



GAZA SMART SURVEY 2026

Nutritional Status of Women and Children in the
Gaza Strip During a Protracted Humanitarian
Crisis, June 2026

Population-Based SMART Nutrition Survey Report

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Executive Summary

The Gaza SMART Survey 2026 provides a population-based assessment of the nutritional status of children aged 0–59 months and women and girls aged 15–49 years living within accessible areas of the Gaza Strip between 31 May and 15 June 2026. Around 17 per cent of Gaza's population, some 358,000 people, was excluded from the sampling frame before cluster selection because of access and security constraints. The survey assessed important factors related to maternal and child nutrition, including childhood illness, infant and young child feeding practices, maternal nutrition, measles vaccination, vitamin A supplementation, deworming and care-seeking behavior. The findings provide a snapshot of the latest nutrition situation based on the data collected during the survey period and cannot be used to confirm, disprove, or reinterpret assessments describing nutritional conditions in the past.

The survey used internationally recognized SMART¹ methodology and a cross-sectional, two-stage cluster sampling design across three survey domains: Gaza and North Gaza, Deir Al-Balah, and Khan Younis and Rafah. A total of 2,089 households participated, and 1,335 children completed anthropometric assessment. Weighted estimates were generated for the accessible survey population. Approximately 83 per cent of the Gaza Strip's estimated population was covered by the survey, while the remaining 17 per cent could not be included due to security and access limitations. The nutritional situation of populations living in these excluded areas cannot be inferred from this survey and may differ from the estimates presented here. Humanitarian assistance, food availability, disease patterns, population displacement, access to services and the broader operating environment are important contextual factors for interpreting the survey findings.

The survey shows a complex nutritional picture: relatively low acute malnutrition among children in the accessible population, concerning rates of chronic malnutrition (stunting), maternal malnutrition, very poor dietary quality, suboptimal infant and young child feeding practices, and a substantial burden of childhood illness.

Combined Global Acute Malnutrition, based on weight-for-height, MUAC where applicable, and/or bilateral pitting edema, was estimated at 1.3 per cent. Severe acute malnutrition was uncommon across the three survey domains. Stunting affected 12.2 per cent (95% CI: 10.4–14.2) of children under five years, indicating that approximately one in eight children had impaired linear growth relative to international child growth standards. Stunting can cause life-long and irreversible cognitive and developmental impairments if not identified and treated early. Underweight affected 3.9 per cent (95% CI: 3.0–5.1) of children under five, while overweight affected 4.0 per cent (95% CI: 3.0–5.4) of children under five. Among children aged 0–59 months, Global Acute Malnutrition (GAM) based on weight-for-height Z-score was estimated at 0.5 per cent. The coexistence of stunting and acute malnutrition reflects a dual burden of malnutrition, underscoring the importance of diet quality rather than food quantity alone. Among children aged 6–23 months, only one in three children achieved minimum dietary diversity (consumption of food from five or more food groups) and 22.4 per cent received a minimum acceptable diet (frequency of eating depending on age combined with diversity). The findings also revealed a high consumption of unhealthy foods.

It's important to note that different nutrition indicators capture distinct aspects of nutritional well-being during specific periods of time. Acute malnutrition, measured through weight-for-height and mid-upper arm circumference MUAC, reflects current nutritional status and can change relatively quickly in response to shifts in food intake, disease and other conditions.

¹ Standardized Monitoring and Assessment of Relief and Transitions.

Stunting, by contrast, reflects cumulative nutritional and health deprivation over a longer period beginning before birth and continuing throughout infancy and early childhood. Maternal malnutrition, poor dietary diversity, suboptimal breastfeeding and complementary feeding, and recurrent childhood illness similarly identify vulnerabilities that are not captured by acute malnutrition prevalence alone. The coexistence of relatively low acute malnutrition with these other concerns is not contradictory. The survey findings should therefore be considered together rather than using any single indicator to characterise the overall nutritional situation.

Maternal malnutrition was also a concern, with 9.4 per cent of non-pregnant, non-lactating women and 7.2 per cent of pregnant and lactating women affected by acute malnutrition, based on MUAC below 230 mm. Infant and young child feeding findings showed important gaps. Breastfeeding was widely practiced, with 96.5 per cent of children aged 0–23 months having ever been breastfed. However, exclusive breastfeeding among infants younger than six months was only 20.4 per cent. Among children aged 6–23 months, 30.3 per cent achieved minimum dietary diversity (consumption of food from five or more food groups) and 22.4 per cent received a minimum acceptable diet (frequency of eating depending on age combined with diversity). High consumption of unhealthy foods and limited intake of fruits and vegetables suggest that many children are not receiving the nutrients necessary for healthy growth and development.

Childhood illness was common. During the two weeks preceding the survey, 37.1 per cent of children had experienced diarrhea, 31.9 per cent had experienced fever, and 6.0 per cent had symptoms of acute respiratory infection. Care-seeking was relatively high for fever and respiratory symptoms, but appropriate treatment of diarrhea remained limited: 25.6 per cent of children with diarrhea received oral rehydration salts, 18.9 per cent received zinc and only 12.3 per cent received both.

The coverage of selected preventive health interventions showed a mixed picture. Among children aged 9–23 months, 75.9 per cent were reported to have received at least one measles vaccination based on a vaccination card or caregiver recall. This measure does not represent verified age-appropriate two-dose coverage. Vitamin A supplementation among eligible children was 71.0 per cent, while deworming coverage remained considerably low.

The survey followed a substantial expansion of humanitarian assistance after the October 2025 ceasefire. In the months before, including August 2025, when the IPC confirmed Famine in Gaza Governorate, severe access constraints and supply disruptions meant that blanket supplementary feeding - a principal means of preventing acute malnutrition - had largely ceased across Gaza. Some programmes to detect and treat malnutrition continued to operate, but the supplies and access needed to prevent children becoming malnourished in the first place were not reaching them. Admissions for treatment of acute malnutrition peaked at nearly 17,000 children in August 2025 and had fallen to under 3,000 by March 2026.

The survey findings support continued attention to both acute nutritional risk and the wider determinants of maternal and child nutrition. Maintaining strong capacity for early identification, referral, and treatment of acute malnutrition remains important, particularly in a humanitarian context where conditions can change rapidly. Routine screening, treatment services, and availability of essential nutrition commodities must be sustained.

The findings highlight the importance of strengthening preventive action. Priorities include maternal nutrition, protection and support of breastfeeding, improved complementary feeding and child diet quality, prevention and treatment of childhood illness, vaccination and micronutrient interventions, safe water and adequate sanitation, food security and social protection.

The high prevalence of diarrhea particularly highlights the need for stronger integration between nutrition, health, and WASH interventions. The findings on dietary diversity and minimum acceptable diet similarly underline the importance of ensuring that young children have access not only to sufficient food but to diverse, safe and nutrient-rich diets, in addition to timely access to health, WASH, and nutrition supplies.

Continued nutrition surveillance is also essential. SMART surveys should be used alongside routine nutrition information systems, community MUAC screening, sentinel surveillance, program monitoring, and other humanitarian evidence to identify changes in nutritional conditions and inform timely decision-making. The survey provides an important evidence base for humanitarian decision-making and highlights the need to maintain capacity to prevent and treat acute malnutrition while simultaneously addressing the broader nutritional, health, dietary and environmental vulnerabilities affecting women and children.

Table 1: Summary of Gaza SMART Survey 2026 Findings

 INDICATOR	 Gaza & North Gaza	 Deir Al-Balah	 Khan Yunis & Rafah	 Gaza Strip
 Child anthropometry – WHZ (0–59 months)				
Global acute malnutrition (GAM), WHZ < -2 z-score and/or oedema	0.8% [0.3–2.0]	0.5% [0.1–2.0]	0.2% [0.0–1.8]	0.5% [0.2–1.0]
Moderate acute malnutrition (MAM), WHZ < -2 and ≥ -3 z-score, no oedema	0.6% [0.2–1.8]	0.5% [0.1–2.0]	0.0% [0.0–0.0]	0.3% [0.1–0.7]
Severe acute malnutrition (SAM), WHZ < -3 z-score and/or oedema	0.2% [0.0–1.4]	0.0% [0.0–0.0]	0.2% [0.0–1.8]	0.2% [0.0–0.7]
 Child anthropometry – MUAC (6–59 months)				
GAM, MUAC <125 mm and/or oedema	1.5% [0.6–3.6]	1.9% [0.8–4.3]	0.8% [0.3–2.4]	1.3% [0.7–2.1]
MAM, MUAC <125 mm and ≥115 mm, no oedema	1.3% [0.5–3.5]	1.4% [0.6–3.2]	0.8% [0.3–2.4]	1.1% [0.6–1.9]
SAM, MUAC <115 mm and/or oedema	0.2% [0.0–1.6]	0.5% [0.1–2.2]	0.0% [0.0–0.0]	0.2% [0.1–0.6]
 Combined acute malnutrition (0–59 months)				
Combined GAM: WHZ < -2 and/or MUAC <125 mm and/or oedema	1.7% [0.8–3.6]	2.0% [0.9–4.2]	0.7% [0.2–2.2]	1.3% [0.8–2.2]

