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MINISTRY OF HEALTH - ETHIOPIA
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HEALTHIER CITIZENS FOR PROSPEROUS NATION!

Comprehensive and Integrated Nutrition Services Delivery Guideline for the Pastoral and Agro-pastoral Communities of Ethiopia

(PCINS)

Federal Ministry of Health

August, 2020

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Preface

Ethiopia has exhibited modest improvements in the nutritional status of children. Despite the country's progress, the burden of malnutrition has remained a formidable challenge. When the data are further disaggregated by regions, the nutritional indicators are far worse in the pastoralist and agro-pastoralist areas. Evidence revealed that child and maternal malnutrition are serious challenges to the pastoralist communities in the country. Recent Ethiopian Demographic Health Survey (EDHS) data show that the pastoral communities experience not only the highest child micronutrient deficiencies such as anemia, but also the highest prevalence of wasting (acute malnutrition).

Despite the evidence that the promotion, support, and protection of breastfeeding is effective in preventing childhood death from diarrhea, pneumonia and neonatal sepsis, the lowest prevalence of exclusive breastfeeding (EBF) among under five children is observed in the pastoral communities in Ethiopia. This puts children in the pastoral communities at a disadvantage undermining the 13% prevention rate of all under five deaths through breastfeeding in countries with high under five mortality rates.

Despite the high exposure to challenges caused by extreme climatic conditions, the uptake of the available social services by most of the mobile pastoralists is low because of the challenge to provide social services adapted to their way of life. Specifically, the existing healthcare system is not robust enough to address the health needs of pastoralists living scattered and continuously on the move from place to place, searching for water and pasture for their livestock. Health care facilities are located so far that people are required to walk for hours on foot and sometimes on the back of animals such as camels to access health services. The alarming situation of child and maternal malnutrition in the pastoral and agro-pastoral communities demands an integrated approach that addresses the needs of the malnourished and requires treatment as well as preventive care of a much larger number of those with moderate malnutrition and normal nutritional status to avoid further deterioration. Thus, the objective of the development of the integrated nutrition services guidelines for the pastoralist and agro-pastoralist regions in Ethiopia (PCINS) aims to facilitate a coordinated, inter-sectoral approach to solving the current nutrition problems in the pastoralist and agro-pastoralist communities in Ethiopia.

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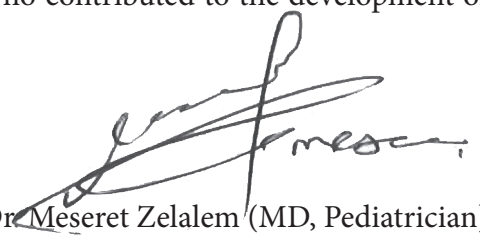
Acknowledgment

This comprehensive and integrated nutrition services guideline is a standardized document developed to guide nutrition program managers and frontline workers in delivering quality and equitable nutrition services for pastoral and agro-pastoral communities in Ethiopia. The guideline will address both nutrition specific and nutrition sensitive interventions along with the different implementation modalities.

The target audience for this guideline will be program managers and nutrition service providers including nutritionists, food science experts, health professionals, agricultural workers, vets and program managers working at national, regional, zonal and woreda levels, frontline workers (HWS/HEWS, DAs, social workers, teachers) working at HFs, FTCs, schools etc. It is believed that the guideline will guide those target audiences to deliver comprehensive and integrated nutrition services to the pastoral community.

The Federal Ministry of Health would like to acknowledge Alive & Thrive Ethiopia for its financial and technical support and all individuals and organizations who contributed to the development of this guideline.



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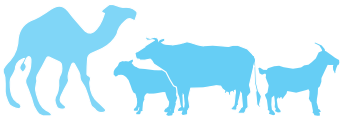


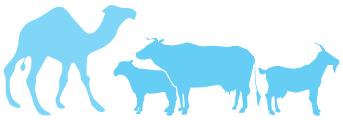
Definitions and Interpretations

In this document, the words or phrases below shall have the following meanings unless the context requires otherwise.

Word/phrase	Definition
Complementary feeding	The introduction of other foods to the baby's diet in addition to breast milk at six months.
Exclusive breastfeeding	The period when the infant receives only breast milk or expressed breast milk and no other liquids or solids with the exception of drops or syrups prescribed by physicians or health professionals.
Food supplement	The provision of food products in addition to the food available at home or addition of more nutritious foods to a simple diet.
Growth monitoring and promotion (GMP)	The regular measurement, recording and interpretation of a child's growth in order to counsel, act, and follow up results with the purpose of promoting child health, human development, and quality of life.
Household food insecurity	The inadequate access by the household to amounts of food of the right quality to satisfy the dietary needs and healthy active life of all its members throughout the year.
Low birth weight	A birth weight of less than 2,500 grams.
Malnutrition	Various forms of poor nutrition caused by a complex array of factors including dietary inadequacy, excess intake of nutrients, infections, socio economic, and socio-cultural factors.
Moderate acute malnutrition	Weight-for-height between -2 and -3 z scores or mid upper arm circumference (MUAC) between 11.5 and 12.5cm.
Nutrition indicators	The situation, signs or measurements used to point to or index different progress in program implementation, progress and/or processes.
Nutritional status	The nutritional health of a person as determined by anthropometric measurements, biochemical measures, clinical examination, or dietary analysis.
Obesity	Adult body mass index (BMI) equal to or more than 30 kg/m^2 or a child with greater than or equal to +3 weight-for-height Z-scores.
Overweight	Children with greater than +2 weight-for-height Z-scores.
Severe acute malnutrition	Weight-for-height of less than -3 standard deviations, MUAC of less than 11.5cm or the presence of bilateral nutritional edema.
Stunting	Failure to reach linear growth potential because of long term under nutrition and poor health, measured as height-for-age below -2 Z-scores. It is usually a preferred indicator of long term under nutrition among young children.
Under nutrition	Poor nutrition due to inadequate intake of nutrients, infections, or other socio-cultural and socioeconomic factors. Three commonly used indexes for child under nutrition are height for age, weight-for-age and weight-for-height. For adults, under nutrition is measured by BMI of less than 18.5 kg/m^2.
Underweight	Weight-for-age less than -2 Z-scores.
Wasting	Reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease. It is also defined as weight-for-height below -2 Z-scores.

Abbreviations and acronyms

BFHI	Baby Friendly Hospital Initiative
BMI	Body Mass Index
CMAM	Community based Management of Acute Malnutrition
GMP	Growth Monitoring and Promotion
IDD	Iodine Deficiency Disorders
IMCI	Integrated Management of Childhood Illness
InteNSE	Integrated Nutrition Services in Ethiopia
IYCF	Infant and Young Child Feeding
LBW	Low Birth Weight
MAM	Moderate Acute Malnutrition
MBFI	Mother Baby Friendly Initiative
MUAC	Mid Upper Arm Circumference
OTP	Outpatient Therapeutic Program
ORS	Oral Rehydration Solution
RUTF	Ready to Use Therapeutic Foods
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding Program
VAD	Vitamin A Deficiency



Introduction

This guideline is developed to guide the smooth implementation of the Integrated Nutrition Services in the Pastoral and Agro-pastoral Communities of Ethiopia (PCINS). It is the main source of guidance on the objectives and implementation procedures (actions) of PCINS interventions. PCINS is a set of nutrition interventions meant to be implemented in the pastoral and agro-pastoral regions of Ethiopia.

The implementation guideline has a modular format to make it easier for practitioners and implementers find and use sections relevant to their tasks. It lays out the detailed steps that implementers at different levels need to follow in order to implement the interventions efficiently and effectively in Ethiopia's pastoral and agro-pastoral regions. As in all other similar guidelines, the implementation guideline for the PCINS interventions requires a regular review and revision process. The process is particularly important for this guideline because there would be a number of new high impact nutrition interventions and changes for delivery platforms in the future and hence will need to be incorporated in the implementation guideline.

Background

Malnutrition encompasses deficiencies, excesses or imbalances in the intake of energy and essential nutrients. More importantly, it is an outcome of interrelated, complex, basic, underlying and immediate causes [1]. Macro and micronutrient deficiencies and overweight/obesity are the most common forms of malnutrition among children, adolescents and women in low- and middle-income countries.

Malnutrition, in all its forms, carries huge direct and indirect costs to the people of Ethiopia. Such enormous costs result from foregone economic growth and lost investments in human capital associated with preventable child deaths; 45% of which can be ascribed to poor nutrition, as well as premature adult mortality linked to diet-related non-communicable diseases (NCDs) [2]. Further costs are incurred through impaired learning potential, poor school performance, compromised adult labor productivity, and increased health care. For example, according to the reports from the "Cost of Hunger in Africa", child malnutrition costs Ethiopia 16.5% (about 56 billion ETB) of its gross domestic product (GDP) each year [3]. Thus, it is critical that addressing all forms of malnutrition become a top policy priority in Ethiopia.

Ethiopia has made modest improvements in the nutritional status of its children. Despite the progress, the burden of malnutrition has nevertheless remained a formidable challenge. Reports indicated that the burden of stunting has reduced from 58% in 2000 to 38% in 2016 (375 in 2019), an average decline of about one percentage point per year. On the other hand, the prevalence of wasting had changed relatively little over the same period from 12% in 2000 to 7% in 2019 [2, 4]. The prevalence of underweight has consistently decreased from 41% in 2000 to 21% in 2019 over the 20-year period [2, 4]. Overall, the drop-in percentage prevalence of stunting, underweight and wasting has not been rapid to meet the international and national nutrition targets.

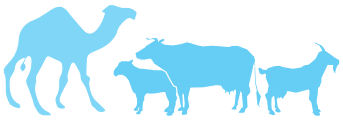
The burden of malnutrition in Ethiopia varies with geography. Relatively, child and maternal malnutrition remained a significant public health problem for pastoral and agro-pastoral communities compared to their agrarian counterparts. Recent EDHS data show that the pastoral and agro-pastoral communities experience not only the highest child micronutrient deficiencies such as anemia, but also the highest prevalence of wasting (acute malnutrition) [2].

Nutritional practices are affected by a number of factors in these communities. Poor knowledge, cultural beliefs, heavy workloads, poor maternal health, poor maternal nutrition, and lack of proper information about breastfeeding and complementary foods, for instance, prevent pastoral women from adopting the recommended maternal infant and young child feeding (MIYCF) practices. The lack of knowledge on optimal infant and young child feeding (IYCF) practices, the overall belief that colostrum is bad to the newborn, the provision of pre-lacteal foods to 'make the baby strong and wise', and to clean the intestine, the misconception that formula is better than breast milk, mothers' lack of confidence about their capacity to produce milk right after birth or their perceived inability to produce enough milk, appears to lead to suboptimal IYCF practices and inappropriate choices in the selection of complementary foods (Assessment Report by MOH, 2020) .

A typical diet for young children in pastoral and agro-pastoral areas includes cereal-based foods which are low in energy, protein, and micronutrient density. Animal source foods (except milk), vegetables and fruits appear to be used infrequently and are rarely given to children because they are considered too expensive for women to purchase. Increased consumption of these food types could have a positive impact on the nutritional status of children. Feeding frequency is also generally low because infants and young children are fed only during scheduled family meals with families unable to meet the special needs of infants and young children except in Borena of the Oromia region where children are given priorities in feeding (Assessment report by MOH, 2020).

Moreover, heavy workload for mothers was found to be another barrier to optimal IYCF practices. Mothers in the pastoral and agro-pastoral communities often get back to work immediately after birth, and hence tend to try and habituate their children to complementary foods before six months of age because they will be unable to exclusively breastfeed on schedule. Women are not exempted from heavy workloads during the periods of pregnancy and lactation either. Expressed breast milk is rarely practiced mainly due to cultural norms and because it is often considered inconvenient due to low level of awareness and unavailability of breast pumps and refrigerators.

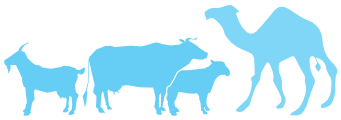
Poor maternal health such as feeling weak & tired, sustaining pain after normal and caesarean deliveries, inverted or sore nipples, or lack of sleep while tending to babies awake at night are also documented as barriers to breastfeeding [5, 6]. Another common scenario in pastoral and agro-pastoral communities is that household food insecurity leads to lack of sufficient and proper diets for mothers, thereby limiting their capacity to produce breast milk in sufficient quantity and quality to meet their infants' demands. Post-partum mothers are usually provided with relatively good diet in the first week after delivery but return to the family diet routines after two or more weeks (Desk review and assessment report by MOH, 2020).



Mothers in pastoral and agro-pastoral communities of Ethiopia hardly get support from husbands and other family members with feeding and caring their children. Only grandmothers are known to support both the mothers and infants in the first few months after delivery and have influence on the mothers' decisions regarding breastfeeding and child feeding practices. The lack of control over economic resources by women was also found a barrier to optimal IYCF practices in these communities.

Despite the high exposure to challenges caused by extreme climatic conditions, the uptake of available social services by most of the mobile pastoralists is low owing to challenges related to adapting these services adapted to pastoral and agro-pastoral ways of life. Specifically, the existing healthcare system is not robust enough to address the nutrition and health needs of pastoralists living scattered and are continuously on the move from place to place searching for water and pasture for their livestock. Distances to health care facilities and water points are overwhelmingly far and people are required to walk for hours on foot to access them. To combat this, weekly mobile clinic teams are set to provide health and nutrition services including screening for malnutrition, routine immunizations and basic healthcare, ante-natal care and emergency delivery services, common illness management, health and nutrition education and promotion, as well as referring patients to higher levels of care and distributing household water purification supplies as necessary.

The alarming situation of child and maternal malnutrition in the pastoral and agro-pastoral communities of Ethiopia calls for an integrated approach to address the needs of those who are malnourished and require treatment as well as to prevent deterioration of a much larger number of people with moderate and normal nutritional status. Unfortunately, the approach followed so far has been informed by biomedical rather than public health perspectives where malnutrition is often treated as a medical emergency without considering its broader social determinants of child malnutrition in the pastoralist and agro-pastoral communities of Ethiopia.



Specific Nutritional Situations in the Pastoral and Agro-pastoral Areas of Ethiopia

Breastfeeding is a common practice in the pastoral communities of Ethiopia. About 95.9%, 95.6%, 96%,97.3% of the children were breastfed in the Afar, Somali, Oromia and SNNPR regions respectively [8]. The lowest percentage of newborns who started breastfeeding within 1 hour of birth in Afar region is 42% compared to 73% of the national average. According to the EDHS 2016, about 41%, 39%, 4%, and 7.2 % of children from Afar, Somali, Oromia and SNNPR regions respectively were given pre-lacteal foods in their first three days of life. This is highest in Afar and Somali compared to the national average of 8% [9]. The highest pre-lacteal feeding are believed to partially explain the high prevalence of infant and under five mortality in the pastoralist communities of Afar (neonatal mortality = 81/1,000 live births, under five mortality = 125/1,000 live births), and Somali (neonatal mortality = 67/1,000 live births, under five mortality = 94/1,000 live births) compared to the national average (neonatal mortality = 48/1,000 live births and under five mortality = 67/1,000 live births) [9].

Exclusive breastfeeding (EBF) among 0-6-month-old babies is reportedly low in the pastoral areas. Young infants are provided with water and cow/goat milk during the period of exclusivity, and there is an increase in bottle feeding during this period particularly in the Somali Region. The most common pre-lacteal foods for infants include water, honey, milk, butter, sugar solution and at times herbal drinks. The provision of such foods is not recommended because it exposes newborns to various pathogens, increases the risk of infection and allergy to infants, interferes with suckling and hence reduces breast milk production and makes breastfeeding difficult [8]. Despite all this, pre-lacteal feeding is still commonly practiced in the pastoral communities.

The data sources showed that the majority of women in the pastoral communities tend to continue breastfeeding into the second year of their child's life. However, the median duration of breastfeeding in Afar (20 months), Somali (14 months) and Oromia (23 months) were low compared to the national average of 24.5 months [9].

Growth monitoring and promotion (GMP) appears to be a prerequisite for good child health. However, there is a discrepancy between the purpose and the practice of GMP. Knowledge scores on the child health record booklets among health workers and mothers were high but charting of growth of children was sub-optimal among health workers in the pastoral communities of Ethiopia as supported by other studies [11]. The high prevalence of especially acute malnutrition (wasting) and micronutrient deficiencies (anemia) among the pastoralist communities seem to confirm to this situation. However, it should be emphasized that GMP (monthly weight measurement in under two children), one of the developmental nutrition interventions, is not to replace the monthly nutrition screening (monthly or quarterly MUAC, weight-for-height and clinical assessment/edema in under-five children) that is meant for emergency nutrition since the measurements are not frequent enough to allow for early detection of growth faltering. Therapeutic feeding programs (TFPs) provide rehabilitative diet together with medical treatment for diseases and complications associated with severe acute malnutrition to specifically reduce mortality among acutely severely malnourished individuals and to restore their health through rehabilitation.

Nutrition Interventions for Pastoral and Agro-pastoral Communities of Ethiopia

Nutritional problems in the pastoral and agro-pastoral communities of Ethiopia are complex and directly linked to inadequate or inappropriate food intake and disease. The underlying causes of these problems are household food insecurity, inadequate care for women and children and limited access to health services and poor sanitation [Figure 1]. In turn, these problems are the result of social, cultural, political and economic factors illustrating the complex nature of nutrition problems. These limiting factors require an ongoing process of assessment, analysis, and action at all levels of the government, but most importantly at the local level where the root causes of malnutrition should be determined.

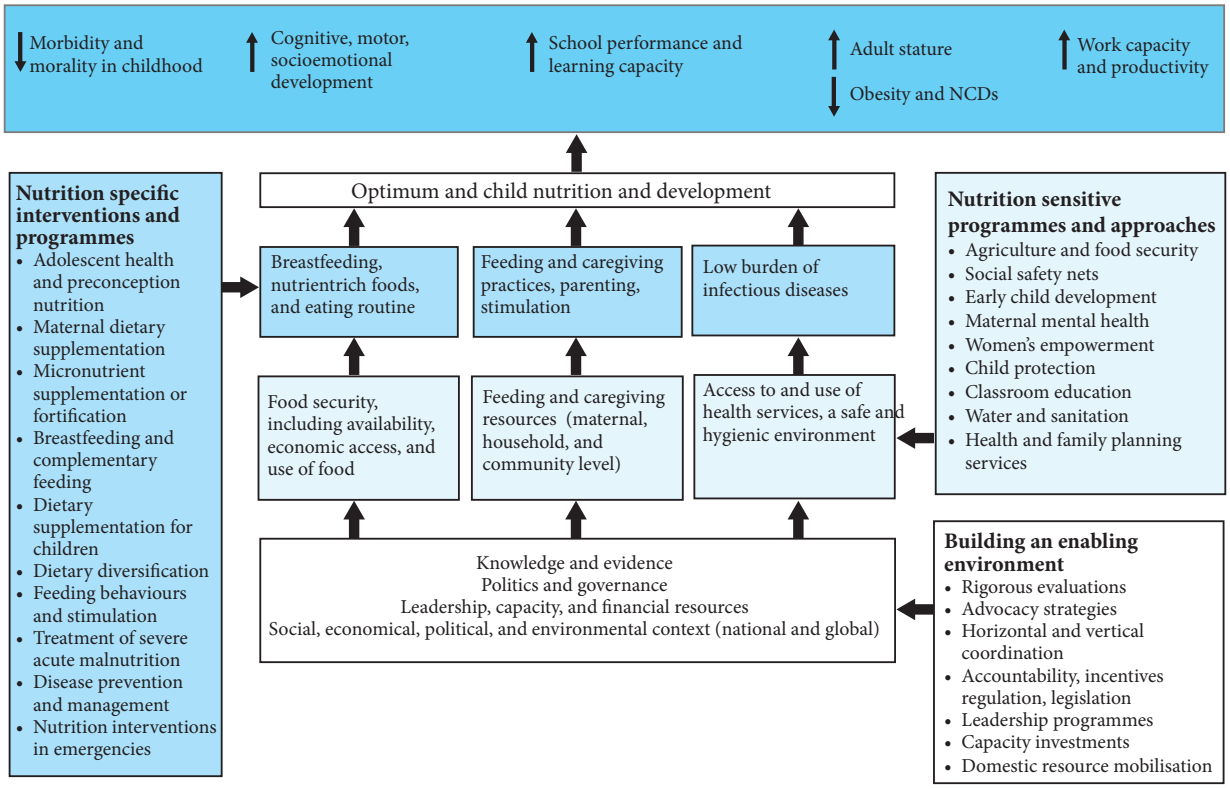
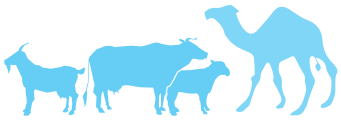


Figure 1: UNICEF conceptual framework for malnutrition

Desk review and field visit findings have led to the development of the Integrated Nutrition Services in Ethiopia (**PCINS** Interventions) to improve the critical conditions of child and maternal nutrition in the pastoral and agro-pastoral communities of Ethiopia.

PCINS adopts the United Nations Children's Fund (UNICEF) conceptual framework for prevention of malnutrition to ensure the delivery of integrated nutrition services among pastoralist and agro-pastoralist regions through providing clear guidance for food and nutrition workforces working in these regions, and indicate the integration and implementation of both nutrition specific and nutrition sensitive interventions.



Objectives

The objectives of this implementation guideline are to describe the processes and procedures or actions that support the implementation of the PCINS interventions in the pastoralist and agro-pastoralist regions of Ethiopia. The development of the IPCINS guideline also aims to facilitate a coordinated, inter-sectoral approach to solving the current nutrition problems in the pastoral and agro-pastoral communities of Ethiopia.

The implementation guideline is based on the high impact nutrition interventions that will help guide the program sectors in the prevention and management of malnutrition leading to the improved nutritional status of children and mothers in the pastoral and agro-pastoral communities. The document incorporates updates on policies/strategies that have been revised recently such as the Food and Nutrition Policy, Community Based Management of Acute Malnutrition, Nutrition Sensitive Agriculture Strategies, and Vitamin A Supplementation Programs.

Nutrition Specific Interventions

Child nutrition

Nutrition for infants 0 – 6 months

Breastfeeding is one of the most cost-effective and impactful interventions for reducing malnutrition and under-five morbidity and mortality. Breastfeeding provides the ideal food for healthy growth and development of infants. It is also an integral part of the reproductive process with important implications for maternal health. Breastfeeding promotion has substantial positive impacts on child survival [7].

Early initiation of breastfeeding and exclusive breastfeeding for the first six months of life prevents neonatal and infant deaths largely by reducing the risk of infectious diseases. This risk is reduced because colostrum contains many protective factors that provide passive and active protection to a wide variety of known pathogens. Colostrum is rich in protective factors and its ingestion within the first hour of life prevents neonatal mortality.

Exclusive breastfeeding or feeding only breast milk during the first six months of a child's life eliminates the ingestion of pathogenic micro-organisms through contaminated water, other fluids, and foods. It also prevents damage to the immunologic barriers in the infant's gut from contaminants or allergenic substances in infant formula or food.

Nutrition interventions for children from birth to 6 months of age

Essential nutrition practices for the newborn are critical to prevent most under-five deaths occurring in the first week to months of life. This section summarizes core universally recommended nutritional practices of newborn and infants until they turn six months.

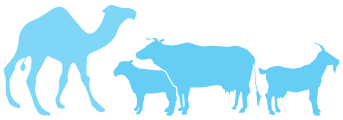


Table 1: Interventions and recommendations for breastfeeding children 0-6months old

S. No	Intervention	Recommendation
1	Drying and warming the baby just after birth	Dry the baby including the head, immediately. Rub up and down the baby's back using clean and warm cloth. Do not remove the vernix (the creamy white substance on the skin) as it protects the skin and may help prevent infection.
2	Rapid assessment at birth	As you dry the baby, check if the baby is breathing, having trouble breathing or not breathing. Look at the baby's color; the color of the tongue, lips and mucous membranes of darker-skinned babies should be pink but not gray or blue. A baby's blue color of the tongue, lips and trunk is a sign of a lack of oxygen in the blood. A bluish color of only the hands and the feet may be present for 1-2 days after birth and usually does not indicate lack of oxygen.
3	Delayed cord clamping	Implement delayed clamping of the umbilical cord after birth for 2-3 minutes until cord pulsation ceases as it allows a small but important amount of blood to continue to flow to the fetus from the placenta, increasing the red cell mass and therefore the iron endowment of the neonate. Tie or clamp the cord securely in two places 2-3 minutes after birth or immediately after cord pulsation ceases. Tie the first one, two fingers away from the baby's abdomen and tie the second one, four fingers away from the baby's abdomen. Cut the cord between the ties, new razor blade/sterile scissors, use also small piece of cloth or gauze to cover the part of the cord you are cutting so no blood splashes on you or on others. Be careful not to cut or injure the baby. Either cut away from the baby or place your hand between the cutting instrument and the baby. Do not put anything on the cord stump other than chlorhexidine.
4	Early initiation of breastfeeding	Support mothers to initiate breastfeeding within one hour of the baby's birth. Most babies are ready to feed for the first time from 15-55 minutes after birth.
5	Colostrum feeding	Support mothers to feed the newborn with colostrum, the first milk secreted from the breast milk. Do not discard colostrum. Colostrum is high in vitamin A and antibodies which protect the baby from infection (often called the baby's first immunization); it contains very high concentration of nutrients and helps prevent low blood sugar in the first hours of life and helps to expel the meconium and to prevent jaundice.
6	Avoidance of pre-lacteal feeding	Counsel the mother to avoid the provision of other liquids or foods (water, sugar solution, honey, milk, butter, and others) immediately after birth.

