Save the Children

HIDDEN HUNGER IN SYRIA

A look at malnutrition across Syria, with a focus on under-twos

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Acknowledgements

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Cover photo: Yara*, 2 lives in a displacement camp in northern Idlib, taken on 5 August 2020. Photo by Ahmad Al Haj Wali / Hurras Network — Save the Children partner organisation.

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CHAPTER ONE: SUMMARY

MORE THAN 10 YEARS OF CONFLICT

Almost ten years of destructive conflict in Syria has hit those who are least responsible the hardest – children. From a nutrition and childcare perspective, infants and young children are particularly vulnerable to malnutrition, illness and death in Syria. With the crisis far from over, they need immediate protection and support.

Yet nutrition programming has long remained underfunded and overlooked in the Syrian response because rates of acute malnutrition (wasting) have remained within what are considered acceptable levels. But it is not just wasting that is a problem. In Syria today, at least one in eight children are stunted. The rates of stunting in Syria are anything but acceptable, but rather a major public health issue whose devastating effects will last for generations unless urgent action is taken. One out of every three pregnant women are suffering from anemia and other micronutrient deficiencies, and at least 51,000 are acutely malnourished — and rising. A malnourished pregnant woman has a higher likelihood of giving birth to a low birth weight infant, who in turn has a poor start in life and is likely to grow up stunted.

Among other causes, suboptimal infant and young child feeding (IYCF) practices (such as poor dietary diversity and early cessation of breastfeeding) are a key cause of the stunting that is robbing children in Syria of their futures. Infant and Young Child Feeding in Emergencies (IYCF-E) refers to the area of humanitarian aid concerned with protecting and supporting recommended IYCF practices during times of crisis. These recommendations are in place because strong scientific evidence shows being fed in this way maximizes children's healthy growth, development and survival, and benefits mothers, families, communities and economies too. Both breastfeeding and complementary feeding are highly effective, evidence-based interventions during the first 1,000 days which save lives and are critical for the prevention of malnutrition. In fact, breastfeeding is the single most effective intervention for the prevention of deaths in children under five years old; its protection and promotion have been determined to be a matter of human rights for mothers and children. Complementary feeding is also a highly effective intervention, ranking third amongst interventions to prevent child mortality across the globe. The numerous challenges faced by children and their caregivers in Syria for a prolonged period of time significantly increase the risk levels for long term physical, cognitive, and psychological effects. It is time to refocus our attention on the large numbers of children in Syria who are in the process of becoming undernourished, and in whom harmful effects of the causes of wasting and stunting are already present. Immediate, comprehensive and multisectoral services which support the First Thousand Days are urgently needed to protect the survival and wellbeing of infants and young children, their caregivers and pregnant women in Syria.

RECOMMENDATIONS

- Invest in multisectoral efforts to improve the availability, accessibility, affordability and consumption of safe and nutritious complementary foods.
- Do not request or permit blanket distributions of breastmilk substitutes, other milk products or feeding equipment. Any intercepted donations should be confiscated and reported to the nutrition sector leads.
- Prioritize the improvement of varied diets of households, rather than sole reliance on food rations.

Hiyam laying down in the tent where she was born in a displacement camp in North East Syria, taken on 23 August 2020. Photo by Muhannad Khaled / Save the Children

‘ The last time I had a piece of fruit was more than two months ago. When I ask my parents to buy us some, they say we can barely afford food. ’

Noura*, 10

CHAPTER TWO: CONTEXT

COVID-19 AND MALNUTRITION

Integrating life-saving nutrition interventions into humanitarian response is crucial, particularly during the context of COVID-19. Services to protect, promote and support optimal age-appropriate and safe complementary foods and feeding practices should remain a critical component of the programming and response for young children in the context of COVID-19.

Although relatively few cases have been reported of infants confirmed with COVID-19; infants are still infectious and contagious and breastfeeding is one of the most effective ways to ensure their health and survival. Considering the known benefits of breastfeeding and the limited evidence we have that the COVID-19 virus is not present in breastmilk; all international guidelines advise that breastfeeding should continue, while applying all the necessary precautions whether infants or mothers were suspected or confirmed to have COVID-19 infection.

The COVID-19 response should also take into account where malnutrition and other risk factors may cause additional vulnerability, this is particularly important in the context of Syria; recent HNO data shows that chronic malnutrition is at its highest rates, with almost 500,000 children suffering from stunting[1], maternal malnutrition has increased five-fold compared to last year[2] and increasing trends of acute malnutrition has also been observed among internally displaced children and mothers. This combination of malnutrition, disrupted health systems and poor access to health care due to ongoing hostilities, in addition to poor WASH conditions and overcrowded IDP camps makes the situation extremely dangerous for mothers and young children in North West and North East Syria.

Although there is little data on the impact of COVID-19 on nutrition status of children under five and Pregnant and Lactating Women (PLW) in regards to infection rates, the programmatic impacts of COVID in addition to the failing economic situation, serious food insecurity, and decreasing access to health services, could have dire impacts on the nutrition situation Save the Children counsellors are now intensifying promotion of safe hygiene behaviors to reduce risk of transmission of COVID-19, working with pregnant and lactating mothers on how to protect themselves and others and providing counselling on safe infant feeding and appropriate IPC measures to prevent COVID-19 virus transmission in case of suspected or confirmed cases. While different activities were adapted to remote modalities and contextualized counselling package for suspected and confirmed cases is being rolled out; SCI is also working towards an integrated COVID-19 nutrition response based around the three pillars of supporting access to nutritious food, protecting, promoting and supporting IYCF, and maintaining essential health and nutrition services.

As the largest and most complex crisis of our time enters its tenth year of unrelenting conflict, parents across Syria face unimaginable challenges in raising and caring for the nation’s youngest. In 2020, approximately 4.6 million Syrians were in need of nutrition assistance — 74% were under the age of five.[3] Families have been repeatedly uprooted and find themselves living in overcrowded camps, collective shelters and host communities far from home. Amongst those who fled in 2019 were approximately 248,000 (4%) pregnant women in critical need of maternal and newborn care services, including infant and young child feeding support. Yet almost half the health facilities are either partially functional or not at all. Outbreaks of infectious diseases, to which pregnant women and young children are particularly vulnerable, are common. The destruction of civilian infrastructure continues to limit access to safe shelter, basic services and opportunities to make a living. Estimates from 2015 revealed that 83% of people lived below the poverty line – recent indications suggest that the situation has since worsened.[4]

With the crisis far from over, civilian displacement continues, with families experiencing devastating losses and trauma as they are once again caught up in active conflict in both North Western and North Eastern parts of the country. The current displacement of almost one million people[5] within the space of three months in North Western Syria is the largest since the beginning of the war and deeply concerning.[6] Around 80% of those fleeing the bombings and brutal, indiscriminate violence are women and children, with many forced to sleep in the open under horrific conditions because camps are full and services vital for their survival are overwhelmed.[7, 8] Acute malnutrition of displaced pregnant and breastfeeding women has spiked to over 20%.[9] In relatively more stable areas, such as Southern Syria, the ten years of conflict have ravaged the economy and eroded communities’ resilience to such an extent that families continue to face daily, stressful challenges.

Fatmah gives water to her daughter Amina, in their tent in a displacement camp in North East Syria, on 28 July, 2020. Photo by Muhannad Khaled / Save the Children*

CHAPTER THREE: BASIC CONCEPTS

NUTRITION IS A FUNDAMENTAL RIGHT

WHAT IS MALNUTRITION?

Malnutrition means having too little or too much to eat or not eating the right foods. In more technical terms, it is condition which occurs when a person's nutrient and energy intake does not meet, or exceeds, their individual requirements for growth, immunity and organ function. Malnutrition manifests itself in many forms, which can broadly be categorized as overnutrition, undernutrition and micronutrient related malnutrition.

When a child doesn't have enough to eat, doesn't eat enough of the right things, or is unable to use food they do eat, this results in undernutrition – a condition linked to almost half of all deaths of children under five each year[10].

Although these different types of malnutrition tend to prompt different programmatic approaches, it is important to realize that a child may be both wasted and stunted at the same time, pass from one condition to the other over time, and accumulate risks to their health and life through their combined effects.[11] It is becoming increasingly clear that children who are stunted are more likely to become wasted,[12] and vice versa.

The most visible forms of undernutrition are wasting and stunting.