 Underweight- WAZ (0–59 months)				
Underweight, WAZ < -2 z-score	3.9% [2.4–6.2]	3.5% [2.3–5.5]	4.1% [2.6–6.2]	3.9% [3.0–5.1]
Moderate underweight, WAZ < -2 and ≥ -3 z-score	2.9% [1.8–4.6]	3.5% [2.3–5.5]	3.1% [1.9–5.1]	3.1% [2.4–4.1]
Severe underweight, WAZ < -3 z-score	1.0% [0.4–2.6]	0.0% [0.0–0.0]	1.0% [0.4–2.5]	0.7% [0.4–1.5]

Stunting- HAZ (0–59 months)				
Stunting, HAZ < -2 z-score	13.5% [10.7–16.9]	12.6% [9.0–17.5]	11.0% [8.3–14.4]	12.2% [10.4–14.2]
Moderate stunting, HAZ < -2 and ≥ -3 z-score	10.6% [8.4–13.4]	10.9% [7.4–15.6]	8.1% [5.9–11.1]	9.6% [8.0–11.3]
Severe stunting, HAZ < -3 z-score	2.9% [1.8–4.5]	1.8% [0.9–3.6]	2.9% [1.7–4.9]	2.6% [1.9–3.6]
Overweight- WHZ (0–59 months)				
Overweight, WHZ >+2 SD	3.3% [2.0–5.3]	3.5% [2.1–6.0]	4.8% [3.0–7.5]	4.0% [3.0–5.4]
Moderate overweight, +2 < WHZ ≤ +3	3.1% [1.8–5.2]	3.3% [1.9–5.7]	4.5% [2.8–7.3]	3.8% [2.8–5.1]
Severe overweight, WHZ > +3 SD	0.2% [0.0–1.4]	0.3% [0.0–1.8]	0.2% [0.0–1.8]	0.2% [0.1–0.7]
Women 15–49 years- physiological status				
Non-pregnant, non-lactating	77.3% [13.8–80.5]	81.3% [78.2–84.1]	82.5% [79.0–85.5]	80.6% [78.6–82.4]
Pregnant	9.6% [7.7–12.0]	7.9% [6.3–10.0]	7.4% [5.8–9.4]	8.2% [7.2–9.4]
Among lactating women: infant <6 months	32.4% [24.2–41.7]	29.1% [20.8–39.1]	29.5% [21.7–38.8]	30.5% [25.6–35.9]
Among lactating women: infant >6 months	67.6% [58.3–75.8]	70.9% [60.9–79.2]	70.5% [61.2–78.3]	69.5% [64.1–74.4]
Women 15–49 years- acute malnutrition				
Acute malnutrition among non-pregnant/non-lactating women (MUAC <230 mm)	7.6% [5.7–10.2]	10.9% [8.3–14.2]	9.8% [7.5–12.6]	9.4% [8.0–11.0]
Acute malnutrition among pregnant/lactating women (MUAC <230 mm)	6.2% [3.3–11.3]	10.9% [5.9–19.1]	6.2% [2.9–12.8]	7.2% [4.9–10.4]
Child morbidity, care-seeking and diarrhea management				
ARI symptoms in the last 2 weeks	9.6% [6.5–14.1]	6.4% [4.1–10.0]	3.1% [1.8–5.4]	6.0% [4.6–7.8]
Care-seeking for ARI from appropriate provider	80.8% [65.3–90.4]	81.5% [63.3–91.8]	71.4% [41.5–89.8]	78.7% [68.3–86.4]
Fever in the last 2 weeks	33.7% [28.5–39.4]	31.7% [26.0–37.9]	30.8% [26.0–36.0]	31.9% [28.9–35.1]
Care-seeking for fever from appropriate provider	79.7% [72.6–85.3]	75.2% [64.3–83.6]	69.3% [59.2–77.9]	74.2% [68.8–78.9]
Diarrhea in the last 2 weeks	37.0% [32.8–41.5]	37.4% [31.5–43.7]	37.1% [32.7–41.7]	37.1% [34.4–40.0]
Care-seeking for diarrhea from appropriate provider	46.0% [37.4–54.9]	49.0% [39.4–58.7]	52.7% [44.5–60.8]	49.7% [44.7–54.8]
ORS used during diarrhea episode	21.0% [15.1–28.5]	28.7% [22.0–36.3]	27.3% [19.8–36.3]	25.6% [21.3–30.4]
Zinc used during diarrhea episode	24.5% [18.0–32.5]	18.5% [12.6–26.2]	15.2% [10.7–21.1]	18.9% [15.6–22.7]
Both ORS and zinc during diarrhea episode	13.5% [8.9–19.9]	12.1% [7.7–18.5]	11.5% [7.7–17.6]	12.3% [9.6–15.7]
Measles vaccination				
Measles vaccination coverage, children 9–59 months	92.7% [89.0–95.3]	93.6% [90.0–95.9]	94.8% [90.5–97.3]	93.9% [91.8–95.5]
Measles vaccination coverage, children 9–23 months	67.4% [55.3–77.6]	76.1% [65.3–84.3]	80.4% [65.6–89.8]	75.9% [68.5–82.0]
Vitamin A supplementation and deworming				
Vitamin A supplementation in previous 6 months, children 6–59 months	88.9% [81.8–93.5]	46.9% [38.2–55.8]	70.5% [60.9–78.5]	71.0% [65.9–75.5]
Deworming in previous 6 months, children 12–59 months	13.5% [10.5–17.2]	15.5% [11.7–20.3]	10.0% [7.0–14.1]	12.4% [10.4–14.7]
IYCF-breastfeeding practices				
Ever breastfed, children 0–23 months	96.3% [91.8–98.3]	97.4% [91.4–99.3]	96.1% [91.5–98.3]	96.5% [94.2–97.9]
Early initiation of breastfeeding, children 0–23 months	59.8% [50.6–68.3]	66.9% [56.9–75.6]	72.7% [64.3–79.8]	67.2% [62.1–71.9]
Exclusively breastfed for first 2 days after birth, children 0–23 months	41.3% [33.6–49.4]	41.6% [33.4–50.2]	68.8% [59.8–76.6]	53.5% [48.3–58.6]
Exclusive breastfeeding, infants <6 months	17.0% [9.2–29.3]	15.6% [6.0–35.0]	25.7% [13.0–44.4]	20.4% [13.5–29.5]
Mixed milk feeding, infants <6 months	45.3% [32.1–59.2]	53.1% [35.3–70.2]	42.9% [25.3–62.4]	45.9% [36.2–55.9]
Continued breastfeeding, children 12–23 months	48.6% [36.5–60.8]	42.3% [30.5–54.9]	56.1% [42.4–68.9]	50.3% [42.7–57.9]
IYCF-complementary feeding				
Introduction of solid/semi-solid/soft foods, children 6–8 months	97.9% [85.2–99.7]	90.0% [72.0–96.9]	86.4% [56.2–96.9]	92.1% [81.7–96.8]
Minimum dietary diversity, children 6–23 months	25.7% [18.3–34.9]	22.1% [15.6–30.3]	37.8% [28.1–48.6]	30.3% [25.0–36.1]
Minimum meal frequency, children 6–23 months	51.5% [40.7–62.1]	65.6% [56.4–73.7]	73.1% [63.6–80.9]	64.7% [59.0–69.9]
Minimum milk feeding frequency for non-breastfed children 6–23 months	52.3% [36.8–67.3]	60.9% [45.7–74.2]	36.4% [21.8–54.0]	48.5% [39.5–57.7]
Minimum acceptable diet, children 6–23 months	16.2% [10.0–25.2]	18.9% [13.1–26.3]	28.6% [20.0–39.1]	22.4% [17.7–27.9]
IYCF- diet quality and feeding practices				
Egg and/or flesh food consumption, children 6–23 months	36.8% [26.4–48.5]	40.2% [31.4–49.7]	50.4% [39.5–61.3]	43.7% [37.4–50.3]
Sweet beverage consumption, children 6–23 months	58.8% [49.9–67.2]	64.8% [54.5–73.8]	63.9% [51.7–74.5]	62.6% [56.2–68.5]
Unhealthy food consumption, children 6–23 months	66.2% [55.9–75.1]	72.1% [63.2–79.6]	78.2% [69.0–85.2]	73.0% [67.7–77.7]
Zero vegetable or fruit consumption, children 6–23 months	64.0% [54.8–72.2]	59.8% [49.2–69.6]	41.2% [31.2–52.0]	52.7% [46.9–58.5]
Bottle feeding, children 6–23 months	42.9% [35.4–50.7]	48.7% [40.8–56.7]	45.5% [36.6–54.6]	45.4% [40.5–50.4]

Table of Contents

Contents	
Acknowledgements	ii
Executive Summary	iii
Table of Contents	vii
List of Tables	x
List of Figures	x
Acronyms and Abbreviations	xii
1.1 Background	1
1.2 Humanitarian Context	1
1.3 Nutrition Situation in Gaza	2
1.4 Survey Justification	2
1.5 Survey Goal and Objectives	2
1.6 Organization of the Survey	3
2.1 Methodology, Design and Representativeness	3
2.1.1 Survey Design	3
2.1.2 Survey Domains	4
2.1.3 Survey Representativeness	4
2.1.4 Excluded Areas and Survey Coverage	5
2.2 Sampling Methodology	6
2.2.1 Sampling Approach	6
2.2.2 Development of the Sampling Frame	6
2.2.3 First-Stage Sampling: Cluster Selection	7
2.2.4 Second-Stage Sampling: Household Selection	7
2.2.5 Household Listing	7
2.2.6 Household Definition	8
2.2.7 Sample Size Determination	8
2.3 Survey Organization, Training, Field Implementation and Quality Assurance	10
2.3.1 Survey Coordination and Management	10
2.3.2 Survey Team Structure	10
2.3.3 Cluster Preparation Teams	10
2.3.4 Data Collection Teams	11
2.3.5 Field Supervision	11
2.3.6 Recruitment and Selection of Survey Personnel	11
2.3.7 Enumerator Training	11
2.3.8 Anthropometric Standardization and Pilot Survey	12
2.3.9 Field Deployment	12
2.3.10 Data Quality Assurance	12
2.4 Data Collection, Management, Analysis and Ethical Considerations	13
2.4.1 Electronic Data Collection	13
2.4.2 Data Management	13