S. No	Intervention	Recommendation
7	Skin-to-skin contact	The warmth of the mother passes easily to the baby and helps stabilize the baby's temperature and hence support mothers to place the baby in skin-to-skin contact with the mother immediately after delivery. Counsel the mother to practice skin-to-skin contact which helps the mother become attached to her baby and make early breastfeeding successful. Put the newborn on the mother's chest for skin-to-skin warmth. Cover the mother and baby together with a clean cloth or blanket. Support mothers to cover the baby's head with hat or cloth.
8	Keep warm	Keep the room where the newborn and the mother stay warm and free from drafts day and night as it helps rooming-in (a hospital/home arrangement where a mother/baby pair stay in the same room day and night). Counsel the mother to allow unlimited contact between them. Dress the baby in warm clothing (at least 1-2 more layers than an adult), keep the baby's head covered with a hat or cloth. Use loose clothing and covers (tight clothing and coverings do not keep the baby as warm). Put the newborn in bed with the mother for warmth and breastfeeding. Be sure not to cover the baby's face so the baby can breathe freely. Note: if the newborn is too cold, he/she can die because newborns cannot adjust their temperature like adults (they can get cool or warm much more quickly).
9	Delayed bathing	Counsel the mother to delay bathing until 24 hours after birth. If this is not possible due to cultural reasons, bathing should be delayed for at least six hours. Appropriate clothing of the baby for ambient temperature is recommended. This means one to two layers of clothes more than adults, and use of hats/caps. The mother and baby should not be separated and should stay in the same room 24 hours a day.
10	Sponge bathing	Counsel the mother to give the baby only a sponge bath until the cord falls off and the umbilicus is healed as it helps the cord to stay dry and come off more quickly. If the baby has been circumcised, give a sponge bath until the wound is healed. During a sponge bath, counsel the mother first to wash the upper body quickly with the warm, wet washcloth while the lower body is clothed. Dry the upper body quickly and cover or dress it immediately afterwards. Take cloths off the lower body, wash it quickly with the washcloth, dry it quickly, then cover or dress the baby again. Note: A newborn can have the first sponge bath after 24 hrs until the cord falls off and the umbilicus is healed.

S. No	Intervention	Recommendation
11	Full bathing	Counsel the mother to start full bathing after the cord falls off and the umbilicus is healed. Full bath the newborn in a warm room with no drafts. Have everything ready before the bath so the newborn is not left uncovered for long. Tell the mother to bath with slightly warm water (test the bath water by touching it with your elbow). Counsel the mother to wash the face first and the hair last (much heat is lost through the head so it should be bathed last). Wash the baby's bottom from the front to the back. Never use soap on a newborn's face (only clean water). Bath the baby quickly (do not clean inside the newborn's ear canals or nose, only the outside). Dry the baby quickly and completely with a warm towel and be sure to dry the hair thoroughly (be sure to dry inside the skin folds). Cover the baby's head and put the baby in skin-to-skin contact with the mother after bath and cover them both.
12	Birth weight measurement	Inform mothers about measurement of the weight of the newborn within the first 1 hour of birth. Refer low birth weight babies (<2,000 grams) for special care. Make sure the birth is recorded and a birth certificate is prepared. By the 14th day, a baby should have regained his birth weight. Note: Newborns normally lose 5 to 10% of their birth weight in the first few days of life and then begin to gain weight.
13	First immunization	Inform mothers about the first immunization (BCG, OPV0) to the baby on the day of birth according to the Ethiopian National Expanded Program on Immunization schedule and protocols. Make sure the first immunization is recorded and an immunization card is prepared and provided to the mother. Record the date/appointment for the second immunization visit at six weeks (DTP-HepB1-Hib1, OPV1, PCV1, Rota1). Note: The vaccination schedule for the 3rd visit at 10 weeks are for DTP-HepB2-Hib2, OPV2, PCV2, Rota2; 4th visit at 14 weeks are for DTP-HepB3-Hb3, OPV3, PCV3, IPV and 5th visit at 9 months is for measles and at 1 year and three months for MCV2.

S. No	Intervention	Recommendation
14	Exclusive breastfeeding	Counsel the mother to feed the baby only breast milk for the first six months. Counsel the mother to avoid the provision of other liquids or foods (except medications) during the first six months of life. Support mothers to give safe and adequate nutrition to infants through the protection and promotion of breastfeeding and by ensuring the proper use of breast milk substitutes when these are necessary (WHO CODE of marketing of breast milk substitutes). Note: Breast milk has adequate water, babies get enough water and other required nutrients from breastfeeding exclusively. Even before the milk comes in, colostrum is enough to satisfy the nutritional requirements of the baby.
15	Feeding on demand	Counsel the mother to breastfeed whenever the baby wants to (cues that the baby wants to suck include nuzzling, hand/finger sucking, moving of head back and forth or opening of mouth). Counsel the mother to breastfeed for an average of 8-12 times in 24 hours or about every 2-3 hours because a newborn's stomach is small and needs to be filled often and breast milk is easily digested and therefore passes quickly through the gastrointestinal tract of the baby. Note: With demand feeding, the mother's milk production adjusts to the baby's needs so there is always enough milk. The more the baby sucks, the more milk the mother makes.
16	Proper baby attachment	Help mothers to properly attach their babies to the breast. Counsel and support the mother to hold her breast in a "C-hold" (thumb on top and other fingers below the breast) with her fingers away from the nipple (Figure 2).  *Figure 2: The C-hold (palmer grasp) position to support the breast when latching the baby on to breastfeed* Touch the baby's lips with the nipple ⇨ wait for the mouth to open wide ⇨ move the baby onto the breast with the baby's lower lip below the nipple ⇨ do not move only the baby's head but support the back of the neck and move the whole body. Look to check how the baby is attached. Make sure that the breast does not block the baby's nose while sucking, the mother should not lean over the baby. The mother should bring the baby to her breast, not moving her breast to the baby. Demonstrate the four signs of good attachment to the mother: the baby's chin is touching the breast, the baby's mouth is wide open, the lower lip is turned outward, majority of areola is inside baby's mouth/ see more of the areola above the mouth than below it (Figure 3).

S. No	Intervention	Recommendation
17		Tell the mother the good signs of sucking; there are slow deep sucks with some pauses and the mother's breasts and nipples are comfortable. Counsel the mothers to empty the first breast at each feed, encourage the mother to feed first on one breast without time limitation before offering the second breast to ensure that the baby gets the rich hindmilk; do not limit how long the baby can suck during a feeding (the first part of a feed on one breast called the foremilk is more water to satisfy the baby's thirst and the end part of the feed called the hindmilk is richer in fat to satisfy the baby's hunger). Note: If the right breast is used to start one feed, start with the left breast at the next feeding so that both breasts will make the same amount of milk.
18	Proper mother's positions to hold a baby	Demonstrate mothers how to position during breastfeeding; the baby needs to face the breast of the mother; the baby's body needs to be in a straight line. Any of the following positions are advisable: **Cradle hold**: the mother sits up and the baby lays on his side across her lap, facing her; she supports the baby's head in the bend of her elbow and the back and buttocks with her forearm.  **Cross-cradle hold**: this position is almost like the cradle hold, but the mother uses her other arm to hold the baby. The baby's head is held by the mother's open hand. This position makes it easy to move the baby to the breast and into a comfortable position as the baby latches on and sucks .  **Under-arm/rugby** ball/clutch hold; the mother puts her baby under her arm, holding the baby's head and neck in her hand. The baby's feet go towards her back. This position helps if the mother had a cesarean delivery or if the baby does not take in enough of the mother's nipple and areola in other positions  **Side lying** (east-and-sleep) hold; Both the mother and baby lie on their sides facing each other. The mother may use either her hand or forearm or a pillow behind the baby's back to support her baby, positioning the head at her lower breast (Figure 7). The mother may prefer this hold during the first few days after giving birth and at night. It also is a good position for a mother who had a cesarean delivery.   **Correct infant latch-on position**

S. No	Intervention	Recommendation
19	Feeding during and after illness	Counsel the mother to continue breastfeeding during illness and recovery. Tell mothers more frequent breastfeeding and longer feeds during illness and recovery both day and night help the baby to catch-up. Inform mothers the need to provide zinc supplement during diarrhea cases, along with increased fluids and continued feeding. All infants under six months with diarrhea should be given zinc supplementation of 10 mg per day for 10-14 days, dissolve the zinc supplement with expressed breast milk. Note: It is even more important for a sick baby to breastfeed. The baby needs the water, minerals and protection from breast milk.
20	Breastfeeding twins	In case of twins, counsel the mother to feed both children at once, give one breast to one baby and the other breast to the other baby, make sure each baby gets enough breast milk (make sure that each baby gets the rich hindmilk). When feeding the babies together, use either the under-arm hold (Figure 4) or the cradle hold (Figure 2). Note: As breastfeeding becomes established, alternate breasts i.e. do not give one baby the same breast all the time. This keeps a baby from having a favorite side and also keeps one breast from getting bigger than the other if one twin has a stronger suck than the other.
21	Breastfeeding in the context of HIV and PMTCT	Counsel HIV positive mothers breast milk is the best food for a newborn from HIV positive mother. HIV infected mothers should exclusively breastfeed their infants for the first six months with continued breastfeeding up to 12 months and should receive ART to prevent HIV transmission. Having an HIV negative woman breastfeed the newborn (wet nursing) gives the baby nearly all the same protective benefits as breastfeeding with the mother. There is no risk of transmitting HIV through feeding if the wet nurse does not become infected. Counsel the mother who chooses not to breastfed should be sure that she can offer replacement feeds safely and consistently to ensure her child's health and survival. The following specific conditions should be met: The mother or other care giver can reliably provide enough infant formula milk to support normal growth and development of the infant Safe water and sanitation are assured at the household level and in the community The mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhea and malnutrition and,

S. No	Intervention	Recommendation
22		The mother or caregiver can, in the first six months, exclusively give infant formula milk, The family is supportive of this practice and, The mother or caregiver can access health care that offers comprehensive child health services.
23	Kangaroo mother care	Counsel the mother for skin-to-skin contact; practice early, continuous, and prolonged skin-to-skin contact between the mother and her baby, place the baby on the mother's chest between the breasts. Keep the baby in skin-to-skin contact with the mother and breastfed exclusively to the utmost extent continuously. Support the mother in health facility/hospital and at home to successfully provide kangaroo mother care (KMC). Encourage other family members to provide skin-to-skin contact, provide regular post-discharge follow up to continue KMC at home after early discharge from the hospital. Note: Skin-to-skin contact promotes lactation and facilitates the feeding interaction.
24	Human milk banks	Advocate for program mangers/decision makers to establish human milk banks at least at regional level as an effective approach to reduce early neonatal and postnatal morbidity and mortality for babies who cannot be breastfed in facilities caring for high risk infants. Give priority to high risk infants who have no access to mother's own breast milk
25	Mother-baby friendly health facility Initiative (MBHFI)	Promote MBFHI to end the practice of distribution of free and low-cost supplies of breast milk substitutes to maternity wards and hospitals. Promote and support to transform hospitals and maternity facilities through implementation of the following ten steps and three additional items of the Mother-Baby Friendly Initiative (previously known as the Baby-Friendly Hospital Initiative). Have a written breastfeeding policy that is routinely communicated to all health care staff. Train all health care staff in skills necessary to implement this policy. Inform all pregnant women about the benefits and management of breastfeeding. Help mothers initiate breastfeeding within a half-hour of birth. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants. Give newborn infants no food or drink other than breast milk unless medically indicated.

S. No	Intervention	Recommendation
26		Practice rooming in – allow mothers and infants to remain together 24 hours a day. Encourage breastfeeding on demand with no restrictions on the length or frequency of feeds. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic. Item 1: The international CODE of Marketing and Breast Milk Substitutes Item 2: Caring for women and babies with HIV Item 3: Mother Friendly Care
27	Use of insecticide treated net	Promote the provision of free insecticide-treated nets (ITNs) in all malaria endemic areas. Counsel the mother to sleep under ITNs in all malaria endemic areas
28	Growth monitoring and promotion (GMP)	Counsel the mother with under two children on the presence and importance of GMP services Provide monthly weight monitoring and promotion services for children under two years old. Weighed children should be recorded and plotted on the growth chart regularly. The growth curve of each child should be recorded on the growth chart. Routine weighing, plotting, interpretation and feedbacks/counseling are recommended to promote a good relationship between health workers and the parents/caregivers and child, to detect problems early and to initiate appropriate interventions. Use the well-functioning system of GMP as a platform for additional cross-sectional assessments of micronutrient deficiencies such as anemia and night blindness and the prevalence of stunting in health facility-based growth monitoring. GMP activities must be linked to health services in the community and must have an effective system in place to refer children to health services when needed. If a child continues to have inadequate weight gain, the child should be referred to the appropriate higher level of care for specialized evaluation. The times that children are seen at the health facilities, sick child visits, for immunization, or through the delivery of other services, for example, vitamin A supplementation can be used as alternatives to monthly GMP at the community level. During drought seasons or periods of high mobility in the pastoral communities, assessment of nutritional status and relevant actions to correct under-nutrition is the preferred strategy over GMP. If already established, the GMP system can be used for the assessment of nutritional status in such circumstances.

S. No	Intervention	Recommendation
29	Early detection and management of acute malnutritionv	Conduct nutritional screening using weight-for-height, edema, MUAC, ineffective feeding, recent weight loss/failure to gain weight, medical complications. Manage severe acute malnutrition (SAM) without medical complications as per the national guideline (outpatient therapeutic program). Manage severe acute malnutrition (SAM) with medical complications as per the national guideline (stabilization center). All infants 0-6 months of age with SAM with or without medical complication should be referred to/managed at stabilization centers. Manage moderate acute malnutrition (MAM) as per the national guideline Link mothers/caregivers to food support, productive safety net program (PSNP) and other social services as needed. Provide simple transport services like bicycles to the health/nutrition extension workers

Delivery modalities for breastfeeding children 0–6 months

In the pastoral and agro-pastoral context, providing counseling and ensuring support to enable women to breastfeed their newborn babies demands coordination, integrated service provisions and effective utilization of the existing contact points. Interventions and support must reach mothers where they seek/receive care and give birth. The pastoral and agro-pastoral context requires designing a hybrid model of service delivery i.e. routine and outreach approaches to trace/reach children (during house-to-house visits, health facility visits, mobile health and nutrition services).

The regional, zonal and woreda health offices and health care providers are at the center of the endeavor to ensure service reach and coverage in the context. In relation to that, building the capacity of health workers, equipping facilities with logistics, and deploying contextualized communication materials impact service improvement, and all support is needed to ensure access to appropriate nutrition information, counseling and to support breastfeeding women and their families. The sub-section below explores the existing and other potential delivery outlets to improve early neonatal nutrition services.

Promote and support breastfeeding at program management levels:

- Ensure breastfeeding promotion and support is incorporated in the sectors' planning, implementation, monitoring and evaluation process.
- Provide continuous in-service and refresher trainings on breastfeeding.
- Promote and support early initiation of breastfeeding (EIBF) and exclusive breastfeeding (EBF) in communities , at health posts, health centers and hospitals.
- Ensure availability of field tested and contextualized job aids, brochures, posters and documentation and reporting tools to facilitate counseling dialoged with pregnant woman and families.

- Explore a means to utilize school platforms to deliver breastfeeding messages and to shift community norms around uptake of antenatal care and facility delivery.
- Use local media outlets for delivering key breastfeeding messages.
- Make sure the list of pregnant and lactating women is updated for the services.
- Promote the establishment of human milk banks at hospital level for supporting newborns who cannot feed from their mothers

Promote and support breastfeeding at health facility levels

- Provide essential newborn health and nutrition services at hospitals and health centers for those who visit the health facilities for delivery.
- Demonstrate, counsel, and support mothers on proper attachment and positioning immediately after delivery at hospitals and health centers, during post-natal care at hospitals, health centers, health posts.
- Integrate nutrition counseling and support in antenatal, delivery and postnatal care service provision and take measures that enhance early and follow up ANC visits.
- Make sure the three immunization contacts are effectively utilized for providing breastfeeding counseling and support.
- Use the growth monitoring and promotion session for delivering breastfeeding counseling and support.
- Integrate breastfeeding counseling during the sick baby clinic/under five OPDs.
- Promote prevention and protection of breastfeeding from breast milk substitutes and ensure the implementation of Mother-Baby Friendly Initiative (MBFI) at hospitals and health centers.
- Ensure newborn babies are weighted immediately after birth at hospitals and health centers.
- Ensure breastfeeding during and after illness are supported at hospital, health center, and health posts.
- Ensure HIV positive lactating mothers are getting breastfeeding promotion and support services during delivery, PMTC, at hospital, health centers and health posts.
- Ensure children 0-6 months of age are regularly measured of their weight at health posts, health centers and hospitals.
- Ensure children 0-6 months old are regularly screened for early detection and management of acute malnutrition (weight-for-height, edema, ineffective feeding, recent weight loss/failure to gain weight, medical complications) through the hybrid model approach (routine and campaign based).

Promote and support breastfeeding at community and household levels

- For those who delivered at home, the health extension workers (HEWs) can support mothers in drying and warming using clean cloths, check the normal birthing and coloring, delayed cord clamping and cutting, support early initiation of breastfeeding, educate mothers and family members on avoiding pre-lacteal feeding.
- Demonstrate, counsel and support mothers on proper attachment and positioning at post-natal care follow up during the house-to house-visit by HEWs.

- Promote and support exclusive breastfeeding, feeding on demand and breastfeeding twins during house-to-house visit, during outreach services, at health posts, health centers and hospitals, during pregnant mother conferences, using women support groups, community influential people (clan and religious leaders) and other community structures.
- Integrate essential nutrition services and breastfeeding promotion using mobile health services.
- Work with religious or clan leaders or community elders to reach husbands/grandmothers and other family members in promoting and supporting breastfeeding actions.
- Work with community structures such as *Feaema* from Afar, *Jarsa Olla* and *Jarsa Argae Dhageettii* from Borena, women indigenous social networks such as *Marro* in Borana, clan-based structures with specific tasks shared among the group such us updating list of pregnant, lactating woman in the community to provide breastfeeding promotion and support.
- Adopt a pregnant women conference events to enable a community-based dialog on birth preparedness and early infant feeding practices.
- Design means to deliver breastfeeding focused nutrition messages using food distribution site gatherings, community gatherings and public work sites.
- Ensure newborn babies are weighted immediately after birth at household level with support of TBAs and HEWs.
- Ensure breastfeeding during and after illnesses are supported during house-to-house visits, involve community influencers (clan and religious leaders, community elders) and other community structures.
- Ensure children 0-6 months of age are regularly measured for their weight at outreaches and mobile health teams.

Indicators of nutrition for 0 – 6 months old children

✓ Low birth weight (LBW)

- The percentage of live born infants who are weighed immediately or within 2 days of delivery with birth weight less than 2,500g in a given time period
- Calculation: (live born infants with birth weight less than 2500g x 100%)/live birth infants in each time period

✓ Early initiative of breastfeeding (EIBF)

- The percentage of live born infants who were put to the breast within 1 hr of birth.
- Calculation: (live born infants who were put to the breast within one hour of birth x 100%)/ live born infants in each time period

✓ Exclusive breastfeeding (EBF)

- The percentage of infants 0–6 months of age who are exclusively breastfed.
- Calculation: (infants 0–6 months of age who received only breast milk during the previous day x 100%)/infants 0–6 months of age

✓ Pre-lacteal feeding

- The percentage of live born infants who were given pre-lacteal feeds in each time period

- Calculation: (live born infants given prelacteal feeds x 100%)/live born infants in each time period

✓ Bottle feeding

- The proportion of children 0–24 months of age who are fed with a bottle.
- Calculation: (children 0–24 months of age who were bottle-fed during the previous day x 100%)/children 0–24 months of age

✓ Immunization at birth

- The proportion of live born infants who received BCG and OPV0 immediately after birth or within the first two weeks
- Calculation: (the number of live born infants who received BCG and OPV0 x 100%)/live born infants in a given time period

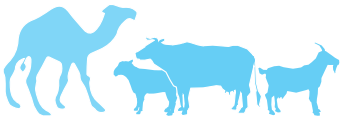
Nutrition for children 6-24 months old

Infants are particularly vulnerable to malnutrition and infection during the transition period when complementary feeding begins. Appropriate complementary feeding promotes growth and prevents stunting among children between 6 and 24 months of age [7], and its optimal practice depends on accurate information and skilled support from the family, community and health system. Inadequate knowledge about appropriate foods and feeding practices is often a greater determinant of malnutrition than lack of food.

Diversified approaches are required to ensure access to foods that will adequately meet the energy and nutrient needs of growing children including the use of home and community-based technology to enhance nutrient density, bioavailability, and the micronutrient content of local foods.

In order to understand the nutritional status of infants, growth monitoring and promotion (GMP) is often pursued as a prevention activity that uses growth monitoring (GM), i.e. measuring and interpreting growth, to facilitate communication and interaction with caregivers and to generate adequate action to promote child growth through: increased caregiver awareness on child growth, improved caring practices and increased demand for other services, as needed [10]. The components of growth monitoring and promotion for children under 2 years of age are taking measurements, tracking indicators, completing growth chart, discussing growth patterns with parents/caregivers, involving parents/caregivers in identifying problems and solutions related to growth faltering, counseling on infant and young child feeding and identifying and following-up on children with growth faltering.

The traditional pattern of feeding for children in pastoral communities involves a progression from breast milk and/or infant formula to different complementary foods such as animal milk and cereals. Despite the availability of livestock in most of the pastoral households, the consumption of animal source foods such as meat or eggs and other food such as fruits and vegetables is low. The complementary foods given to babies have low energy density as well as low protein and micronutrient content.



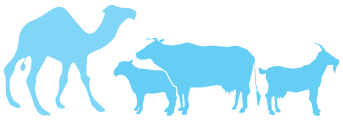
Nutritional interventions for children 6 – 24 months age

After 6 months, it becomes increasingly difficult to meet an infant's energy and nutrient needs from breastmilk alone. At 6 months of age, infants are developmentally and physiologically ready for other foods. From 6-11 months, there is an energy gap with breastmilk providing more than 50% of the energy needs. From 12-24 months, the energy gap increases with breastmilk providing about a third of the child's energy needs. Thus, timely introduction of adequate and safe complementary food is needed to meet the energy and nutrient demands.

Table 2: Interventions with recommendation for children 6-24 months

S. No	Interventions	Recommendations
1	Optimal complementary feeding	✓ Counsel and support mothers to maintain/continue frequent, on-demand breastfeeding up to two years of age and beyond along with complementary foods as breast milk continues to be an important source of energy, protein and micronutrients providing 35-40% of energy needs. ✓ Promote and support mothers to get market access to nutrient dense complementary foods. ✓ Promote and support the private sector to produce nutrient dense complementary foods. ✓ Support the establishment of cooperatives/women groups to produce nutrient dense complementary foods. ✓ Promote and support subsidize the local production of nutrient dense complementary foods.
2	Counsel on optimal complementary feeding practices	✓ Involve community members in the co-production of services and identification of effective messages related to complementary foods all the way from the identification of the local ingredients of the complementary foods to their appropriate preparation and to install a sense of ownership of optimal child feeding practices in the communities. ✓ Educate mothers/caregivers through social and behavior change communication using various communication channels like education through health extension workers/nutrition extension workers, the media (print and electronic media such as radio and TV), various community structures. ✓ Promote engagement of husbands, grandparents and other household members who play key roles in optimal complementary feeding practices. ✓ Promote the use of iodized salt and fortified foods during the preparation of complementary foods. ✓ Promote personal hygiene, environmental sanitation and safety of complementary foods.

S. No	Interventions	Recommendations
3	Timely introduction of appropriate complementary foods	✓ Counsel the mother to introduce complementary foods at six months of age (181 days) ✓ Children can eat pureed, mashed, and semi-solid foods beginning from six months. ✓ Tell the mother to start with 2-3 tablespoons and increase the quantity and quality (diversity), as the child gets older, while maintaining frequent breastfeeding (breast milk will still be the most important source of nutrients). ✓ Inform mothers to start with mashed/semisolid food, gradually increase food consistency and variety as the infants get older, adapting to the infants' requirements and abilities. ✓ Children can eat "finger foods" such as Gaaemo, Sabtha, Deregu, Eundur, Ulalo, Harisa and Tobno in Afar and Shuro in Somali as snacks at eight months of age ✓ Inform mothers to let their children eat the same type of foods consumed by the rest of the family at 12 months. ✓ Tell mothers to avoid foods that may cause choking.
4	Promote responsive feeding	✓ Counsel caretakers or mothers to be sensitive to the hunger and satiety cues of children. ✓ Inform the mother to feed slowly and patiently, and encourage children to eat, but do not force them. ✓ Counsel the mother to experiment with other food combinations, tastes, textures, and methods of encouragement if children refuse some foods. ✓ Counsel the mother to minimize distractions during meals if children lose interest easily. ✓ Counsel the mother to set feeding times, incorporate eye-to-eye contact and be loving moments for learning and bonding with children.
5	Promote meal frequency and energy density	✓ Counsel to provide 2 to 3 times per day at 6 to 8 months of age and 3-4 times per day from 9-11 months and 12 to 24 months, with additional nutritious snacks offered 1-2 times per day between meals of complementary foods for the average, healthy breastfed infant. ✓ Provide foods 5 times per day with 1 or 2 cups of milk when energy density is low, or the child is no longer breastfed.



S. No	Interventions	Recommendations
6	Promote dietary diversity	✓ Promote adequate intake of complementary foods from diversified foods (at least 4 out of the 7 food groups). ✓ Promote nutrient dense foods. ✓ Feed a variety of culturally acceptable foods to ensure that nutrient needs are met. ✓ Feed the children with meat, milk (cow, goat, camel), poultry, fish or eggs daily, or as often as possible. ✓ Serve vitamin A-rich foods with fats to increase absorption. ✓ Serve citrus fruits with iron- and protein-rich foods to increase absorption. ✓ Avoid giving drinks with low nutrient value, such as tea, coffee, and sugary drinks such as soda.
6	Food hygiene and safety	✓ Good hygiene and proper food handling practices minimize contamination by diseases or parasites. ✓ Caregivers' and children's hands need to be washed before food preparation and eating. ✓ Promote critical times of hand washing. ✓ Use safe, adequate, and treated water to prepare complementary food and for drinking purposes. ✓ Store foods safely and serve the food immediately after preparation. ✓ Use clean utensils for preparation, serving and feeding children. ✓ Avoid the use of bottles, which are difficult to keep clean.
7	Promote feeding during and after illness	✓ Counsel the mother to increase fluid intake during her child's illness, including more frequent breastfeeding and longer feeds both day and night. ✓ Encourage the mother to give the sick child soft, varied, appetizing foods. ✓ Offer the child's favorite foods for his/her age and help and encourage the child to eat. ✓ Inform the mother to encourage the child to eat more food after illness to 'catch-up'. ✓ Counsel the mother to continue breastfeeding during illness and recovery. More frequent breastfeeding and longer feeds during illness and recovery both day and night to catch-up. ✓ Provide zinc supplement during diarrhea treatment. ✓ Give children 6-24 months of age with diarrhea 20 mg per day zinc supplementation for 10-14 days, along with increased fluids and continued feeding.