- **Stunting** is a form of growth failure which develops over a long period of time when children are chronically deprived of essential nutrients, health and care during the first 1,000 days of their lives. As a result, their bodies and brains are prevented from reaching their full potential. Stunting is identified by measuring whether a child is too short for their age – although the consequences are far more severe than simply being short, such as a compromised immune system. Stunting is also known as chronic malnutrition, although this is only one of its causes.[13] Currently, almost half a million children suffer from stunting in Syria.[14]
- **Wasting** in children or adults occurs when they rapidly lose weight (or fail to gain weight normally) and become too thin for their height, usually due to acute food shortages, severe illness or both. Deterioration can happen rapidly and there is an increased risk of death. Wasting is also known as acute malnutrition. Recent reports reveal almost 137,00 children under five in Syria are facing life threatening risks and require immediate treatment for acute malnutrition, and that rates of maternal malnutrition have increased five-fold among pregnant women in the past year.[15]
- **Micronutrient deficiencies** are caused by a lack of essential vitamins and minerals (known as micronutrients) needed for the proper functioning of the human body. An example of a micronutrient deficiency is anemia (caused by a deficiency in iron), which affects over 30% of pregnant women and one in four children aged 6 – 59 months in Syria today.[16]

‘ I haven't had any apples, oranges or bananas for more than three months. Yesterday, I went to the market with my mother, and I found a peach on the ground. I cleaned it with my hands and ate it. ’

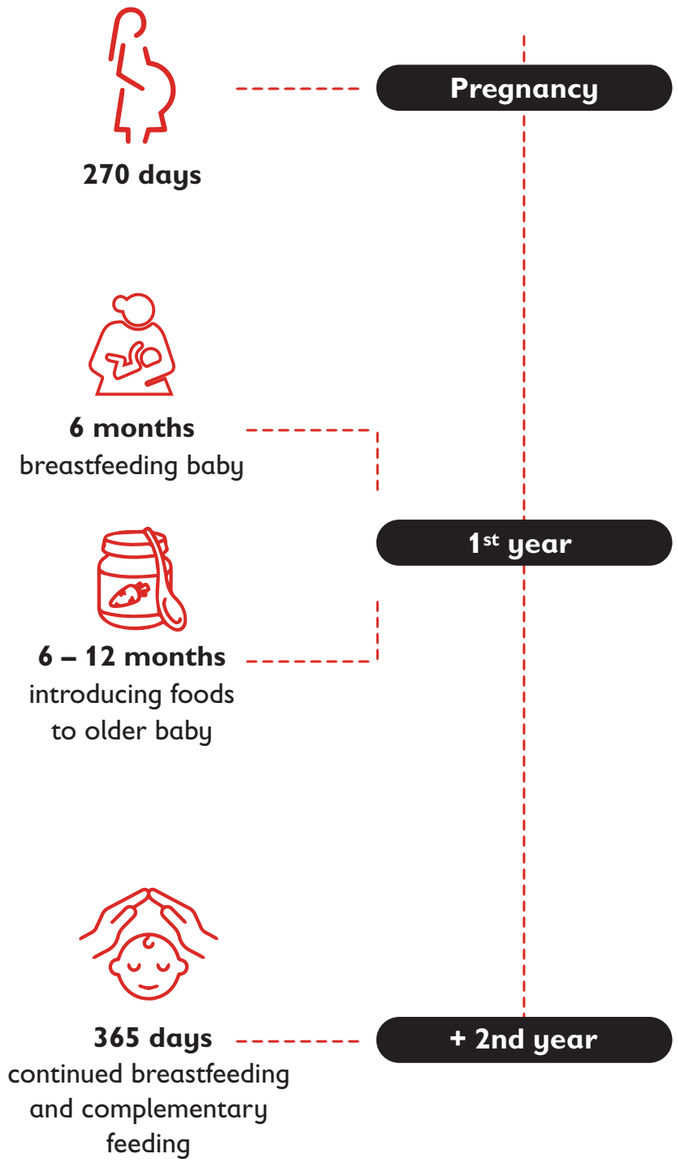
Ali*, 5,

Responding to a question by Save the Children about the last time he has had access to fruit.

WHAT ARE THE FIRST 1,000 DAYS?

The period of time from when a child is conceived until their second birthday is a critical time of both vulnerability and opportunity during which their body and brain[17] develop rapidly, and the foundations for lifelong heath are laid. How well or poorly mothers and children are nourished and cared for during this time has a profound impact on a child's ability to grow, learn and thrive.[18] When children start their lives malnourished, the damage done is often irreversible by the time the First Thousand Days are over.

Figure 1: Timeline of the first one thousand days



WHAT IS INFANT AND YOUNG CHILD FEEDING (IYCF)?

Infants should be put to the breast within one hour of birth, are then exclusively breastfed for the first six months of life (no food or liquid other than breastmilk) and continue to receive breastmilk for two years or more[19]. It is also recommended for age-appropriate foods – known as complementary foods – to be introduced after six completed months of age. Together, these are known as infant and young child feeding (IYCF) practices. These recommendations are in place because strong scientific evidence shows being fed in this way maximizes children's healthy growth, development and survival, and benefits mothers, families, communities and economies too. In fact, breastfeeding is the single most effective intervention for the prevention of deaths in children under five years old; its protection and promotion have been determined to be a matter of human rights for mothers and children.[20] Infant and Young Child Feeding in Emergencies (IYCF-E) refers to the area of humanitarian aid concerned with protecting and supporting IYCF practices during times of crisis. This support is critical for the survival and protection of children under two and a concern for all sectors, not only nutrition.

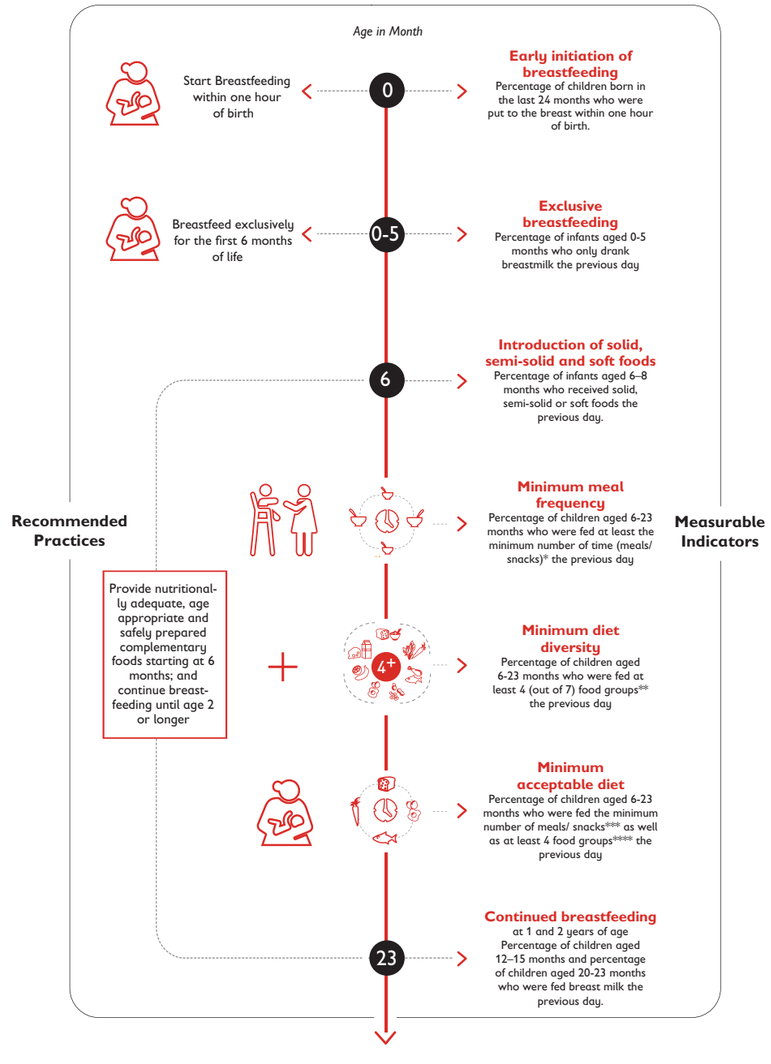


Figure 2: IYCF recommended feeding practices[21]

CHAPTER FOUR: FOOD SECURITY

NUTRITION AND FOOD SECURITY

Inadequate dietary intake, household food insecurity, inadequate care and feeding practices are all immediate causes and underlying drivers of maternal and child undernutrition. Ensuring mothers and children have access and are able to consume nutritious food is vital to prevent long-term damage due to malnutrition, and help children grow, develop and learn to their full potential.

As the Syrian crisis moves into its tenth year, the food security situation in Syria continues to deteriorate, with a total of 9.8 million people in need, the number of food insecure people increased from 7.9 million to 9.3 million during the first 6 months of 2020. The ongoing conflict, prolonged displacement, destruction of agricultural infrastructure, limited livelihoods opportunities, and the recent collapse of the Syrian pound are all factors that have severely affected food security. High inflation and currency depreciation have already reduced purchasing power for the most vulnerable households and resulted in adoption of negative coping mechanisms including relying on less preferred and less expensive foods, limiting portion sizes, and restricting consumption for adults in order to feed younger children.

