

Forecasting Wasting Burden in the State of Palestine (SoP)

Nutrition Cluster, November 7, 2023

Objective

This document aims to inform planning of the nutrition sector, specifically related to the estimation of needs for detection and prevention of wasting. Developed by UNICEF as the sector lead for nutrition, it is intended that this document will be revised as per the evolving situation and the extent of deterioration of the drivers of malnutrition including access to food, services, and practices.

Background

The already fragile nutrition situation of infants, young children, and pregnant and lactating women (PLWs) is under extreme threat of worsening due to shock, stress and deteriorating access to food, water, essential lifesaving services and positive feeding practices.

The crisis has disrupted access to services for the prevention, early detection, and treatment of malnutrition for about 340,000 children under 5 years of age in Gaza. The suspension of these life-saving services is putting children at heightened risk of malnutrition, disease, and death.

Annex 1 summarizes the drivers of malnutrition in this crisis.

Nutrition Response Priorities

To prevent a deterioration in the nutrition situation, the nutrition response is targeting 100% of infants, young children and their caretakers, and pregnant and breastfeeding women and girls, with proven actions that protect nutritional status in crisis settings.

The specific actions included in the revised Flash Appeal (Nov 2023) include:

- Provide nutrition counselling and support to caregivers of infants and young children on
- feeding and care, (skilled counseling and support on breast feeding, complementary feeding and early stimulations and responsive care giving; provision of age-appropriate complementary food for children
- Provide BMS/ ready to use infant formula (RUIF) to address the needs of the non-breastfeed infants less than 6 months as per international guidelines. Establish a monitoring/reporting system to address any BMS code violation and any random distribution of infant formula.
- Provide complementary feeding to PLWs to address their nutritional needs
- Provide micronutrient supplementation to children under five years including vitamin A supplementation, multiple micronutrient powders and lipid-based supplements (LNS-MQ/SQ) and multiple micronutrient supplements to pregnant and breastfeeding women.
- Provide life-saving early detection and treatment to children with severe wasting and moderate wasting (who are also at high risk) with ready to-use therapeutic foods (RUTF).
- Establish linkages with the cash or voucher assistance interventions to improve access to

nutritious foods for young children and pregnant and breastfeeding women during the first 1,000 days

- Conduct Nutrition assessments where possible

Wasting Burden Forecast Methodology and Assumptions

Due to the extreme humanitarian situation and the uncertainty of how the situation will evolve, there is a need to plan for increasing numbers of children who need treatment of wasting. The available data on the estimated prevalence of wasting pre-COVID and before the ongoing conflict (MICS 2019/2020). The decision tree¹ below (Pathway 2) was used for the calculation and estimate of the children in need of treatment for wasting.