S. No	Interventions	Recommendations
8	Promote social protection	✓ Follow the applicability of soft conditionalities which entitles pregnant and lactating women to be exempted from public work. ✓ Target and link food-insecure households with children under one year to productive safety net program (PSNP) services. ✓ Ensure PSNP clients participate in community BCC sessions and uptake of services on health, nutrition, or sanitation. ✓ Ensure the primary caregiver with a moderately or severely malnourished child is exempted from the public works of PSNP during the period of treatment. ✓ Ensure health care services for all malnourished children are exempted from health care fees and mothers/caretakers are able to get food at stabilization centers. ✓ Target and link food-insecure households with children 6-24 months to other social protection services and nutrition-sensitive livelihood and economic opportunities.
9	Promote use of insecticide treated net	✓ Provide free insecticide-treated nets (ITNs) in all malaria endemic areas. ✓ Promote utilization of ITNs in all malaria endemic areas by mothers of 6-24 months of age children.
10	Promote and support local production of complementary foods	✓ Support local production and distribution of complementary foods for malnourished children. ✓ Organize practical cooking demonstration sessions (at home/health post/farmers training center).
11	Growth monitoring and promotion	✓ Routine weighing, plotting, interpretation and feedback are recommended to promote a good relationship between the health workers and the parents/caregivers and child, to detect problems early and to initiate appropriate interventions. ✓ Record the growth curve of each child on the growth chart. ✓ Use the well-functioning system of GMP as a platform for additional cross-sectional assessments of micronutrient deficiencies such as anemia and night blindness and the prevalence of stunting in health facility-based growth monitoring. ✓ Link GMP activities to health services in the community and ensure to put an effective system in place to refer children to health services when needed. If a child continues to have inadequate weight gain, s/he should be referred to the appropriate higher level of care for specialized evaluation.

S. No	Interventions	Recommendations
12		✓ The times that children are seen at the health facilities during sick child visits, immunization, or the delivery of other services, for example, vitamin A supplementation, can be used as alternatives to monthly GMP at the community level. ✓ During drought seasons or periods of high mobility in the pastoral communities, assessment of nutritional status and relevant actions to correct under-nutrition is the preferred strategy over GMP. If already established, the GMP system can be used for the assessment of nutritional status in such circumstances. ✓ End user monitoring (EUM) is an effective strategy to ensure the targeted beneficiaries access GMP services. The GMP services are required to be tracked and traced to the beneficiaries who utilize them. Hence, a community-based system can be introduced to verify all children 0-24 months old in the community are weighed, their weights plotted on the growth chart and mothers/caregivers are counseled.
13	Promote use of fortified complementary foods	✓ Promote iodized salt use. ✓ Use fortified complementary foods or vitamin-mineral supplements for the infant, as needed. ✓ Ensure processed food products for infants and young children meet the standards recommended by the *Codex Alimentarius Commission* and the Codex Code of Hygienic Practices for Foods for Infants and Children.
14	Prevention of nutritional anemia	✓ Identify and treat anemia at the health post level. ✓ Promote the use of micronutrient powders and supplements in areas where iron deficiency is greater than 20% among children under five. ✓ Promote the use of fortified foods (such as flour). ✓ Promote the use of pulses and animal source foods to tackle iron deficiencies. ✓ Promote the use of ITN to prevent malaria infection. ✓ Promote WASH services to prevent infection. ✓ Promote and provide deworming drugs for eligible segments of the population. ✓ Promote wearing of shoes to prevent soil transmitted helminths
15	Prevention and control of iodine deficiency	✓ Promote the proper use of iodized salt at household level. ✓ Promote the use of sea foods (such as fish) to tackle iodine deficiencies.

S. No	Interventions	Recommendations
16	Prevention and control of Zinc deficiency	✓ Ensure provision of zinc with oral rehydration sachets (ORS) for diarrhea treatment. ✓ Promote the use of fortified foods. ✓ Promote the use of pulses and animal source foods to tackle zinc deficiency.
17	Prevention and control of Vitamin A deficiency	✓ Undertake house-to-house visits targeting those children who were missed in the campaigns or routine health service deliveries. ✓ Strengthen the primary health care system maintaining an appropriate ratio of health extension workers to population (taking distance and the difficult weather condition in the pastoral communities into consideration). ✓ Consider advance planning for the shift from campaign approach to routine delivery to maintain higher coverage. ✓ Consider good record-keeping of the primary health care and health post and community understanding of and support for supplementation as criteria to transit from campaign style distribution to the routine service delivery approach. ✓ Health facilities should use registers to record the number of children who received vitamin A supplementation (VAS) as part of a routine health visit and the tally sheets during campaign-based VAS distribution to record the number of children who received VAS. ✓ The community's understanding of and support for supplementation is even more important for routine than for campaign delivery. ✓ An urgent and renewed regional commitment to strengthening vitamin A supplementation programs is needed to promote the integration of vitamin A supplementation into the routine health service delivery system without compromising the coverage in the campaign based capsule distribution. ✓ Control of clinical VAD will include treatment of established cases in health facilities. Central to this process is the administration of high-dose vitamin A preparations as capsules as per the protocol (Tables 2, 3). ✓ Promote and support optimal breastfeeding. ✓ Promote/support edible oil fortification and the consumption of vitamin A fortified oil. ✓ Promote the use of vitamin A rich bio-fortified foods like orange flesh sweet potato (OFSP), ultra-rice and iron fortified beans. ✓ Infection control – infections increase the excretion of vitamin A from the body and cause depletion. Infection control through the provision of safe drinking water and sanitation, early diagnosis and treatment, immunizations and health education will all reduce the excretion of vitamin A and prevent deficiency.

S. No	Interventions	Recommendations
		✓ Dietary interventions – dietary or horticultural interventions of various kinds of good sources of vitamin A. However, the evidence that the bioavailability of provitamin A carotenoids from fruit and vegetables is usually less than previously thought has tended to increase the difficulties of VAD control by means of dietary improvement. As a consequence, greater emphasis is being placed on the value of promoting VAS. ✓ Animal source foods – the best food sources of pre-formed active retinol, which is most effectively used by the body, are animal foods. These include breast milk, egg yolks and organ meats –such as liver, whole milk and milk products, fish, and butter. The best source of vitamin A for infants is breast milk. The mother's secretion of vitamin A into breast milk is related to her own vitamin A status. ✓ Plant source foods of Vitamin A – plants contain beta-carotene, which needs to be converted into retinol by the body. The best plant sources of vitamin A are dark orange or dark yellow fruits and vegetables, such as papayas, mangos, pumpkins, carrots and yellow or orange sweet potatoes, as well as dark green leafy vegetables, such as spinach, kale, and Swiss chard. Kale (Gommen) is an example of a traditional plant rich in vitamin A and commonly included in the Ethiopian diet. The amaranth plant grows wild in Ethiopia and is another good source of beta-carotene. ✓ Social and Behavioral Change Communication (SBCC), often using a social marketing approach, helps to improve practices related to the consumption of available vitamin A-rich food sources.
18	Early detection and management of acute malnutrition	✓ Severe acute malnutrition (SAM) is defined by the presence of bilateral pitting edema or severe wasting (MUAC <11.5 cm or a WFH <-3 z-score [WHO standards]) in children 6-59 months old. ✓ Moderate acute malnutrition (MAM) is defined by a MUAC ≥11.5 cm and <12.5 cm or a WFH ≥-3 z-score and <-2 z-score (WHO standards) in children 6-59 months old. MAM can also be used as a population-level indicator defined by WFH ≥-3 z-score and <-2 z-score (WHO standards). ✓ According to the revised FMoH guideline, admission for SAM treatment is now based on MUAC <11.5 cm or any degree of bilateral pitting edema or WFH <-3 z-score. ✓ Conduct nutritional screening using weight-for-height, MUAC, edema

S. No	Interventions	Recommendations
		✓ Regularly assess the community capacity to have information on community structures (both formal and informal), key stakeholders (traditional authorities, traditional and modern health practitioners, civil society etc), literacy levels, terms used to define malnutrition, who is responsible for children, who makes key decisions on household resource allocation, attitudes to health and malnutrition, health seeking behavior, and formal and informal means of communication used. ✓ Regularly sensitize the community to raise awareness of the program, promote understanding of its methods and lay the foundations for community ownership in the future and to provide essential information about the program's aims, methods and actors in order for people know what the program will mean to them, what it will do, where it will operate, who will implement it, how people can access it and what accessing the program will mean to individuals. ✓ Identify children through active case finding in order to be able to provide the largest possible proportion of the acutely malnourished population with access to care. ✓ Manage Severe Acute Malnutrition (SAM) with medical complications according the national guideline (stabilization center) ✓ Manage Severe Acute Malnutrition (SAM) without complications according the national guideline (outpatient therapeutic program) ✓ Outpatient Therapeutic Program (OTP); Children with severe acute malnutrition (SAM) with appetite for Ready to Use Therapeutic Food (RUTF) and without medical complications are treated with RUTF and routine medications. Treatment is at home with regular visits to the health facility. The child comes to the health facility every week for a medical checkup and to receive RUTF [17, 18]. The OTP services increase impact by addressing the needs of the greatest number of severely acutely malnourished children throughout an entire community. OTP services have achieved positive outcomes in terms of mortality, cure and default compared to Sphere minimum standards and have been shown to achieve much higher coverage and better access for children with severe acute malnutrition ✓ Manage Moderate Acute Malnutrition (MAM) according to the national guideline ✓ Establish a stimulating environment for children in the health facilities (SCs),implement structured play therapy for 15–30 minutes per day with examples of activities related to language skills and motor development with the use of simple toys. Include psychosocial stimulation for children with SAM in the community and the homes of the malnourished children (OTPs).

S. No	Interventions	Recommendations
		✓ Link children discharged from OTP and with MAM to food support, PSNP, routine IYCN services including cooking demonstration and other social services as needed ✓ Discharge children receiving SAM treatment when they reach a MUAC ≥12.5 cm or WFH ≥-2 z-scores and have no bilateral pitting edema for two consecutive visits [48]. ✓ Once they are stabilized, all children are referred to the OTP program, where RUTFs are provided to enable them to continue into full recovery. Where there is no OTP, children shall be treated in inpatient care using RUTF until they meet the discharge criteria. ✓ Provide attendants (mothers/caregivers) of children admitted to the inpatient care with food or admit them to the TSFP. ✓ Follow-up children's progress on a weekly basis at the distribution site especially for children who are losing weight or whose medical condition is deteriorating, not responding to treatment and those whose care givers have refused admission to the in-patient unit. ✓ Good coordination and communication between inpatient (SC) and out- patient care (OTP) and SFP is essential to make sure children do not get lost. Careful monitoring and tracking help prevent this. ✓ Use transfer slips in duplicate copies between inpatient care, OTP and SFP. Inform: o HEWs when a child is transferred from inpatient care to OTP o Food distribution agents when a child is transferred from OTP to SFP o HEWs when a child is absent/defaulted in inpatient care/OTP so that they can follow up the child and mother/caretaker at home and investigate the reasons ✓ **General Food Distribution** is required when a population does not have access to sufficient food to meet its nutritional needs. Ensuring an adequate basic ration for the affected population is of utmost importance. Providing rations that satisfy the daily nutritional needs of the population (roughly defined as 2,100 kcal per capita) largely avoids the need for additional selective feeding programs, which are logistically more difficult, as well as more costly and time-intensive to organize. ✓ **Selective feeding programs** are necessary when the general ration being provided is not adequate, leading to an increase in malnutrition and where there are specific groups who are at risk of becoming malnourished or who are already malnourished and are at the risk of becoming severely malnourished. Different types of selective feeding programs namely supplementary feeding programs (SFP) and therapeutic feeding programs (TFP) aim to cover the special needs of certain vulnerable groups of the population.

S. No	Interventions	Recommendations
		✓ **Blanket supplementary feeding program (BSFP)** is an intervention in which supplementary food is distributed as a temporary measure to all vulnerable members of a population at-risk of becoming malnourished without identifying the most malnourished. The general objective of a BSFP is to prevent widespread malnutrition and mortality. ✓ **Targeted supplementary feeding program (TSFP)** is a program in which supplementary food is restricted to only those individuals identified as the most malnourished or most nutritionally vulnerable/ at risk during nutritional emergencies (including pregnant women, lactating mothers, and young children under 5 years of age). The main objective of a TSFP is to prevent the moderately malnourished from becoming severely malnourished and consequently, reduce the prevalence of severe acute malnutrition and associated mortality. ✓ End user monitoring of emergency nutrition (EUM) is a strategy to ensure the targeted beneficiaries access the commodities. Commodities are required to be tracked and traced to the beneficiaries who consume them. Hence, a community-based system can be introduced to verify: o The supplies are delivered to beneficiaries as per the plan. o The commodities are stored and maintained in good condition. o The end users are satisfied with the quality and quantity of the commodities. o The supply management record, stock inventory and other relevant documentation for the supply items are accurate and consistent.
19	Early childhood development	✓ Despite the strong relations between optimal nutrition and child development during the first two years of life, the nutrition programs in the pastoral and agro-pastoral communities do not yet effectively integrate early child development (ECD) interventions within nutrition. ✓ The following key nutrition measures should be taken to improve ECD. o Improve maternal nutrition during pregnancy to reduce low birth weight infants with significant developmental risk including lower cognitive scores, poorer problem-solving skills, and behavioral issues which are risk factors for poor ECD. o Reduce iodine deficiency during pregnancy which can have an impact on ECD by improving intelligence and cognitive ability.

S. No	Interventions	Recommendations
		○ Improve iron nutrition during infancy to reduce both short- and long-term consequences of iron deficiency including impaired mental and motor development, poorer socio-emotional behavior, and reduced school achievement. ○ Improve linear growth during the first two years of life to reduce negative socio-emotional behaviors and poor cognitive performance including deficits in literacy, numeracy, reasoning, and vocabulary, later school enrollment, increased likelihood of grade repetition, absenteeism, dropping out of school, and risk of failing at least one grade. ○ Manage severe acute malnutrition timely to reduce increased negative socio-emotional behaviors and lower IQ, cognitive function, and school achievement.

Table 3: Schedules of vitamin A supplementation for prevention of VAD in children 6-24 months old

Age	Dose	Frequency
Children 6-11 months	100,000 IU (1 capsule of 100,000 IU)	Once every six months
Children 12-24 months	200,000 IU (2 capsules of 100,000 IU)	Once every 6 months

Table 4: Vitamin A therapeutic supplementation for children 6-24 months old with severe acute malnutrition

Age	Dose	Frequency
Children 6-11 months	100,000 IU (1 capsule of 100,000 IU)	One dose at first contact for children with eye signs of vitamin A deficiency or recent measles and for children who are given therapeutic foods that are not fortified as recommended in WHO specifications. and then as stipulated in the management of severe acute malnutrition guideline*
Children 12-24 months	200,000 IU (2 capsules of 100,000 IU)	

* Do not give VAS if the child has been supplemented through the campaign/routine health service delivery within one month and has bilateral pitting edema, and if s/he is receiving therapeutic foods that comply with WHO specifications (which has the recommended daily amount of VA).

Table 5: Vitamin A therapeutic supplementation for children 0-59 months old with eye signs of vitamin A deficiency or measles

Schedule	Doses for the age groups		
	Infants < 6 months of age	Children 6 months to 12 months of age	Children >12 months of age
Immediately on Diagnosis (day 1)	50,000 IU, (a drop from 100,000 IU capsule)	100,000 IU (1 capsule of 100,000 IU)	200,000 IU (2 capsules of 100,000 IU)
Next day (day 2)	50,000 IU, (a drop from 100,000 IU capsule)	100,000 IU (1 capsule of 100,000 IU)	200,000 IU (2 capsules of 100,000 IU)
15 days later (day 15)	50,000 IU, (a drop from 100,000 IU capsule)	100,000 IU (1 capsule of 100,000 IU)	200,000 IU (2 capsules of 100, 000 IU)

Delivery modalities for nutrition interventions for children 6–24 months

Ensuring complementary food focused counseling and support in a timely and targeted manner is critical to shape the practice of care givers. To expand complementary feeding related support, health workers and community volunteers need to show the utmost commitment. Particularly in pastoralist and agro-pastoral context, additional efforts are needed to reach care givers to help them improve their knowledge, skills on complementary feeding preparation and feeding. Providing nutrition counseling and support to mothers and children in these communities requires actors to employing a hybrid service delivery model (routine and campaign based). Such a hybrid approach particularly enables to trace/reach children during house-to-house and health facility visits as well as through mobile health and nutrition services or outreach services for growth monitoring and promotion.

The section blow identifies potential delivery platforms to improve complementary food related counseling and support.

Nutrition for children 6-24 months at program level

- ✓ Work closely with local administration to ensure target community members seek growth monitoring and promotion services, EPI, and utilize contact points effectively.
- ✓ Build the capacity of health facilities with user-friendly communication or counseling materials, cooking demonstration utensils and establish complementary feeding demonstration corners.
- ✓ Provide regular capacity building training or refresher training for health and extension workers.
- ✓ Promote and support salt iodization at salt processing and packing sites.
- ✓ Promote social protection services such as targeting pregnant women, lactating mother with under one-year old children and any household with children under five with SAM for PSNP support at woreda health and agriculture offices, at health posts and FTC, at public work, at community BCC sessions.

- ✓ Promote local production and distribution of complementary foods at multisectoral coordination and linkages committee meetings, income generation activity initiatives, women business groups, urban areas.
- ✓ Implement the hybrid model/approach of both campaign and routine service deliveries with a focus on the campaign-based vitamin A supplementation for the rural pastoralists at outreach and fixed sites in health centers and health posts.
- ✓ Undertake house-to-house visits targeting those children who were missed in the campaigns or routine health service deliveries.
- ✓ In contexts with frequent drought seasons or periods of high mobility in the pastoral communities, deliver a combined package of general food distribution, targeted supplementary feeding (TSF) and key child and maternal nutrition interventions including vitamin A supplementation, provision of insecticide treated bed nets, provision of IFA tablets for pregnant women, de-worming and screening of pregnant and lactating women and children under five years of age using mid upper arm circumference (MUAC) at community and facility levels.
- ✓ TSFP shall also include children discharged from OTP and in some cases, children discharged from inpatient care (where there is no OTP).
- ✓ The health sector shall be responsible for the implementation of the hybrid model delivery of emergency nutrition services.
- ✓ In order to avoid the sharing of supplementary foods, provide general food distribution to the rest of the family members from food insecure households.
- ✓ Use locally available mass media (or existing community information exchange systems like *'dagu'*) to promote complementary feeding and other nutrition services.

Nutrition for children 6-24 months at health facility level

- ✓ Ensure provision of zinc with oral rehydration sachets (ORS) for diarrhea treatment in under five OPD at health centers and hospitals.
- ✓ Ensure the availability of user-friendly, filed, tested and contextualized communication materials on complementary feeding promotion and support.
- ✓ Work aggressively to enhance transportation related bottlenecks through providing simple transport services like bicycles and *'bajajs'* to the health/nutrition extension workers for outreach services.
- ✓ Promote the delivery of growth monitoring and promotion services at EPI, under five OPD, at hospital, health center and health posts.
- ✓ Provide identification and treatment of anemia at health posts, health centers, hospitals.
- ✓ Provide vitamin A supplements through routine and outreach approaches.
- ✓ Promote consumption of vitamin A rich animal and plant source foods at health posts, outreach sites, FTCs, health centers.
- ✓ Conduct nutritional screening at hospitals, health centers, health posts, during house-to-house visits, during community outreaches, using mobile health and nutrition teams.
- ✓ Provide acute malnutrition management services at hospitals and health centers for SC, at health

centers and health posts for OTP and at health post and food distribution sites for MAM cases.

- ✓ Link children discharged from OTP and with MAM to food support, PSNP, routine IYCN services including cooking demonstration and other social services as needed at health posts, health centers, FTCs, community outreaches, using mobile health and nutrition teams.
- ✓ Promote early childhood development and nutrition services at health facilities and outreach services.
- ✓ In the agro-pastoral areas and for communities with reduced mobility and relatively stronger health systems, use the routine health contacts to deliver the key maternal and child nutrition services to the most vulnerable segments of the population including vitamin A supplementation, provision of insecticide treated bed nets, provision of IFA tablets, de-worming and screening of pregnant and lactating women and children under five years of age.
- ✓ Screen children with MUAC at the health post, health facility visits, mobile clinics, house-to-house visits, immunization days, outreach services, community health days and GMP activities and self-referrals.
- ✓ Admit children with MUAC <11.5cm or any degree of bilateral pitting edema or WFH <-3 Z-score and an appetite but without medical complications into the OTP program.
- ✓ Allow admitted children to receive the required essential drugs and one week's ration of 'ready-to-use therapeutic food' (RUTF) to be consumed at home daily until the next scheduled visit
- ✓ Upon discharge from the OTP, all children are admitted into the SFP, where dry food rations are provided to enable them to continue into full recovery.

Nutrition for children 6-24 moths at community and household level

- ✓ Provide optimal complementary feeding promotion, counseling and cooking demonstration services at community outreaches, health posts, health centers, farmers training centers, primary schools, using mobile health teams and women groups.
- ✓ Promote and support mothers/care takers on timely introduction, responsive feeding, meal frequency, dietary diversity, consistency, nutrient dense food intake, food hygiene and sanitation, feeding during and after illness, use of fortified complementary foods through various community structures such as 'feaema' in Afar, 'Jarsa Olla' and 'Jarsa argae dhageettii' in Borena, women indigenous social networks such as 'Marro' in Borana, clan-based structures.
- ✓ Effectively utilize religious structures such as Friday gatherings, to reach husbands with selected complementary feeding messages.
- ✓ Explore other community-based contact points such as water points and grazing places to use them as communication platforms in the pastoral communities.
- ✓ Promote use of iodized salt during house-to-house visits, at health posts, during growth monitoring and promotion sessions, at outreach sites, community gatherings, etc.
- ✓ Train and involve mothers to screening their 6-59-month-old children for acute malnutrition by measuring MUAC using color banded MUAC strap and locating the midpoint of the left upper arm and testing for edema.

Indicators of nutrition for 6 – 24 months old children

- ✓ Performance indicators
  - Number of caregivers who attended complementary food demonstration sessions
  - Number of caregivers who received CF focused counseling
  - Number of women who received counseling at home on complementary feeding
- ✓ Stunting
  - The percentage of children 6-24 months old whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the standard WHO population are considered short for their age (stunted), or chronically undernourished. Children who are below minus three standard deviations (-3 SD) are considered severely stunted.
  - Calculation: (Children 6–24 months of age whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the standard WHO population x 100%)/Children 6–24 months of age
- ✓ Wasting
  - The percentage of 6 – 24 months old children whose weight-for-height Z-score is below minus two standard deviations (-2 SD) from the median of the Standard WHO population are considered thin (wasted), or acutely undernourished. Children whose weight-for-height Z-score is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely wasted.
  - Calculation: (Children 6–24 months of age whose weight-for-height Z-score is below minus two standard deviations (-2 SD) from the median of the standard WHO population x 100%)/Children 6–23 months of age
- ✓ Underweight
  - The percentage of 6 – 24 months old children whose weight-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the standard WHO population are classified as underweight. Children whose weight-for-age Z-score is below minus three standard deviations (-3 SD) from the median are considered severely underweight.
  - Calculation: (Children 6–24 months of age whose weight-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the standard WHO population x 100%)/Children 6–24 months of age
- ✓ Anemia
  - Proportion of 6 – 59 months old children with less than 110 g/l of hemoglobin levels in their blood
  - Calculation: (6 – 59 months old children with less than 110 g/l of hemoglobin levels in their blood x 100%)/ 6 – 59 months old children
- ✓ Continue breastfeeding
  - Proportion of children 20–24 months of age who are fed breast milk.
  - Calculation: (Children 20–24 months of age who received breast milk during the previous day x 100%) * Children 20–24 months of age

- ✓ Timely introduction of complementary feeding
    - Proportion of infants 6 months of age who receive solid, semi-solid or soft foods.
    - Calculation: (Infants 6 months of age who received solid, semi-solid or soft foods during the previous day x 100%)/Infants 6 months of age
- ✓ Meal frequency
    - Proportion of breastfed and non-breastfed children 6–24 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.
    - Calculation for breastfed: (Breastfed children 6–24 months of age who received solid, semi-solid or soft foods the minimum number of times or more during the previous day x 100%)/Breastfed children 6–24 months of age
    - Calculation for non-breastfed: (Non-breastfed children 6–23 months of age who received solid, semi-solid or soft foods or milk feeds the minimum number of times or more during the previous day x 100%)/Non-breastfed children 6–24 months of age
    - To calculate a value for this indicator, combine the two numerators and the two denominators for breastfed and non-breastfed children. For breastfed children, the minimum number of times varies with age (2 times if 6–8 months and 3 times if 9–24 months). For non-breastfed children the minimum number of times does not vary by age (4 times for all children 6–24 months).
- ✓ Dietary Diversity
    - Proportion of children 6–24 months of age who receive foods from 5 or more food groups
    - Calculation: (Children 6–24 months of age who received foods from ≥5 food groups during the previous day x 100%)/Children 6–24 months of age
- ✓ Minimum Acceptable Diet
    - Proportion of children 6–24 months of age who receive a minimum acceptable diet (apart from breast milk).
    - Calculation for breastfed: (Breastfed children 6–24 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day x 1005)/Breastfed children 6–24 months of age
    - Calculation for non-breastfed: (Non-breastfed children 6–24 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day x 100%)/Non-breastfed children 6–24 months of age
    - Calculation of a value for this indicator involves combining the two numerators and the two denominators.
- ✓ Vitamin A Supplementation
    - The proportion of children aged 6 – 59 months who received two age appropriate doses of vitamin A supplements in the last 12 months

- Calculation: (children aged 6 – 59 months who received two age appropriate doses of vitamin A supplements in the last 12 months x 100%)/6 – 59 months old children

✓ Growth monitoring and promotion
- Proportion of 6 – 59 months children who received GMP services
- Calculation: (the number of 6 – 59 months old children who received GMP services x 100%)/6 – 59 months old children

✓ Nutrition screening
- Proportion of 6 – 59 months old children screened for malnutrition using weight-for-height or MUAC
- Calculation: (6 – 59 months old children screened for malnutrition using weight-for-height or MUAC x100%)/6-59 months old children

✓ Acute malnutrition
- Cure rate: Proportion who are discharged from SAM or MAM treatment having reached the cure discharge criteria.
  - Calculation: Cure rate (%) = (Total discharged cured)/ (Cured+ Died+ Defaulted+ Non responders) ×100
- Default rate: Proportion discharged having defaulted
  - Calculation: Default rate (%) = (Total discharged defaulted)/ (Cured +Died + Defaulted + Non responders) ×100
- Death rate: Proportion discharged having died while registered for SAM or MAM treatment
  - Calculation: Death rate (%) = (Total discharged died)/ (Cured+ Died+ Defaulted+ Non responders) × 100
- Average length of stay (LOS): The number of days that a patient spends in treatment from admission to discharge. LOS is only calculated for patients cured.
  - Calculation: Average Length of Stay (LOS) = (Sum LOS)/(Number of cards or cases in the sample)
- Average Weight Gain (AWG): The rate of weight gain per kilogram of body weight per day. AWG is only calculated for patients discharged cured.
  - Calculation: Average Weight Gain (AWG) = (Sum of weight gains (in grams per kg bodyweight per day))/(Number of cards or cases in the sample)

Nutrition for children 24 – 59 months old

Both protein energy and micronutrient deficiencies are significant nutrition problems in children and mothers in the pastoral communities of Ethiopia. Severe malnutrition is characterized by edema, acute wasting, anorexia, metabolic disturbance, multiple infections, micronutrient deficiency, and behavioral and developmental limitations. Moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) in children under 5 years of age are the highest in the pastoral communities. Hence many children from these communities are on the brink of death.