2.4.3 Data Analysis	14
2.4.4 Survey Weighting	14
2.4.5 Ethical Considerations	14
2.4.6 Methodological Strengths	14
3.1 Results	15
3.2 Survey Sample and Data Quality	15
3.2.1 Survey Sample Achievement	15
3.2.2 Household Response and Non-Response	16
3.3.3 Survey Representativeness	16
3.2.4 Anthropometric Data Quality	18
3.2.5 Survey Strengths	19
3.3.1 Acute Malnutrition Based on Weight-for-Height Z-scores (WHZ)	20
3.3.2 Acute Malnutrition Based on Mid-Upper Arm Circumference (MUAC)	22
3.3.3 Relationship Between WHZ and MUAC in Identifying Acute Malnutrition	23
3.3.4 Combined Global Acute Malnutrition (cGAM)	24
3.3.5 Underweight (Weight-for-Age Z-scores)	25
3.3.6 Chronic Malnutrition (Stunting)	26
3.3.7 Overweight Among Children	27
3.4 Nutritional Status of Women (15–49 Years)	28
3.4.1 Physiological Status of Women	29
3.4.2 Acute Malnutrition Among Women of Reproductive Age	29
3.5 Child Health and Public Health Interventions	31
3.5.1 Childhood Morbidity	31
3.5.2 Management of Childhood Diarrhoea	32
3.5.3 Care-Seeking Behaviour for Childhood Illness	32
3.5.4 Preventive Public Health Interventions	34
3.6 Infant and Young Child Feeding (IYCF)	34
3.6.1 Breastfeeding Practices	35
3.6.2 Complementary Feeding Practices	35
3.7 Summary of Major Findings	37
4.1 Discussion of Findings	39
4.2 Overall Interpretation of the Nutrition Situation	39
4.3 Understanding the Low Prevalence of Acute Malnutrition in a Protracted Humanitarian Crisis	40
4.4 Persistent Chronic Undernutrition: The Emerging Nutrition Challenge	41
4.5 Child Feeding, Diet Quality and Childhood Morbidity: Understanding the Immediate Determinants of Malnutrition	43
4.6 Humanitarian Assistance as a Protective Factor	45
4.7 Strengths and Limitations of the Survey	47
4.7.1 Strengths of the Survey	47
4.7.2 Limitations of the Survey	48
5.1 Conclusions	49

Annex 1: References	51
Annex 2: List of Indicators	53
Annex 3: Plausibility Report	57
Annex 4: Domain Level Reports	58

List of Tables

Table 1: Summary of Gaza SMART Survey 2026 Findings	III
Table 2: Anthropometry Sample Size Inputs	9
Table 3: Number of Households per Cluster in each Domain	9
Table 4: Achieved Sample of clusters, household, and children by domain	15
Table 5: Distribution of Populated Neighbourhoods by Governorate and Inclusion/Exclusion Zone Status, Gaza Strip, May 2026	16
Table 6: Survey Sampling Frame and Excluded Population by Governorate, Gaza Strip, May 2026	17
Table 7: Summary of anthropometric data quality indicators by survey domain.	19
Table 8: Prevalence of acute malnutrition based on Weight-for-Height Z-scores (WHZ) among children aged 0–59 months by survey domain	20
Table 9: Prevalence of acute malnutrition based on MUAC among children aged 6–59 months by survey domain and Gaza Strip weighted analysis.	22
Table 10: Prevalence of acute malnutrition based on WHZ, and MUAC and/or Bilateral Oedema and by sex, children 0-59 months	24
Table 11: Prevalence of underweight among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.	25
Table 12: Prevalence of stunting among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.	26
Table 13: Prevalence of overweight among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.	27
Table 14: Physiological status of women aged 15–49 years by survey domain and Gaza Strip weighted analysis.	29
Table 15: Prevalence of malnutrition among women aged 15–49 years by physiological status, survey domain and Gaza Strip weighted analysis.	30
Table 16: simultaneously reducing dietary intake, impairing nutrient absorption, and contributing directly to both acute weight loss and chronic growth faltering.	31
Table 17: Measles vaccination coverage among children aged 9–23 and 9-59months.	33
Table 18: Vitamin A supplementation and Deworming among children aged 6–59 months.	33
Table 19: Breastfeeding indicators among children aged 0–23 months.	34
Table 20: Complementary feeding indicators among children aged 6–23 months.	36
Table 21: Complementary feeding indicators among children aged 6–23 months.	37
List of Figures	
Figure 1: Map of the Gaza Strip and areas excluded from the survey (IDF-controlled areas)	5
Figure 2: Location of Populated Neighbourhoods within Inclusion, Exclusion, and Intersecting Zones,	17
Figure 3: Figure 3.2.3b: Survey Representativeness Showing Sampled Accessible and Excluded Clusters	

and Population Coverage, Gaza Strip	18
Figure 4: Prevalence of Global Acute Malnutrition (WHZ) by survey domain.	21
Figure 5: Prevalence of Global Acute Malnutrition (MUAC) by survey domain.	22
Figure 6: A Venn diagram showing the discordance between WFH & MUAC in Acute Malnutrition diagnosis (a) GAM diagnosis discordance and (b) shows SAM diagnosis discordance.	24
Figure 7: Figure 3.3.4: Prevalence of Combine GAM by WHZ and MUAC by survey domain and Gaza Strip.	27
Figure 8: Prevalence of underweight by WAZ by survey domain and Gaza Strip.	25
Figure 9: Stunting by Height-for-Age Z-score by survey domain and Gaza Strip	26
Figure 10: Overweight prevalence by survey domain and Gaza Strip.	28
Figure 11: Childhood morbidity among children aged 0–59 months.	31
Figure 12: Breastfeeding practices among children aged 0–23 months.	35



Acronyms and Abbreviations

ACF	Action Against Hunger
ARI	Acute Respiratory Infection
cGAM	Combined Global Acute Malnutrition
cSAM	Combined Severe Acute Malnutrition
CMAM	Community-based Management of Acute Malnutrition
CI	Confidence Interval
EBF	Exclusive Breastfeeding
GAM	Global Acute Malnutrition
HAZ	Height-for-Age Z-score
HML IRB	HML Institutional Review Board
IYCF	Infant and Young Child Feeding
MAD	Minimum Acceptable Diet
MDD	Minimum Dietary Diversity
MMF	Minimum Meal Frequency
MUAC	Mid-Upper Arm Circumference
OCHA	Office for the Coordination of Humanitarian Affairs
ORS	Oral Rehydration Salts
PPS	Probability Proportional to Size
SAM	Severe Acute Malnutrition
SBC	Social and Behaviour Change
SMART	Standardized Monitoring and Assessment of Relief and Transitions
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WAZ	Weight-for-Age Z-score
WHZ	Weight-for-Height Z-score
WHO	World Health Organization

1.1 Background

The prolonged humanitarian crisis in the Gaza Strip continues to pose profound risks to the health, nutrition, and well-being of women and children (OCHA, 2026; UNICEF, 2026). More than two years of conflict have resulted in widespread destruction of homes, health facilities, schools, water and sanitation infrastructure, markets, agricultural production systems, and other essential services. Repeated displacement, disruption of livelihoods, deterioration of public services, and restricted movement of people and goods have fundamentally altered living conditions across the Gaza Strip, leaving much of the population dependent on humanitarian assistance for survival (OCHA, 2026).

Women and children have been disproportionately affected by these conditions. Food insecurity, reduced dietary diversity, recurrent infectious diseases, poor access to healthcare, and inadequate water, sanitation and hygiene (WASH) services continue to increase the risk of malnutrition and adverse health outcomes (UNICEF, 2020; WHO, 2023). Although humanitarian partners have maintained large-scale emergency assistance throughout much of the crisis, the nutritional situation remains fragile and highly dependent on continued humanitarian access.

The Gaza SMART Survey 2026 was conducted against this backdrop to provide robust, population-representative evidence on the nutritional status of women and children living within accessible areas of the Gaza Strip. The survey also examined key determinants of malnutrition, including childhood morbidity, maternal nutrition, infant and young child feeding practices, and selected public health interventions, thereby providing an evidence base for humanitarian programming, policy development, advocacy, and future nutrition surveillance.

1.2 Humanitarian Context

Since the escalation of hostilities, the Gaza Strip has experienced one of the most severe and prolonged humanitarian emergencies in recent history. Repeated population displacement, extensive damage to civilian infrastructure, restrictions on movement, and interruptions to essential public services have significantly affected household food security, access to healthcare, education, water and sanitation, and opportunities for sustainable livelihoods (OCHA, 2026).