According to the Global Report on Food Crises (WFP,2020), Syria was categorized as one of the 10 countries constituting the worst food crises in 2019 with at least 35 per cent of its population in a state of food crisis. The coronavirus pandemic throws additional challenges and pressures onto already strained health system and fragile economy, in addition to interrupted access to health and nutrition services; COVID-19 and related restrictions are expected to exacerbate existing household food insecurity, disruptions in food systems may limit the availability of and access to nutritious foods, increase food prices making nutritious foods unaffordable, and increase the availability and/or reliance on cheap staple (cereals, roots and tubers) and nutrient-poor ultra-processed foods. Such disruptions may affect the quality of diets and impact the nutritional status of women and newborns. In food insecure households, COVID-19 may also exacerbate discriminatory gender and social inequalities around food with adverse impacts on the nutritional status of women.[22] A recent REACH assessment (Aug 2020) showed that food was reported as top priority need in both NWS and NES areas, households in 75 per cent of assessed informal settlements (NES) reported not have enough food. Diet quality is negatively affected by food insecurity, even at moderate levels of severity. People who experience moderate or severe food insecurity consume less meat, and fewer dairy products and fruits and vegetables, than those who are food secure or mildly food insecure. Food insecurity can worsen diet quality and consequently increase the risk of various forms of malnutrition, potentially leading to undernutrition as well as overweight and obesity.[23] Studies worldwide confirm that poor dietary diversity in maternal and young child diets is a significant predictor of stunting. After the first 1,000 days the effects of stunting are irreversible, highlighting the importance of this window of time. Therefore, interventions aimed at improving maternal, infant and young child nutrition, in particular dietary diversity of pregnant women and children 6-23 months (in addition to breastfeeding) should be prioritized to reduce the burden of chronic malnutrition amongst a population.

As the causes of malnutrition in Syria are complex and ranging from direct and underlying drivers; and as the nutritional status of the most vulnerable population groups is likely to deteriorate further due to the health and socio-economic impacts of COVID-19; it is crucial that any food security response considers clear nutrition objectives as a central pillar. Save the Children is currently working with an integrated FSL/Nutrition approach focusing on the first 1,000 days, and looking at improving IYCF practices while also increasing access to a nutritious diversified diet. A large body of evidence demonstrates how, while cash transfers can often support improvements in food security and dietary diversity, unless they are complemented with additional interventions, they have typically not led to significant improvements in final nutrition outcomes, such as stunting and wasting.[24]

‘A few days ago, my brothers and I went to the market just before it is closed. The greengrocers were throwing away the rotten vegetables and fruits. We gathered some and took it home. My brother who is four years old ate it and now he is sick because of the apricot he ate.’

Sara*, 13

Ahmad, 1 year and 2 months old, sitting in the tent his family was displaced to in a camp in a village in northern Idlib, North West Syria, taken on 5 August 2020. Photo by Save the Children partner organisation Hurras Network.*

CHAPTER FIVE: INFANTS AND YOUNG CHILDREN

WHY ARE THEY PARTICULARLY VULNERABLE IN SYRIA

Nine years of destructive conflict in Syria has hit those who are least responsible the hardest – children. From a nutrition and childcare perspective, infants and young children are particularly vulnerable in Syria.

Children are at increased risk of malnutrition, illness and death – especially in emergencies. Babies are born highly dependent on their caregivers, with very specific nutritional needs and underdeveloped immune systems. As temperatures drop below zero during Syria's harsh winter months, displacement becomes particularly dangerous – and sometimes fatal – for the youngest. Illness, a lack of proper nutrition, and inappropriate care practices during these early years can have profound and lifelong consequences on their health, educational attainment, and overall wellbeing. The younger they are, the more vulnerable they are.

Too few children in Syria are benefiting from the protection offered by breastfeeding. If children are breastfed, breastmilk fully meets their nutritional needs for the first six months of life and continues to provide healthy and safe nutrition well into toddlerhood. It also provides children with comfort, connection, pain relief and immune support, protecting them from the worst of the emergency's conditions. Immune support is vital now that diseases are far more common in Syria, and children's exposure is heightened by the frequent displacement their families are subjected to, often to overcrowded and unsanitary conditions.

The lifesaving protection offered by breastfeeding is strongest if children are breastfed as is recommended by WHO and UNICEF. Yet 64% of newborns in Syria are put to their mother's breast too late, and only 28% of infants are exclusively breastfed for the first six months of life.[25] In some areas, the rates are even lower; findings from an assessment conducted in Dara'a show that just 3% of infants receive the

Too few children benefit from appropriate breastfeeding practices.

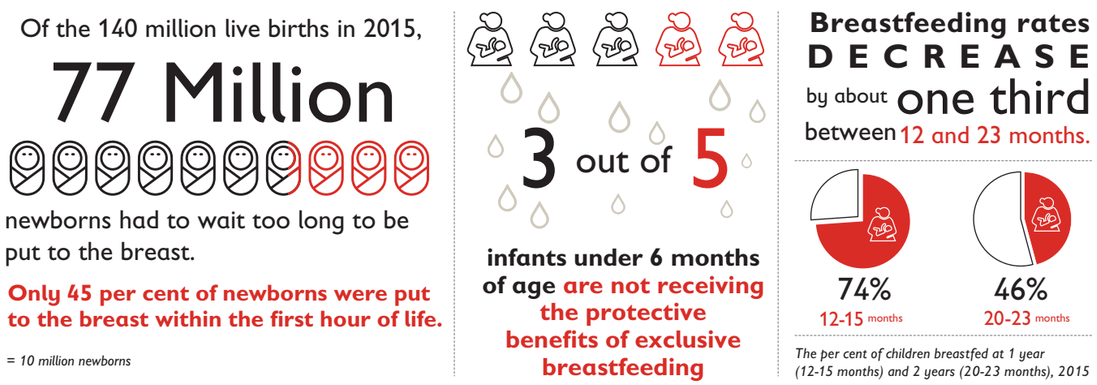
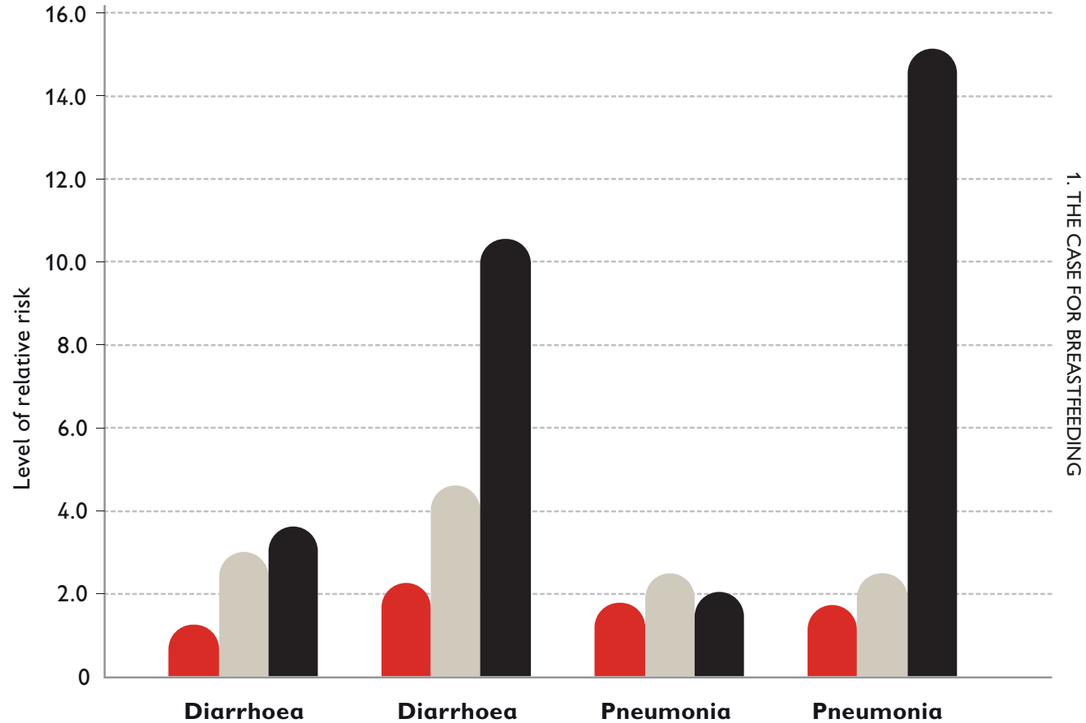


Figure 3: Too few children benefit from appropriate breastfeeding practices.[33]

Figure 4: Children in poor families who are not breastfed face a far greater risk of dying from pneumonia and diarrhoea[34]



protective effects of exclusive breastfeeding in some communities.[26] By the time children in Syria are one year old, just 47.5% are still breastfed.[27]

High rates of artificial feeding have increased children's vulnerability in Syria. Before the conflict, it was fairly common for parents in Syria to feed their babies infant formula.[28] This practice has become far more dangerous since the situation inside Syria has changed so drastically. Yet years of aggressive marketing and influencing of parents and doctors by the formula industry[29] mean that beliefs and practices have been slow to adapt to the new reality. Dependent on expensive products that often can't be safely prepared, formula-fed children in Syria are particularly vulnerable to shocks to the system and at high risk of malnutrition. Babies who aren't breastfed at all are in the greatest danger. Having lost the critical immune protection offered by breastmilk, they are now in an environment that is far more dangerous, with far greater exposure to disease. They are more likely to fall ill and, when they do, it is harder for them to recover.