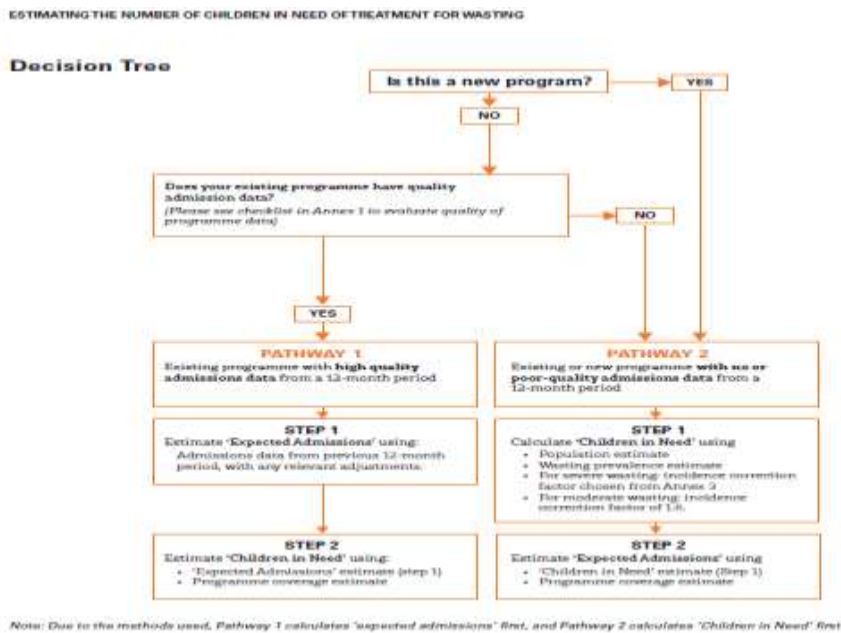


Table 1: Sources of data for current estimate of wasting burden

Population estimate (children 6-59 months)	Sources: Palestinian Central Bureau of Statistics (PCBS)	SoP: 675,226 West Bank: 371,875 Gaza: 303,351
Wasting prevalence estimate	Sources: Based on the available data (pre-COVID and pre-conflict) – MICS 2019/2020	Wasting SoP: 1.3%, West Bank: 1.7% Gaza: 0.8% Severe Wasting SoP: 0.6%, West Bank: 0.8%

¹ UNICEF Nutrition, New York; Guidance for Estimating the Number of Children in Need of Treatment for Wasting; July 2021

		Gaza: 0.4%
Current incidence correction factor for severe and moderate wasting	Sources: Isanaka S, Andersen CT, Cousens S, Myatt M, Briend A, Krasevec J, Hayashi C, Mayberry A, Mwirigi L, Guerrero S. Improving estimates of the burden of severe wasting: analysis of secondary prevalence and incidence data from 352 sites. BMJ Glob Health. 2021 Mar;6(3) UNICEF guidance for Estimating the Number of Children in Need of Treatment for Wasting; July 2021	2.6 - West Bank (1 + incidence factor 1.6) 3.0 - Gaza (1 + incidence factor 2.0)
Projected incidence correction factor in coming months for severe and moderate wasting	Sources: Isanaka S, Andersen CT, Cousens S, Myatt M, Briend A, Krasevec J, Hayashi C, Mayberry A, Mwirigi L, Guerrero S. Improving estimates of the burden of severe wasting: analysis of secondary prevalence and incidence data from 352 sites. BMJ Glob Health. 2021 Mar;6(3) Guidance for Estimating the Number of Children in Need of Treatment for Wasting; July 2021	3.0 - West Bank (1 + incidence factor 2.0) 3.8 - Gaza (1 + incidence factor 2.8)
Worst-case scenario incidence correction factor for severe and moderate wasting	Sources: Isanaka S, Andersen CT, Cousens S, Myatt M, Briend A, Krasevec J, Hayashi C, Mayberry A, Mwirigi L, Guerrero S. Improving estimates of the burden of severe wasting: analysis of secondary prevalence and incidence data from 352 sites. BMJ Glob Health. 2021 Mar;6(3) Guidance for Estimating the Number of Children in Need of Treatment for Wasting; July 2021	4.0 - West Bank (1 + incidence factor 3.0) 4.8 - Gaza (1 + incidence factor 3.8)

The following formula was used to estimate the current and projected children in need of wasting treatment: (Number of children in need = population (6-59 months) × [prevalence of wasting × (1 + K²)])

² The K-value denotes the incidence correction factor. This factor, when combined with a prevalence estimate, enables an approximation of incident cases in each period of time

Table 2: Current, projected (most likely), and worst-case scenario wasting cases.

		Current incidence factor	Current PIN	Projection incidence factor	Projection PIN	increase burden	% increase	Worst case scenairo incidence factor	Worst case scenairo PIN	increase burden vs current PIN	% increase
Gaza	Number of SAM children 0-59 mo in need of Inpatient Treatment	3	404	3.8	512	108	27%	4.8	647	243	60%
Gaza	Number of SAM children 6-59 mo in need of Outpatient Treatment	3	3640	3.8	4,611	971	27%	4.8	5824	2184	60%
Gaza	Number of MAM 6-59 mo in need	3	3640	3.8	4,611	971	27%	4.8	5824	2184	60%
	Total Gaza		7,685		9,734	2,049	27%		12,296	4,611	60%
WB	Number of SAM children 0-59 mo in need of Inpatient Treatment	2.6	859	3	992	132	15%	4	1,322	463	54%
WB	Number of SAM children 6-59 mo in need of Outpatient Treatment	2.6	7735	3	8,925	1,190	15%	4	11,900	4165	54%
WB	Number of MAM 6-59 mo in need	2.6	8702	3	10,041	1,339	15%	4	13,387	4686	54%
	Total WB		17,296		19,957	2,661	15%		26,610	9,313	
	Total SOP		24,981		29,691	4,710	0	-	38,906	13,924	

Summary of most-likely and worst-case scenarios

Maternal and child malnutrition were already pressing concerns before the current conflict, with more than 24,900 children affected by wasting including 12,400 severely wasted in Gaza and the West Bank.