Moreover, iron and zinc deficiencies are common in the pastoral communities. Anemia is a risk factor for perinatal mortality and childbirth complications such as preterm births and low birth weight. It also affects brain development and cognition in children. Anemia is reported to be one of the main micronutrient deficiencies in children and women in the pastoralist communities [9]. The consequences of iron deficiency anemia include suboptimal mental and motor development in young children, leading to potentially irreversible cognitive deficits in mid-childhood [12]. For women, iron deficiency is estimated to cause 18% of maternal mortality worldwide [12] and it also reduces quality of life. Zinc plays a pivotal role in the function of the immune system, and thus its deficiency can result in increased susceptibility to infectious diseases. It increases the risk and severity of a variety of infections, restricts physical growth, and affects specific outcomes of pregnancy [13]. In addition to the effects of zinc on morbidity and mortality, a number of studies indicate that preventive zinc supplementation increases linear growth and weight gain in previously stunted or underweight children [14]. Thus, interventions to prevent zinc deficiency can also reduce the overall rates of childhood malnutrition, as defined by anthropometric criteria.

Nutritional interventions for children 24-59 months.

Nutrition interventions for the specified group range from ensuring dietary adequacy to, prevention of micronutrient deficiencies, early detection and management of acute malnutrition. The interventions for this group extend to ensuring access and provision of integrated early childhood care and development stimulation with existing community and facility-based child nutrition programs. In pastoral and agro-pastoral context, all means are utilized to reach children and care givers with a package of interventions.

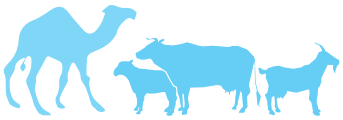


Table 6: Interventions and recommendation for children 24-59 months

S. No	Intervention	Recommendation
1	Prevention and control of iron deficiency anemia	✓ Provide biannual deworming services. ✓ Ensure the identification and treatment of anemia at the health post level. ✓ Promote the use of micronutrient powders and supplements in areas where iron deficiency is greater than 20% among children under five. ✓ Promote the use of fortified foods (such as flour). ✓ Promote the use of pulses and animal source foods to tackle iron deficiencies. ✓ Promote the use of ITN to prevent malaria infection. ✓ Promote WASH services to prevent infection.
2	Prevention and control of iodine deficiency	✓ Promote the proper use of iodized salt at household level. ✓ Promote the use of sea foods (such as fish) to tackle iodine deficiencies.
3	Prevention and control of zinc deficiency	✓ Provide zinc with low osmolality ORS (Lo-ORS) to treat all types of diarrhea patients with a full 10-day course of treatment. ✓ Promotion of use of fortified foods. ✓ Promote the use of pulses and animal source foods to tackle zinc deficiency
4	Prevention and control of Vitamin A deficiency	✓ Provide vitamin A supplementation for children 24–59 months of age biannually. ✓ Food fortification – vitamin A is added to widely consumed foodstuffs if vulnerable groups are unlikely to obtain their nutrient requirements in any other way. ✓ Promote the use of vitamin A rich bio-fortified foods like orange flesh sweet potato (OFSP), ultra-rice and iron fortified beans. ✓ Dietary interventions – Dietary or horticultural interventions of various kinds of good sources of vitamin A. However, the evidence that the bioavailability of provitamin A carotenoids from fruit and vegetables is usually less than previously thought has tended to increase the difficulties of VAD control by means of dietary improvement. As a consequence, greater emphasis is being placed on the value of promoting VAS.

S. No	Intervention	Recommendation
		○ Animal source foods – the best food sources of pre-formed active retinol, which is most effectively used by the body, are animal foods. These include breast milk, egg yolks and organ meats –such as liver, whole milk and milk products, fish, and butter. The best source of vitamin A for infants is breast milk. The mother's secretion of vitamin A into breast milk is related to her own vitamin A status. ○ Plant source foods of vitamin A – plants contain beta-carotene, which needs to be converted into retinol by the body. The best plant sources of vitamin A are dark orange or dark yellow fruits and vegetables, such as papayas, mangos, pumpkins, carrots and yellow or orange sweet potatoes, as well as dark green leafy vegetables, such as spinach, kale, and Swiss chard. Kale (Gommen) is an example of a traditional plant rich in vitamin A and commonly included in the Ethiopian diet. The amaranth plant grows wild in Ethiopia and is another good source of beta-carotene. ✓ Infection control – infections increase the excretion of vitamin A from the body and cause depletion. Thus, measures to reduce the excretion of vitamin A will help to prevent deficiency. Infection control through the provision of safe drinking water and sanitation, early diagnosis and treatment, immunizations and health education will all reduce the excretion of vitamin A and prevent deficiency. ✓ Strengthen the primary health care system maintaining an appropriate ratio of health extension workers to population (taking distance and the difficult weather condition in the pastoral communities into consideration). ✓ Consider advance planning (or develop criteria) for the shift from campaign approach to routine delivery to maintain the high coverage. ✓ Consider good record-keeping of the primary health care and the health post and community understanding of and support for supplementation as criteria to transit from campaign style distribution to the routine service delivery approach. ✓ Health facilities should use registers to record the number of children who received VAS as part of a routine health visit and the tally sheets during campaign-based VAS distribution to record the number of children who received VAS. ✓ is even more important for routine than for campaign delivery.

S. No	Intervention	Recommendation
		✓ An urgent and renewed regional commitment to strengthening vitamin A supplementation programs is needed to promote the integration of vitamin A supplementation into the routine health service delivery system without compromising the coverage in the campaign based capsule distribution. ✓ Social and Behavioral Change Communication (SBCC), often using a social marketing approach, helps to improve practices related to the consumption of available vitamin A-rich food sources. ✓ The community understanding of and support for supplementation Control of clinical VAD will include treatment of established cases in health facilities. Central to this process is the administration of high-dose vitamin A preparations as capsules as per the protocol (Tables 5,6).
5	Early detection and management of acute malnutrition	✓ Severe acute malnutrition (SAM) is defined by the presence of bilateral pitting edema or severe wasting (MUAC <11.5 cm or a WFH <-3 z-score [WHO standards]) in children 6-59 months old. ✓ Moderate acute malnutrition (MAM) is defined by a MUAC ≥11.5 cm and <12.5 cm or a WFH ≥-3 z-score and <-2 z-score (WHO standards) in children 6-59 months old. MAM can also be used as a population-level indicator defined by WFH ≥-3 z-score and <-2 z-score (WHO standards). ✓ According to the revised FMoH guideline, admission for SAM treatment is now based on MUAC <11.5 cm or any degree of bilateral pitting edema or WFH <-3 z-score. ✓ Conduct nutritional screening using weight-for-height, MUAC, edema ✓ Regularly assess the community capacity to have information on community structures (both formal and informal), key stakeholders (traditional authorities, traditional and modern health practitioners, civil society etc), literacy levels, terms used to define malnutrition, who is responsible for children, who makes key decisions on household resource allocation, attitudes to health and malnutrition, health seeking behavior, and formal and informal means of communication used. ✓ Regularly sensitize the community to raise awareness of the program, promote understanding of its methods and lay the foundations for community ownership in the future and to provide essential information about the program's aims, methods and actors in order for people know what the program will mean to them, what it will do, where it will operate, who will implement it, how people can access it and what accessing the program will mean to individuals.

S. No	Intervention	Recommendation
		✓ Identify children through active case finding in order to be able to provide the largest possible proportion of the acutely malnourished population with access to care. ✓ Manage Severe Acute Malnutrition (SAM) with medical complications according the national guideline (stabilization center) ✓ Manage Severe Acute Malnutrition (SAM) without complications according the national guideline (outpatient therapeutic program) ✓ Outpatient Therapeutic Program (OTP); Children with severe acute malnutrition (SAM) with appetite for Ready to Use Therapeutic Food (RUTF) and without medical complications are treated with RUTF and routine medications. Treatment is at home with regular visits to the health facility. The child comes to the health facility every week for a medical checkup and to receive RUTF [17, 18]. The OTP services increase impact by addressing the needs of the greatest number of severely acutely malnourished children throughout an entire community. OTP services have achieved positive outcomes in terms of mortality, cure and default compared to Sphere minimum standards and have been shown to achieve much higher coverage and better access for children with severe acute malnutrition ✓ Manage Moderate Acute Malnutrition (MAM) according to the national guideline ✓ Establish a stimulating environment for children in the health facilities (SCs),implement structured play therapy for 15–30 minutes per day with examples of activities related to language skills and motor development with the use of simple toys. Include psychosocial stimulation for children with SAM in the community and the homes of the malnourished children (OTPs). ✓ Link children discharged from OTP and with MAM to food support, PSNP, routine IYCN services including cooking demonstration and other social services as needed ✓ Discharge children receiving SAM treatment when they reach a MUAC ≥12.5 cm or WFH ≥-2 z-scores and have no bilateral pitting edema for two consecutive visits [48]. ✓ Once they are stabilized, all children are referred to the OTP program, where RUTFs are provided to enable them to continue into full recovery. Where there is no OTP, children shall be treated in inpatient care using RUTF until they meet the discharge criteria.

S. No	Intervention	Recommendation
		✓ Provide attendants (mothers/caregivers) of children admitted to the inpatient care with food or admit them to the TSFP. ✓ Follow-up children's progress on a weekly basis at the distribution site especially for children who are losing weight or whose medical condition is deteriorating, not responding to treatment and those whose care givers have refused admission to the in-patient unit. ✓ Good coordination and communication between inpatient (SC) and out- patient care (OTP) and SFP is essential to make sure children do not get lost. Careful monitoring and tracking help prevent this. ✓ Use transfer slips in duplicate copies between inpatient care, OTP and SFP. Inform: o HEWs when a child is transferred from inpatient care to OTP o Food distribution agents when a child is transferred from OTP to SFP o HEWs when a child is absent/defaulted in inpatient care/ OTP so that they can follow up the child and mother/ caretaker at home and investigate the reasons ✓ **General Food Distribution** is required when a population does not have access to sufficient food to meet its nutritional needs. Ensuring an adequate basic ration for the affected population is of utmost importance. Providing rations that satisfy the daily nutritional needs of the population (roughly defined as 2,100 kcal per capita) largely avoids the need for additional selective feeding programs, which are logistically more difficult, as well as more costly and time-intensive to organize. ✓ **Selective feeding programs** are necessary when the general ration being provided is not adequate, leading to an increase in malnutrition and where there are specific groups who are at risk of becoming malnourished or who are already malnourished and are at the risk of becoming severely malnourished. Different types of selective feeding programs namely supplementary feeding programs (SFP) and therapeutic feeding programs (TFP) aim to cover the special needs of certain vulnerable groups of the population. ✓ **Blanket supplementary feeding program (BSFP)** is an intervention in which supplementary food is distributed as a temporary measure to all vulnerable members of a population at-risk of becoming malnourished without identifying the most malnourished. The general objective of a BSFP is to prevent widespread malnutrition and mortality.

S. No	Intervention	Recommendation
		✓ End user monitoring of emergency nutrition (EUM) is a strategy to ensure the targeted beneficiaries access the commodities. Commodities are required to be tracked and traced to the beneficiaries who consume them. Hence, a community-based system can be introduced to verify: o The supplies are delivered to beneficiaries as per the plan. o The commodities are stored and maintained in good condition. o The end users are satisfied with the quality and quantity of the commodities. ✓ The supply management record, stock inventory and other relevant documentation for the supply items are accurate and consistent.
6	Promote social protection services	✓ **Ensure health care services for all malnourished children are exempted from health care fees and mothers/caretakers able to get food at stabilization centers (SC).** ✓ **Target and link food-insecure households with children aged 24-59 months to social protection services and nutrition-sensitive livelihood and economic opportunities.** ✓ **Ensure quality of nutrition services and beneficiary satisfaction with optimal community engagement to measure satisfaction with different measurement tools like community score card.** ✓ **Ensure the primary caregiver with a moderately or severely malnourished child is exempted from the public works of PSNP during the period of treatment.**

Table 7: Schedules of vitamin A supplementation for prevention of VAD in children 24-59 months old

Age	Dose	Frequency
Children 24-59 months	200,000 IU (2 capsules of 100,000 IU)	Once every 6 months

Table 8: Vitamin A therapeutic supplementation for children 24-59 months old with severe acute malnutrition.

Age	Dose	Frequency
Children 24-59 months	200,000 IU (2 capsules of 100,000 IU)	One dose at first contact with health unit and then as stipulated in the management of severe acute malnutrition guideline*

*Do not give VAS if the child has been supplemented through the campaign or routine health service delivery approach within one month and has bilateral pitting edema.

Table 9: Vitamin A therapeutic supplementation for children 24-59 months old with eye signs of vitamin A deficiency or measles.

Doses for the age groups	
Schedule	Children >1 year of age
Immediately on diagnosis	200,000 IU (2 capsules of 100,000 IU)
Next day	200,000 IU (2 capsules of 100,000 IU)
15 days later	200,000 IU (2 capsules of 100,000 IU)

Table 10: Dosage of zinc for the treatment of diarrhea in children 0-59 months old

Age	Dose
<6 months	1/2 tablet of 20mg Zinc for 10days
6 months – 5years	1tablet of 20mg Zinc for 10days
Settings	All settings

NB: *Zinc comes in a dispersible tablet. It should be dissolved in a small amount of breast milk, ORS or clean water in a cup or spoon. It should be given together with ORS for all types of diarrheal disease.*

Delivery modalities for nutrition interventions for children 24 – 59 months

Nutrition for 24-59 months at program level

- ✓ Promote the use of fortified foods, pulses, and animal source foods, ITN, and promote WASH services for iron deficiency anemia during house-to-house visit, at outreach sites, at health posts and health centers.
- ✓ Promote salt iodization and production at distribution sites, the proper use of iodized salt and use of sea foods (such as fish) during house-to-house visits, at health posts and health centers to tackle iodine deficiencies.
- ✓ Implement the hybrid model/approach of both campaign and the routine service deliveries with a focus on the campaign-based vitamin A supplementation in the rural pastoralist communities of Ethiopia.
- ✓ Promote the use of vitamin A rich fortified and bio-fortified foods, diversified food of animal and plant source at HH visits, community outreach, health post and health centers levels.
- ✓ Promote social protection services at public work targeting sites, at FTC and health posts.
- ✓ In contexts with frequent drought seasons or periods of high mobility in the pastoral communities, deliver a combined package of general food distribution, targeted supplementary feeding (TSF) and key child and maternal nutrition interventions including vitamin A supplementation, provision of insecticide treated bed nets, provision of IFA tablets for pregnant women, de-worming and screening of pregnant and lactating women, and children under five years of age using mid upper arm circumference (MUAC) at community and facility levels.

- ✓ TSFP shall also include children discharged from OTP and in some cases, children discharged from inpatient care (where there is no OTP).
- ✓ The health sector shall be responsible for the delivery of the hybrid model of the delivery of emergency nutrition services.
- ✓ In order to avoid the sharing of supplementary foods, provide general food distribution to the rest of the family members from food insecure households.
- ✓ Establish and strengthen integrated early childhood care and development stimulation center

Nutrition for 24-59 months and at health facility level

- ✓ Provide biannual deworming services at health centers, health posts, at outreach sites, during house-to-house visits, integrating with other child health services such as EPI, under five OPD, and GMP.
- ✓ Provide early identification and treatment of anemia at health posts, health centers, hospitals, and outreach sites
- ✓ Promote the use of micronutrient powders and supplements in areas where iron deficiency is greater than 20% among children under five at health posts, health centers, outreach sites and during the house-to-house visits.
- ✓ Promote the provision of zinc with oral rehydration sachets (ORS) for diarrhea treatment and use of fortified foods, pulses, and animal source foods to tackle zinc deficiency at hospitals, health centers, health posts, outreach sites, and even during house-to-house visits.
- ✓ Use routine service VAS delivery in the agro pastoralist contexts and those living close to the health facilities (health centers and health posts).
- ✓ Promote and support reducing depletion of vitamin A in the body through reducing the excretion of vitamin A through the provision of safe drinking water and sanitation, early diagnosis and treatment, immunizations, and health education during house-to-house visits, at outreach sites, health posts, health centers and hospitals.
- ✓ Conduct nutritional screening at hospitals, health centers, health posts, community outreach, house-to-house visits, and through mobile health and nutrition teams.
- ✓ Provide OTP services at health centers, health posts and community outreach sites, and through mobile health, and nutrition teams.
- ✓ Provide SC service at hospitals and health centers.
- ✓ Provide MAM treatment at health posts, community distribution and, outreach sites, PSNP food distribution sites, and public work sites.
- ✓ In the agro-pastoral areas and for communities with reduced mobility and relatively stronger health systems, use the routine health contacts to deliver key maternal and child nutrition services to the most vulnerable segments of the population including vitamin A supplementation, provision of insecticide treated bed nets, provision of IFA tablets, de-worming and screening of pregnant

women, lactating women and children under five years of age.

- ✓ Screen children with MUAC at the health post, health facility visits, mobile clinics, house-to-house visits, immunization days, outreach services, community health days and GMP activities and self-referrals.
- ✓ Admit children with MUAC <11.5 cm or any degree of bilateral pitting edema or WFH <-3 z-score and an appetite but without medical complications into the OTP program.
- ✓ Allow admitted children to receive the required essential drugs and one week's ration of 'ready-to-use therapeutic food' (RUTF) to be consumed at home daily until the next scheduled visit. The RUTF is a peanut-based paste containing minerals, vitamins, and energy to facilitate recovery and growth in children suffering from SAM. However, exceptions can be made for individual patients living in very remote areas where they can be seen on a fortnightly basis after the initial two visits.
- ✓ Upon discharge from the OTP, all children are admitted into the SFP, where dry food rations are provided to enable them to continue into full recovery.
- ✓ Weight-for-height z scores should be used over MUAC to screen children in the pastoral and agro-pastoral communities as MUAC is shown to miss quite a significant number of malnourished children [49, 50].

Nutrition service delivery modality for children 24–59 months at community level

- ✓ Use the biannual campaign approach, which delivers a package of services such as VAS, deworming and nutritional screening in the purely pastoral/mobile communities and those living far from the health facilities where transport is less readily available using the outreach, mobile health and nutrition team and during house-to-house visits.
- ✓ Train and involve mothers to screening for acute malnutrition in their 6-59 months old children by measuring MUAC using color banded MUAC strap without locating the midpoint of the left upper arm and testing for edema.
- ✓ Use locally available media (or community system of communication like *'dagu'*) to promote child nutrition services.

Indicators for nutrition of 24 – 59 months old children

- ✓ Stunting: height-for-age (HFA) proportion of under 5 children with height-for- age Z-score below -2 SD; reflects skeletal growth, chronic malnutrition.
- ✓ Wasting: weight-for-height (WFH) proportion of under 5 children with weight-for- height Z-score below -2 SD (Prevalence of wasting); reflects recent weight loss or gain; acute malnutrition.
- ✓ Underweight weight-for-age (WFA): proportion of under 5 children with weight-for- age Z-score below -2 SD (prevalence of under-weight); composite index of wasting and stunting
- ✓ Anemia: prevalence of anemia in children 6-59 months.
- ✓ Dietary diversity proportion of children 6–24 months of age who receive foods from 4 or more food groups:

- Minimum meal frequency: proportion of breastfed and non-breastfed children 6–24 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.
- Minimum acceptable diet: proportion of children 6–24 months of age who receive a minimum acceptable diet (apart from breast milk).

✓ Vitamin A supplementation: proportion of children aged 6–59 months who received a two dose of vitamin A supplement:

✓ Deworming

- Proportion of 24 – 59 months old children who received two age appropriate doses of deworming tablets in the last 12 months
- Calculation: (24 – 59 months old children who received two age appropriate doses of deworming tablets in the last 12 months x100%)/24-59 months old children

✓ Growth monitoring and promotion: Proportion of GMP participation among under 2 children

✓ Nutrition screening: proportion of children under five screened for acute malnutrition

✓ Treatment outcome for MAM and SAM: proportion of children 6-59 months with severe acute malnutrition that exit, defaulted, died, transferred or recovered.

Nutrition for children 6-10 years old

The pastoralist communities have one of the highest rates of moderate acute malnutrition (MAM) and severe acute malnutrition (SAM) in children under 5 years of age. The situation is believed to be similar with the 6 – 10 years old children. Yet, the services to prevent and treat acute malnutrition in these children are weak and fragile, especially in emergency situations. During humanitarian emergencies, food security is often severely threatened, leading to an increased risk of malnutrition, disease, and death.

Nutrition interventions and recommendation for children 6-10 years

Nutrition interventions that encompass the promotion of healthy nutrition behaviors, promotion of physical exercises, initiative around prevention of macro and micronutrient deficiencies and other nutrition sensitive interventions are described briefly in Annex 11. In pastoral and agro-pastoral areas, ensuring healthy nutrition practice needs critical attention, and nutrition sensitive agriculture could play a significant role in this regard.

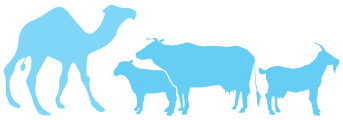


Table 11: Intervention and recommendation for children 6-10 years

S. No	Intervention	Recommendation
1	Promotion of good nutrition behavior	✓ Promote good eating behaviors that affect their current and future states of health. ✓ Deliver critical health care and nutrition information (child feeding, visiting of health facility during illnesses). ✓ Ensure children's families, teachers, and the media to influence good eating behaviors and personal behaviors (personal hygiene, dressings). ✓ Counsel parents to be positive role models. ✓ Encourage family mealtimes. ✓ Reduce dental caries by limiting sugary foods.
2	Promote physical activity and healthy lifestyle	✓ Promoting physical activity for preventing childhood obesity. ✓ Promote physical activity behaviors that affect their current and future states of health. ✓ Ensure children's families, teachers, and the media to influence good physical activity behaviors.
3	Protect child abuse	✓ Promote child education. ✓ Protect children from engaging in begging, childhood labor, and other criminal activities. ✓ Establish a mechanism to fulfill their food and nutrition needs.
4	Prevent harmful traditional practices	✓ Protect girls from female genital mutilation, early/child marriage, food taboos, abduction, house maids and commercial sex work. ✓ Advocate to enforcing family law against child marriage and abduction.
5	Provide support for children in special situations	✓ Advocate the promotion and enforcement of minimum standards on nutritional services for children in special situations that include refugee camps, internally displaced people, disabled children, street children, orphans, children with chronic illnesses, neglected children, PSNP public work sites and other social services as needed.
6	School health and nutrition	✓ Conduct six monthly nutritional assessments and link to health care facilities for the identified nutritional problems ✓ Promote school feeding program. ✓ Promote and demonstrate food diversification through school garden and nutrition clubs. ✓ Promote the proper disposal of human, animal, and environmental wastes. ✓ Promote access to safe potable water, sanitation, and hygiene in schools and at home. ✓ Support and facilitate school-based deworming programs.

S. No	Intervention	Recommendation
7	Prevent macro and micronutrient deficiencies	✓ Provide biannual de-worming for school and out of school children aged 6-10 years. ✓ Promote the use of diversified food products to tackle micronutrient deficiencies. ✓ Promote the use of appropriate bio-fortified (orange flesh sweet potatoes, quality protein maize) and fortified foods (iodized salt, edible oil, and flour). ✓ Target and link food-insecure households with children aged 6-10 years to social protection services and other economic opportunities. ✓ Promote universal salt iodization for human and animal consumption. ✓ Promote the routine daily consumption of adequately iodized salt. ✓ Add salt on foods at the end of cooking. ✓ Avoid washing salt before use. ✓ Avoid the storage, selling and use of salt after its expiry date. ✓ Promote in Social and Behavior Change Communication.
8	Provide nutrition Counseling services	✓ Promote appropriate production and utilization of diversified diet in schools. ✓ Build the capacity of health extension workers and agriculture development agents on promotion, consumption and production of nutrient rich crops and animal source foods. ✓ Improve the knowledge and practice of agriculture development agents, households and pastoralists/farmers on nutrition sensitive livestock and agriculture activities ✓ Provide nutrition counseling services through mobile health and nutrition teams
9	Prevent and control of Vitamin A Deficiency (VAD)	✓ Promote the use of vitamin A reach foods like yellow fruits and dark green leafy vegetables.