In particular, non-breastfed children are vulnerable to pneumonia and diarrhea. Outbreaks of diarrheal disease are commonly recorded during Syria's summer season, and have been associated with peaks of severe acute malnutrition.[30] Estimates indicate that, globally, one third of all respiratory infections and half of all cases of diarrhea could be avoided if all children were breastfed.[31] Where in the past an episode of diarrhea may have resulted in a few more trips to the pediatrician's office, the erosion of Syria's healthcare system means that an otherwise treatable disease can now be fatal.

Between 6 and 23 months a child's nutritional needs are greater per kilogram of bodyweight than at any other time of life,[32] making them especially vulnerable to malnutrition at this age. As children grow, their bodies and brains depend on good nutrition for healthy growth and development. Once they reach six months of age, complementary foods need to be introduced in addition to breastmilk or a breastmilk substitute (BMS) for their nutritional needs to be met. To meet a growing child's needs, these complementary foods must meet specific requirements in terms of nutrients, diversity, safety, quantity and the manner in which they are fed. Young children depend on their caregivers to interpret danger (e.g. from cooking fires, poisons and unhygienic foods) and to support them with eating. If this vulnerable phase of transition is not managed well, it commonly results in illness and malnutrition.

CHAPTER SIX

CHALLENGES AND THEIR CONSEQUENCES

Malnutrition in Syria has many different causes working at different levels. Access to quality food, healthcare, water, sanitation and hygiene (WASH), protection, education and skilled IYCF support are all important. A common cause across all forms of malnutrition is a suboptimal diet, including inadequate breastfeeding for babies.35 To protect children in Syria, it is therefore important to understand why IYCF practices are often inadequate in Syria, what the consequences are on the lives and futures of Syria's youngest, and what can be done about it.

COMPLEMENTARY FEEDING

The complementary feeding period is a critical period to prevent all forms of malnutrition. Complementary Feeding is a proven intervention which can significantly reduce stunting in the first two years of life[36] and prevent 6% of deaths amongst children under 5.[37]

Introducing a baby to their "first foods" can be an exciting milestone for parents, but also an anxious time as there's much to get right – particularly in Syria today. Children need good practices, good food and good services. In Syria, accessing clean water[38] and a hygienic environment to safely prepare meals is a challenge for many parents. Outbreaks of acute bloody diarrhea and typhoid fever are common.[39] These types of illnesses drastically increase the risk of malnutrition in children; globally, it is estimated that a quarter of all stunting cases in children under two is attributable to having had five or more episodes of diarrhea in the first two years of life.[40]

Consuming a diverse diet is not only essential for child growth and wellbeing, but also provides the foundations required for good health and healthy eating habits later in life. Parents report both lack of variety of fresh foods and high prices in markets as obstacles.[41] An estimated 6.5 million Syrians are food insecure;[42] although food aid is offered in response, it typically fails to consider infants' and young children's unique nutritional needs. The hunger affecting children in Syria is therefore harder to recognize; at face value there is food, however a closer look reveals that it is often poor quality and lacking in the nutrients, vitamins and minerals children need to grow and fight disease. In government held areas, fewer than 42% of children between 6 and 23 months in Syria are consuming an adequately diverse diet. Diets of children are far worse in areas that are underserved (Deir Ez Zor) and with high displacement (Idleb). A lack of access to health and nutrition services, such as nutrition counselling and care for sick children, further erode complementary feeding practices.

Consequences of inadequate support to complementary feeding in Syria

- Alarming rates of stunting (see Spotlight on Stunting on page 22)
- Higher rates of wasting among younger children (6 – 23 months) compared to older children. [43]
- High[44] prevalence of anemia amongst children aged 6 – 23 months. At 41.6% percent,[45] it is more than twice as common as it is in older children,[46] reflecting the unique nutritional needs of this vulnerable age group. The negative impact of anemia on child mortality, cognitive and physical development is well documented.
- High rates of diarrhea and other infectious diseases in children aged six months to two years.

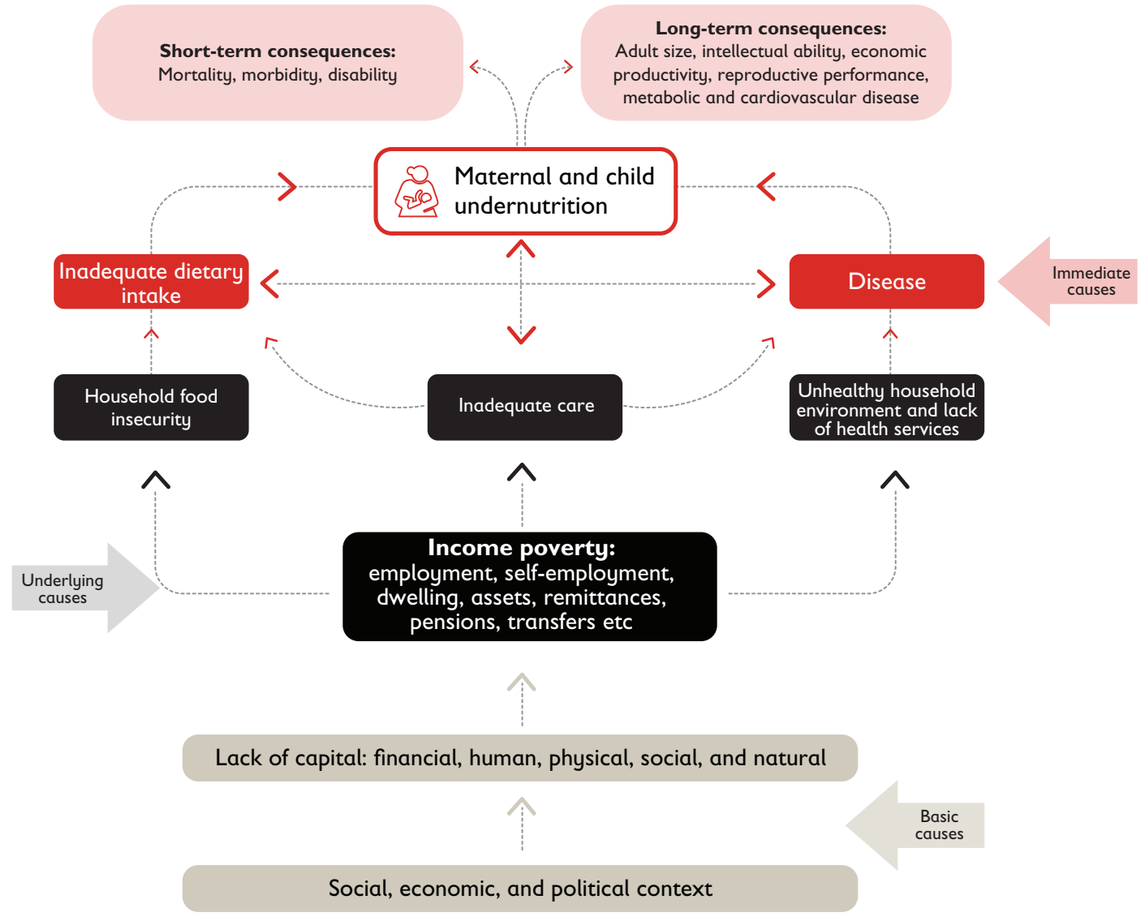


Figure 5: Framework of the relations between poverty, food insecurity and other underlying and immediate causes to maternal and child malnutrition and its short and long term consequences[55]

BREASTFEEDING

Breastfeeding is a lifeline in emergencies – when systems break down and supply lines are cut, a mother is able to provide her baby with warmth, comfort, nourishment and protection. During displacement, mother-baby dyads are exposed to far more pathogens than a mother at home with her newborn normally would be – breastfeeding acts a bridge between womb and world, introducing babies to everything in their surroundings in small doses and teaching their immune systems to tolerate or defend. While the case for breastfeeding is categorical, the strength and bravery of breastfeeding mothers who persevere under extreme conditions deserve recognition. Breastfeeding is not a one-woman job; families, communities, health workers, aid workers and governments all have a joint responsibility to support breastfeeding women and their children. Rather than a reflection of a woman's mothering abilities, the poor breastfeeding practices seen in Syria today are a reflection of a collective failure by those who have a duty to support them. Mothers' confidence in their ability to breastfeed their children is repeatedly undermined through the perpetuation of unhelpful statements and disasters myths (such as that malnourished or stressed mothers cannot breastfeed) and the uncontrolled distribution and marketing of BMS to women who would otherwise breastfeed their children. During displacement, mothers often do not receive enough opportunities to eat, drink or rest. Stuck on overcrowded buses for long hours and subsequently in overcrowded shelters without privacy, mothers put off or shorten feeds, resulting in painful breast conditions and declining milk production. Under these conditions breastfeeding problems are expected – yet there is a critical lack of skilled support.