In the most-likely scenario, the nutrition sector predicts that child wasting is likely to increase by 27 percent in Gaza and by 15 percent in the West Bank (Annex 2) in the coming months— meaning that nearly 30,000 children across the State of Palestine are at risk of wasting and 15,000 of these children are projected to face severe wasting.

In worst case scenarios if humanitarian access is not granted to reach all the population with food, WASH and health services, child wasting is projected to increase by 60 percent in Gaza and by 54 percent in the West Bank in the coming months— meaning that nearly 39,000 children across the State of Palestine are at risk of wasting and 20,000 of these children are projected to face severe wasting.

UNICEF and partners are in urgent need of funding - \$25 M for the next 3 months and \$85M for the next 12 months -- to sustain and scale up prevention, protection, early detection and treatment nutrition interventions and support to address the underlying determinants of malnutrition and prevent malnutrition in all its forms.

Annex 1: Public health risks and the drivers of malnutrition

Public health risk (health analysis) and underlying determinant of malnutrition	Level of risk*** ³	Rationale
Public health risk/Diseases⁴		
Respiratory Tract Infections (RTI), including COVID-19		In Palestine, respiratory diseases are the sixth most common cause of death. ¹¹ In 2022, 81 975 cases of COVID-19 were reported in the Gaza strip with an incidence rate of 3784/100 000 population, resulting in over 400 deaths (fourth cause of death in Gaza. With high numbers of displaced and mobile people in overcrowded shelters, transmission will be increased and substantial number of people will be infected with RTIs.
Mental Health		Mental health issues in Palestine are driven by a series of factors including recurrent escalations of hostilities. In 2020, almost 200 000 adults (45% women and 55% men) were estimated to have moderate or severe mental health disorders, while almost 300 000 children (50% girls and 50% boys) were believed to experience severe, moderate, or mild, mental health disorders. There are multiple barriers to accessing mental health services in Palestine, such as lack of trained staff, limited facilities, poor quality of services, affordability, under-resourcing, stigma, and discrimination. This can lead to critical consequences on Breastfeeding and overall care for children
Cholera and Acute Watery Diarrhea (AWD)		There are no recent reported cases of cholera in Gaza Strip. However, there have been outbreaks in the region. In 2022, the first cholera outbreak in over 10 years was reported in Lebanon and Syria. The disruption of water and sanitation systems can increase the risk of cholera transmission, should the bacteria be present or introduced. Since the start of hostilities, one desalination plant serving over 1.1 million people were damaged by airstrikes in Gaza ⁵ All solid waste collection and transfer to landfills remains on hold ⁶ .
Measles		In 2019 and 2020 an outbreak was reported in Gaza. Although the Gaza Strip has maintained an overall high administrative coverage for measles, the continuous socio-economic decline conflict and

³ Red: Very high risk. Could result in high levels of excess mortality/morbidity in the upcoming month. Orange: High risk. Could result in considerable levels of excess mortality/morbidity in the upcoming months. Yellow: Moderate risk. Could make a minor contribution to excess mortality/morbidity in the upcoming months. Green: Low risk. Will probably not result in excess mortality/morbidity in the upcoming months

⁴ Public Health Situation Analysis (PHSA), 14 October 2023

⁵ OCHA (13th October 2023), Hostilities In Gaza And Israel- Flash Appeal for the Occupied Palestinian Territory, Version 1 as of 12 October 2023

