.
 - ♦ Early diagnosis and prompt treatment are the only way to beat TB.
 - ♦ HIV does not mean TB and TB does not mean HIV.
 - ♦ Find out what you have. If it is TB, it can be cured. Act fast.
 - ♦ Once hope replaces fear, TB can be cured.
- **Key Message 6** – If you have been coughing for 2 weeks or more, go for a TB test immediately. Early diagnosis and prompt treatment are the only way to beat TB.
- **Key Message 7** – Recognize and take action on warning symptoms of TB. Report immediately to the nearest health facility in case TB is suspected.

Remember:

- ♦ TB always warns you in time with a cough. Do not delay action.
 - ♦ Let a health care provider at an approved government facility listen to that cough. He/she will know what to do.
 - ♦ Other people have other opinions. The opinion that matters is of the health worker at the approved government health care centre.
- **Key Message 8** – TB is a family problem and all family and community members should be involved to ensure adherence to treatment.

Such involvement is exemplified by the following:

- ♦ The family should refuse to let the patient die.
 - ♦ Encourage the individual with cough to test, start treatment, and live.
 - ♦ The family that lights up hope together fights off TB together.
 - ♦ Be your brother's (sister's/father's/mother's) keeper.
 - ♦ I said NO but my family said yes to TB cure and I'm alive today.
- **Key Message 9** – You do not have the right cure for TB, but you can always give the right advice.

The right advice for TB consists of the following:

- ♦ Send the TB patient now to the nearest government health care facility.
- ♦ When people with TB depend on our guidance, don't misinform them.
- ♦ Understand TB and guide the TB patient, but leave the cure to an approved TB health care facility.
- ♦ TB can be cured only at a well-equipped and approved health care facility.
- ♦ Don't give out false cures for TB. Give out the correct advice.
- ♦ Caring begins with the look in our eyes. Don't look away from TB.
- ♦ The complete cure for TB starts with your correct advice.

- **Key Message 10** – Have confidence that government health facilities can diagnose, treat, and cure TB at no cost if reported early.

The following affirmations are valid and worth noting:

- ◆ I'm alive today because the government health clinic cured my TB for free.
- ◆ Give them your time and commitment and they will cure you of your TB.
- ◆ A TB cure costs nothing, and is available close by. Why are you hiding at home?

- **Key Message 11** – Leprosy is a bacterial infection, and is a disease like any other. It is curable. Treatment is free of charge in public health facilities and is available at the nearest health facility. If not identified and treated on time, leprosy can lead to deformities and disabilities. People with deformities but who had been treated for leprosy cannot infect others.

CHAPTER 7

Elderly Persons (60+ Years)

In this target group the main tasks at the household and community levels are dialogue to promote regular medical checkups, healthy practices, and care groups, and provision of referral services.

7.1 Maintaining Good Health

- ▶ **Key Message 1** – Seek regular medical checkups and information on old age conditions. One should follow the instructions given at the health facility to the end and seek health care as soon as illness appears.

Persons aged 65 and older are at high risk for complications and hospitalization. Elderly persons have immune systems that are less able to fight new infections because of the declining immunity that accompanies aging.

- ▶ **Key Message 2** – Try to be physically active every day.

It is vital to make moderate physical activity a part of an adult's daily routine as a preventive/management strategy against conditions like obesity, hypertension, diabetes, and coronary artery disease. Moderate physical activity for an hour each day can increase energy expenditure by about 150 to 200 calories, depending on body size. If not offset by increased calorie intake, this increase in physical activity could be helpful in preventing weight gain. Many adults need to participate in up to 60 minutes of moderate to vigorous physical activity on most days to prevent unhealthy weight gain.

- ▶ **Key Message 3** – Increase daily intake of fruits and vegetables, whole grains and reduced-fat milk and milk products.