Consequences of inadequate support to breastfeeding in Syria

- Increased rates of mortality and malnutrition amongst children under two.
- Increased rates of illness, including diarrheal disease and respiratory infections.
- Decline in maternal health, including increased risk of reproductive cancers, heart disease, and diabetes, as well as a lost opportunity to naturally space children through the natural contraception offered by breastfeeding.
- Negative impacts on maternal mental health. Documented emotions of women who do not meet their breastfeeding goals include feelings of failure, regret, guilt, shame, disappointment, grief and feeling let down by others.[47] Women who experience a lack of support with breastfeeding and for whom pain or physical difficulty is the reason that leads them to stop breastfeeding are also more likely to experience postnatal depression.[48]
- Increased pressure on family workloads and finances (buying and preparing formula, cleaning utensils etc.)
- Breastfeeding is the single most effective preventative intervention for saving lives[49]. Women are 2.5 times more likely to breastfeed where breastfeeding is protected, promoted and supported.[50]

Breastfeeding as a means of healing intergenerational trauma

The new field of epigenetics shows that trauma can be inherited. Experiences of hardship and violence can reverberate down the generations, leaving their mark on the physiology and mental health of children and grandchildren. But it is possible to start to repair these histories of trauma. IYCF-E programs support bonding and responsive care practices which strengthen neuronal connections in children's brains, preventing the disconnection caused by toxic stress and helping them to repair damage that has already been done. From a neurological brain perspective, breastfeeding (and more specifically the deep eye gazing that occurs naturally with the close contact required in the breastfeeding relationship) can begin to rewire trauma connections in the brain.[51] We are also starting to discover that pregnancy and the early postpartum period are a time where there is a larger capacity to heal trauma in the brain.

FORMULA FEEDING

Interventions to support formula dependent infants can be lifesaving. It is essential that they involve a comprehensive package of support designed to minimize risk to prevent further harm from being done.

Large numbers of children are partially or fully fed with formula in Syria – their safety is a serious concern. Each time an infant is fed, several liters of water are needed to clean the preparation area, wash hands, reconstitute the powered formula and clean utensils. The cost of this for families in Syria can be disastrous: families relying on commercial water trucks spend an average 10% of their income on water, those in informal settlements as much as 50%.[52] The proportion is higher for families with formula-fed babies, pushing them towards risky practices. In many areas, the water simply isn't safe enough for an infant. Formula itself is also expensive[53] and can be difficult to come by when supply chains are disrupted or cities are besieged – worried about running out, caregivers sometimes resort to the dangerous practice of diluting the formula to stretch supplies. During displacement, a regular occurrence in Syria today, formula feeding becomes particularly stressful for caregivers and dangerous for children. The bulky supplies needed for preparation, feeding, cleaning and storage may be destroyed, left behind or lost along the way, and fuel needed to boil the water and feeding equipment may be too expensive to purchase. Caregivers often don't know when they will next have an opportunity to clean a bottle or boil water. Desperate to feed and comfort children, babies are given formula which cannot be safely prepared during – for example – a long bus journey. Coupled with the lack of sanitation, lost immune protection, high rates of communicable disease and difficulties accessing healthcare, these conditions put formula fed children at high risk of illness, malnutrition and even death.

Considering these very real risks, formula-fed children need to be urgently identified and provided with appropriate, multisectoral support by qualified personnel and with committed supplies. For many children, the safest option will be for their mothers to be supported to return to breastfeeding. But for some, such as unaccompanied or orphaned infants, after all other alternatives to breastmilk have been explored, formula feeding is the only option available to keep them nourished. Infant formula therefore does have an important – and even lifesaving - place in emergency programming, but much more is needed than only formula to survive. It is critical that formula is provided as part of a comprehensive package of support which also includes preparation and feeding equipment, safe water, a hygienic space for preparation and storage, education, growth monitoring and access to medical care. Save the Children leads on the management and control of BMS in Syria by engaging with stakeholders and developing policies such as the "BMS Standard Operating Procedures for the Whole of Syria" – our monitoring data reveals that BMS donations are frequent during displacements, often comprised of no more than a tin of formula handed out on an ad hoc basis, in many cases the product is expired or soon to be expired, and is widely distributed to all mothers with young children regardless of their breastfeeding status. Such distributions harm both breastfed and non-breastfed infants and must stop.

Consequences of the lack of appropriate support for formula fed infants in Syria

- Increased rates of illness, malnutrition and death. Globally, non-breastfed infants are 14 times more likely to die from pneumonia and 10 times more likely to die of diarrhea than breastfed children.[54]
- Added financial and work burdens for caregivers.

The Code

Women have the right to accurate, objective information which enables them to make an informed choice about how they feed their babies. Almost 40 years ago, The International Code on the Marketing of Breastmilk Substitutes was adopted by the World Health Assembly, the highest public health policy making body in the world, to protect women from biased and misleading information through inappropriate marketing practices of manufacturers and distributors of BMS. With an outdated national Code with little adherence, our monitoring data shows that almost all BMS distributed in Syria violate the Code, as ruthless manufacturers continue to push a product, they know cannot be safely prepared by the vast majority of families living in Syria today.

SPOTLIGHT ON STUNTING

How serious is the situation?

One in eight children in Syria are stunted. Nutrition surveys indicate stunting is getting worse,[56] and rates are already far higher in certain pockets; one out of six children in the northwest is stunted, while in the north east the estimation is one out of every five children.

How does stunting impact lives?

Stunting increases a child's risk of dying[57] and has devastating, long-lasting effects across multiple sectoral outcomes. Its impact on individuals, families and communities has been well documented. The cycle can be broken, but only if the critical window to act is not missed.

Stunting is a well-established risk marker of poor child development. From early childhood to late adolescence, stunting limits children's ability to reach their full potential in cognitive and psychomotor development and school achievement.[58] Stunted children are more likely to experience anxiety, depressive symptoms and lower self-esteem compared to their non- stunted peers,[59] an effect that is likely compounded in Syria by the heavy toll that the conflict is also taking on children's mental health. Later in life, these children are more likely to struggle with chronic diseases, low physical stamina and have reduced employment opportunities; stunted children earn an estimated 20% less as adults compared to non-stunted individuals[60]. The consequences do not stop here; when young girls grow poorly and become stunted women, they are more likely to experience birth complications and have small babies who are at increased risk of dying or becoming wasted or stunted themselves, creating an intergenerational cycle of poverty, growth failure and poor health.[61, 62] Considering how severe and prolonged the situation in Syria is, these effects are the minimum expected in this setting. Current levels of stunting in Syria will therefore continue to heavily undermine ongoing efforts to build resilience unless concurrent efforts are made to break the cycle of stunting.

What is causing stunting in Syria?

Stunting starts in pregnancy. Once a child reaches their second birthday, its effects are largely irreversible. While the causes of stunting are numerous and complex,[63] we know that IYCF practices play a significant role. Given the poor practices evidenced by assessments in Syria, it is reasonable to assume that a major driver behind the high stunting levels seen in Syria today are suboptimal IYCF practices. Interventions to strengthen these practices should therefore be a critical component of a multisectoral effort to reduce the rate of stunting in Syria.

Infants under six months

Because stunting is a condition which takes longer to develop and detect, stunting has historically been considered a longer-term development issue. But with a small window in a child's life to intervene before the damage becomes permanent and no end in sight for this emergency, the time to act is now; both to protect today's children from its lifelong consequences and for broader social and economic development in Syria.

'A few days ago, my brothers and I went to the market just before it is closed. The greengrocers were throwing away the rotten vegetables and fruits. We gathered some and took it home. My brother who is four years old ate it and now he is sick because of the apricot he ate.'

Sara*, 13

Fruits and vegetables displayed in fruit of grocery shops in Amuda town in North East Syria, taken on 25 July, 2020. Photo by Muhannad Khaled / Save the Children

MATERNAL WELLBEING

Interventions in which mothers are taught about infant development and are shown how to engage and stimulate their infants and to be more responsive and affectionate towards them have been shown to improve maternal mood, in addition to strengthening the mother–infant relationship and leading to better infant health and development outcomes. Similarly, interventions expressly designed to improve maternal mental health have a positive impact on infant health and development.[64] It is therefore critical that the wellbeing of caregivers is protected and supported as part of an IYCF-E response.