The destruction of agricultural production systems, food markets, supply chains, and local economic activities has substantially reduced the availability, accessibility, and affordability of nutritious foods. Consequently, many households have become increasingly dependent on humanitarian food assistance to meet their daily food requirements. While humanitarian assistance has played a critical role in preventing a more severe deterioration in food security and nutrition, many households continue to face considerable challenges in accessing diverse, nutrient-rich diets (IPC, 2026; FAO, 2024).

At the same time, overcrowded living conditions, inadequate sanitation, limited access to safe drinking water and disruptions to primary healthcare services continue to increase children's exposure to infectious diseases, particularly diarrhoea and fever. These conditions contribute to nutritional vulnerability and reinforce the need for integrated humanitarian programming across nutrition, health, food security, WASH and social protection sectors (WHO, 2023; UNICEF, 2023).

1.3 Nutrition Situation in Gaza

Prior to this survey, no population-representative SMART survey had been conducted in Gaza since before the current conflict. Consequently, humanitarian partners relied primarily on routine programme data, nutrition sentinel surveillance, nutrition MUAC screening, and facility-based routine nutrition information to monitor the nutritional situation (Nutrition Cluster, 2025). While these systems provide valuable operational information, they might not generate representative population-level estimates of nutritional status.

The nutritional challenges facing Gaza extend beyond acute malnutrition and increasingly include poor dietary diversity, maternal undernutrition, suboptimal infant and young child feeding practices, recurrent childhood illness, and chronic growth deficits among children. These multiple and interrelated factors contribute to persistent nutritional vulnerability despite ongoing humanitarian assistance (Black et al., 2013; Victora et al., 2021).

Understanding the current nutritional situation therefore requires a comprehensive assessment that extends beyond anthropometric indicators alone. The Gaza SMART Survey was designed to generate representative evidence on child and maternal nutritional status while simultaneously assessing the immediate determinants of malnutrition, including childhood illness, breastfeeding, complementary feeding, vaccination, micronutrient supplementation, and care-seeking behaviour.

1.4 Survey Justification

Reliable nutrition information is fundamental for evidence-based humanitarian programming. In rapidly evolving emergencies, decisions based solely on routine surveillance or programme data may not adequately reflect the nutritional situation of the wider population (SMART Initiative, 2020; UNICEF, 2020).

The Gaza SMART Survey was therefore undertaken to:

- generate representative estimates of the nutritional status of children and women at the time of the survey implementation;
- establish a robust baseline for monitoring future trends;
- support humanitarian response planning and decision making;
- strengthen evidence-based programme prioritization;
- inform malnutrition burden estimations and resource allocation;
- support nutrition surveillance and advocacy.

The survey also responds to the need identified by humanitarian partners for an independent population-based assessment following the prolonged humanitarian crisis and provides an important contribution to ongoing nutrition information systems within the Gaza Strip.

1.5 Survey Goal and Objectives

Overall Goal

The overall goal of the Gaza SMART Survey was to determine the nutritional status of children aged 0–59 months and women of reproductive age (15–49 years), and to identify key factors contributing to malnutrition to inform humanitarian response planning across the Gaza Strip.

Specific Objectives

The survey sought to:

- Estimate the prevalence of acute malnutrition among children aged 0–59 months using Weight-for-Height Z-scores (WHZ), Mid-Upper Arm Circumference (MUAC), and bilateral pitting oedema.

- Estimate the prevalence of chronic malnutrition (stunting) and underweight among children aged 0–59 months.
- Estimate the prevalence of acute malnutrition among women aged 15–49 years using MUAC.
- Assess coverage of key public health interventions, including measles vaccination, vitamin A supplementation, and deworming.
- Assess the prevalence of childhood diarrhoea, fever, and acute respiratory infection together with care-seeking behaviour.
- Assess infant and young child feeding (IYCF) practices among children aged 0–23 months.
- Generate representative evidence to support humanitarian response planning, policy development, advocacy, nutrition surveillance, and programme monitoring.

1.6 Organization of the Survey

The Gaza SMART Survey was implemented through a collaborative partnership led by UNICEF State of Palestine, with operational support provided by Action Against Hunger (ACF) and technical oversight from the SMART Technical taskforce of the nutrition information system technical working group (NIS TWG).

The survey also represented an important opportunity to strengthen national technical capacity through practical training, mentorship, and implementation of standardized SMART methodology among national staff and implementing partners. The findings presented in this report provide a comprehensive assessment of the nutritional status of women and children residing within accessible areas of the Gaza Strip. In addition to documenting the current nutrition situation, the survey provides an evidence base for humanitarian decision-making, programme prioritization, advocacy, burden estimation, and future nutrition surveillance.

2.1 Methodology, Design and Representativeness

This section describes the overall design of the Gaza SMART Survey and the methodological principles used to ensure that the findings are representative of the accessible population of the Gaza Strip. It outlines the survey design, survey domains, sampling universe, representativeness, and population coverage, together with the procedures used to define the survey population within the complex humanitarian context. These methodological considerations provide the foundation for interpreting the survey findings presented in subsequent chapters.

2.1.1 Survey Design

The Gaza SMART Survey was conducted as a cross-sectional, population-representative nutrition survey using the internationally standardized SMART (Standardized Monitoring and Assessment of Relief and Transitions) methodology. The survey was designed to generate representative estimates of the nutritional status of children aged 0–59 months and women of reproductive age (15–49 years), together with key nutrition determinants, including childhood morbidity, infant and young child feeding (IYCF) practices, selected public health interventions, and maternal nutritional status.

The survey adhered to internationally recognized SMART methodology, WHO Child Growth Standards (2006), and the SMART+ digital infrastructure for survey design, sampling, electronic data collection, data quality assurance, and statistical analysis (SMART Initiative, 2024; WHO, 2006).

A stratified two-stage cluster sampling design was employed. Each survey domain was treated as an independent survey while also contributing, through survey weighting, to representative estimates for the Gaza Strip as a whole. This design enabled both sub-national and Gaza-wide estimates while maintaining statistical rigor and operational feasibility.

Unlike routine surveillance systems that monitor programme beneficiaries or selected sentinel sites, the SMART methodology provides representative estimates for the target population. Because the survey used probability sampling, every eligible child and woman residing within the accessible survey universe had a known probability of selection, allowing unbiased estimation of population-level nutrition indicators.

2.1.2 Survey Domains

The survey was implemented across three independent survey domains, representing the accessible population residing between the Mediterranean Sea and the Yellow Line during June 2026. The survey domains were:

- Domain 1: Gaza and North Gaza Governorate
- Domain 2: Deir Al-Balah Governorate
- Domain 3: Khan Younis and Rafah Governorate

The grouping of governorates reflected operational, demographic, and statistical considerations. Extensive population displacement blurred administrative boundaries, particularly between Gaza and North Gaza and between Khan Younis and Rafah. Combining these governorates ensured sufficient sample sizes, improved statistical precision, and reflected the realities of population movement during the humanitarian crisis.

2.1.3 Survey Representativeness

Representativeness was a central methodological consideration during survey planning because of the unique humanitarian and security context. The survey was designed to represent all eligible children aged 0–59 months and women aged 15–49 years residing within accessible areas of the Gaza Strip at the time of data collection. To maximize representativeness, three complementary components were developed:

Sampling Universe

The sampling universe consisted of the accessible population residing between the Mediterranean Sea and the Yellow Line. Population estimates were derived from the most recent OCHA population estimates available during survey planning.

Sampling Frame

An updated sampling frame was developed collaboratively by UNICEF, Nutrition Cluster, Action Against Hunger (ACF), Site Management, OCHA, and members of the Gaza SMART Technical Working Group. Population estimates from displacement sites were integrated with neighbourhood-level population estimates, thereby incorporating both displaced and non-displaced populations.

Immediately before field deployment, Cluster Preparation Teams conducted pre-census verification activities to update household lists, verify settlement occupancy, and account for recent displacement. This ensured that the sampling frame reflected the evolving population distribution as accurately as possible.

Probability Proportional to Size Sampling

Primary Sampling Units (clusters) were selected using Probability Proportional to Size (PPS) sampling through SMART+ Infrastructure. PPS ensures that larger settlements have a proportionately greater probability of selection while maintaining approximately equal probability of selection for individual households within the survey universe.

2.1.4 Excluded Areas and Survey Coverage

Conducting a representative survey required careful identification of areas that could not safely be included within the sampling universe. Prior to sampling, four categories of exclusion zones were established:

- Red Areas (No-Go Zones)
- Humanitarian Buffer Zones
- Survey Security Buffer Zones
- Netzarim Corridor

These exclusions were determined prior to sampling and therefore constitute design exclusions rather than survey non-response. Of the 193 neighbourhoods that existed across Gaza before the conflict, only 101 neighbourhoods remained populated according to OCHA population estimates available during survey planning. Among these:

- 30 neighbourhoods were fully included.
- 37 neighbourhoods partially intersected exclusion areas.
- 34 neighbourhoods were entirely excluded.

Overall, approximately 358,244 people (17%) were excluded from the sampling universe because of access and security constraints, while approximately 1.72 million people (83%) remained within the accessible survey population.

Consequently, the findings presented in this report should be interpreted as representative of the accessible population rather than the entire Gaza Strip. Despite these exclusions, the Gaza SMART Survey represents one of the largest and most comprehensive population-based nutrition assessments conducted in Gaza since before the conflict.