Delivery modalities for children 6–10 years nutrition interventions

Nutrition for 6-10 years old children at program level

- ✓ Promote good eating behaviors, physical exercise, and healthy lifestyle; share nutrition information, nutrition screening and counseling services at schools, health posts, health centers, youth centers, at community outreach sites, sport centers, using mobile health and nutrition teams.
- ✓ Design a strategy that enables to reach parents and non-school going children of the age group sending a home take message and encouraging discussions at household level.
- ✓ Promote the protection of child abuse protecting children from begging, child labor, criminal activities, discrimination on feeding and caring at health facilities, schools, outreach sites, using mobile health and nutrition teams, food distribution sites, social protection centers, community networks (structures).
- ✓ Promote and enforce minimum standards on nutritional services for children in special situations that include refugees, IDPs, disabled children, street children, orphans, children with chronic illnesses, neglected children at refugee camps, IDP sites, disability support centers, social protection centers, OVC centers, NGOs.

Nutrition for 6-10 years old children at health facility or school level

- ✓ Strategically utilize school clubs, school outdoor environment, school mini media and parent gatherings to promote healthy diet and other relevant information.
- ✓ Promote school health and nutrition packages, school feeding programs, school gardening, school WASH, safe potable water at health centers, health posts, schools, outreach sites.
- ✓ Provide biannual de-worming, promote the use of diversified food, appropriate bio-fortified (orange flesh sweet potato, quality protein maize) and fortified foods (iodized salt, edible oil, and flour) at schools, health posts, and villages through outreach services.

Nutrition for 6-10 years old children at community level

- ✓ Promote the prevention of harmful traditional practices such as female genital mutilation, early/child marriage, food taboos, abduction, domestic and commercial sex work at health centers, health posts, schools, outreach centers, through community structures, at social protection centers, religious centers, using clan structures, at PSNP public work sites and other social services as needed.
- ✓ Use religious gatherings, festivals and water fetching points to deliver nutrition messages.
- ✓ Engage in regular messaging using local radio on health diet, health behaviors to influence community norms.

Indicators for nutrition of 6-10 years old children

- ✓ Obesity
    - The percentage of 6-10 years old children whose BMI Z-score is above three standard deviations (3 SD) from the median of the reference population.
    - Calculation: (Children 6–10 years of age whose BMI Z score is above three standard deviations (3 SD) from the median of the reference population x 100%)/Children 6–10 years of age
- ✓ Consumption of iron rich foods
    - Proportion of children 6–10 years of age who receive an iron-rich food or iron-fortified food.
    - Calculation: (Children 6–10 years of age who received an iron-rich food or iron fortified food during the previous day x 100%)/Children 6–10 years of age
- ✓ Screening and counseling support provided
- ✓ School deworming
- ✓ Life skill and nutrition training provided
    - Proportion of 6–10 years of children trained on life skills and nutrition
    - Calculation: (6–10 years old children trained on life skills and nutrition x 100%)/ 6 – 10 years old children

Maternal Nutrition

Good nutrition is important during pregnancy and lactation. It is important for all pregnant women and contributes to maternal health and optimal birth outcomes. Pregnant women need to consume adequate quantities of nutritionally dense foods to meet their own nutritional requirements and the requirements of the growing fetus and to prepare for lactation. Inadequate food intake, poor dietary quality, and untreated infections before and during pregnancy increase the risk of maternal mortality and morbidity and are risk factors for negative birth outcomes such as infants with low birth weight (LBW) or intrauterine growth restriction (IUGR). Lactating women also need additional energy to support the production of breast milk. Lactation places a high demand on maternal stores of energy, protein, and other nutrients. These stores need to be established, conserved, and replenished starting from pregnancy. The energy, protein, and other nutrients in breast milk come from a mother's own body stores and, to a lesser extent, from her diet.

Maternal nutrition service delivery in pastoralist and agro-pastoral regions requires strong coordination and integration to enhance health seeking behaviors of target community through an integrated quality service delivery. The initiatives in pastoral and agro-pastoral communities should focus on utilizing existing contact points effectively to expand reach and coverage of nutrition. Addressing human development and supply related issues would play a critical role in facilitating the anticipated maternal nutrition delivery.

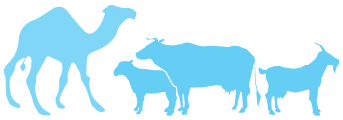
Maternal nutrition interventions in pastoral and agro-pastoral communities

Nutrition services recommended in the national AMIYCN guideline applies for pastoral and agro-pastoral communities. The boxes below summarize key recommendations extracted from the national AMIYCN guideline.

Table 12: Nutritional intervention and recommendation for mothers.

S. No	Intervention	Recommendation
1	Pre-conceptional nutrition	✓ Ensure a good nutritional status for women before conception as this influences positively the nutritional demand during the period of pregnancy and lactation. ✓ During any health contact, make sure nutritional screening, counseling on diet diversity, possible ways of preventing micronutrient deficiency, healthy life style that included birth spacing and reproductive health care should be provided in an integrated manner. ✓ Empower women and linking them to the available social protection schemes. ✓ Promote the consumption of iron folic acid before conception.
2	Nutrition during pregnancy	✓ Ensure that pregnant women are identified early (within the first month of pregnancy). ✓ Provide lab investigation as per the national ANC guideline. ✓ Conduct physical assessment (such as edema, anemia, and others) during each ANC visit as per the national ANC guideline. ✓ Conduct nutritional screening (MUAC, height and weight measurement and monitoring) and manage accordingly. ✓ Promote and support dietary diversity by counseling pregnant women to add 2-3 specified locally available foods to their current daily diet to reach 5 or more specific food varieties. ✓ Provide 180 tablets of IFA to each pregnant woman and promote intake of one daily IFA tablet for 180 days (with proper counseling of adherence). ✓ Conduct weight gain monitoring regularly, interpret properly and provide adequate counseling and support to improve the intake of energy and protein rich meals and snacks. ✓ Counsel pregnant women and their families during ANC visits to initiate breastfeeding within the first hour of delivery.

S. No	Intervention	Recommendation
		✓ Make sure all women are getting preventive and curative services such as deworming during the 2nd or 3rd trimester. ✓ Ensure that the community and household members are informed of the importance of making one additional meal (adequate energy) and food available to women during pregnancy as well as helping them reduce their workload and obtain adequate rest. ✓ Provide free insecticide-treated nets (ITNs) to all households with pregnant woman. ✓ Provide skilled birth services for all pregnant women. ✓ Engage in social behavior change communication to increase the health and nutrition service seeking behaviors
3	Nutrition during lactation	✓ Ensure that all postpartum women get regular assessment routinely during the first 24 hours starting from the first hour after birth regardless of the place of delivery (home or health facility). ✓ Ensure that at least three additional postnatal contacts are provided for all postpartum mothers on day 3 (48–72 hours), between days 7–14 after birth, and six weeks after birth. ✓ Conduct nutritional screening (MUAC, height and weight measurement) and manage accordingly. ✓ Counsel on the continuation of IFA consumption if the dose is not completed before birth. ✓ Provide counseling on two additional diversified meals during lactation as well as helping lactating women to reduce their workload and obtain adequate rest. ✓ Counseling on the importance of support by other family members in availing diversified diet and reducing workload. ✓ Position guidelines and procedures that support optimal breastfeeding practices and design appropriate mechanism to ensure that support is provided on breastfeeding for postpartum and lactating women (institutionalizing BFI and code protection initiative). ✓ Provide psychosocial support to prevent postpartum depression especially among women who have lost their baby during birth. ✓ Provide an integrated nutrition services through static and mobile health teams.



Maternal nutrition delivery modality in the pastoral and agro-pastoral context

In the pastoral and agro-pastoral context, quality maternal nutrition service delivery necessitates strengthening the health system to ensure reach and coverage. This can be ensured by building the capacity of frontline health workers around planning and implementation of maternal nutrition services in an integrated way. Taking different capacity building initiatives that target woreda health offices, health center staff, health posts and different community structures like HDAs/community volunteers and religious leaders is of great importance to realize quality maternal health services for pastoral and agro-pastoral communities in Ethiopia, and this may be done through training/orientation workshops, community discussions, supportive supervision and follow up. Increasing awareness and data capturing and monitoring capacity is also critical to improve service delivery in the context.

System strengthening

- Efforts should be made to improve maternal nutrition by integrating nutrition interventions in existing ANC services. This can be ensured once more by deploying trained frontline workers and building the capacity of frontline health workers around planning and implementation of maternal nutrition services in an integrated way.
- Facilities need to be equipped with basic and essential packages of maternal health and nutrition commodities.
- Enabling platforms should be established for frontline workers to work with different community and religious actors to enhance early ANC, facility delivery and to engage other family members in maternal care and support.
- It is important to adopt/modify, pilot and scale up the women health development army structure to increase reach and coverage through promoting home visits or community based group dialogue led by the health extension workers and/or women development groups to counsel on and demonstrate diet diversity, quantity (adequate energy – one/two additional meals) and to follow up the number of IFA consumed by a given woman in the target area.
- As in currently the case in agrarian communities, monthly pregnant women conferences may be adopted to pastoral and agro-pastoral regions for which contact points can be utilized to increase contact during the period of pregnancy.
- It is also crucial to support women to have economic control and the ability to have equitable decision-making power. Similarly, vulnerable households need to be linked to the existing productive safety net program.
- Strategies to be designed to meet the health and nutritional needs of internally displaced women in camp settings and other informal settlements.

Capacity-building

- Capacity building activities on maternal nutrition that target woreda health offices, health center staff, health posts and different community structures like HDAs, religious leaders can make be realized through regular training/orientation workshops, community discussion, supportive supervision & follow up.
- Materials conveying different social and behavioral change messages targeting maternal nutrition such as posters and job aid tools should be available.
- Existing checklists, registration books and referral slips need to be revised and updated in a way that they integrate key maternal nutrition process indicators.
- Learning platforms need to be established and should be applicable for front line workers deployed in pastoral and agro-pastoral areas so as to enable them to enhance their nutritional and health care delivery skills as well as to develop their motivational abilities.

Increasing awareness and expanding coverage

- Utilizing local media outlet such as the 'dagu' in Afar could contribute in expanding reach and coverage of selected messages that would impact on health seeking behaviors and selected maternal nutrition practices.
- It is critical to working aggressively to ensure pregnant mothers, husbands and families receive counseling and orientation on consuming food from at least five food groups daily to ensure adequate dietary diversity, taking 180 IFA tablets during pregnancy, measuring weight gain and adjusting it to the required level, early initiation of breast milk after birth and influencing husbands and families on the importance of making additional snack available for pregnant women to meet their extra energy needs. The awareness raising activities can be carried out using community networks and platforms, such as mothers' conferences and working through WHDATLs to reinforce messaging at household level and related points of contact.
- Religious and community leaders should be utilized effectively to deliver maternal nutrition messages and to enhance health seeking behaviors, particularly ANC visits.
- Introducing and piloting performance-based incentive arrangement for community workers in the context could greatly help in expanding reach as well as ensuring frequent exposure to nutrition messaging.
- Social and behavioral change communications should be placed at the center of maternal nutrition interventions and help to enhance frequent contact between the service provider and client through active roles of health managers and health workers. Frequent contact enables to avoid message overload and track progress made by pregnant women and their families as well as to solve problems they encountered.

Establishing data utilization and performance monitoring mechanism

- Data availability is a critical aspect of program delivery to improve service coverage and quality.
- Coverage indicators for and practices of pregnant women need to be regularly reviewed for rapid problem identification and responses. Equally important are tracking micronutrient supplies; facilitating the correct use of weighing scales and measuring/recording weight gain.
- Monthly meetings at each level i.e. HEW, PHC staff, and woreda managers and supervisors are a useful platform to review data extracted from ANC registers and supervision checklists.

Indicators for maternal nutrition

- BMI
    - Percent of non-pregnant women of reproductive age who have a low body mass index (<18.5) or high body mass index (> 25)
- MUAC
    - Percent of women with a low mid upper arm circumference.
- Peri-conceptional supplementation of folic acid
    - Percent of non-pregnant women who receive the recommended folate supplements before three months of each pregnancy.
- IFA
    - Percent of pregnant women who receive the recommended number of iron/folate supplements during pregnancy.
- Adherence to IFA
    - Percent of pregnant who took more than 90 iron/folate supplements during pregnancy
- Anemia testing
    - Percent of pregnant women tested for anemia.
- Anemia
    - Percent of women with a hemoglobin concentration lower than the norm for sex and physiological status
- Weight gain during pregnancy
    - Percent of women who gain weight on the last two trimesters of pregnancy within the recommended range for their weight status
- Night blindness
    - Percent of pregnant women with nigh blindness.

- Iodized salt
    - Percent of women living in households using adequately iodized salt.
- Vitamin A supplementation
    - Percent of postpartum women who received high dose vitamin A supplements within eight weeks (six weeks if not breastfeeding) of their last live birth.

Adolescent Nutrition

Adolescence (10-19 years) is a period of gradual transition from childhood to adulthood that normally begins with the onset of signs of puberty. It is characterized by important physiological, psychological, and social changes. There is increased nutritional need at this stage, related to the fact that adolescents gain up to 50% of their adult weight, more than 20% of their adult height, and 50% of their adult skeletal mass during this period [15]. Caloric and protein requirements are maximal. There is increased physical activity, combined with poor eating habits and other considerations. For example, menstruation and pregnancy contribute to accentuating the potential risk of poor nutrition for adolescents. Improving adolescent girls' nutrition and delaying their first pregnancy is a promising intervention point to break the intergenerational cycle of malnutrition and the vicious cycle of poverty, and chronic diseases.

The adolescent health and nutrition situation in the pastoral and agro-pastoral context is badly affected by different factors linked with poor infrastructure, persistence of harmful traditional practices, limited user-friendly services, poor primary health coverage and limited education status that is characterized by limited coverage, enrollment, and attrition. In these areas, girls are the major disadvantaged groups due to the predominant traditional harmful practices, i.e. genital mutilation, early marriage, and lower rate of school enrollment and completion. The program intervention in pastoralist and agro-pastoralist regions or districts need to be comprehensive in order to address the complex situation.

Adolescent girls' nutrition benefits on future birth outcome [16].

- ◊ Increased pre-pregnancy weight and body stores of nutrients, thus, contributing to improved future pregnancy and lactation outcome, while preserving the mother's nutritional status and well-being.
- ◊ Improved iron status with reduced risk of anemia in pregnancy, low birth weight, maternal morbidity, and mortality, and with enhanced work productivity and perhaps linear growth.
- ◊ Improved folate status, with reduced risk of neural tube defects in the newborn and megaloblastic anemia during pregnancy.

Adolescent Nutrition Interventions

The national AMIYCN guideline has recognized the following key recommendations during the period of adolescence as related to of its current and future benefits.

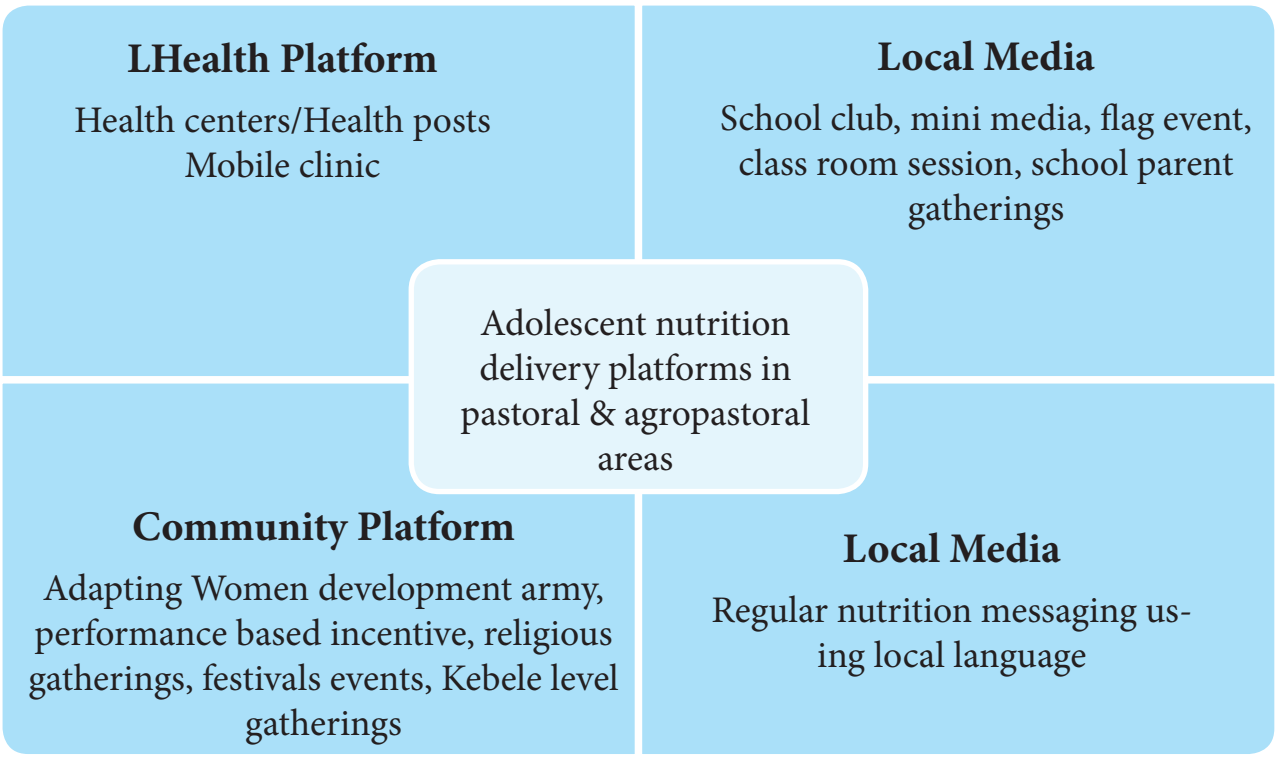
- Consuming adequate energy, protein, and fat to meet energy and protein needs through diverse food sources

- Adequate micronutrient status for growth and development: consuming micronutrient supplements (e.g. iron folic acid tablets), and foods that meet recommended dietary diversity scores for women of reproductive age; and de-worming.
- Discouraging unhealthy food choices such as sweets, sugary beverages and low nutrient salty/fried/sweet snacks that predispose to serious long-term diseases, and are not cost-effective for obtaining nutrients.
- Delaying the age of childbearing until after completion of growth and physiological maturation: encouraging schooling, livelihoods programs and access to family planning services.

Adolescent Nutrition Delivery Modality in Pastoral and Agro-pastoral context

Ensuring reach and coverage of nutrition packages for adolescents who are in and out of school is very critical and challenging in this context. Program designers and implementers should plan and implement activities through a participatory approach. In the pastoralist and agro-pastoral context, regular monitoring and program evaluation needs to be in place to make any correction and to streamline the designed interventions. Regional and local authorities should be advised to utilize the existing platforms in the fields of health, education, community, and mass communication to increase reach for in- and out-of-school adolescents. The subsection below proposes potential delivery outlets under each platform.

Adolescent nutrition delivery platforms in pastoral & agro-pastoral areas



Strengthening and utilizing health platforms

- Strengthen the health system to deliver quality adolescent health, reproductive and nutrition services along with education and other platforms.
- Expand reach and coverage of health services using the static and mobile service delivery platforms.
- Build the capacity of frontline health workers and managers to deliver adolescent health, nutrition, and reproductive health services in a user-friendly manner.
- Set adolescent nutrition service delivery standards to be implemented in an integrated manner.
- Develop user friendly tools and materials applicable for the local context.
- Employ periodic service delivery auditing to track integrated service delivery.

School platforms

- School platforms could be effectively utilized to deliver adolescent nutrition services and to promote SBC messages.
- School platforms need to be utilized strategically to impact school going adolescents, their parents and out of school adolescents through home take messages.
- Regular nutrition screening, deworming and IFA supplementation can be easily integrated to school nutrition package.
- The capacity of schoolteachers needs to be enhanced through regular nutrition trainings and user-friendly communication material provisions.
- It is important to monitor the extent to which school contact points (school mini media, school clubs, flag events and classroom sessions) are effectively utilized to deliver and sustain adolescent health and nutrition messages.
- User friendly communication materials need to be available and they should be tailored to school contexts that can sustain adolescent nutrition dialogue throughout school year.
- The periodic parent-teacher gatherings in schools could be utilized strategically and effectively to integrate nutrition messages targeting the parents.
- Working aggressively to increase school enrollment and minimize dropout rate helps to attain adolescent nutrition objectives and increases reach of adolescent nutrition services through school platform.
- The education sector along with other actors should work to protect adolescent girls from early marriage and teenage pregnancy.
- School compounds can be used as a demonstration and diffusion center for nutrition sensitive agriculture such as backyard grading and planting of fruit trees.

Community platforms

The existing community platforms can play a positive role in enhancing school enrollment, delaying early marriage and increasing the rate of school completion.

- Community volunteers
    - Adopt women health development structure to pastoralist and agro-pastoral context with modification and piloting.
    - Make maximal effort to reach adolescents and their parents with key adolescent nutrition messages.
    - Pilot performance- and incentive-based package.
- Religious platforms
    - Religious venues and religious leaders could possibly play a significant role in reaching parents in delivering adolescent health and nutrition message.
    - They can deliver nutrition messages focusing on energy adequacy, diet diversity, delaying the age of childbearing, encouraging schooling, and access to family planning services.
    - In agro-pastoral areas of SNNP, community gatherings and festival events could be utilized effectively to deliver adolescent nutrition messages.

Mass communication platforms

- Local media could play their part in reaching adolescents as well as their parents, at all level. Technical working groups (TWG) should work aggressively to provide technical support in building the capacity of media personnel.
- Developing annual AN airing calendar and monitoring its regular implementation would better work to effectively utilize local media outlets.
- Nutrition technical working groups at regional, zonal and woreda level should plan, coordinate, and monitor the implementation of nutrition messaging through local radio.
- Regular capacity building training should be provided for local media personnel.

Indicators for adolescent nutrition

- Stunting
    - Percent of adolescents with low height-for-age (stunting)
- BMI
    - Percent of adolescent girls with low body mass index (<-2 BMI Z scores) or high body mass index (> +2 BMI Z scores)

- Anemia
    - Percent of adolescent girls with a hemoglobin concentration lower than the norm for sex and physiological status
- Intermittent weekly IFA supplementation
    - Percent of in-school and out-of-school adolescent girls who receive the recommended number of iron/folate supplements.
- Iodized salt
    - Percent of adolescent girls living in households using adequately iodized salt

Nutrition for people in special situations

Geriatric (old age) nutrition

It is well recognized that the nutrient requirements are the acceptable range of values for caloric and nutrient intake that maintain the body in optimal function. Thus, if older people maintain their physical activity, either by engaging in physical work or by regular exercise, their food energy requirements are related to their energy expenditure just as those of younger people. But, at the same time, old people are at a physiological disadvantage. The aging process increases nutrient requirements because of the reduced efficiency of the ability to digest and absorb nutrients and hence the elderly can easily get undernourished. Similarly, in the aging body, the risks of caloric and nutrient excess are as dangerous as inadequate caloric and nutrient intake and hence the elderly are at a greater risk of overweight/obesity as well. It is, therefore, essential to address the nutritional requirements of the elderly population.

Table 13: Interventions and recommendations for the elderly population.

S. No	Intervention	Recommendations
1	Promoting health and slowing aging	✓ Promote sleeping regularly and adequately. ✓ Promote adequate intake of diversified foods and biofortified foods regularly. ✓ Promote regular physical activity to reduce functional declines. ✓ Promote healthy lifestyle and regular physical activity to maintain healthy body weight. ✓ Protect the elderly from the negative consequences of tobacco use and use of harmful substances such as alcohol, khat, shisha ✓ Ensure the health/nutrition related concerns of the old people/ senior citizens are incorporated in the service provision standards.

S. No	Intervention	Recommendations
2	Nutrition screening	✓ Conduct anthropometric measurements (using MUAC, and weight) at regular intervals and manage acute malnutrition accordingly. ✓ Provide supportive environment for a coordinated response to nutritional demands of the elderly. ✓ Provide counseling on adequate intake of diversified foods, bio-fortified foods and water regularly.
3	Feeding centers/ nursing homes	✓ Establish local/community feeding centers for elders in collaboration with the private sector and the community. ✓ Promote the establishment of nursing homes for elders who do not have anyone to take care of them. ✓ Support the establishment of self-help mechanism for elderly people.
4	Social protection/ security	✓ Ensure that older people have access to food assistance programs in the community. ✓ Ensure elders are exempted from labor and permanently benefit from direct PSNP support. ✓ Encourage families, caregivers and other service providers to protect elders. ✓ Encourage voluntary community level support for elders for their nutritional needs.

Nutrition service delivery modalities for elderly people

- ✓ Promote health and slow the aging process through promoting regular and adequate sleep, adequate intake of diversified foods and biofortified foods, regular physical activity to reduce functional declines, healthy life style and regular physical activity to maintain healthy body weight at health facilities, outreach sites, mobile health and nutrition teams, food distribution sites, social protection centers and community networks (structures).
- ✓ Ensure the health/nutrition related concerns of the elderly are incorporated in the service provision standards and protect the elderly from the negative consequences of tobacco use and use of harmful substances such as alcohol, khat, shisha at health facilities, outreach sites, using mobile health and nutrition teams, at food distribution sites, social protection centers and community networks (structures).
- ✓ Ensure nutrition screening by conducting anthropometric measurements of height and weight at regular intervals and manage acute malnutrition accordingly, provide supportive environment for a coordinated response to nutritional demands of elders and provide counseling on adequate intake of diversified foods, bio-fortified foods and water regularly at health facilities, outreach sites, using mobile health and nutrition teams, at food distribution sites, social protection centers and community networks (structures).