Mothers and babies are inextricably connected: the wellbeing of a baby is closely linked to the wellbeing of their mother. A common challenge across breastfeeding, formula feeding and complementary feeding requiring urgent attention is maternal wellbeing; mothers in Syria are not receiving the support they need. Increasing trends of child marriage have resulted in increasing numbers of adolescent pregnancies and young mothers, gender-based violence is common, maternal malnutrition has increased by 100% and maternal mental health is at serious risk.

Adolescent pregnancy and motherhood

IYCF-E programs offer a good opportunity to regularly reach adolescent mothers with a holistic package of support, including psychosocial and early childhood development (ECD) support.

While marriage before the age of 18 did happen in Syria before the conflict, it has now become a common coping strategy in the context of poverty and gender-based violence. Struggling to provide for their children and fearing for their safety, some parents see marriage as a means to protect their daughters. A survey conducted in North Western Syria recently confirmed high levels (45%) of child marriage,[65] and records show that girls under the age of 18 make up 12 – 15% of births taking place in health facilities[66]. Caring for a newborn can feel overwhelming during the best of times –even more so at a young age, when family and social support structures are disrupted, or when enduring health or nutrition complications. From global studies we know that, for physiological reasons, complications during pregnancy, childbirth and the time thereafter are more common amongst adolescent girls. Our teams inside Syria have noticed that young mothers are more likely to experience IYCF difficulties, and benefit from adolescent-specific support to build their confidence to feed and play with their babies in ways that support cognitive and physical development.

Gender based violence

Gender-based violence, in particular sexual harassment and abuse, forced marriage and domestic violence – is widespread in Syria today. Although the shame and stigma surrounding such violence can hold survivors back from sharing their story, it is often IYCF counsellors with whom mothers have built a trusted relationship over time in whom they eventually confide. Gender based violence negatively impacts breastfeeding and heightens difficulties in feeding and caring for children, increasing their risk of malnutrition and poor child development (see MHPSS section below). These problems require specialized support skills to recognize and address, which are often lacking amongst nutrition staff in Syria. Some survivors of sexual and domestic violence find breastfeeding too distressing and will require skilled support with feeding their baby a different way. But for other women – particularly when they are well supported – breastfeeding offers them a means to improve their overall wellbeing,[67] reclaim their bodies as their own and to create lifelong positive memories of using their body to nourish and protect their child.

Maternal malnutrition

Feed the mother, so that she can feed her baby.

Increasing numbers of children are being born to malnourished mothers in Syria; the number of acutely malnourished mothers increased fivefold compared to last year.[68] These rates are 2.5 times higher in women than in children, as mothers prioritise food for children while faced with heavy workloads and poverty. When women are denied their right to nutrition and health, the risks they face are serious. The risk of maternal death is doubled for a woman with severe anaemia[69] almost one in three pregnant women in Syria are anaemic.[70] The effects of maternal malnutrition do not stop here. Children born to malnourished mothers are more likely to experience stunting, cognitive impairments and weakened immunity,[71] thereby perpetuating intergenerational cycles of malnutrition, inequity and suffering. Despite the fact that the critical impact that the antenatal period has on stunting – now a major public health issue in Syria - is well understood, there is a worrying lack of attention to maternal nutrition needs in Syria.

Maternal mental health and psychosocial wellbeing

Physical exhaustion, irreversible material and kin losses, disruption of social networks and community support structures, prolonged exposure to violence, increased rates of gender-based violence and a daily struggle to access basic services place caregivers in Syria under significant stress and endanger their mental health. In 2019, it was estimated that at least 15% of Syria's population required mental health and psychosocial services (MHPSS). Pregnant women and mothers are known to be at high risk of MHPSS problems during emergencies.[72]

Children are dependent on the care, empathy and attention of adults for their survival, wellbeing and development. MHPSS problems make it difficult for a mother to notice and respond to children's needs, particularly the youngest who have no or limited language to express their needs. Children of mothers who are depressed have been shown to face a greater risk of malnutrition, delayed growth and mortality,[73] demonstrating that provision of food alone is not enough to address malnutrition in Syria. Breastfeeding in particular can be impacted by MHPSS problems; a survey conducted by Save the Children in Southern Syria identified severe stress as the most common reason given for not breastfeeding.[74] While "stress dries up breastmilk" and "stressed women cannot breastfeed" are untrue and disempowering statements, most women living under stressful conditions do need breastfeeding support. Physical and emotional stress can reduce a woman's confidence in her ability to breastfeed and diminish the capacity of family members to support her. She may put her baby to the breast less often, which can gradually reduce milk production, and her milk may not flow ("let down") easily if a moment of calm and connection is not created.

Appropriate support can and does enable women who are experiencing breastfeeding difficulties due to stress to breastfeed.[75]

How can breastfeeding improve the wellbeing of mothers in Syria?

- By protecting mothers physiologically though enhancing sleep, downregulating inflammation (which in turn reduces the risk of postnatal depression)[76] and supporting the immune system.[77]
- By bringing about the positive emotions (e.g. pride) associated with successful breastfeeding.
- By supporting psychological wellbeing through maintaining a sense of identity. For many women, breastfeeding is an important part of their maternal identity. For others, it is also part of their religious identity. (There is a specific reference in the Koran to breastfeeding for two years.)
- By raising levels of oxytocin, the "love hormone", prompting feelings of calmness, facilitating bonding and supportive mothers to sensitively care for their babies.

Mariam feeding her two sons, Yazan*, 2, and Nasser*, 5, taken on 18 December 2018. Photo by Syria Relief — Save the Children Partner Organisation*

CHAPTER SEVEN

PROTECT CHILDREN'S SURVIVAL AND DEVELOPMENT

"If a new vaccine became available that could prevent one million or more child deaths a year and that was moreover cheap, safe, administered orally and required no cold chain, it would become an immediate public health imperative. Breastfeeding can do all this and more." -The Lancet, 1994

Children have the right to life, survival and development and to the highest attainable standard of health, of which breastfeeding must be considered an integral component, as well as safe and nutritious foods. Women have the right to accurate, unbiased information needed to make informed choices about breastfeeding.[78] In 2016, the UN Office of the High Commissioner of Human Rights reminded states of their obligations under relevant international human rights treaties to provide all necessary support and protection to mothers and their children to facilitate recommended feeding practices. The Operational Guidance on Infant and Young Child Feeding in Emergencies, which has been endorsed by the World Health Assembly, explains how these obligations can be met during emergencies through IYCF-E programming.

Protection and support of the youngest children in Syria during emergencies involves actively supporting breastfeeding, ensuring that non-breastfed babies are fed in the safest way possible, enabling access to appropriate complementary foods, preventing donations and uncontrolled distributions of breast milk substitutes and supporting the wellbeing of mothers.

Breastfeeding and complementary feeding are highly effective, evidence-based interventions during the first 1,000 days which save lives and are critical for the prevention of malnutrition, but they require the support of all sectors responding in Syria.[79] The numerous challenges faced by children and their caregivers in Syria for a prolonged period of time significantly increase the risk levels for long term physical, cognitive, and psychological effects. It is time to refocus our attention on the large numbers of children in Syria who are in the process of become undernourished, and in whom harmful effects of the causes of wasting and stunting are already present.[80]

A programming example of how infants and young children can be protected and supported during emergencies

Mother Baby Areas (MBA) are safe spaces where pregnant women and caregivers of infants and young children can receive information and support from skilled staff, get help with specific infant feeding problems, learn about best feeding and care practices with demonstrations, have a place to breastfeed privately or simply rest, share experiences and connect with their children and other mothers. During displacement, the safe space offered by MBAs becomes even more critical.

Save the Children has found Mother Baby Areas to be well appreciated by mothers, many of whom regularly visit. MBAs offer an excellent opportunity for several sectors to regularly reach pregnant women, children under two years of age and their caregivers so that their needs can be addressed in a holistic way. They also offer opportunities for positive interactions and community cohesion by bringing together mothers from different communities, to model positive parenting practices, promote home health and hygiene practices, teach mindfulness and relaxation activities, build young children's brains through play, early communication and responsive care activities and to gradually build the confidence of young mothers to continue early childhood development (ECD) activities at home, as well as a space for women and girls to feel safe from gender-based violence.

Education Sector: Call To Action

We believe that all children have the right to learn. Education does not start in first grade: parents (and other caregivers) are a child's first teachers. During the first three years of life - a time of rapid brain development - the care and nutrition a child receives and the interactions and stimulation they experience impact their ability to learn and earn, influencing brain function for life. Infant Feeding is one of the first early childhood development (ECD) interventions. Breastfeeding cost-effectively influences longer term educational outcomes through providing an inimitable blend of essential nutrients for healthy brain development and frequent, and is associated with higher performance of IQ tests (3 points average), with low- and middle-income countries losing more than $70 billion each year due to low breastfeeding rates.[81] Nurturing interactions during responsive feeding further strengthen brain development.