Figure 1: Map of the Gaza Strip and areas excluded from the survey (IDF-controlled areas)



2.2 Sampling Methodology

This section describes the sampling methodology used to select survey clusters, households, and eligible respondents. It explains the development of the sampling frame, probability proportional to size (PPS) sampling procedures, household selection methods, sample size determination, and sample achievement. Together, these procedures ensured that the survey produced statistically robust and representative estimates while maintaining methodological rigor under challenging humanitarian conditions.

2.2.1 Sampling Approach

The Gaza SMART Survey employed a two-stage cluster sampling design based on the internationally recognized SMART methodology. This design was selected because it provides statistically robust population estimates while remaining operationally feasible within complex humanitarian emergencies characterized by insecurity, population displacement, and restricted humanitarian access (SMART Initiative, 2020).

Sampling was undertaken independently within each of the three survey domains to generate representative estimates at both the domain and Gaza Strip levels. The sampling strategy ensured that every eligible child aged 0–59 months and every eligible woman aged 15–49 years residing within the accessible survey population had a known probability of selection.

The sampling process consisted of two stages:

- Stage One: Selection of Primary Sampling Units (clusters) using Probability Proportional to Size (PPS).
- Stage Two: Random selection of households within each sampled cluster.

This approach minimizes selection bias while ensuring that survey estimates accurately represent the accessible population.

2.2.2 Development of the Sampling Frame

Development of an accurate sampling frame represented one of the most technically demanding components of the survey because of the rapidly evolving humanitarian situation and continuous population movement throughout the Gaza Strip.

Unlike conventional SMART surveys that rely primarily on stable administrative population registers, the Gaza SMART 2026 Survey required construction of a dynamic sampling frame reflecting the most recent distribution of both displaced and non-displaced populations.

The sampling frame was developed collaboratively by UNICEF, Nutrition Cluster, Action Against Hunger (ACF), the Site Management Cluster, OCHA, and members of the Gaza SMART Technical Working Group.

Multiple data sources were integrated, including:

- OCHA neighbourhood (ADM4) population estimates;
- Site Management Cluster displacement site lists;
- Population estimates for non-site populations;
- Updated settlement master lists;

2.2.3 First-Stage Sampling: Cluster Selection

Clusters were selected using Probability Proportional to Size (PPS) through the SMART+ Infrastructure. PPS sampling assigns larger settlements a proportionately greater probability of selection while maintaining approximately equal probability of selection for individual households across the survey universe.

Prior to sampling, all inaccessible areas identified through the representativeness assessment were removed from the sampling frame. Consequently, cluster selection was restricted exclusively to the accessible survey universe. Separate PPS sampling was conducted independently for each of the three survey domains. Each domain required approximately 50 primary sampling units (clusters) to achieve the calculated sample size.

To reduce the operational risks associated with the humanitarian context, reserve clusters were also generated for each survey domain before field implementation. These reserve clusters provided operational flexibility should originally selected clusters become inaccessible because of security incidents or population movement.

Ultimately, only three of the originally selected clusters could not be surveyed because of unacceptable security risks, resulting in an overall cluster completion rate of 98%.

2.2.4 Second-Stage Sampling: Household Selection

Households were selected using simple random sampling procedures consistent with SMART methodology. Recognizing the diversity of settlement types across Gaza, three standardized household selection scenarios were developed.

Scenario One: Existing Household Lists

Where reliable household lists were available, Cluster Preparation Teams updated these lists together with community leaders before selecting households using simple random sampling.

Scenario Two: Small Settlements Without Household Lists

Where household lists were unavailable and settlements contained fewer than approximately 150 households, complete household listing was undertaken before randomly selecting households.

Scenario Three: Large Settlements

For larger settlements lacking household lists, segmentation procedures were implemented. Settlements were divided into manageable geographic segments. Population estimates were generated for each segment before one or more segments were selected using Probability Proportional to Size. Complete household listing and random household selection were subsequently undertaken within the selected segment.

2.2.5 Household Listing

Household listing represented one of the most important quality assurance activities undertaken before field implementation. Under standard SMART methodology, household listing is normally conducted immediately before data collection. However, the operational context in Gaza made this approach impractical because of:

- rapidly changing displacement patterns;
- extensive settlement size;
- limited operational windows;
- security constraints;
- the need to minimize field exposure.

Accordingly, the survey introduced an important operational adaptation. Rather than requiring data collection teams to undertake household listing immediately before interviews, dedicated Cluster Preparation Teams completed household listing one day before data collection. Where reliable household lists already existed, these were verified and updated. Where lists were unavailable, complete household listing was conducted according to SMART procedures.

This adaptation substantially reduced the workload of data collection teams while preserving methodological rigor and minimizing security exposure. Importantly, all field personnel received comprehensive training on standard SMART household listing procedures, ensuring that complete listings could be generated whenever existing household lists were unavailable.

2.2.6 Household Definition

For the purposes of the survey, a household was defined as:

“A person or group of people, related or unrelated, who usually live together, share common food arrangements, and recognize one individual as the household head.”

All eligible children aged 0–59 months and women aged 15–49 years residing within selected households were included in the survey. Households that were temporarily absent were revisited whenever operationally feasible before being classified as absent. Refusing households were not replaced in order to preserve the principles of probability sampling.

2.2.7 Sample Size Determination

Sample size calculations were performed using the SMART+ Infrastructure according to internationally accepted SMART procedures. Separate calculations were undertaken for each survey domain using assumptions relating to:

- expected prevalence of acute malnutrition;
- desired precision;
- design effect;
- household size;
- proportion of children under five years;
- anticipated non-response.



Table 2: Anthropometry Sample Size Inputs

 Anthropometry inputs	Gaza Strip			 Source and Rational
	 Gaza and North Gaza	 Deir Al- Balah	 Khan Yunis and Rafa	
Parameters				
 Estimated Prevalence of GAM (%)	5.0	5.0	5.0	The recent MUAC screening collected by the Nutrition stakeholder and Sentinel sites implemented from Jan to Mar 2026 shows mainly GAM rates ranging between 3 to 4.5%.
 ± Desired precision	3.0	3.0	3.0	SMART methodology recommends ±3.0% precision when the expected GAM prevalence ranges from 5% to 10%.
 Design Effect	1.5	1.5	1.5	SMART methodology recommends a design effect of 1.5 when no evidence from a previous survey is available.
 Children included	331	331	331	Calculated by SMART+ Infrastructure. All three domains applied the same parameters and required a sample of 331 children.
 Average HH Size	5	5	5	Nutrition sentinel sites reported an average household size of approximately five persons from January to March 2026.
 % Children under-5	10	10	10	Nutrition sentinel sites reported that children under five accounted for approximately 10% to 12% of the population from January to March 2026.
 % Non-response Households	10	10	10	Estimated from Nutrition sentinel site reports, where the non-response rate was slightly below 10%.
 Households included	736	736	736	Calculated by SMART+ Infrastructure. All three domains applied the same parameters and each required a sample of 736 households.

Based on the parameters outlined in Table 2 and to ensure adequate representation, a minimum of 50 clusters per domain was targeted. The number of households per cluster for each domain, calculated to meet the sample size requirements for anthropometry, is presented in Table 3 below:

Table 3: Number of Households per Cluster in each Domain

 Domain	 Required # HH Per Cluster	Anthropometry		
		 # Children	 Total HH	 Cluster
Gaza and North Gaza	15	331	750	50
Deir Al- Balah	15	331	750	50
Khan Yunis and Rafa	15	331	750	50

2.3 Survey Organization, Training, Field Implementation and Quality Assurance

Successful implementation of the Gaza SMART 2026 Survey required careful operational planning, intensive staff training, robust supervision, and continuous quality assurance. This section describes the organizational structure of the survey, including the innovative Cluster Preparation Team model, recruitment and training of field teams, anthropometric standardization, field deployment, supervision arrangements, and quality assurance procedures implemented throughout data collection to ensure high-quality survey data.

2.3.1 Survey Coordination and Management

The Gaza SMART Survey 2026 was led by UNICEF State of Palestine, operationally implemented by Action Against Hunger (ACF), and technically overseen by the Gaza SMART Technical Working Group (TWG). The survey was conducted through a collaborative partnership that ensured adherence to internationally recognized SMART methodology and quality standards.

The TWG provided technical guidance throughout survey design, implementation, analysis, validation, interpretation, and dissemination of findings. Overall technical leadership was provided by the SMART Survey Manager, while ACF coordinated field operations, recruitment, logistics, and day-to-day implementation activities.

This collaborative approach ensured strong technical oversight, effective operational coordination, and timely resolution of implementation challenges throughout the survey process.

2.3.2 Survey Team Structure

Recognizing the exceptional operational challenges associated with conducting a population-based survey in Gaza, the survey adopted a two-tier field implementation model that separated cluster preparation from household data collection. This approach represented an important operational adaptation specifically designed for the Gaza context. The field structure comprised six Cluster Preparation Teams, twelve Data Collection Teams, three Field Supervisors, one Survey Coordinator, and one SMART Survey Manager. This organizational model substantially improved operational efficiency, reduced security exposure for field teams, and strengthened adherence to SMART methodology despite the highly challenging operational environment.

2.3.3 Cluster Preparation Teams

One of the key operational adaptations introduced during the Gaza SMART 2026 Survey was the establishment of dedicated Cluster Preparation Teams. Under standard SMART implementation, survey teams typically undertake cluster preparation, household listing and selection, and data collection as part of the field process. This approach was not feasible in Gaza due to ongoing insecurity, widespread infrastructure destruction, dynamic displacement and changing household composition, limited daily operational windows, and the need to minimize field exposure.