- ✓ Establish and support local/community feeding centers, nursing homes and self-help mechanism for elders in collaboration with the private sector, social protection centers and community networks (structures).
- ✓ Ensure that the elderly have access to food assistance programs and are exempted from labor and they permanently benefit from direct PSNP support at health facilities, food distribution sites, social protection centers, using mobile health and nutrition teams and volunteer community networks (structures).

Nutrition of persons with disabilities

Table 14: Interventions and recommendations for persons with disabilities.

S. No	Intervention	Recommendations
1	Affirmative action	✓ Ensure persons with disabilities have access to technology /support devices. ✓ Ensure that they receive preferential treatment for employment, placement, and engaging in income generating activities ✓ Ensure that nutrition/health for persons with disabilities are incorporated in service provision standards. ✓ Promote the capacity of families, caregivers and other service providers to protect persons with disabilities. ✓ Ensure access, prioritization and utilization of essential nutrition services for persons with disabilities and their caregivers and families/ households.
2	Nutrition screening	✓ Conduct anthropometric measurements of height and weight at regular intervals and manage acute malnutrition accordingly. ✓ Provide supportive environment for a coordinated response to nutritional demands of persons with disabilities. ✓ Provide counseling on adequate intake of diversified foods and bio-fortified foods.
3	Social protection/ security	✓ Ensure that persons with serious disabilities have access to food assistance programs in the community. ✓ Ensure persons with disabilities are exempted from labor and permanently benefit from direct PSNP support. ✓ Support the establishment of self-help mechanism for persons with disabilities

Nutrition service delivery modalities for the persons with disabilities

- ✓ Promote and enforce minimum standards on nutritional services for children in special situations that include refugee, IDPs, disabled children, street children, orphans, children with chronic illnesses, neglected children at refugee camps, IDP sites, disability support centers, social protection centers, OVC centers, NGOs,
- ✓ Ensure that persons with disabilities have access to technology /support devices, preferential treatment in terms of employment, placement, and engaging them income generating activities, and PWDs as well as their families and caregivers have access to essential nutrition services and receive counseling on adequate intake of diversified foods and bio-fortified foods at health facilities, schools, outreach sites, using mobile health and nutrition teams, at food distribution sites, social protection centers and community networks (structures),
- ✓ Ensure that persons with disabilities are screened through anthropometric measurements of height and weight at regular intervals and manage acute malnutrition accordingly at health facilities, outreach sites and using mobile health and nutrition teams,
- ✓ Ensure that persons with serious disabilities have access to food assistance programs in the community, are exempted from labor and permanently benefit from direct PSNP support at health facilities, schools, outreach sites, using mobile health and nutrition teams, at food distribution sites, social protection centers and community networks (structures), and self-help mechanism are established for them at social protection centers and community networks (structures),

Nutrition of the refugee population

Table 15: Interventions and recommendations for the refugee population.

S. No	Intervention	Recommendations
1	Nutrition screening	✓ Conduct anthropometric measurements using MUAC at regular intervals and manage acute malnutrition accordingly. ✓ Provide supportive environment for a coordinated response to nutritional demands of the IDPs/refugees. ✓ Provide counseling on adequate intake of diversified foods and bio-fortified foods to IDPs/refugees.
2	Food assistance programs	✓ Ensure that IDPs/refuges have access to health and food/nutrition services. ✓ Ensure nutrition/health for IDPs/refugees is incorporated in service provision standards. ✓ Promote adequate intake of diversified food and bio-fortified foods.

S. No	Intervention	Recommendations
3	WASH services	✓ Ensure the provision, consistent use and maintenance of sanitation and hygiene facilities/supplies at IDP and refuge centers and in host communities. ✓ Promote the use of water treatment practices, promoting safe and hygienic preparation and handling of food, and proper hand washing with soap at IDP and refugee centers and in host communities. ✓ Ensure the provision, consistent use and maintenance of latrine facilities at IDP and refuge centers and in host communities
4	School feeding programs	✓ Provide school meals for students in IDP/refugee camps.

Nutrition service delivery modalities for people in refugee camps or IDP sites

- ✓ Promote and enforce minimum standards on nutritional services for refugee population in refugee camps and IDP sites, outreach services by mobile health and nutrition teams and NGOs.
- ✓ Ensure the vulnerable groups in the refugee camps are nutritionally screened using MUAC at regular intervals and manage acute malnutrition accordingly at health facilities, schools, mobile health and nutrition team outreach services, outreach sites, house-to-house visits and refugee/IDP camps.
- ✓ Ensure that the nutritional demands of the IDPs/refugees are met, nutrition counseling on adequate intake of diversified foods and bio-fortified foods are provided to IDPs/refugees, nutrition/health for IDPs/Refugees is incorporated in service provision standards at health facilities, schools, refugee/IDP camps, mobile health and nutrition team outreach services, and community (network) structures.
- ✓ Ensure the provision of school meals for students in IDPs/refugee camps, consistent use and maintenance of sanitation and hygiene and latrine facilities/supplies, promote the use of water treatment practices, safe and hygienic preparation and handling of food, and proper hand washing with soap at IDP and refugee centers and in host communities at health facilities, refugee/IDP camps, schools, mobile health and nutrition team outreach services, and community structures.

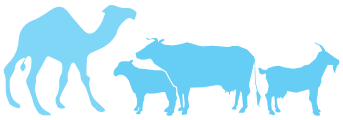
Nutrition of orphans/vulnerable children

Table 16: Interventions and recommendations for orphans/vulnerable children

S. No	Intervention	Recommendations
1	Nutrition screening	✓ Conduct anthropometric measurements using MUAC at regular intervals and manage acute malnutrition accordingly. ✓ Provide supportive environment for a coordinated response to nutritional demands of the orphans/vulnerable children.
2	Food assistance programs	✓ Ensure that orphans/vulnerable children have access to health and food/nutrition services. ✓ Ensure nutrition/health for orphans/vulnerable children is incorporated in service provision standards. ✓ Promote adequate intake of diversified food and bio-fortified foods for orphans/vulnerable children. ✓ Provide meals for student orphans/vulnerable children.
3	WASH services	✓ Ensure access and consistent use of water, sanitation and hygiene facilities/supplies for orphans/vulnerable children. ✓ Ensure access and consistent use of latrine facilities for orphans/ vulnerable children. ✓ Protect orphan/vulnerable girls from gender-based violence. ✓ Provide napkins (sanitary kits) to orphan/vulnerable adolescent girls.
4	Social protection/ security	✓ Ensure that orphans/vulnerable children have access to food assistance programs in the community. ✓ Protect orphan/vulnerable children from engaging in begging, child labor, human trafficking, commercial sex work and substance abuse (alcohol, khat, cigarette, shisha). ✓ Provide sanitary napkins for orphan adolescent girls ✓ Promote orphans/street children to have access to free health services. ✓ Ensure households who support orphan or street children receive preferential treatment for employment and engaging in income generating activities. ✓ Encourage voluntary community level support for orphanage/ vulnerable children (OVC) for their nutritional needs. ✓ Support orphans/ vulnerable children (OVC) to access PSNP services.

Nutrition service delivery modalities for orphans/vulnerable children

- ✓ Ensure orphan/vulnerable children are nutritionally screened using MUAC at regular intervals and manage acute malnutrition accordingly at health facilities, schools, house-to-house visits, outreach sites, mobile health and nutrition team outreach services, social protection centers, community structures, youth centers and NGOs.
- ✓ Ensure that orphans/vulnerable children have access to health and food/nutrition services, their nutrition/health demands are incorporated in service provision standards, adequate intake of diversified food and bio-fortified foods are promoted, meals for student orphans/vulnerable children are provided at health facilities, outreach sites, schools, mobile health and nutrition team outreach services, community structures, social protection centers.
- ✓ Ensure that orphans/vulnerable children have access to and enjoy consistent use of water, sanitation and hygiene and latrine facilities/supplies at health facilities, schools, youth centers, sport centers and social protection centers.
- ✓ Ensure that orphan/vulnerable girls are protected from gender-based violence and provided with menstrual pad (sanitary napkins) at health facilities, schools, NGOs, social protection centers, youth centers, sport centers, mobile health and nutrition team outreach services and community structures.
- ✓ Ensure that orphans/vulnerable children have access to free health and nutrition services, food assistance programs in the community, are protected from engaging in begging, child labor, human trafficking, commercial sex work and substance abuse (alcohol, khat, cigarette, shisha) at social protection centers, health facilities and community structures.
- ✓ Ensure households who support orphan or street children receive preferential treatment for employment, and engaging in income generating activities and promote voluntary community level support for orphanage/ vulnerable children (OVC) for their nutritional needs at health facilities, schools, community structures, social protection centers, NGOs.
- ✓ Promote and enforce minimum standards on nutritional services for children in special situations that include street children, orphans, children with chronic illnesses, disability support centers, social protection centers, OVC centers, NGOs.
- ✓ Promote the protection of child abuse by protecting OVCs from begging, child labor, criminal activities, discrimination on feeding and caring at health facilities, schools, outreach sites, mobile health and nutrition team outreach services, food distribution sites, social protection centers, community networks (structures).
- ✓ Promote good eating behaviors, physical exercise, and healthy lifestyle; share nutrition information, and provide nutrition screening and counseling services at schools, health posts, health centers, youth centers, at community outreaches, sport centers and using the mobile health and nutrition team.



- ✓ Promote the prevention of harmful traditional practices such as female genital mutilation, early/child marriage, food taboos, abduction, domestic and commercial sex work at health centers, health posts, schools, outreach centers, community structures, social protection centers, religious centers, clan structures, PSNP public work sites and other social services as needed.

Indicators for people in special situations

- ✓ Proportion of under 5 children with height-for-age Z-score below -2 SD (prevalence of stunting)
- ✓ Proportion of under 5 children with weight-for-height Z-score below -2 SD (prevalence of wasting)
- ✓ Prevalence of anemia in children 6-59 months (sex disaggregated)
- ✓ Proportion of children aged from 6-59 months received two dose of Vitamin A capsules
- ✓ Proportion of children aged from 24-59 months received two dose of albendazole tabs

Nutrition of persons with communicable diseases

Infectious diseases during childhood are a crucial public health problem in developing countries and have long been known to affect growth. In that relation, malnutrition is a critical, yet an underestimated factor in susceptibility to infection, including HIV/AIDS, tuberculosis and malaria. Infection saps the individual of energy, which reduces productivity at the community level and perpetuates an alarming spiral of infection, disease and poverty. Hence, it is essential to address the nutritional requirements of individuals with infections.

Table 17: Interventions and recommendations for persons with communicable diseases

S. No	Intervention	Recommendations
1	Capacity building	✓ Integrate nutritional assessment, counseling and support into all existing HIV/AIDS, TB, COVID-19 and other infectious disease treatment, care and support services ✓ Equip facilities with nutrition assessment and counseling materials. ✓ Provide SBCC materials to health service providers (in line with the National Health Communication Strategy). ✓ Train health workers on acute malnutrition management for the treatment and support of people who have HIV, TB and other infectious diseases. ✓ Incorporate region/context specific nutrition counseling and support services to HIV, TB and other infectious diseases into integrated refresher training (IRT) manuals for HEWs. ✓ Deploy adequate number of nutritionists and/or dieticians to HIV, TB and other infectious disease clinics.

S. No	Intervention	Recommendations
		✓ Adhere to the national guidelines of the provision of clinical nutrition services to HIV, TB and other infectious disease patients ✓ Strengthen monitoring and evaluation of nutrition HIV, TB and other infectious diseases services in the regional Health Management Information System. ✓ Deliver community-based nutrition care and support activities for PLHIV, TB and other infectious diseases through health extension workers, and health development armies. ✓ Incorporate indicators on food and nutrition services to TB/HIV and other infectious diseases in the regional development plan.
2	Nutrition screening	✓ Conduct regular nutritional assessment for all patients with HIV/AIDS, TB, COVID-19 and other infectious diseases ✓ Prioritize children under five, pregnant and lactating women in cases of supply shortage. ✓ Conduct nutrition screening, treatment and counseling services for TB /HIV patients and patients with other infectious diseases at facility levels, particularly during ANC, PNC, PMTCT services.
3	Logistics and supply	✓ Provide adequate food and nutrition supplies for TB/HIV and other infectious disease patients with special attention to vulnerable populations. ✓ Conduct regular integrated food and nutrition supplies forecasting, procurement and distribution. ✓ Avail food and nutrition commodities and supplies for treatment of TB/HIV and other infectious diseases (supplements, anthropometric equipment, therapeutic food, supplementary food). ✓ Promote local production of RUSF and RUTF for people having TB, HIV and other infectious diseases.
4	Social protection/ security	✓ Promote livelihood support for patients having TB/ HIV and other infectious diseases ✓ Target people with HIV/AIDS and TB to the productive safety net programs. ✓ Ensure the social safety net program addresses the PLHIV, TB and other critically ill patients with infectious diseases.

S. No	Intervention	Recommendations
		✓ Promote appropriate nutrition support for the marginalized TB, HIV, and other infectious disease clients. ✓ Ensure PLHIV and TB patients who are affected by malnutrition are getting appropriate treatment and food and nutrition support. ✓ Promote and support income generating activities for PLHIV and TB patients.
5	Public private partnership	✓ Capacitate the private sector to provide food and nutrition services for people with HIV/TB and other infectious diseases.
6	Dietary diversity	✓ Promote and support production of small ruminants. ✓ Promote and support income generating activities for PLHIV and TB patients. ✓ Promote backyard gardening for diversified vegetables and fruits. ✓ Promote and support small scale irrigation where feasible. ✓ Ensure people with HIV and TB are accessing land for animal rearing, crop, vegetable and fruit production. ✓ Avail improved breeds and vegetable seeds and fruits for people with TB/HIV and other infectious diseases
7	Local production and distribution of therapeutic foods	✓ Promote availability of safe food for TB,HIV and infectious disease clients. ✓ Promote the consumption of diversified, fortified and biofortified foods. ✓ Promote local production and distribution of therapeutic foods. ✓ Ensure the quality and safety of locally produced foods that are meant for PLHIV, TB and other infectious disease patients.
8	Food and nutrition services	✓ Promote use of diversified food (fortified and biofortified). ✓ Ensure all women and adolescents living with HIV, TB and other infectious diseases are getting food and nutrition support. ✓ Ensure women, children and adolescent who are living with HIV, have TB and other infectious diseases are getting equal access to food and nutrition services.

S. No	Intervention	Recommendations
		✓ Promote and support women, children and adolescent girls who are exposed to HIV, TB and other infectious diseases to get diversified, nutritious foods. ✓ Prevent harmful traditional practices and discriminations that hinder the target groups to get the appropriate dietary care and support (food taboos, discriminations). ✓ Provide food and nutrition services through mobile health and nutrition teams
9	Emergency nutrition	✓ Ensure food and nutrition services for PLHIV, and those having TB and other infectious disease are addressed in the strategies and plans of the National Emergency Preparedness, Response, Rehabilitation and Resilience Commission. ✓ Target inclusion of TB, HIV and other infectious disease clients during emergency. ✓ Promote early warning system on the risk of malnutrition among patients with TB, HIV and other infectious diseases. ✓ Strengthen the food and nutrition support capacity of sectors to timely and appropriately respond to the need of the PLHIV, TB and other infectious diseases patients. ✓ Provide emergency nutrition services through mobile health and nutrition teams.
10	Resource mobilization	✓ Allocate budget from the government treasury for food and nutrition for people with TB/HIV and other infectious diseases. ✓ Establish pool fund for TB, HIV and other infectious diseases. ✓ Promote budget allocation by each of the nutrition implementing sectors for nutrition programs targeting people living with HIV, having TB and other infectious diseases. ✓ Mobilize additional budget from the private sector and development partners for food and nutrition interventions targeting people living with HIV, having TB and other infectious diseases.

S. No	Intervention	Recommendations
11	Social and behavior change communication	✓ Promote appropriate feeding options for infants born to HIV-infected mothers ✓ Counsel and support HIV-positive mothers on infant feeding as per the national recommendations and strategies for elimination of mother-to-child transmission (EMTCT) ✓ Develop and disseminate nutrition SBCC materials for people with TB/HIV and other infectious diseases ✓ Provide nutrition education, including on water purification, food hygiene, preparation and handling, and other complementary interventions. ✓ Provide training for food handlers on food preparation and handling to people with HIV/TB and other infectious diseases ✓ Promote and incorporate health education on mass media, including new media. ✓ Develop mass media programs on nutrition targeting TB, HIV and other infectious disease clients. ✓ Organize public awareness creation dialogue on HIV/AIDS, TB and other infectious disease prevention, treatment and nutrition integration through different channels. ✓ Create a permanent program to be aired through different channels on TB, HIV, AIDS and other infectious diseases. ✓ Promote and implement skill-based nutrition training in higher learning institutions. ✓ Provide nutrition counseling services through mobile health and nutrition teams.

Nutrition service delivery for communicable diseases

- ✓ Ensure that nutritional assessment, counseling and support into all existing HIV/AIDS, TB, and other infectious disease treatment, care and support services are integrated at the health facilities, and the health facilities are equipped with nutrition assessment and counseling materials
- ✓ Ensure that health workers are trained on acute malnutrition management for the treatment and support of people with HIV, TB and other infectious diseases and the delivery of community based nutrition care and support activities for PLHIV, TB patients and those with other infectious diseases at the primary health care facilities, mobile health and nutrition team services, outreach services, house-to-house visits, and community (network) structures.
- ✓ Ensure that indicators on food and nutrition services to TB/HIV and other infectious diseases are incorporated in the regional development plan, regular nutritional assessments are conducted on all patients with HIV/AIDS, TB, and other infectious diseases, children under five, pregnant and lactating women are prioritized in cases of supply shortage at all health facilities, the finance sector, NGOs, social protection centers, mobile health and nutrition teams, private sector and community (network) structures
- ✓ Provide food and nutrition commodities and supplies for treatment of TB, HIV and other infectious diseases (supplements, anthropometric equipment, therapeutic food, supplementary food) and promote local production and distribution of RUSF and RUTF for TB, HIV and other infectious diseases at health facilities, mobile health and nutrition team outreach services, agriculture sector, social protection centers, NGOs, community (network) structures
- ✓ Ensure the social safety net program addresses the PLHIV, TB and other infectious diseases and promote livelihood support for those with these infectious diseases at health facilities, social protection programs, PSNP, mobile health and nutrition team outreach services, NGOs, community structures.
- ✓ Promote and support income generating activities, production of small ruminants, backyard gardening for diversified vegetables and fruits, access to land, small scale irrigation where feasible at health facilities, farmer/pastoral training centers, mobile health and nutrition team outreach services, social protection programs, small and medium enterprises, NGOs and community (network) structures.
- ✓ Promote early warning system on the risk of malnutrition among patients with TB, HIV and other infectious diseases, budget allocation for HIV, TB and other infectious diseases *a*nd provide emergency nutrition services at health facilities, mobile health and nutrition team outreach services, emergency preparedness programs, social protection programs, the finance sector, the private sector, NGOs and community (network) structures.
- ✓ Develop and disseminate context specific nutrition SBCC materials for people with TB, HIV and other infectious diseases, mass media program on nutrition interventions for TB, HIV and other

infectious disease clients and organize public awareness creation dialogue on HIV/AIDS, TB and other infectious disease preventions, treatment and nutrition integration through different channels at the health facilities, schools, youth centers, farmer/pastoral training centers, mobile health and nutrition team outreach services, community (network) structures.

Indicators for people with communicable diseases

- ✓ BMI: - Percent of non-pregnant women of reproductive age who have a low body mass index (<18.5) or high body mass index (> 25)
- ✓ MUAC; Percent of women with a low mid upper arm circumference (<23 cm).
- ✓ Micronutrient supplementation; Percent of patients with communicable diseases supplemented with micronutrient supplements

Nutrition of people with non-communicable and lifestyle related diseases

Because of the change in dietary and lifestyle patterns, non-communicable diseases like obesity, diabetes mellitus, cardiovascular disease, hypertension, stroke and some types of cancer are becoming increasingly significant causes of disability and premature death in Ethiopia.

Table 18: Interventions and recommendations for people with communicable diseases.

S. No	Intervention	Recommendations
1	Mainstreaming NCD response	✓ Revise the existing curriculum for junior health professionals to include nutrition and NCDs. ✓ Incorporate food and nutrition in chronic non-communicable disease prevention and control in the in-service training manuals. ✓ Promote physical exercise and healthy lifestyle into different programs of the health sector ✓ Establish and foster networking and collaboration across TVETs to harmonize the training curriculum on chronic non-communicable diseases. ✓ Ensure that diet and lifestyle non-communicable diseases are incorporated in the school curriculum. ✓ Establish school nutrition clubs to prevent obesity and overweight. ✓ Promote and implement school gardening. ✓ Ensure school feeding programs are free of inorganic food groups. ✓ Promote physical activity in workplaces.

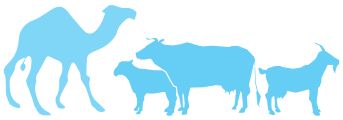
S. No	Intervention	Recommendations
2	Nutrition screening	✓ Support facilities to integrate nutrition assessment/screening and counseling services into all facility services to identify overweight and obesity. ✓ Integrate nutrition assessment and disease specific dietary counseling into different clinics for non-communicable disease (diabetics, hypertension, cancer, etc). ✓ Provide periodic nutritional screening and counseling of students for early identification of obesity and overweight at school. ✓ Provide periodic nutritional screening for early identification of obesity and overweight, and counseling to girls and boys at youth friendly centers, facility and community levels. ✓ Provide nutrition screening through mobile health and nutrition teams.
3	Healthy lifestyle	✓ Create/advocate for external environments that enhance physical activity in schools, at workplaces and in communities. ✓ Encourage schools to provide students with daily physical education, exercise and equip themselves with appropriate recreation, play and sports facilities. ✓ Advocate for and support urban planners to incorporate adequate green areas, walkways, bicycle lanes and recreation areas that will encourage appropriate physical activities. ✓ Encourage the development of standard playgrounds/fields in the community. ✓ Promote the establishment of physical exercise and nutrition clubs within communities, schools and workplaces.
4	Evidence generation	✓ Strengthen surveillance of risk factors for non-communicable disease. ✓ Promote health systems research or epidemiological studies on major risk factors for non-communicable disease, including physical inactivity and unhealthy diet.
5	Treat chronic non-communicable/ lifestyle related diseases	✓ Equip health facilities with essential supplies, diagnostic equipment and other treatment inputs. ✓ Organize and conduct sustainable in-service training programs on clinical diagnosis, treatment, counseling and comprehensive care of patients with non-communicable diseases.

S. No	Intervention	Recommendations
6	Formulate and enforce regulations	✓ Support the production and distribution of healthy foods. ✓ Promote local production and consumption of fruits and vegetables. ✓ Enforce labeling of composition (ingredients) of commercially produced or imported foods and drinks.
7	Production and consumption of organic agricultural products	✓ Encourage and promote livestock, poultry and fishery products to be well consumed by communities (not just for selling in the market to generate more income). ✓ Promote growing diverse food items. ✓ Promote the production and consumption of organic agricultural products. ✓ Strengthen the pre-post-harvest management system to prevent post-harvest loss and contamination of agricultural products by chemicals, aflatoxins, inorganic materials etc. ✓ Ensure livestock, poultry and fishery products are free from any contaminations by inorganic substances.
8	Safety and quality of foods	✓ Ensure the food markets are selling foods that are safe and of good quality to the public. ✓ Support the business community to bring organic food items to the market. ✓ Ensure small, medium and large-scale industries are not contaminating the environment by releasing heavy metals, toxins, chemicals, and other products that cause NCD. ✓ Ensure food and drink manufacturers are producing safe, healthy, nutritious, organic and quality food items.
9	Social and behavior change communication	✓ Create awareness and promote healthy diet. ✓ Promote public awareness on healthy dietary behaviors and physical activities for prevention and management of non-communicable diseases and risk factors. ✓ Develop and disseminate standardized health and nutrition messages on healthy dietary behaviors. ✓ Develop and disseminate appropriate, acceptable and easily understandable communication messages to increase consumption of fruits and vegetables, reduce that of soda beverages, saturated fats and trans-fatty acids (junk foods), reduce tobacco use, alcohol and khat consumption and increase consumption of healthy diets and physical activity.

S. No	Intervention	Recommendations
		✓ Encourage and advocate for media outlets to promote the prevention of nutrition driven non-communicable diseases. ✓ Conduct school-based health promotion to encourage healthy diet and physical activity to prevent childhood obesity among schoolchildren. ✓ Build the capacity of HEWs (both urban and rural) on diet, physical activity and NCDs. ✓ Promote continuation of breastfeeding for 2 years and beyond. ✓ Develop and implement region specific food guide pyramids for diverse cultural settings. ✓ Promote nutrition counseling for NCDs patients. ✓ Promote and support community level healthy dietary practices and behaviors. ✓ Develop and implement contextualized packages of nutrition and NCDs materials to be used by the community. ✓ Conduct high level advocacy for relevant decision makers on the importance of physical activity in preventing non-communicable diseases. ✓ Creating public awareness on the consumption of organic foods, prevention of contamination by chemicals, toxins, heavy metals, and eating trans-fatty acids & junk foods. ✓ Provide nutrition counseling services through mobile health and nutrition teams.

Nutrition service delivery for non-communicable diseases

- ✓ Ensure that food and nutrition in chronic non-communicable disease prevention and control is incorporated in the in-service training manuals; promote physical activity and healthy life style in different programs and workplaces at health facilities, schools, TVETs, government sector offices, mobile health and nutrition team outreach services, community (network) structures.
- ✓ Ensure the integration of nutrition assessment/screening and disease specific dietary counseling into different non-communicable disease clinics (diabetics, hypertension, cancer, etc) at the health facilities and through mobile health and nutrition teams.
- ✓ Advocate for external environments that enhance physical activity in health facilities, schools, youth centers, workplaces and in communities, and support urban planners to incorporate adequate green areas, walkways, bicycle lanes and recreation areas that will encourage appropriate physical activities.