In Syria, Save the Children is working to operationalize the Nurturing Care Framework, a global consensus based upon evidence and recognition that there are five essential components for optimal child development (see figure). IYCF-E contributes to this framework by 1) protecting children's health 2) creating delivery platforms (such as mother baby areas) which create regular opportunities for early learning 3) encouraging responsive caregiving through promotion and support of responsive feeding practices and 4) supporting adequate nutrition through protection, promotion and support of breastfeeding and complementary feeding.

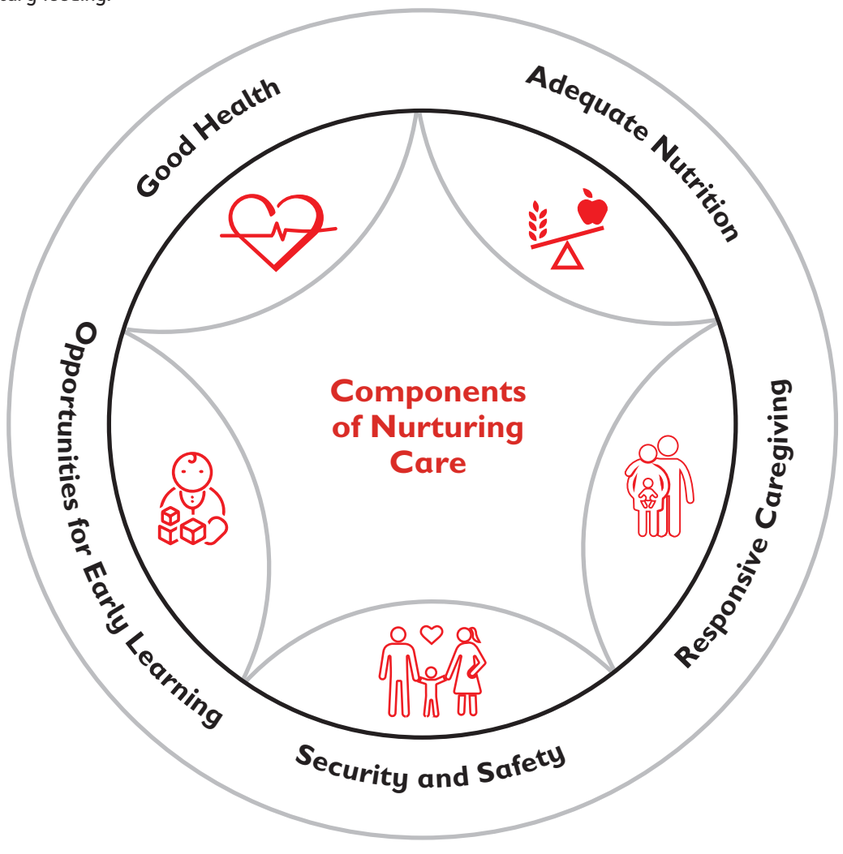


Figure 6: The five components of nurturing care.[82]

‘I have been one and a half years in the camp and have never eaten a banana here. The last time I had an apple was two weeks when I was walking around and saw an open garbage bag. I noticed apple and orange peels. I gathered some apple pieces and ate them’

Salim*, 8

CHAPTER EIGHT

RECOMMENDATIONS

Immediate, comprehensive and multisectoral services which support the First Thousand Days are urgently needed to protect the survival and wellbeing of infants and young children, their caregivers and pregnant women in Syria.

States and donors

- Do not donate breastmilk substitutes, other milk products, or feeding equipment such as bottles.
- Ensure support and protection is in place for both breastfed and non-breastfed infants in Syria. When funding programs to support non-breastfed infants, ensure that all the provisions of the BMS Standard Operating Procedures for the Whole of Syria can be met by the implementing agency. Grant applications should include, and funders should accept, costs for associated supplies, such as feeding equipment and hygiene measures.
- Invest in multisectoral efforts to improve the availability, accessibility, affordability and consumption of safe and nutritious complementary foods.
- In areas with high risk of displacement, support the establishment of rapid response mechanisms which allow immediate action to protect IYCF practices and minimize risks.
- View and address a reduction in stunting – or at least no increase - as a legitimate humanitarian goal. Reconfigure financing mechanisms to allow for multi-year funded programs that prevent stunting in protracted crises and enable integrated multi-sector nutrition programming, early warning and for surge response.[83]

Local authorities

- Consider the unique needs and vulnerabilities of children under two, particularly during displacements
- Do not request or permit blanket distributions of breastmilk substitutes, other milk products or feeding equipment. Any intercepted donations should be confiscated and reported to the nutrition sector leads.

Humanitarian responders

- Ensure staff across all sectors receive an appropriate level of orientation or training on IYCF-E.
- Prioritize the improvement of varied diets of households, rather than sole reliance on food rations.
- Support the establishment of adolescent mother friendly services.
- Maximize use of Mother Baby Areas as multisectoral service delivery platforms to reach pregnant women, infants, young children and their caregivers with a holistic package of services. The integration of GBV, MHPSS, ECD and Nutrition services is a priority.
- Build the capacity of health and nutrition service providers to integrate basic MHPSS into individual IYCF counselling, including providing trauma informed care, recognizing signs of severe distress in both mothers and infants, and ensure referral pathways to caseworkers who can deliver appropriate services (GBV, mental health, case management) to those in need.
- To better understand the impact of the protracted humanitarian crisis on stunting trends in Syria, analysis and reporting on available data is critical to examine stunting and wasting trends over time and in specific geographical areas, to identify where approaches are having some effect on stunting levels and where efficiencies in response can be made.
- Strengthen the capacity of the health, food security, education and child protection sectors to provide accurate information on IYCF and support breastfeeding mothers.
- Invest in financial and human resources to improve access to skilled IYCF counselling through scaling up (ensuring it is incorporated into all perinatal and child health contacts) and strengthening quality.

Meeting global and national targets

Strengthening IYCF practices in Syria can help drive progress against other global and national nutrition targets (including stunting, anemia in women of reproductive age and low birth weight) – in fact, it will be impossible to meet global Sustainable Development Goals (SDG) and World Health Assembly (WHA) targets without a greater focus on stunting in Fragile and Conflict Affected States (FACS) such as Syria, where the number of stunted children has become increasingly concentrated.[84] Beyond nutrition, IYCF is a central part of the 2030 Agenda for Sustainable Development Goals; breastfeeding alone can help achieve many of the 17 goals, including goals on poverty, hunger, health, education, gender equality and sustainable consumption.

CHAPTER EIGHT

ENDNOTES

1 UNOCHA, Humanitarian Needs Overview 2020, In press.

2 INFANT & YOUNG CHILD FEEDING IN THE CONTEXT OF COVID-19 /Brief No. 2 (v1) (March 30th, 2020)

3 UNOCHA, Humanitarian Needs Overview 2020, In press.

4 *Ibid.*

5 Or one third of the total civilian population of the greater Idleb de-escalation zone

6 2020 OCHA Syrian Arab Republic Flash Update – Recent Developments in North Western Syria

7 OCHA 2020 Press Release

8 2020 OCHA Syrian Arab Republic Flash Update – Recent Developments in North Western Syria

9 Gaziantep Nutrition Cluster surveillance data, February 2020.

10 Black et al. (2008) Maternal and Child Undernutrition: Global and Regional Exposures and Health Consequences. Lancet. 371: 243 – 60

11 Wells et al. (2019) Beyond Wasted and Stunted – a major shift to fight child undernutrition.

12 Global Nutrition Report 2018

13 *Ibid.*

14 2019 SMART Survey. Although the overall stunting prevalence inside Syria is 12.6 per cent, or one out of eight children, other areas reflect higher numbers. One out of every six children in many areas of the north-west is stunted, and in the north-east, such as Deir Ez Zor, the estimation is one out of every five children

15 2019 SMART Survey.

16 *Ibid..*

17 80% of the brain structure is completed during the first three years of life

18 *https://thousanddays.org/why-1000-days/*

19 The World Health Organization (WHO) and UNICEF

20 UN Office of the High Commissioner of Human Rights (2016) Joint statement by the UN Special Rapporteurs on the Right to Food, Right to Health, the Working Group on Discrimination against Women in law and in practice, and the Committee on the Rights of the Child in support of increased efforts to promote, support and protect breast-feeding

21 UNICEF, From the First hour of Life, Available indicators for recommended feeding practices. October 2016, P. 23

22 Protecting Maternal Diets and Nutrition Services and Practices in the Context of COVID-19

23 The state of food security and nutrition in the world-2020

24 Op. Cit. Bastagli et al. (2016)

25 SMART Survey 2019

26 UNOCHA, Humanitarian Needs Overview, 2019

27 SMART Survey 2019

28 Pre-crisis 10% of infants were not breastfed at all (UNICEF (2012) State of the World's Children) and many more were mixed fed (both formula and breastmilk).