To address these constraints, six Cluster Preparation Teams were established two per survey domain, each comprising two experienced field staff. The teams visited selected clusters one or more days before data collection to coordinate with community leaders and local authorities, sensitize communities, verify and update household and shelter lists, conduct household listing where required, segment large settlements, randomly select households in accordance with SMART methodology, prepare sketch maps and household movement plans, and identify operational and security risks. They then prepared complete cluster handover packages for the Data Collection Teams.

This advance preparation reduced delays and unnecessary field exposure, facilitated efficient team movement and household identification, and enabled Data Collection Teams to focus on interviews and measurements. Importantly, the adaptation improved operational efficiency while maintaining strict adherence to SMART sampling methodology in Gaza's highly challenging and rapidly changing context.

2.3.4 Data Collection Teams

A total of 12 Data Collection Teams were deployed across the three survey domains. Each team comprised one Team Leader/Enumerator and two Anthropometric Measurers, with at least one female member to facilitate culturally appropriate engagement with caregivers and women.

Each team was assigned one prepared cluster per day and received a complete handover package from the Cluster Preparation Teams, including updated household lists, pre-selected households, sketch maps, movement plans, and relevant operational notes. This arrangement removed the need for Data Collection Teams to undertake household listing and selection on the day of data collection, allowing them to focus on household interviews, anthropometric measurements, and caregiver engagement while improving the efficiency of field implementation.

2.3.5 Field Supervision

Three experienced Field Supervisors were deployed throughout the data collection period, with each supervisor overseeing four Data Collection Teams while maintaining close coordination with the Cluster Preparation Teams. Their daily responsibilities included observing household interviews and anthropometric measurements, verifying household selection, conducting repeat measurements where necessary, confirming cases of bilateral pitting oedema, reviewing completed questionnaires, providing immediate technical coaching, resolving operational challenges, and ensuring compliance with SMART methodology.

This intensive supervisory structure enabled rapid identification and correction of field-level issues and helped ensure consistent, high-quality implementation across all three survey domains.

2.3.6 Recruitment and Selection of Survey Personnel

Survey personnel were recruited through a competitive process based on educational qualifications, previous SMART survey experience, anthropometric competency, familiarity with humanitarian operations, and communication skills. Priority was given to candidates with previous experience conducting nutrition surveys in humanitarian settings.

Final selection and deployment were based on performance during training, including classroom participation, written assessments, anthropometric standardization, pilot survey performance, teamwork, and professionalism. This process helped ensure that only personnel demonstrating the required technical competence and field readiness were deployed for data collection.

2.3.7 Enumerator Training

Prior to field implementation, a comprehensive training programme was conducted for all enumerators and field team members. The training combined classroom-based instruction with extensive practical exercises to ensure participants were fully prepared for data collection activities. Key areas covered included the SMART methodology, sampling procedures, household selection techniques, electronic data collection using digital devices, anthropometric measurements, age estimation, and oedema assessment. Additional sessions focused on obtaining informed consent, safeguarding principles, referral pathways, effective communication with respondents, and field logistics management.

Practical demonstrations, role plays, and standardization exercises were incorporated throughout the training to reinforce technical competencies and promote consistency in data collection practices. Emphasis was placed on maintaining measurement standardization, ensuring adherence to survey protocols, and minimizing interviewer variability to enhance the accuracy and reliability of the survey results.

2.3.8 Anthropometric Standardization and Pilot Survey

To ensure the highest standards of data quality and measurement reliability, all anthropometric measurers participated in formal SMART standardization exercises prior to field deployment. During these exercises, repeated measurements of weight, height/length, and Mid-Upper Arm Circumference (MUAC) were collected from the same children and analysed using SMART+ Infrastructure. The standardization process assessed measurement precision and accuracy, as well as inter-observer and intra-observer variability, enabling the identification of inconsistencies among measurers. Results from the assessments were used to guide the final pairing and deployment of anthropometric teams, ensuring optimal field performance and adherence to SMART quality standards.

Following the standardization exercise, a full pilot survey was conducted to test all components of the survey methodology under field conditions. The pilot assessed the effectiveness and functionality of questionnaires, electronic data collection tools, household selection procedures, anthropometric measurement protocols, logistical arrangements, translation accuracy, supervision mechanisms, and referral pathways. Findings and lessons learned from the pilot were carefully reviewed and used to refine survey instruments, operational procedures, and field protocols, thereby strengthening the overall quality and efficiency of the survey implementation.

2.3.9 Field Deployment

Field implementation followed a structured sequential workflow.

Step 1: Cluster Preparation Teams completed all preparatory activities.

Step 2: Cluster documentation was transferred to Data Collection Teams.

Step 3: Data Collection Teams completed interviews and anthropometry.

Step 4: Supervisors reviewed implementation and synchronized data.

Step 5: Survey management reviewed daily data quality and provided corrective feedback.

This phased implementation substantially improved operational efficiency while reducing security risks and strengthening methodological compliance.

2.3.10 Data Quality Assurance

A comprehensive quality assurance system was maintained throughout field implementation. Key measures included intensive field supervision, direct observation of household interviews and anthropometric measurements, repeat measurements where required, questionnaire review, completeness and internal consistency checks, daily synchronization of electronic data, daily supervisory meetings, and immediate corrective feedback to field teams.

In addition, anthropometric data quality was monitored in real time through daily review of plausibility reports. Findings were promptly communicated to supervisors and field teams, enabling potential measurement or data quality issues to be identified and corrected while data collection was still ongoing.

2.4 Data Collection, Management, Analysis and Ethical Considerations

This section describes the procedures used for electronic data collection, data management, statistical analysis, survey weighting, and ethical oversight. It also summarizes the quality assurance mechanisms implemented throughout the survey lifecycle and highlights the methodological strengths that contributed to the reliability, validity, and scientific credibility of the survey findings.

2.4.1 Electronic Data Collection

The Gaza SMART 2026 Survey was implemented using the SMART+ digital platform, comprising SMART+ Infrastructure for survey design, sampling, field management, data quality monitoring, statistical analysis, and reporting, together with SMART+ Collect for electronic field data collection.

All survey questionnaires were administered electronically using Android tablets, eliminating paper-based data collection and substantially reducing transcription errors. Electronic questionnaires incorporated automated skip patterns, mandatory fields, consistency checks, validation rules, and range restrictions, thereby improving data completeness and minimizing interviewer errors during field implementation.

Completed questionnaires were synchronized daily with the SMART+ server whenever internet connectivity was available. This enabled survey management to monitor implementation progress, review data quality, identify inconsistencies, and provide immediate feedback to field teams while data collection remained ongoing.

The use of SMART+ ensured standardized implementation across all survey domains and strengthened the efficiency, accuracy, and security of survey data management.

2.4.2 Data Management

A comprehensive data management system was established to ensure data security, confidentiality, completeness, and integrity throughout survey implementation. At the end of each day, completed questionnaires were synchronized to the central SMART+ Infrastructure. Daily data reviews were undertaken by the SMART Survey Manager and technical team to assess completeness, consistency, and overall data quality before subsequent field deployment.

Routine data management procedures included:

- verification of questionnaire completeness;
- internal consistency checks;
- verification of household identifiers;
- identification of duplicate records;
- validation of anthropometric completeness;
- review of synchronization status;
- monitoring of field progress.

Any inconsistencies identified during these reviews were immediately communicated to supervisors, allowing clarification or correction whenever operationally feasible. This continuous data management approach substantially reduced data processing time while strengthening the reliability of the final analytical dataset.

2.4.3 Data Analysis

Data analysis was conducted using the SMART+ Infrastructure in accordance with internationally accepted SMART analytical procedures. Anthropometric indices were calculated using the WHO Child Growth Standards (2006), and nutritional status was classified according to WHO and SMART definitions for Global Acute Malnutrition (GAM), Severe Acute Malnutrition (SAM), combined Global Acute Malnutrition (cGAM), combined Severe Acute Malnutrition (cSAM), stunting and severe stunting, underweight and severe underweight, and overweight. Children presenting with bilateral pitting oedema were classified in accordance with SMART recommendations.

All prevalence estimates are presented with 95% confidence intervals to indicate statistical precision. In addition to anthropometric outcomes, estimates were generated for childhood morbidity, infant and young child feeding practices, measles vaccination, vitamin A supplementation, deworming, women's nutritional status, care-seeking behaviour, and other public health indicators collected during the survey.

2.4.4 Survey Weighting

The survey was designed to generate representative estimates at both the survey-domain level and for the Gaza Strip as a whole. Each of the three survey domains was analysed independently. Subsequently, weighted analysis was performed using the SMART+ Infrastructure to generate Gaza Strip-level estimates for the accessible population.

This ensured that each survey domain contributed proportionately to the Gaza Strip estimates according to its underlying population rather than its sample size. Accordingly, all Gaza Strip estimates presented in this report represent weighted population estimates for the accessible population residing within the survey universe.

2.4.5 Ethical Considerations

The Gaza SMART 2026 Survey was conducted in accordance with internationally accepted ethical principles governing research involving human participants.

Prior to implementation, the survey protocol underwent independent ethical review and received formal approval from the HML Institutional Review Board (HML IRB) Research and Ethics Committee. The survey also received technical review and endorsement from the Gaza SMART Technical Working Group, ensuring methodological integrity and operational appropriateness within the humanitarian context.