- ✓ Ensure that surveillance of non-communicable diseases is strengthened, and health facilities are equipped with essential supplies, diagnostic equipment and other treatment inputs at health facilities and community (network) structures.
- ✓ Advocate for the production and distribution of healthy foods, local production and consumption of fruits and vegetables and for the enforcement of labeling of composition (ingredients) on commercially produced or imported foods and drinks at the health facilities, supermarkets, trade and industry sectors, mobile health and nutrition team outreach services, schools, NGOs, pastoral/farmer training centers and community structures.
- ✓ Promote the production and consumption of organic agricultural products, strengthen the pre-post-harvest management system to prevent post-harvest loss and contamination of agricultural products by chemicals, aflatoxins and other inorganic materials at the health facilities, schools, youth centers, through mobile health and nutrition teams and community structures.
- ✓ Ensure the food markets are availing foods that are safe and of good quality to the public; support the business community to bring organic food items to the market and food and drinking manufacturing industries are producing safe, healthy, nutritious, organic and quality food items at the trade and industry sectors, agriculture, private sector and community structures.
- ✓ Raise public awareness on healthy dietary behaviors and physical activities for prevention and management of non-communicable diseases and risk factors and disseminate standardized health and nutrition messages on healthy dietary behaviors at health facilities, sport facilities, schools, farmer/pastoral training centers, youth centers, through mobile health and nutrition teams and community structures.
- ✓ Promote and disseminate appropriate, acceptable and easily understandable communication messages to increase consumption of fruits and vegetables, reduce soda beverages, saturated fats and trans-fatty acids (junk foods), reduce tobacco use, alcohol and khat consumption and increase consumption of healthy diet and physical activity and encourage media engagement in the promotion and prevention of nutrition driven non-communicable diseases at health facilities, schools, mobile health, youth centers, sport facilities, farmer/pastoral training centers, youth centers, through mobile health and nutrition teams and community structures.

Indicators for people with non-communicable diseases

- ✓ BMI:- Percent of non-pregnant women of reproductive age who have a low body mass index (<18.5) or high body mass index (>25)
    - Calculation: (Number of overweight people x 100%) / number of people surveyed)
- ✓ Raised blood pressure
    - Percent of persons aged 18+ years with systolic blood pressure >=140 and/or diastolic blood pressure >= 90 mmHg.

- Calculation: (Number of people aged 18+ years with systolic blood pressure >=140 and/ or diastolic blood pressure >= 90 mmHg x 100%)/Number of people surveyed aged 18+ years)

✓ Raised total cholesterol

- Percent of persons aged 18+ years with cholesterol >5.0 mmol/L (190 mg/dl)
- Calculation: (Number of people aged 18+ years with cholesterol >5.0 mmol/L (190 mg/dl x 100%)/Number of people surveyed aged 18+ years)

Nutrition Sensitive Interventions

In order to address the overall burden of under nutrition in the Ethiopia, there is now a broad consensus on the need for nutrition sensitive programming to be rolled out in addition to nutrition-specific programming. Nutrition sensitivity is a concept that describes the degree to which an indirect intervention positively affects nutrition outcomes. For effective multi-sectoral collaboration and implementation, a clear articulation of the roles and responsibilities of the nutrition specific and nutrition sensitive sectors in the pastoral communities is essential. Once the specific roles and responsibilities of each sector are enumerated, joint planning, monitoring and evaluation of the nutrition interventions is important to better strengthen the multi-sectoral implementation of nutrition-sensitive and nutrition-specific interventions across sectors and achieve the shared goal of reducing malnutrition in the pastoral communities of Ethiopia.

Table 19: Nutrition sensitive interventions

S. No	Intervention	Recommendation
Livestock/Agriculture sector		
1	Enhance animal production and productivity	✓ Strengthen PTCs/FTCs to promote livestock husbandry and fishery. ✓ Provide farmers' access to livestock and crop inputs (improved breeds and seed), indigenous livestock species. ✓ Prevent, control, and eradicate livestock diseases and parasites and Enhance animal healthcare and extension services at all levels. ✓ Improve the quantity and quality of feed production and supply. ✓ Strengthen livestock production extension and training programs. ✓ Improve the grazing and rangeland management system, forage production and feed processing. ✓ Strengthen animal breed improvement research (dairy, beef, small ruminant, poultry, fish, etc). ✓ Strengthen production and productivity of animals and animal products (dairy, beef, small ruminant, poultry, fish, etc).

S. No	Intervention	Recommendation
		✓ Promote and support private sectors to engage in extension service production, feed processing, animal health, and breeding and extension services ✓ Promote improved animal husbandry and veterinary practices ✓ Support the engagement of the private sector in the provision of day-old-chicks and pullets (broilers, layers, dual purpose). ✓ Promote the private sector to engage in the poultry business. ✓ Support community-initiated fishery in small and large dams, reservoirs, rivers and in aquaculture with appropriate infrastructure to deliver fish to the community. ✓ Promote private business participation in input provision for fish production. ✓ Establish feed and fodder banks.
2	Enhance agro-ecology based farming systems and sustainable natural resource management	✓ Promote the cultivation of agro-ecology based crops. ✓ Promote sustainable farmland and wetland management practices. ✓ Protect natural resources through improved management practices (fodder production, mulching, composting, establishment of tree and fruit nurseries and planting). ✓ Identify and provide suitable farmlands for commercial farm businesses.
3	Increase year-round availability, access, and consumption of animal source foods	✓ Increase production and household consumption of meat, milk, fish, and eggs. ✓ Promote rearing of improved breeds of dairy cattle, small ruminants, and poultry. ✓ Support the establishment of milk collection centers and improved milk processing technologies at household level. ✓ Increase fish production and consumption. ✓ Promote appropriate technologies and infrastructure that increase fish production and utilization and reduce postharvest loss in fisheries and aquaculture. ✓ Promote small-scale beekeeping by women and other vulnerable groups. ✓ Improve pastoralists' access to water and safe fodders. ✓ Support/establish agro-business centers to promote production and consumption of poultry, fisheries, small ruminants, and cattle. ✓ Strengthen linkages with local markets and ensure that smallholder farmers and pastoralists have consistent access to input and produce markets.

S. No	Intervention	Recommendation
	Increase year-round availability, access, and consumption of fruits and vegetables, nutrient-dense cereals, and pulses	✓ Encourage use of small-scale irrigation for crop and forage production. ✓ Ensure access to quality fruit and vegetable seeds and other agriculture inputs. ✓ Support the establishment of community fruit and vegetable nursery and demonstration sites at FTCs. ✓ Promote homesteads and school gardening. ✓ Promote and support urban agriculture. ✓ Promote and support community-level production and consumption of fruits and vegetables. ✓ Promote production and consumption of bio-fortified vegetables (orange fleshed sweet Potatoes, iron-rich beans, etc.). ✓ Improve post-harvest handling and storage. ✓ Improve post-harvest food processing and ensure safety. ✓ Improve market linkage for fruit and vegetable produces. ✓ Promote the production and consumption of nutrient-dense pulses. ✓ Promote production of local complementary foods.
4	Promote and support cultivation and farming, resettlement	✓ Identify and provide suitable farmlands to the community and for commercial farming. ✓ Implement intra-regionally and voluntarily resettlement initiatives of pastoralists and agro-pastoralists in suitable, under-utilized areas. ✓ Support resettled pastoralists and agro-pastoralists to ensure food self-sufficiency and nutritional security. ✓ Support resettled pastoralists and agro-pastoralists with the social services such as schools and health facilities and other essential infrastructures such as water points, all weather roads, power, telecommunication, and housing. ✓ Improve small-scale irrigation systems and livestock water points in priority areas for better nutrition outcomes. ✓ Promote one water point, one fruit tree, one homestead garden and small ruminants for each household.

S. No	Intervention	Recommendation
5	Empower women to access productive resources and labor-saving technologies	✓ Promote gender sensitive pre-harvest and postharvest technologies. ✓ Promote simple, efficient and time saving food preparation and processing techniques. ✓ Encourage private sector on development and importation of appropriate gender-sensitive technologies. ✓ Support the establishment of child day care centers at the farms (gate/commercial farming) ✓ Ensure women's access to productive resources.
6	Strengthen capacity of agriculture sector to mainstream nutrition	✓ Capacitate extension workers on nutrition-sensitive and gender inclusive agricultural technologies and practices. ✓ Harmonize nutrition into the livestock/agricultural extension education curricula. ✓ Strengthen pastoral training centers (PTC) to demonstrate nutrition sensitive livestock/agriculture (NSLA). ✓ Establish nutrition structure at all levels with adequate job positions. ✓ Establish and strengthen nutrition section in both the livestock and agriculture units.
7	Intra-sectoral nutrition coordination	✓ Improve intra-sectoral nutrition coordination across livestock, agriculture, and the Disaster Risk Management Coordination Commission (DRMCC) at all levels. ✓ Establish joint agriculture sector nutrition linkage forum among the livestock and agriculture sectors at all levels. ✓ Support agriculture research options to address micronutrient deficiencies in the pastoral communities through bio-fortification.

S. No	Intervention	Recommendation
8	Promote appropriate technologies for post-harvest food processing, handling, preservation, and preparation for food diversification to ensure nutritious food utilization	✓ Identify and scale up best practices in the food processing, preservation, and preparation of animal food products such as meat, dairy and fish, crops, fruits and vegetables. ✓ Improve food handling, storage, and transportation of animal food products, crops, fruits, and vegetables.
9	Strengthen connections between agricultural risk management and resilience for pastoralists	✓ Promote the productive safety net program. ✓ Promote job creation programs in the rural areas. ✓ Enhance pastoral credit system for the improvement of livestock and agricultural investment ✓ Strengthen the livestock/agricultural insurance system.
10	Strengthen the use of social and behavioral change communications (SBCC) to promote nutrition	✓ Create nutrition awareness to religious leaders, clan leaders and community influential. ✓ Create awareness on the nutritional benefits of animal products, fruits and vegetables, legumes, and cereals. ✓ Provide nutrition education in schools and community-based organizations (CBOs). ✓ Promote school gardening. ✓ Promote the consumption of nutrient rich food items. ✓ Improve nutrition-sensitive livestock agriculture (NSLA) knowledge and practice of pastoralists/agro-pastoralists. ✓ Improve household knowledge and practices on dietary diversity. ✓ Use local media to address food taboos and cultural constraints. ✓ Integrate SBCC relevant for NSLA in all pastoralists and Development Agents(DAs)training sessions and manuals. ✓ Strengthen advocacy and sensitization on nutrition-sensitive livestock and agriculture at all levels.

S. No	Intervention	Recommendation
Education sector		
11	Promote and scale up school feeding programs	✓ Develop a training manual and build the capacity of education personnel (experts, leaders, teachers, PTAs, students, and other school communities) at each level (region, zone, woreda, and kebele). ✓ Support and promote gender-responsive school feeding in different modalities. ✓ In collaboration with the agriculture sector, encourage schools to promote and transfer sustainable and replicable school gardening models at the community level and link with school feeding and WASH programs. ✓ With community participation, provide menu-based locally produced food to school children.
12	Promote school health and nutrition (SHN) interventions through collaboration with other sectors	✓ Establish organizational structure at different levels for the implementation of SHN strategy. ✓ Establish and strengthen school health and nutrition clubs. ✓ Celebrate nutrition day in educational institutions. ✓ Improve gender-sensitive water, hygiene, and sanitation facilities in schools. ✓ Promote appropriate nutritional practices through different media (e.g., use of iodized salt, weekly intermittent iron folic acid supplementation, etc.). ✓ Implement nutrition services (deworming, targeted micronutrient supplementations). ✓ Promote girls' education to address nutrition related problems in women.
13	Improve nutrition workforce capacity	✓ Incorporate gender-responsive nutrition curricula into schools, teacher training colleges, TVETs, and non-formal education sector (such as in functional adult literacy programs). ✓ Encourage and support TVETs to produce extension workers capable of supporting the implementation and uptake of nutrition services at household level. ✓ Provide refresher training to the school community (teachers, students, parents) at different levels. ✓ Strengthen TVETs and local universities to conduct context specific operational research in nutrition related challenges. ✓ Support nutrition students for their community attachment.

S. No	Intervention	Recommendation
Disaster Risk Management and Coordination		
14	Early warning system	✓ Strengthen and scale up early warning and response systems for food and nutrition information, from the community to the regional and eventually the national level. ✓ Support the capacity of the monitoring and evaluation system to ensure credible and timely data collection and analysis.
15	Community participatory risk assessments and preparedness planning to support nutrition emergency response and recovery programs	✓ Develop, promote, and implement a comprehensive package of nutrition services and food items for emergencies and recovery periods in a timely fashion. ✓ Ensure early detection and management of acute malnutrition (severe and moderate). ✓ Integrate management of infant and young child feeding in emergency response interventions. ✓ Ensure the provision of adequate and appropriate information during emergencies. ✓ Ensure access to safe water, sanitation, and hygiene during emergencies.
16	Ensure early detection and management of acute malnutrition (severe and moderate)	✓ Undertake vitamin A supplementation and measles vaccination. ✓ Establish and strengthen supplementary and therapeutic feeding based on assessments.
17	Ensure capacity for coordinated emergency preparedness and response	✓ Facilitate the collection of reliable, quality, and timely data related to nutrition emergency. ✓ Ensure the capacity for mapping of the affected areas. ✓ Develop evidence-based Regional Emergency Preparedness and Response Plans (REPRPs) ✓ Strengthen the capacity for coordination of emergency nutrition response.
Water, Sanitation and Hygiene (WASH)		
18	Ensure dependable and sustainable water supply for human and livestock based on demand, supply, and efficiency	✓ Ensure access to clean and safe water (human, livestock). ✓ Promote the use of household water treatment practices. ✓ Promote safe and hygienic preparation and handling of food. ✓ Promote hand washing with soap/ash and water.

S. No	Intervention	Recommendation
		✓ Promote a safe and clean household environment (in relation to poultry and small ruminants and household waste management). ✓ Promote the construction and utilization of household and community latrines. ✓ Provide the water supply for sewerage facilities. ✓ Address extension system-supporting programs at kebele level, which are engaged in community drinking water and self-supply schemes. ✓ Prepare and implement a water safety plan for a sustainable rural/urban and/or human/livestock drinking water quality monitoring system. ✓ Strengthen the coordination of water, sanitation, and hygiene activities through the ONE WASH program. ✓ Ensure access to safe water, sanitation, and hygiene during emergencies.
19	Social security (safety net) program interventions	✓ Promote the implementation of gender-sensitive social safety net programs and other social protection instruments. ✓ Ensure that vulnerable households affected by malnutrition and/or nutrition emergencies are adequately targeted through safety net initiatives. ✓ Ensure that pregnant and lactating women are eligible for conditional support—to exclude their involvement in physical labor (cash for work). ✓ Ensure PSNP beneficiaries with children aged below two years also receive AMIYCN (Adolescent, Maternal, Infant, and Young Child Nutrition) messaging. ✓ Engage both males and females in complementary food cooking demonstrations for skill transfer at the household level. ✓ Appropriately integrate nutrition practices with social safety net programs to improve the nutritional status of women and children.

S. No	Intervention	Recommendation
20	Promote the provision of credits, grants, microfinance services, and other income-generating initiatives to support vulnerable groups, with primary focus on unemployed women and female headed households, to increase access to nutritious foods	✓ Improve the access of women's self-help groups to grants and credits. ✓ Promote appropriate nutrition and AMIYCN practices through women's self-help groups.
21	Increase access to basic nutrition services for all vulnerable groups	✓ Employ fee-waiver schemes for management of acute malnutrition. ✓ Expand basic preventative and curative nutrition services to pastoralist and other vulnerable areas. ✓ Improve nutritional services for the poor, the elderly, and persons with disabilities
Women, youth and children sector		
22	Ensure that women, adolescents, and children are given due consideration in nutrition services	✓ Collecting, compiling, and disseminating information on the nutrition situation of women, adolescents, and children. ✓ Ensure that the nutrition concerns of women, adolescents and children are addressed during the preparation of various regional strategies, development programs and projects.
23	Capacity building	✓ Provide training for all staff from nutrition implementing sectors and political leaders on optimal maternal, adolescent and child nutrition and care practices at regional, zonal, woreda and kebele levels. ✓ Provide training for members of women-based structures and associations at all levels on optimal maternal, adolescent and child nutrition and care practices

S. No	Intervention	Recommendation
Trade and industry sector		
24	Strengthen the capacity of the trade sector in the regulation of imported food items	✓ Capacitate the trade sector at regional, zonal, and woreda trade levels on the inspection and regulation of imported food items. ✓ Develop a guiding manual for inspection and regulation of food items. ✓ Capacitate staff of the Trade Practice and Consumer Protection Authority on the promotion and utilization of fortified foods.
25	Ensure that the quality and safety of imported food items are as per the national standard	✓ Conduct regular market surveillance to ensure the quality and safety of fortified products. ✓ Conduct regular inspections and monitoring of food processing factories. ✓ Strengthen the collaboration between the industry and regulatory sectors to support and facilitate the production of healthy foods
26	Advocacy services	✓ Develop an appropriate marketing strategy for healthy foods. ✓ Conduct awareness creation events for the private sector on nutrition-related requirements and standards for imported food items. ✓ Conduct awareness creation events for public/consumers on the benefits of fortified food. ✓ Promote the production of fortified foods (edible oil, salt, etc.).
27	Strengthen the capacity of the industry sector to support the production and distribution of fortified foods	✓ Provide training for staff for the Ministry of Trade and Industry on the national food fortification program.
28	Build industry capacity to the international standard to produce quality and safe fortified food (edible oil, flour, salt, etc.)	✓ Conduct industry mapping to identify and support small- and large-scale wheat flour and edible oil industries to produce fortified food products. ✓ Promote appropriate social mobilization and marketing strategy for food fortification. ✓ Ensure quality and safety of locally produced food items.

S. No	Intervention	Recommendation
29	Conduct awareness-creation events for the private sector on nutrition-related requirements and standards of locally manufactured food items	✓ Provide training on food fortification for food industries including quality control/quality assurance. ✓ Provide training for selected laboratories on standardized testing methodologies (private and public institutions). ✓ Formulate strategies and action plans that assist the food manufacturers to produce safe and nutritious food.
Finance sector		
30	Enhance the contribution of the government sector in financing the implementation of nutrition interventions	✓ Ensure public resources/budget is allocated for nutrition. ✓ Make disbursements in accordance with the approved budget for nutrition. ✓ Mobilize resources for nutrition. ✓ Evaluate the performance of the budget allocated for nutrition. ✓ Ensure resources allocated for nutrition are properly utilized. ✓ Establish a Nutrition Case Team or employ a nutrition focal person within the finance sector. ✓ Serves as a member of the various committees established at regional, and woreda levels.
The media		
31	Ensure understanding of nutrition-related policies, strategies and programs in the region and country among the general public	✓ Engage multi-sectoral nutrition coordinating bodies and technical committee members in policy dialogues and dissemination. ✓ Conduct advocacy and public dialogues for nutrition-related policy, strategies, programs, and legislations. ✓ Promote nutrition policy and practice among the public and policy makers. ✓ Identify and engage nutrition champions in nutrition-related policy messaging and implementation. ✓ Engage stakeholders for policy awareness, implementation, and influencing nutrition actions through dialogues. ✓ Promote utilization of nutrition evidence for policy input and dialogue ✓ Engage appropriate channels and influential actors to reach, inform, influence, capacitate, and motivate decision makers. ✓ Engage policy makers to enforce policies around the prevention of under nutrition and non-communicable and lifestyle related diseases.

S. No	Intervention	Recommendation
		✓ Sensitize and involve the private sector on implementation of the FNP objectives. ✓ Develop a nutrition communications strategy. ✓ Develop a nutrition communication toolkit to help policy implementation and public dialogue. ✓ Conduct media monitoring to study nutrition media coverage, quality, and impact.
32	Promote healthy eating and lifestyles	✓ Promote public awareness on healthy dietary behaviors and physical activities for the prevention and management of non-communicable diseases and risk factors. ✓ Develop and disseminate standardized health and nutrition messages on healthy dietary behaviors. ✓ Develop and disseminate appropriate, acceptable and easily understandable communication messages to increase consumption of fruits and vegetables, reduce that of soda beverages, saturated fats and trans-fatty acids (junk foods), reduce tobacco use, alcohol and khat consumption and increase consumption of healthy diet and physical activity ✓ Create awareness on the nutritional benefits of improved nutrition and social and economic consequences of malnutrition. ✓ Conduct high level advocacy on the importance of physical activity in preventing non-communicable diseases. ✓ Promote the consumption of fortified foods and bio-fortified crops. ✓ Improve household dietary diversity knowledge and practice of pastoralists. ✓ Promote appropriate adolescent, maternal, youth, child and infant nutrition practices.

Delivery modalities for nutrition sensitive interventions

- ✓ Promote and support animal production and productivity at PTC/FTC, animal clinics, grazing lands, at outreach sites, health posts, farms, and house-to-house.
- ✓ Promote and support agro-ecology based farming systems and sustainable natural resource management at FTC, outreach sites, grazing lands, mechanized farms, health posts, farm levels, and house-to-house.
- ✓ Promote year-round availability, access, and consumption of animal source foods, fruits and vegetables, nutrient-dense cereals, and pulses at PTC/FTC, animal clinics, grazing lands, at outreach sites, health posts, smallholder farms, and house to house.
- ✓ Advocate for land use policy at federal, regional, zonal, woreda and kebele levels.
- ✓ Empower women to access productive resources and labor-saving technologies at FTC, health posts, women group and community structures.
- ✓ Promote appropriate technologies for post-harvest food processing, handling, preservation, and preparation for food diversification to ensure nutritious food utilization at FTC, farmlands, large- and small-scale industries, and community structures.
- ✓ Strengthen connections between agricultural risk management and resilience for pastoralists at federal, regional, zonal, woreda and kebele level pastorals offices and FTCs.
- ✓ Promote the implementation of school feeding programs, school wash, school deworming, school gardening, nutrition club activities, mini media programming at primary and secondary schools and office levels.
- ✓ Promote to improve nutrition workforce capacity at the Ministry of Education, universities, colleges, etc.
- ✓ Promote community participatory risk assessments and preparedness planning to support nutrition emergency response and recovery programs.
- ✓ Ensure capacity for coordinated emergency preparedness and response at national, regional, zonal, woreda and kebele levels.
- ✓ Ensure dependable and sustainable water supply for human and livestock use based on demand, supply, and efficiency at community levels.
- ✓ Promote the provision of credits, grants, microfinance services, and other income-generating initiatives to support vulnerable groups, with primary focus on unemployed women and female headed households, to increase access to nutritious foods at community or kebele level.
- ✓ Build the capacity of the trade and industry sector on the regulation of imported food items to help ensure quality and safety of imported food items, support the production and distribution of fortified foods, produce quality and safe fortified food (edible oil, flour, salt, etc.) at national and regional levels.

- ✓ Conduct awareness creation events for the private sector on nutrition related requirements and standards of locally manufactured food items at industry level.
- ✓ Advocate for government's financial support for the implementation of nutrition interventions at all levels.
- ✓ Ensure understanding of nutrition-related policies, strategies and programs among the general public at national and regional levels using national and local media.

Multi-sectoral collaboration and sectoral implementation, reporting and accountability

Observations during the reconnaissance in the pastoral areas revealed that, with notably few exceptions, lack of leadership commitment and coordinated systems as well as shortage of human resources stand out as some of the biggest challenges undermining the endeavors of pastoral communities to fight malnutrition using the available resources. Ethiopia has recently adopted the Food and Nutrition Policy which emphasizes the need for multi-sectoral collaboration to improve nutrition-sensitivity of policies and programs in health, agriculture, education, social protection, trade and industry, among others and strengthen nutrition-specific interventions such as micronutrient supplementation, promotion of appropriate breastfeeding, complementary feeding and hygiene practices to ultimately tackle the consequences of under nutrition.

However, the emergent implementation of multi-sectoral nutrition programming at scale is fairly limited and it faced persistent challenges at national, regional, and local levels. This is because of the involvement of multiple line ministries, dispersed loci of control and dynamic networks of power and influence among actors which makes it difficult to govern exclusively through the formal multi-sectoral coordinating bodies established to address the problem [17]. The opportunities for collaboration notwithstanding, multi-sectoral nutrition programming has posed a number of challenges to those working at implementation level. Thus, there is an urgent need to address particularly the challenges in operationalizing effective multi-sectoral coordination platforms to fully support the implementation of high impact nutrition sensitive and nutrition specific interventions and advance national nutritional agendas in Ethiopia. For effective work, multi-sector collaboration in the pastoral communities should focus on joint planning and policy coherence, but the implementation, reporting and accountability shall remain within the domain of the sectors.