Fruits contain glucose, fructose, sucrose, and fibre, and most fruits are relatively low in calories. In addition, fruits are important sources of at least 8 additional

nutrients, including vitamin C, folate, and potassium (which may help control blood pressure). Many vegetables provide only small amounts of sugars and/or starch, some are high in starch, and all provide fibre. Vegetables are important sources of 19 or more nutrients, including potassium, folate, and vitamins A and E.

Adults who increase their fruit and vegetable consumption to meet recommended nutrient intakes will also be consuming amounts of fruits and vegetables that are associated with a decreased risk of such chronic diseases as stroke. Moreover, increased consumption of fruits and vegetables may be a useful component of a programme designed to achieve and sustain weight loss.

Reducing salt (sodium chloride) intake is one of several ways that people can lower their blood pressure. Reducing blood pressure, ideally to the normal range, reduces the chance of developing a stroke, heart disease, heart failure, and kidney disease. The relationship between salt intake and blood pressure is direct and progressive without an apparent threshold. On average, the higher a person's salt intake, the higher their blood pressure. Thus, reducing salt intake as much as possible is one way to lower blood pressure. Another dietary measure to lower blood pressure is the consumption of a diet rich in potassium. Such a diet also blunts the effects of salt on blood pressure, and may reduce the risk of developing kidney stones, and possibly decrease bone loss with age.

► **Key Message 4** – Adhere to key health practices.

It is highly recommended that elderly persons should adhere to the following key health practices:

- ◆ Use ITNs to prevent malaria.
- ◆ Wash hands before handling food, before eating, and after visiting the toilet.
- ◆ Seek information on old age conditions.
- ◆ Seek health care as soon as illness manifests
- ◆ Use boiled or treated water for drinking.
- ◆ Follow instructions given at the health facility for any service.
- ◆ Go for regular medical checkups to detect silent conditions.
- ◆ Have daily physical activity.
- ◆ Eat plenty of vegetables and fruits.
- ◆ Avoid salty, oily foods.

7.2 Managing Disease

7.2.1 Diseases of the Heart and Blood Vessels

7.2.1.1 HYPERTENSION (HIGH BLOOD PRESSURE)

Common signs are awareness of heartbeat, headache, and dizziness. If the heart is damaged, the signs are swelling of the legs, getting tired easily, cough, breathlessness.

Management Options

Not all patients with hypertension need drug treatment. A good number can be controlled by the following measures:

- ♦ Reducing weight if overweight or obese.
- ♦ Eating a low salt diet.
- ♦ Advising patients to give up smoking and consumption of excessive alcohol.
- ♦ Taking regular dynamic exercises.

7.2.2.2 STROKE

Stroke is a sudden weakness of one side of the body, commonly accompanied by headache. It is caused by damage to the brain that usually results from high blood pressure but can also be due to other causes.

Management

Refer such a patient urgently to a hospital for appropriate management. Such patients might require intensive care treatment.

7.2.2 Cancers and Growths

Cancers are malignant conditions that can be found in any part of the body. They commonly appear as swellings, e.g., in the breast, lymph glands, stomach, and skin. Some will appear as abnormal bleeding or discharge like cancer of the cervix (mouth of the womb) or cancer of the womb. The majority of cancers start from one organ and progressively spread to involve others. They are usually not painful, although some are in fact very painful. Most cancers if detected early can be cured but if detected late they are fatal. Cancers of the blood may present as anaemia, swellings in the glands, or swellings in the stomach. Not all growths are cancerous. All patients who present with the features listed above must be referred to the nearest facility urgently.

Cancer is caused by exposure to various risk factors that include the following:

- ♦ Tobacco use and cigarette smoking
- ♦ Unhealthy diet
- ♦ Sexually transmitted diseases
- ♦ Infections, e.g., schistosomiasis
- ♦ Exposure to some chemicals, drugs, and radiation

7.2.3 Senile Cataract

Presenting Features

- ♦ Slowly progressive visual loss or blurring affecting one or both eyes
- ♦ Appearance of white pupil

Management Options

- ♦ Community education on blindness, prevention and treatment.
- ♦ Community outreach programmes.

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