Written or verbal informed consent was obtained from caregivers before interviewing households or conducting anthropometric measurements of children and women. Strict confidentiality was maintained throughout implementation. Personally identifiable information was excluded from analytical datasets, and all electronic data were securely managed within SMART+ Infrastructure.

Children identified with severe acute malnutrition, bilateral pitting oedema, or other medical conditions requiring urgent attention were immediately referred to the nearest available health or nutrition service according to established referral pathways.

2.4.6 Methodological Strengths

Several methodological features substantially strengthened the scientific rigor of the Gaza SMART Survey. These included:

- internationally standardized SMART methodology;
- independent external ethical approval;
- representative probability sampling;

- updated sampling frame integrating site and non-site populations;
- dedicated Cluster Preparation Teams;
- comprehensive training and anthropometric standardization;
- intensive field supervision;
- real-time plausibility monitoring;
- full integration of SMART+ Infrastructure throughout the survey lifecycle;
- independent technical oversight by the Gaza SMART Technical Working Group;
- independent validation of the survey findings.

Collectively, these methodological strengths contributed to the production of a robust, reliable, and high-quality dataset despite one of the most challenging humanitarian operating environments globally.

3.1 Results

This chapter presents the validated findings of the Gaza SMART Survey 2026. Results are organized into five thematic sections covering survey implementation and data quality, nutritional status of children and women, child health and preventive public health interventions, infant and young child feeding practices, and a summary of the major findings.

All Gaza Strip estimates presented in this chapter represent weighted population estimates for the accessible population residing within the survey universe. Domain-specific estimates are presented to facilitate geographical comparison across the three survey domains.

3.2 Survey Sample and Data Quality

Before presenting the nutritional findings, it is important to assess the quality and representativeness of the survey data. This section summarizes sample achievement, household participation, survey representativeness, and anthropometric data quality, providing assurance that the results presented in the subsequent sections are based on a robust and reliable dataset suitable for informing humanitarian decision-making.

3.2.1 Survey Sample Achievement

The Gaza SMART 2026 Survey was successfully implemented across the three predefined survey domains. Field implementation was completed over a 13-day period, achieving high coverage of the planned sample and generating a robust dataset for estimating the nutritional status of women and children residing within accessible areas of the Gaza Strip.

Table 4: Achieved Sample of clusters, household, and children by domain

As presented in **Table 4**, a total of 147 of the planned 150 clusters (98%) were successfully surveyed across the three survey domains. Only three clusters could not be completed because of active military activity, unexploded ordnance, extensive structural destruction, and unacceptable security risks to survey teams.

Overall, **2,089** households participated in the survey, representing approximately **93%** of the planned household sample. Among these households, **1,411** eligible children aged 0–59 months were identified, of whom **1,335** children (**94.6%**) completed anthropometric assessment. This substantially exceeded the original target sample of **993 children**, thereby improving the statistical precision of prevalence estimates.

The larger-than-anticipated number of eligible children largely reflects the demographic composition of displacement sites and densely populated communities, where young children constituted a greater proportion of the population than originally assumed during sample size calculations.

Overall sample achievement exceeded minimum SMART requirements and provides a strong foundation for reliable estimation of nutritional indicators at both the survey-domain and Gaza Strip levels.

3.2.2 Household Response and Non-Response

Household participation was consistently high across all three survey domains. As shown in **Table 4**, refusal rates remained very low throughout implementation, demonstrating strong community acceptance of the survey.

Most household non-response resulted from temporary household absence rather than refusal, reflecting the highly dynamic population movements that continued throughout the survey period. Similarly, most children without complete anthropometric measurements were unavailable during household visits rather than excluded because of survey procedures.

The high participation rates achieved across all survey domains demonstrate the effectiveness of advance community engagement conducted by the Cluster Preparation Teams together with close collaboration between community leaders, humanitarian partners, and field teams.

3.3.3 Survey Representativeness

Out of 193 neighborhoods in the Gaza Strip, 101 are still populated according to population estimates provided by OCHA in May 2026. If all four zones are combined into an “exclusion zone”, then about one third of these neighbourhoods would fall in the exclusion zone, with another third intersecting both the exclusion zone and inclusion zone.

Table 5: Distribution of Populated Neighbourhoods by Governorate and Inclusion/Exclusion Zone Status, Gaza Strip, May 2026

Zone	Deir al Balah	Gaza	Khan Yunis	North Gaza	Rafah	Total
Inclusion zone	17	6	5	2	0	30
Intersecting both zones	9	10	9	7	2	37
Exclusion zone	14	7	3	9	1	34
Total	40	23	17	18	3	101

Figure 2: Location of Populated Neighbourhoods within Inclusion, Exclusion, and Intersecting Zones.

Due to neighborhoods being the lowest administrative level with population estimates, it is not possible to estimate the exact population in the parts of neighbourhoods that intersect the exclusion zone, however if homogeneous density is assumed, then it is possible to use the proportion of the neighbourhoods in the exclusion zone as the proportion of the population being excluded to calculate the excluded population, which would be over 358,000 people accounting for 17% of the strip's population, and would include 162 IDP sites.

Table 6: Survey Sampling Frame and Excluded Population by Governorate, Gaza Strip, May 2026

SURVEY DESIGN				STRATA 1				STRATA 2		STRATA 3				TOTAL	
SAMPLING UNIVERSE		GAZA STRIP GOV. (Population estimates)		North Gaza		Gaza		Deir al-Balah		Khan Yunis		Rafah			
				#	%	#	%	#	%	#	%	#	%	#	%
SAMPLING	 Site Population	49,203	55%	286,120	42%	319,255	54%	587,962	83%	587,962	83%	441	4%	1,242,981	60%
	 Non-Site Population	575	1%	272,407	40%	126,974	21%	73,440	10%	-	0%	-	0%	473,396	23%
	 Total Accessible	49,778	56%	558,527	83%	446,229	75%	661,402	93%	441	4%			1,716,377	83%
EXCLUSION	 Red NO GO Zone	5,714	6%	38,445	6%	19,824	3%	1,997	0%	5,829	54%			71,809	3%
	 Orange Humanitarian	17,082	19%	11,205	2%	41,143	7%	14,649	2%	3,613	33%			87,692	4%
	 Green Survey Security	16,349	18%	38,676	6%	85,537	14%	30,598	4%	950	9%			172,110	8%
	 Netzarim	-	0%	26,435	4%	198	0%	-	0%	-	0%			26,633	1%
	 Total Inaccessible	39,145	44%	114,761	17%	146,702	25%	47,244	7%	10,392	96%	10,392	96%	358,244	17%
TOTAL POPULATION		88,923	100%	673,288	100%	592,931	100%	708,646	100%	10,833	100%	10,833	100%	2,074,621	100%

Figure 3: Figure 3.2.3b: Survey Representativeness Showing Sampled Accessible and Excluded Clusters and Population Coverage, Gaza Strip

The survey was designed to generate representative estimates for the accessible population residing between the Mediterranean Sea and the Yellow Line during the survey period.

As illustrated in **Table 6** and **Figure 3**, approximately **17%** of the estimated Gaza Strip population could not be included within the sampling universe because of active conflict, military restrictions, humanitarian buffer zones, and security considerations. The remaining **83%** of the population, representing approximately **1.72** million people, constituted the accessible survey population from which the representative sample was selected.

Accordingly, the findings presented throughout this report should be interpreted as representative of the accessible population rather than areas that remained inaccessible during the survey period.

3.2.4 Anthropometric Data Quality

The reliability of population-based nutrition surveys depends fundamentally on the quality of anthropometric measurements. To ensure robust and reliable estimates, the Gaza SMART 2026 Survey implemented an intensive quality assurance system incorporating comprehensive training, anthropometric standardization, dedicated field supervision, and daily plausibility monitoring throughout implementation.

Table 7: Summary of anthropometric data quality indicators by survey domain.

As presented in **Table 7**, anthropometric data quality was classified as **good to excellent** across all three survey domains. Overall plausibility scores remained within internationally accepted SMART standards, while Weight-for-Height Z-score standard deviations, flag rates, digit preference scores, and measurement completeness all indicated high-quality anthropometric data. Age and sex distributions were generally consistent with expected demographic patterns, demonstrating the effectiveness of the survey's continuous quality improvement approach.

The excellent anthropometric data quality achieved during the survey reflects the combined contribution of comprehensive training, operational innovations, intensive supervision, and real-time quality assurance implemented throughout fieldwork.

3.2.5 Survey Strengths

Several methodological and operational factors contributed to the successful implementation of the Gaza SMART 2026 Survey. These included:

- representative probability sampling covering approximately 83% of the Gaza Strip population;
- completion of 98% of planned clusters despite exceptional operational constraints
- high household participation and low refusal rates;
- achievement of a larger-than-planned child sample, increasing statistical precision;
- implementation of dedicated Cluster Preparation Teams;
- comprehensive training and anthropometric standardization;
- intensive field supervision;
- daily plausibility monitoring and immediate corrective feedback;
- full integration of SMART+ Infrastructure throughout the survey lifecycle.

Collectively, these strengths provide a high degree of confidence that the nutritional estimates presented in the following sections accurately reflect the nutritional situation of women and children residing within accessible areas of the Gaza Strip during the survey period.

3.3 Nutritional Status of Children (based on WHO standards 2006)

Anthropometric assessment provides the foundation for understanding the nutritional status of children within a population. The Gaza SMART 2026 Survey assessed child nutritional status using internationally recognized WHO Child Growth Standards and SMART methodology, generating estimates of acute malnutrition, chronic malnutrition, underweight, and overweight among children aged 0–59 months.