Table 20: Multi-sectoral collaboration for joint planning and policy coherence, and sectoral implementation, reporting and accountability

S. No	Intervention/ activity	Recommendation
1	Strengthen nutrition governance at all levels	✓ Sustain political will, accountability and commitment of implementing sectors and other decision makers for food and nutrition interventions. ✓ Strengthen the Regional Food and Nutrition Council (RFNC). ✓ Strengthen the Regional Food and Nutrition Technical Committees (RFNTC). ✓ Establish and strengthen zonal, woreda and kebele level food and nutrition coordination platforms. ✓ Review and approve the allocation of adequate food and nutrition budget from the government treasury for each sector and monitor its implementation. ✓ Create nutrition structure for each FNP implementing sectors.
2	Joint planning and policy coherence	✓ Ensure the inclusion of sector specific activities with budget in the annual plan of the FNP implementing sectors and monitor their implementation using preset food/nutrition indicators. ✓ Prepare joint multisectoral nutrition plans at all levels (kebele to federal) of coordination.
3	Sectoral implementation, reporting and accountability	✓ Ensure regular reporting and feedback mechanisms for sectoral (NOT multi-sectoral) food and nutrition implementation to report to the House of Peoples' Representatives at all levels. ✓ Prepare sectoral annual plans, performance and financial reports and submit/report to the House of Peoples' Representatives ✓ Prepare sectoral plan and reports to the Food and Nutrition Council. ✓ Mainstream nutrition as a priority agenda in all the implementing sectors and beyond.
4	Improve the capacity of all regional implementing sectors	✓ Strengthen the capacity of the nutrition coordination body Food & Nutrition Council) and nutrition technical committees at all levels through supervision and regular performance review meetings. ✓ Provide comprehensive and integrated in-service nutrition training for the staff of the implementing sectors.
5	Create an institutional arrangement	✓ Establish an appropriate structure (case teams and/or dedicated nutrition officer) for nutrition with dedicated staff at all levels that can carry out nutrition activities based on the various roles and responsibilities of the implementing sectors

Social and Behavior Change Communication (SBCC)

Social and behavior change communication (SBCC) interventions can play a determinant role to address malnutrition. As part of SBCC activities, proper nutrition counseling has already shown positive influence on child feeding practices in various settings. Women who delivered at health facilities had an improved rate of early initiation of breastfeeding and exclusive breastfeeding compared to women who delivered at home [18]. However, proper counseling services are not widely offered at health facilities in the pastoral communities of Ethiopia. The poor counseling services by health workers in these facilities is mainly explained insufficient training on MIYCF counseling, poor IYCF counseling skills, lack of time, unsupportive attitudes towards IYCF practices or a combination of some or all of these factors.

The behavior change interventions that are aimed at improving the nutritional status of the various population groups involve activities that are more than just educating individuals or delivering information about healthy dietary practices. They necessitate working with communities to understand local perceptions and constraints and ultimately identify ways of addressing nutritional problems. Traditionally, nutrition education programs have delivered information to mothers with the expectation that they would put into practice their newly acquired knowledge. The information delivered to them is often general and does not take the cultural context into account. As a result, the ability of nutrition education interventions to impact on growth—among other outcomes—has been inconsistent. Four elements inherent to behavior change programs that have had a positive impact on feeding practices are (1) changing behaviors (not just supplying information); (2) promoting improved behaviors, taking into account the target community's needs; (3) creative solutions; and (4) a comprehensive strategy with a communications component [19].

Table 21: Social and behavior change communication

S. No	Interventions	Recommendations
1	Ensure that the messages, materials, and methods of dissemination, whether interpersonal, group or mediated, are standardized and socio-culturally acceptable	✓ Tap into the local knowledge, religious and cultural practices. ✓ Design messages with the community including the religious/clan leaders, children, and youth. ✓ Closely work with the FNP implementing sectors and partners in mobilizing communities with the essential elements of SBCC.

S. No	Interventions	Recommendations
2	Build support for food and nutrition through advocacy	✓ Mobilize resource, support and build partnerships across sectors through program communication such as IEC materials in health facilities (posters, leaflets, brochures, charts), mass media campaign to promote nutrition, influential talks by religious leaders, opinion leaders and professionals, and evidence based community interventions (entertainment education), peer learning and personal testimonies. ✓ Promote the WHO CODE of marketing of breast milk substitutes.
3	Enhance the use of multiple media outlets to improve food and nutrition literacy	✓ Utilize mass media and social media ✓ Disseminate/broadcast key food and nutrition messages for individuals on diversified and healthy diets, lifestyles and optimal nutrition, physical activity, etc. ✓ Establish mechanism for sharing food and nutrition information and update timely. ✓ Strengthen the capacity of media personnel on food and nutrition basics. ✓ Explore and adopt new communication technologies to improve nutrition literacy.
4	Ensure institutional capacity for promotion of food and nutrition issues	✓ Strengthen the capacity of health facilities and health service providers on food and nutrition education, and services. ✓ Strengthen the capacity of schools and teachers on providing food and nutrition education, ✓ Strengthen the capacity of food and nutrient suppliers, and producers on providing information on safe, adequate, and quality food to customers. ✓ Strengthen the capacity of Farmer Training Centers on providing food and nutrition education and services.

S. No	Interventions	Recommendations
5	Enhance food and nutrition communication within the FNP implementing sectors	✓ Develop nutrition communication plan. ✓ Establish/strengthen food and nutrition clubs and school mini media. ✓ Promote food and nutrition education using school feeding programs as a platform. ✓ Promote school food and nutrition counseling services in and out of school. ✓ Ensure food and nutrition topics are well incorporated into teachers training curriculum. ✓ Provide training for food and nutrition handlers, producers, suppliers on food safety and quality (both public and private). ✓ Provide the necessary food and nutrition education and counseling kits for all health facilities ✓ Develop and disseminate SBCC tools, training manuals and guidelines/standards to health service providers, inspectors, regulators, food handlers, processors, and suppliers.
6	Improve nutrition literacy at community level through existing community networks and platforms	✓ Map existing community networks /platforms (WDGs, parent-teacher associations, women and youth associations, water committees). ✓ Enhance communication and facilitation skills and knowledge of community workers (HEWs, AEWs, WDGs, PTAs). ✓ Engage community influencers (clan leaders, religious leaders, elders, opinion leaders) to promote food and nutrition themes.
7	Ensure institutional capacity on awareness of food quality and safety along the values chain	✓ Build the capacity of food and drink manufacturers to produce fortified food with good quality and safety for targeted individuals. ✓ Develop and disseminate SBCC materials on food safety and quality (protecting food adulteration, misbranding, mislabeling, toxin contamination).

S. No	Interventions	Recommendations
8	Increase individuals' food and nutrition awareness to enhance optimal food and nutritional practices	✓ Disseminate/broadcast key food and nutrition messages for individuals on diversified and healthy diets, lifestyles and optimal nutrition, physical activity, etc. ✓ Use food and nutrition professionals, gate keepers, champions, and decision makers to disseminate appropriate food and nutrition messages for specific targets.
9	Improve knowledge and practice on clean and safe water for individuals and households	✓ Increase knowledge and practices of individuals on personal, food and environmental hygiene and sanitation. ✓ Promote water safety and quality. ✓ Promote personal hygiene and environmental sanitation.
10	Improve knowledge and practice of households related to food preparation, hygiene, and safety	✓ Develop and disseminate household specific food and nutrition SBCC material on consumption of diversified and nutrient dense food, food preparation and handling, household hygiene and environmental sanitation. ✓ Develop and disseminate area specific and culturally accepted recipe. ✓ Provide food and nutrition education to households on the consumption of culturally accepted diversified and nutritious diet.
11	Improve awareness and practice of households on food safety, healthy lifestyles, and balanced diet	✓ Develop a package of food and nutrition messages for regular dissemination. ✓ Allocate airtime and create magazine title for regular or daily updates on food and nutrition issues targeting households. ✓ Support households on the consumption of diversified and nutrient dense food, healthy lifestyles, and physical activity. ✓ Create awareness on food labeling, adulteration, misbranding, contamination (chemicals, heave metals, aflatoxins) and consumption of junk food and trans fatty acids.

S. No	Interventions	Recommendations
12	Promote effective delivery of nutrition messages to communities and households through building the capacity of frontline actors and social gathers	✓ Ensure food and nutrition messages are incorporated in the '*feaema*', clan, religious structures, and women development group/incentive-based community voluntary system training packages. ✓ Introduce performance-based incentive scheme to strengthen the incentive-based community voluntary system. ✓ Ensure the community structures such as *feaema*, clan, community, and religious leaders, Friday gatherings and pregnant women conferences (PWC) incorporate AMIYCN messages and husband engagement as part of their day to day discussions and actions for improved food and nutritional outcomes in the community. ✓ Ensure nutrition topics are incorporated in the integrated adult education curriculum.
13	Create public awareness on food and nutrition and healthy lifestyles using different channels	✓ Develop and regularly disseminate a package for food and nutrition messages targeting the community. ✓ Allocate airtime to provide regular updates on food and nutrition issues to the community. ✓ Broadcast/transmit messages on community consumption of indigenous, organic, and culturally accepted foods using different channels. ✓ Develop a strategy to promote and support consumption of food items that are edible for the community or those that are also adapted and consumed by other communities. ✓ Engage local media agencies in regular food and nutrition education and messaging. ✓ Promote and support the community on the consumption of diversified and nutrient dense food, healthy lifestyles, and physical activity, etc. through allocating airtime and creating magazine title for regular or daily updates.

S. No	Interventions	Recommendations
14	Promote optimal AMIYCN messages through traditional and innovative behavior change methods and channels	✓ Allocate airtime to provide regular updates on food and nutrition issues at community level. ✓ Identify appropriate channels and influential actors to reach, inform, influence, capacitate and motivate the public. ✓ Build the capacity of community level implementers (HEWs, AEWs, DAs, farmer groups, women and youth forums, teachers, and students) to promote positive behavior. ✓ Engage nutrition champions and influential actors in the dissemination of nutrition messages and policy-influencing activities. ✓ Develop a nutrition communication toolkit to support the rollout of nutrition related SBCC interventions.
15	Strengthen the capacity of nutrition actors at community and institutional levels on social and behavioral change communication	✓ Build the capacities of health workers, nutrition champions and influential actors on effective interpersonal communication. ✓ Build the capacity of the media, including school mini media, to own SBCC nutrition interventions and engage in the promotion of optimal nutrition practices. ✓ Conduct media monitoring to determine the quality and impact of nutrition coverage. ✓ Generate evidence to identify barriers, facilitators and behavioral determinants, social norms and traditions for optimal nutrition practices. ✓ Monitor and evaluate the impact of nutrition communication and social mobilization activities for program improvement. ✓ Map and harmonize existing nutrition communication multimedia materials to support both media and interpersonal communication in local languages. ✓ Identify appropriate channels and influential actors to reach, inform, influence, capacitate and motivate the public. ✓ Engage the media in promoting good nutrition practices among the public and fostering dialogue on nutrition among experts and the public. ✓ Establish nutrition and media taskforce. ✓ Provide nutrition training to journalists and conduct quarterly progress review. ✓ Document, share and scale up best practices of SBCC activities at all levels.

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Annex 1: Delivery Platforms for PCINS Interventions in the Pastoral Communities of Ethiopia

Delivery Platforms for PCINS Interventions in the Pastoralist Communities of Ethiopia

The nutrition services delivery platforms for PCINS interventions are organizations of people, institutions and resources to deliver nutrition services to meet the nutrition needs of the pastoral and agro-pastoral communities in Ethiopia. The 2013 Lancet Series on Maternal and Child Nutrition emphasizes the crucial importance of scale-up of effective nutrition interventions through various facility and community delivery platforms to improve the nutritional status of children and women. Most of the effective nutrition interventions involve mothers/caregivers and hence the delivery of the high impact nutrition interventions in the pastoral and agro-pastoral communities in Ethiopia need to be led by Community-led efforts. These will be the best option since the other alternatives (like mobile health and nutrition teams) are unsustainably and too expensive. Hence, bringing a new cadre of nutrition extension workers (NEWs) and incentive-based community volunteers (Experience from Community based animal health service (FAO) who can responsibly and specifically deliver nutrition interventions at the household level is timely. Such community led efforts will enhance the shift from a stress on detection and reporting of malnutrition by health extension workers (HEWs) to preventing malnutrition through supporting mothers and building their capacities at household level and ultimately ensure healthy growth of children. The context specific system or platform for delivery of the InteNSE services in the pastoralist and agro-pastoralist communities of Ethiopia are summarized in the following table (Table 2).

Table 22: Delivery platforms for PCINS Interventions in the Pastoralist Communities of Ethiopia

Contact points	Specific services
ANC	• Laboratory investigations • Iron and Folic acid supplementation • Counseling on one extra meal and rest during pregnancy • Counseling on healthy eating, diversified meal and use of iodized salt • Advice on Antenatal Care services • Deworming • Nutritional screening (If needed link to: TSF/ Food support, PSNP, reproductive health services) • Advise on ITN use for malaria endemic areas • Advice on early initiation of breast feeding and feeding of colostrum – Third Trimester • Avoidance of pre-lacteal feeding • Advice on exclusive breast feeding – third trimester • Advice on avoidance of alcohol, chat, cigarette

	• Advice on birth preparedness and complication readiness (preparation for safe delivery) • Advice on personal hygiene, environmental sanitation and infection prevention measures • Advice on danger signs during pregnancy • TT vaccination • Check and treat for malaria, anemia and STIs • Ultrasound investigations • Weight gain monitoring
Delivery	• Skin to skin contact • Delayed cord clamping • Assess for danger signs • Measure birth weight (within the first 1 hour) • Advice on personal hygiene and cord care • Kangaroo mother care (< 2000 g) • Counseling on two extra meal and rest during lactation • Counsel on optimal breast feeding (early initiation, feeding colostrum's, proper attachment and positioning, exclusive breast feeding, feeding on demand) • Counseling on healthy eating, diversified meal and use of iodized salt • Advice on use of ITN • Continue use of iron folate if not finished during pregnancy • Advice on Family Planning • Nutritional screening • Advice on exposing the child on direct morning and evening sunlight • Advice on delayed washing for at least 24 hrs after delivery to ensure warmth • Advice on danger signs and home care for the mother • Advice on danger signs and home care for the baby • Advice on extra care for low birth weight (LBW) or small babies and other vulnerable babies • Encourage birth registration • Refer for routine immunization

PNC and FP	• Counseling on two extra meal and rest during lactation • Counsel on optimal breastfeeding practices include exclusive breastfeeding for the first six months of life, followed by breastmilk and complementary) starting from six months of age, and continued breastfeeding for at least two years of age, feeding on demand • Counsel on proper attachment and positioning) • Counseling on healthy eating, diversified meal and use of iodized salt • Advice on use of ITN • Continue use of iron folate • Advice on Family Planning • Continue TT vaccination • Nutritional screening • Advice on exposing the child on direct sunlight • Advice on delayed washing for at least 24 hrs to ensure warmth • Advice on danger signs and home care for the mother • Advice on danger signs and home care for the baby • Advice on extra care for low birth weight (LBW) or small babies and other vulnerable babies • Advice on routine immunization • Growth monitoring and promotion (measuring weight and age, record, interpret, counsel) • Referral and linkage to appropriate nutrition/nutrition sensitive services
Healthy baby/ GMP	• Growth monitoring and promotion (measuring weight and age, record, interpret, counsel) • Check for child's and mother's anemia and treat **1-6 Months** • Exclusive breast feeding up to 6 months • Correct breast feeding; proper positioning and attachments, breast feeding on demand, empty one breast at a time, frequency of breast feeding • Screen for SAM • Management of Severe acute Malnutrition (SAM) • Management of Moderate Acute Malnutrition (MAM) • Link to food support, PSNP and routine IYCN • Advice on exposing the child on direct sunlight

	• Advice on use of ITN
	• Danger signs of the baby and home care
	• Discuss growth patterns with mother/involve parents care givers
	6-24 months
	• Counsel on optimal complementary feeding practice
	  ○ Continued BF at least to 24 months
	  ○ Timey initiation of age appropriate CF at 6 months
	  ○ Age appropriate feeding (diversity, frequency, amount, consistency, frequency and responsive)
	  ○ Responsive feeding
	  ○ Food hygiene (hand washing on critical time and proper storage of food)
	  ○ Discuss growth patterns with mother/involve parents care givers
	• Practical cooking demonstration
	• Advice on exposing the child on direct sunlight
	• Advice on use of ITN
	• Vitamin A supplementation
	• Iodized salt utilization
	• Screen for SAM
	• Management of Severe acute Malnutrition (SAM)
	• Management of Moderate Acute Malnutrition (MAM)
	• Link to food support, PSNP and routine IYCN
	• Danger signs of the baby and home care
	• Discuss growth patterns with mother/involve parents care givers
	For the Mother
	• Counseling on two extra meal and rest during lactation
	• Counseling on healthy eating, diversified meal and use of iodized salt
	• Advice on use of ITN
	• Continue use of iron folate
	• Advice on Family Planning
	• Continue TT vaccination
	• Nutritional screening and link to food support, PSNP
	• Referral and linkage to appropriate nutrition/nutrition sensitive services

Immunization	**0-6 months** • Counsel on optimal breast feeding (proper attachment and positioning, exclusive breast feeding, feeding on demand, breast feeding frequency • Advice on exposing the child on direct sunlight • Growth monitoring and promotion (measuring weight and age, record, interpret, counsel) • Screen for SAM • Management of Severe acute Malnutrition (SAM) • Management of Moderate Acute Malnutrition (MAM) • Link to food support, PSNP and routine IYCN • Counsel on danger signs for the baby **6 – 24 months** • Counsel on optimal complementary feeding practice o Continued BF at least to 24 months o Timey initiation of age appropriate CF at 6 months o Age appropriate feeding o Responsive feeding o Feeding frequency and diversity o Food hygiene (hand washing on critical time and proper storage of food) • Practical cooking demonstration • Vitamin A supplementation • Growth monitoring and promotion (measuring weight and age, record, interpret, counsel) • Nutrition screening • Management of Severe Acute Malnutrition (SAM) • Management of Moderate Acute Malnutrition (MAM) • Link to food support, PSNP and routine IYCN **For the mother** • Counseling on two extra meal and rest during lactation • Use of Iodized salt • Advice on use of ITN • Continue use of iron folate • Advice on Family Planning • Nutritional screening and link to food support, PSNP • Counseling on healthy eating, diversified meal • Check for child's and mother's anemia and treat

Sick baby clinic/ U5 clinic	• Assess, classify illness and treat according to the IMNCI algorithms • Diarrhea treatment with zinc and ORS • Counsel on feeding of sick child during illness and recovery • Nutrition screening • Counsel on optimal breastfeeding practices • Counsel on adequate complementary feeding from 6 to 24 months • Advise her to expose the baby to sunlight every day for 15-20 minutes • Check for the child's Vitamin A supplementation status and update if needed • Check for the child's de-worming and update if needed • Referral and linkage to appropriate nutrition/nutrition sensitive services
Early childhood/ preschool age	• Delivery of critical health care information – child feeding, visiting of health facility during illnesses • Counseling on early learning and exercises • Counseling on harmful traditional practices – link to community services • School based deworming • Use of iodized salt/fortified foods • Promote and demonstrate food diversification through school garden and nutrition clubs • Promote proper disposal of human, animal and environmental wastes • Promote access to safe potable water, sanitation and hygiene in schools and at home • Use of ITN in malarias areas • Nutrition screening • ECD; o Most delivered through home visits, group sessions in the community, or both and health facilities, o Contacts usually occurred weekly (emergency) and monthly in non-emergency situations, o Duration of interventions varied considerably between 6 weeks (emergency) to 2 years

School age/ Primary and secondary schools – school feeding programs	• Use of iodized salt/fortified foods • Iron folate supplementation • Nutrition counseling – food diversification and eating disorders, healthy food choice • Deworming for school and out of school adolescent girls • Use of ITN • Link with youth friendly services • Promote proper disposal of human, animal and environmental wastes • Promote access to safe potable water, sanitation and hygiene in schools and at home • Promote delay of early marriage and teenage pregnancy. • Nutrition screening • Prevent harmful traditional practices such as food taboos, female genital mutilation, commercial sex, and substance abuse (alcohol, Chat, cigarette) • Promote sanitary napkins for adolescent girls
Youth friendly health services	• Use of iodized salt • Iron folate supplementation • Nutrition counseling – food diversification, adequate energy, healthy food choices • Deworming • Use of ITN • Promote proper disposal of human, animal and environmental wastes • Promote access to safe potable water, sanitation and hygiene in schools and at home, hand washing practices • Promote delay of early marriage and teenage pregnancy • Prevent harmful traditional practices such as food taboos, female genital mutilation, commercial sex, and substance abuse (alcohol, Chat, cigarette) • Life skills trainings (such as assertiveness, negotiation skills, and decision-making, leadership and bargaining skills) • Nutrition assessment/screening • Promote sanitary napkins for adolescent girls

Emergency nutrition services – health center and health posts	• **Early detection and management of acute malnutrition**
	  ○ Screening (weight for height, MUAC, Edema)
	  ○ Management of Severe acute Malnutrition (SAM)
	• Exclusive breast feeding up to 6 months
	• Correct breast feeding; proper positioning and attachments, breast feeding on demand, empty one breast at a time
	• Management of Moderate Acute Malnutrition (MAM)
	• Link to food support, PSNP and routine IYCN
	• Advice on exposing the child on direct sunlight
	• Advice on use of ITN
	• Counsel on optimal complementary feeding practice
	  ○ Continued BF at least to 24 months
	  ○ Timey initiation of age appropriate CF at 6 months
	  ○ Age appropriate feeding
	  ○ Responsive feeding
	  ○ Feeding frequency and diversity
	  ○ Food Hygiene (hand washing on critical time and proper storage of food)
	• Practical cooking demonstration
	• Vitamin A supplementation
	• Iodized Salt utilization
	For adolescent girls
	• Provide treatment and support to adolescents with acute malnutrition as per national acute malnutrition guideline
	For the Mother
	• Counseling on healthy eating, diversified meal and use of Iodized salt
	• Continue use of iron folate
	• Advice on Family Planning
	• Nutritional screening
	• Use of ITN

Community services – targeted supplementary feeding programs (TSF), PSNP, HDA, pregnant women conference, etc	• Advice on one extra meal and rest during pregnancy and lactation • Advice on healthy eating, diversified meal and use of iodized salt • Advice on Antenatal Care services • Advise on ITN use for Malaria endemic areas • Avoidance of pre-lacteal feeding • Advice on Optimal breast feeding (early initiation, proper attachment and positioning, exclusive breast feeding, feeding on demand) • Iodized salt/fortified foods • Advice on use of ITN • Continue use of iron folate • Advice on Family Planning • Advice on exposing the child on direct sunlight • Growth monitoring and promotion • Practical cooking demonstration • Advice on timely visit of health facility illness. • Advice on food hygiene (hand washing on critical time and proper storage of food) • Advice on pre-conceptional supplementation of folic acid • Advice on women empowerment • Advice on important of deworming
Health facilities – Hospitals and health centers	• Nutrition screening and growth promotion • Integrate nutritional assessment, counseling and support into HIV/AIDS, TB and other infectious diseases health services • Integrate nutritional assessment and disease specific dietary counseling into different non-communicable disease clinics (diabetics, cancer, hypertension, heart diseases, liver diseases, kidney diseases) • Promote healthy dietary behavior, lifestyle and physical activities • Create community facilities such as gym to promote healthy lifestyle

Refugee camps/ IDPs	• Nutrition screening
	• Promote healthy dietary behavior, lifestyle and physical activities
	• Food supplementation
	• **Early detection and management of acute malnutrition**
	  ○ Screening (weight for height, MUAC, Edema)
	  ○ Management of Severe acute Malnutrition (SAM)

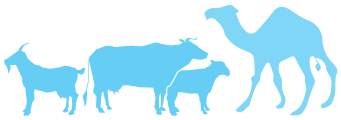
PTC/FTCs	• Promote nutrition-sensitive agriculture (NSA) knowledge and practice of pastoralists/agro-pastoralists using Behavioral Change Communication (BCC) • Promote diversified agricultural production for DD • Promote diversified income source for better DD • Women empowerment • Organize cooking demonstrations • Local production of complementary foods • Promote livestock husbandry and fishery • Promote dietary diversification • Promote consumption of animal source foods • Joint nutrition planning with the HEWs and kebele administration
Women/Youth Associations	• Promote nutrition knowledge and practice of pastoralists/agro-pastoralists using Behavioral Change Communication (BCC) • Promote the mainstreaming of adolescent, child and maternal nutrition into the agenda of the implementing sectors • Promote nutrition implementing sectors and political leaders on optimal women, adolescent and child nutrition and caring practices at regional, zonal, woreda and kebele levels
Religious/clan establishments	• Deliver AMIYCN message • Promote husband engagement in child feeding • Create awareness on additional meals during pregnancy, lactation • Create awareness on family support workload reduction during pregnancy and lactation
Community structures/ kebeles	• Deliver AMIYCN message • Promote husband engagement in child feeding • Create awareness on additional meals during pregnancy, lactation • Create awareness on family support workload reduction during pregnancy and lactation
Mosques/Friday gatherings	• Deliver AMIYCN message • Promote husband engagement in child feeding • Create awareness on additional meals during pregnancy, lactation • Create awareness on family support workload reduction during pregnancy and lactation

Trade/business associations/ industrial parks	• Create awareness on nutrition-related requirements and standards for imported food items • Create events for public/consumers on the benefits of fortified food • Promote the production and distribution of fortified foods • Promote access to time and labor-saving technologies • Create community facilities (such as gym) to promote healthy lifestyle
Mainstream/ social media	• Promote nutrition literacy • Promote healthy eating and lifestyles • Promote nutrition-related policies, strategies and programs • Promote multi-sectoral collaboration for nutrition • Promote AMNICY nutrition messages • Promote food quality and safety along the food value chain • Promote WASH messages • Promote reduction of workload during pregnancy and lactation • Promote messages that discourage alcohol drinks, drugs, chat and tobacco use
Water points and grazing places	• Provide child, adolescent and maternal nutrition information • Promote nutrition knowledge and practice of pastoralists/agro-pastoralists • Create awareness on nutrition and AMIYCN • Community mobilization for AMICN • Promote WASH messages
Private health facilities	• Promote nutrition messages during any visit • Provide nutrition services during ANC, PNC, delivery and immunization • Provide VAS and deworming services • Facility based GMP

Mobile health and nutrition teams	• Provide emergency and developmental nutrition services
	  • Growth monitoring and promotion
	  • Nutrition screening
	  • Free distribution of IFA
	  • VAS
	  • Deworming

Model Households/ TBAs	• Nutrition screening for 6 – 59 months old children • Measuring birth weights for home deliveries • Nutrition screening /mother led MUAC screening /

Pastoral/farmer training centers	• Cooking demonstration • Back yard gardening • Small animal raring including chicken
Civic societies	• Deliver AMIYCN message • Promote husband engagement in child feeding • Create awareness on additional meals during pregnancy, lactation • Create awareness on family support workload reduction during pregnancy and lactation
Farmer training center	• Promoting the production and intake of MN rich foods including biofortified crops such as OFSP, iron fortified beans, QPM • Increase HH availability and access to MN rich foods • Promote consumption of nutrient dense foods through nutrition education • Generate income from the sale of products



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