⁶ OCHA (9th October 2023), Escalation in the Gaza Strip and Israel | Flash Update #3

		disruptions to services have challenged the health sector ⁷ . The recent escalations will also interrupt routine vaccinations and disease surveillance systems.
Underlying determinants of malnutrition		
Access to Food		In 2022 and 2023, heightened conflict, economic stagnation, rising food and fuel prices and lingering effects of the COVID-19 pandemic; posed serious challenges to the food security of hundreds of thousands of Palestinians. In April 2023, with the rise in food prices significantly reducing purchasing power, WFP estimated that 1.8 million Palestinians were food insecure. In the Gaza Strip, the situation is especially concerning, with 64% of the population assessed as moderately or severely food insecure. Following the escalation Following the escalation, 100% of the Gaza population (approximately 2.3 million) are vulnerable to food insecurity
Access to health Services		Health: According to WHO, 18 healthcare facilities and 20 ambulances were hit by airstrikes ⁸ , while in total there has been 76 attacks on healthcare. Only 37% of Ministry of Health primary care facilities are operational , and those which are operating are facing severe shortages of medical supplies, damage from airstrikes, and extended electricity outages. As of October 10, 2023, 15 out of 22 UNRWA Health Centers across the Gaza Strip are providing primary healthcare services from 9:00 to 12:00 to patients with urgent referred appointments received through the free-toll hotline. Only 125 health staff (13.5 % of UNRWAs health staff) are rotating at the health centers. Prior to conflict , there are four main health providers in Gaza (UNRWA, Health NGOs, Palestinian health ministry/ies, and the private sector). Service coverage as measured by the Universal Healthcare Coverage (UHC) service coverage index is 64 and has remained essentially unchanged over the past two decades, indicating that people still have trouble accessing essential health services. Through 22 centers, UNRWA provides health-care services to the vast majority of the over 1.2 million Palestine refugees in Gaza.
Water, Sanitation and Hygiene (WASH)		Since the start of hostilities , six water wells, three water pumping stations, one water reservoir, and one desalination plant serving over 1.1 million people were damaged by airstrikes. UNICEF reports some have already begun drinking seawater, which is highly saline and contaminated with sewage from the discharge of over 120,000 cubic meters of untreated wastewater daily. WASH cluster estimated 94% of reduction in the water supply.

⁷ Sanjeet Bagcch (March 2020), Measles returns to the Gaza Strip, Published: March,

⁸ WHO (12th October 2023), oPt EMERGENCY SITUATION REPORT Issue 3 (12 October 2023) As of 23.00

		<p>Before the escalation. In early 2023, UNICEF reported that insufficient safely managed water supply to households, poor sanitation, limited public WASH services, and risk of flooding expose 1.36 million Palestinians to water-related diseases risks. UNRWA have also previously reported that over 90% of the water in Gaza has been deemed unfit for human consumption. Only 4% of households have access to safely managed water in Gaza</p>
<p>Infant and young child feeding practices</p>	<p>Exclusive breastfeeding: Prior to conflict 43.3% (44.8 in WB and 41.6 in Gaza) were exclusively breastfed</p> <p>Post conflict: With the current massive displacements (1.5 million displaced) in Gaza and the trauma that mothers are going through its expected that exclusive breastfeeding rate will drop.</p>	
	<p>Child food poverty: Pre conflict in SoP, 1 in 2 children -- approx. 124,500 young children (6 – 23 mo) (56,000 in Gaza and 68,500 in WB)– were living in food poverty and ate less than five of the eight recommended food groups⁹. So half of the children in the early years were not fed the foods they need to grow and develop to their full potential.</p> <p>With the deteriorated food security situation 2.3M are vulnerable to food insecurity, with all food stocks are depleting rapidly. The most depleted are wheat flour and canned food, eggs, dairy products, and water</p>	
	<p>Minimum acceptable diet: 44.7% of young children 6 – 23 months (35.1% in Gaza and 50.8% in WB)–</p>	
	<p>Minimum dietary diversity: 31.4% of young children 6 – 23 months (23.7% in Gaza and 36.4% in WB)–</p>	
	<p>Minimum meal frequency: 72.3 of young children 6 – 23 months (68% in Gaza and 75% in WB)- didn't receive solid, semi-solid, or soft foods (including milk feeds for non-breastfed children) the minimum number of times or more during the previous day</p>	

⁹ Child Food Poverty: A Nutrition Crisis in Early Childhood, October 2022