29 Save the Children (2018) Don't Push It: Why the Formula Milk Industry Must Clean Up its Act

30 Terkawi et al. (2019) Child and Adolescent Health in northwestern Syria: findings from Healthy-Syria study 2017 Avicenna J Med. This prospective study of the data registry of a health center in northwestern Syria found that acute diarrhea was the second most common condition (after upper respiratory tract infections). The most frequently affected age groups were infants (58%, n=694) and toddlers (30%, n = 358). Acute diarrhea was also more common among people living in IDP camps (58% of all cases).

31 Victora et al. (2016) Breastfeeding in the 21st Century: Epidemiology, Mechanisms and Lifelong Effect. Lancet. 387: 475 – 90.

32 UNICEF (2019) State of the World's Children

33 UNICEF, From the First hour of Life, Available indicators for recommended feeding practices. October 2016, P. 22

34 Save the Children (2018) Don't Push It: Why the Formula Milk Industry Must Clean Up its Act

35 Global Nutrition Report 2018

36 Ramakrishnan, Usha, Phuong Nguyen, and Reynaldo Martorell. "Effects of Micronutrients on Growth of Children Under 5 Years of Age: Meta-Analyses of Single and Multiple Nutrient Interventions." American Journal of Clinical Nutrition. Vol. 89. January 2009. pp.191-203.

37 Black et al. (2008) Maternal and Child Undernutrition: Global and Regional Exposures and Health Consequences. Lancet. 371: 243 – 60.

38 Up to 55% of surveyed households rely on alternative and often unsafe water sources (e.g. unregulated water operators) to meet or complement their water needs (2019 HNO)

39 UNOCHA, Humanitarian Needs Overview 2019,

40 Walker, C. L. F., et al. (2013). Global burden of childhood pneumonia and diarrhea. The Lancet, 381(9875), pp. 1405–1416

41 Barrier Analysis North West Syria 2017

42 UNOCHA, Humanitarian Needs Overview 2019

43 UNOCHA, Humanitarian Needs Overview 2020, In press

44 As per WHO Classification

45 UNOCHA, Humanitarian Needs Overview 2020, In press.

46 19.8% for children aged 24 – 59 months

47 Brown, A. (2019) Why Breastfeeding Grief and Trauma Matter. Pinter and Martin.

48 Brown, A. et al ((2016) Understanding the relationship between breastfeeding and postnatal depression: the role of pain and physical difficulties. Journal of Advanced Nursing, 72 (2), 273 – 282.

49 Jones et al. (2003) How many child deaths can we prevent this year? Lancet. 362:65–71.

50 Lancet Breastfeeding Series.

51 Chimine Arfuso in Brown (2019) Why Breastfeeding Grief and Trauma Matter.

52 UNOCHA, Humanitarian Needs Overview, 2019

53 The cost of purchasing infant formula for 6 months is around USD 280 (Based on information that one kg of infant formula cost around 7000 Syrian Pounds (approx. 14 USD) in January 2020, and the assumption that 20 kgs of infant formula are needed).

54 Black et al. (2008) Maternal and Child Undernutrition: Global and Regional Exposures and Health Consequences. Lancet. 371: 243 – 60.

55 Robert E. Black et al. (2008) Maternal and Child Undernutrition

.The Lancet. VOLUME 371, ISSUE 9608, P243-260.

56 Data from 2017 and 2019 SMART Surveys – not publicly available..

57 Mistakenly not considered a life-threatening condition and therefore often deprioritized within humanitarian operations, the 13% of children who are stunted in Syria are in fact also at higher risk of dying as they become stuck in a vicious cycle of worsening nutritional status and increasing susceptibility to infection. A child who is severely stunted is at higher risk of dying than one who is moderately wasted (Mc Donald et al., 2013).

58 Grantham-McGregor et al. (2007) Developmental potential in the first five years for children in developing countries. Lancet. 396:60-70.

59 Walker et al. (2007) Early childhood stunting is associated with poor psychological functioning in late adolescence and effects are reduced by psychosocial stimulation. J Nutr. 2007; 137:2464–9.

60 Grantham-McGregor et al. (2007) Developmental potential in the first five years for children in developing countries. Lancet. 396:60-70..

61 Ozaltin et al. (2010) Association of Maternal Stature With Offspring Mortality, Underweight, and Stunting in Low- to Middle-Income Countries. JAMA..

62 Martorell and Zongrone (2012) Intergenerational Influences on Child Growth and Under-

nutrition. Pediatric and Perinatal Epidemiology, 26: 302-314.

63 Underlying causes of stunting in Syria include household poverty and food insecurity (leading to inadequate intake of complementary foods) and poor access to safe water, sanitation and health care (leading to a rise in disease), whilst the huge strain that Syrian parents are under contributes to non-responsive feeding practices and inadequate child stimulation, also known factors which impede child growth and development. Compounding this are the rising rates of maternal malnutrition and adolescent pregnancy observed in Syria.

64 Rahman, A., Fisher, J., Bower, P., Luchters, S., Tran, T., Taghi Yasamy, M., Saxena, S., and Waheed, W., 2013. Interventions for common perinatal mood disorders in women in low- and middle-income countries: a systematic review and meta-analysis. Bulletin of the World Health Organization.

65 SMART Survey 2019

66 UNOCHA, Humanitarian Needs Overview 2020, In press

67 The negative effects of past sexual assault on new mothers' sleep quality and risk of depression have been shown to be less severe for exclusively breastfeeding mothers, compared to those who were mixed- or formula-feeding their children. Kendall-Tackett et al. (2013) Depression, sleep quality, and maternal well-being in postpartum women with a history of sexual assault: a comparison of breastfeeding, mixed-feeding, and formula-feeding mothers. Breastfeeding Med. 8(1):16-22

68 UNOCHA, Humanitarian Needs Overview 2020, In press.

69 Daru et al. (2018) Risk of maternal mortality in women with severe anemia during pregnancy and postpartum: a multilevel analysis. The Lancet. Vol 6, Issue 5.

70 SMART Survey 2019

71 UNICEF (2019). The State of the World's Children 2019. Children, Food and Nutrition: Growing well in a changing world. UNICEF, New York.

72 IASC (2007) Guidelines for Mental Health and Psychosocial Support during Emergencies..

73 Rahman, A., Lovel, H., Bunn, J., Iqbal, Z. and Harrington, R., 2004. Mothers' mental health and infant growth: a case–control study from Rawalpindi, Pakistan. Child: Care, Health and Development, 30: 21-27.

74 Save the Children (2018) IYCF Baseline Survey in Southern Syria

75 Shukri et al. (2019) Randomized controlled trial investigating the effects of a breastfeeding relaxation intervention on maternal psychological state, breast milk outcomes, and infant behavior and growth. Am J Clin Nutr. 2019 Jul 1;110(1):121-130.

76 Kendall-Tackett, K. A new paradigm for depression in new mothers: the central role of inflammation and how breastfeeding and anti-inflammatory treatments protect maternal mental health. Int Breastfeed J 2, 6 (2007) doi:10.1186/1746-4358-2-6

77 Groër MW et al. Immunity, inflammation and infection in post-partum breast and formula feeders. American Journal of Reproductive Immunology. 2005, 54: 222 – 231.

78 UN Office of the High Commissioner of Human Rights (2016) Joint statement by the UN Special Rapporteurs on the Right to Food, Right to Health, the Working Group on Discrimination against Women in law and in practice, and the Committee on the Rights of the Child in support of increased efforts to promote, support and protect breast-feeding.

79 IFE Core Group (2017) Operational Guidance on Infant Feeding in Emergencies. Vol 3, issue 11, 831 – 834..

80 Wells et al. (2019) Beyond Wasted and Stunted – a major shift to fight child undernutrition. The Lancet.

81 Rollins et al. (2016). Breastfeeding 2: Why invest, and what it will take to improve breastfeeding practices?. The Lancet. 387. 491–504. 10.1016/S0140-6736(15)01044-2.

82 Nurturing care, the five components of nurturing care, https://nurturing-care.org/about/components/ (accessed on September 21, 2020)

83 Emergency Nutrition Network (2019) Time for a Change: Can we prevent more children from becoming stunted in countries affected by crisis? A briefing note for policy makers and program implementers.

84 Mates et al. (2017) Stunting in humanitarian and protracted crisis. ENN Discussion Paper.

Anas, 2 lives in a displacement camp in southern rural Aleppo with his father Karim*, 50 and his six siblings, taken on 6 August 2020. Photo by Ataa Humanitarian Relief Association — Save the Children partner organisation.*

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