Acute malnutrition was assessed using both Weight-for-Height Z-scores (WHZ) and Mid-Upper Arm Circumference (MUAC). Because these indicators identify overlapping but not identical groups of children, the survey also estimated Combined Global Acute Malnutrition (cGAM), providing a more comprehensive assessment of the burden of acute malnutrition. The chapter subsequently presents findings on underweight, chronic malnutrition (stunting), and overweight, thereby providing a comprehensive assessment of child nutritional status across the accessible population of the Gaza Strip.

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3.3.1 Acute Malnutrition Based on Weight-for-Height Z-scores (WHZ)

Acute malnutrition, measured using Weight-for-Height Z-scores (WHZ), reflects recent nutritional status and is widely used to assess the immediate effects of inadequate dietary intake and infectious disease on child growth. In humanitarian emergencies, wasting is one of the principal indicators used to monitor the severity of nutrition crises and guide humanitarian response planning.

Table 8: Prevalence of acute malnutrition based on Weight-for-Height Z-scores (WHZ) among children aged 0–59 months by survey domain

Region / Governorate	Prevalence of global malnutrition ($<$, 2 z, score and/or oedema)			Prevalence of moderate malnutrition ($<$, 2 z, score and $\geq$, 3 z, score, no oedema)			Prevalence of severe malnutrition ($<$, 3 z, score and/or oedema)		
	 All	 Boys	 Girls	 All	 Boys	 Girls	 All	 Boys	 Girls
 Region	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Gaza Strip	0.5	0.5	0.5	0.3	0.4	0.2	0.2	0.1	0.2
	[0.2 - 1.0]	[0.2 - 1.3]	[0.1 - 1.5]	[0.1 - 0.7]	[0.1 - 1.1]	[0.1 - 0.9]	[0.0 - 0.7]	[0.0 - 0.9]	[0.0 - 1.6]
Governorate Gaza and North Gaza	0.8	1.6	0.0	0.6	1.2	0.0	0.2	0.4	0.0
	[0.3 - 2.0]	[0.6 - 4.2]	[0.0 - 0.0]	[0.2 - 1.8]	[0.4 - 3.7]	[0.0 - 0.0]	[0.0 - 1.4]	[0.1 - 2.9]	[0.0 - 0.0]
Deir Al-Balah	0.5	0.0	1.1	0.5	0.0	1.1	0.0	0.0	0.0
	[0.1 - 2.0]	[0.0 - 0.0]	[0.3 - 4.2]	[0.1 - 2.0]	[0.0 - 0.0]	[0.3 - 4.2]	[0.0 - 0.0]	[0.0 - 0.0]	[0.0 - 0.0]
Khan Yunis and Rafah	0.2	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.5
	[0.0 - 1.8]	[0.0 - 0.0]	[0.1 - 3.6]	[0.0 - 0.0]	[0.0 - 0.0]	[0.0 - 0.0]	[0.0 - 1.8]	[0.0 - 0.0]	[0.1 - 3.6]

Figure 4: Prevalence of Global Acute Malnutrition (WHZ) by survey domain.

The weighted analysis estimated the prevalence of Global Acute Malnutrition (GAM) based on WHZ at **0.5% (95% CI: 0.2–1.0)** among children aged 0–59 months. Severe Acute Malnutrition (SAM) based on WHZ was estimated at **0.2% (95% CI: 0.0–0.7)**.

As presented in **Table 8** and **Figure 4**, acute malnutrition is shown to be low across all three survey domains. Although Gaza City/North Gaza recorded the highest prevalence and Khan Younis/Rafah the lowest, confidence intervals overlapped substantially, suggesting no statistically meaningful geographical differences.

Overall, the prevalence of wasting were well below internationally recognized emergency thresholds, indicating that widespread population-level acute malnutrition was not observed among the accessible population during the survey period.

These findings are encouraging given the prolonged humanitarian crisis. Nevertheless, they should not be interpreted in isolation. Wasting reflects relatively recent nutritional status and responds more rapidly than chronic nutritional indicators to improvements in dietary intake, disease control, and humanitarian assistance.

Consequently, the relatively low prevalence of acute malnutrition observed during the survey should not be interpreted as evidence that nutritional vulnerability has been resolved. Rather, interpretation should consider the other broader nutritional specific and sensitive vulnerabilities presented throughout this report, including persistent stunting, maternal malnutrition, poor dietary diversity, suboptimal infant feeding practices, and high childhood morbidity.

3.3.2 Acute Malnutrition Based on Mid-Upper Arm Circumference (MUAC)

Mid-Upper Arm Circumference (MUAC) provides an alternative measure of acute malnutrition and is widely used for community screening because of its operational simplicity and strong association with mortality risk. Unlike WHZ, MUAC primarily reflects muscle mass, and body tissue reserves and therefore identifies a somewhat different group of nutritionally vulnerable children.

Table 9: Prevalence of acute malnutrition based on MUAC among children aged 6–59 months by survey domain and Gaza Strip weighted analysis.

Region / Governorate	Prevalence of global malnutrition (< 125 mm and/or oedema)			Prevalence of moderate malnutrition (< 125 mm and ≥ 115 mm, no oedema)			Prevalence of severe malnutrition (< 115 mm and/or oedema)		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Region									
Gaza Strip	1.3	0.6	1.9	1.1	0.4	1.8	0.2	0.3	0.1
	[0.7 - 2.1]	[0.2 - 1.7]	[1.1 - 3.5]	[0.6 - 1.9]	[0.1 - 1.2]	[1.0 - 3.4]	[0.1 - 0.6]	[0.1 - 1.0]	[0.0 - 0.9]
Governorate									
Gaza and North Gaza	1.5	1.3	1.7	1.3	0.9	1.7	0.2	0.4	0.0
	[0.6 - 3.6]	[0.4 - 4.0]	[0.5 - 5.4]	[0.5 - 3.5]	[0.2 - 3.5]	[0.5 - 5.4]	[0.0 - 1.6]	[0.1 - 3.2]	[0.0 - 0.0]
Deir Al-Balah	1.9	1.0	2.9	1.4	0.5	2.3	0.5	0.5	0.6
	[0.8 - 4.3]	[0.1 - 7.5]	[1.2 - 6.6]	[0.6 - 3.2]	[0.1 - 3.8]	[0.9 - 6.0]	[0.1 - 2.2]	[0.1 - 3.8]	[0.1 - 4.1]
Khan Yunis and Rafa	0.8	0.0	1.7	0.8	0.0	1.7	0.0	0.0	0.0
	[0.3 - 2.4]	[0.0 - 0.0]	[0.6 - 4.8]	[0.3 - 2.4]	[0.0 - 0.0]	[0.6 - 4.8]	[0.0 - 0.0]	[0.0 - 0.0]	[0.0 - 0.0]

Figure 5: Prevalence of Global Acute Malnutrition (MUAC) by survey domain.

The weighted analysis estimated Global Acute Malnutrition based on MUAC at **1.3% (95% CI: 0.7–2.1)**, while Severe Acute Malnutrition based on MUAC was **0.2% (95% CI: 0.1–0.6)**.

MUAC consistently identified a slightly greater proportion of acutely malnourished children than WHZ across all survey domains. Deir Al-Balah recorded the highest MUAC-defined prevalence, followed by Gaza City/North Gaza, while Khan Younis/Rafah recorded the lowest prevalence.

The higher prevalence identified through MUAC reflects the complementary nature of the two anthropometric indicators rather than inconsistencies in the survey findings. MUAC and WHZ measure different physiological characteristics and therefore identify overlapping but not identical groups of children. These findings reinforce current international recommendations supporting the continued use of both MUAC and WHZ during population-based nutrition assessments.

3.3.3 Relationship Between WHZ and MUAC in Identifying Acute Malnutrition

Mid-upper arm circumference (MUAC) and weight-for-height Z-score (WHZ) are distinct and independent criteria used to identify acutely malnourished children. WHZ and MUAC are complementary indicators of acute malnutrition and should not be considered interchangeable. Each indicator identifies children with different physiological characteristics and levels of nutritional risk.

Extensive research across various countries in Asia and Africa has demonstrated that MUAC and WHZ often diagnose different subsets of acutely malnourished children (Laillou et al., 2014; Grellety & Golden, 2018; Myatt et al., 2006).

The findings of this survey highlight the divergent nature of MUAC and WHZ as diagnostic criteria for acute malnutrition, with convergence rates of 21.6% for GAM and 22.3% for Severe Acute Malnutrition (SAM), as illustrated in Figure 6 below.



Figure 6: A Venn diagram showing the discordance between WHZ & MUAC in Acute Malnutrition diagnosis (a) GAM diagnosis discordance and (b) shows SAM diagnosis discordance.

The survey demonstrated that WHZ and MUAC identified overlapping but not identical groups of children. While some children met both anthropometric criteria, others were identified exclusively by either WHZ or MUAC. The observed discordance reflects biological differences in body composition, age, sex, and growth patterns rather than methodological inconsistency.

These findings demonstrate that reliance on a single anthropometric indicator would underestimate the overall burden of acute malnutrition. Accordingly, the survey presents Combined Global Acute Malnutrition (cGAM) in the following section to provide the most comprehensive estimate of acute nutritional vulnerability.

3.3.4 Combined Global Acute Malnutrition (cGAM)

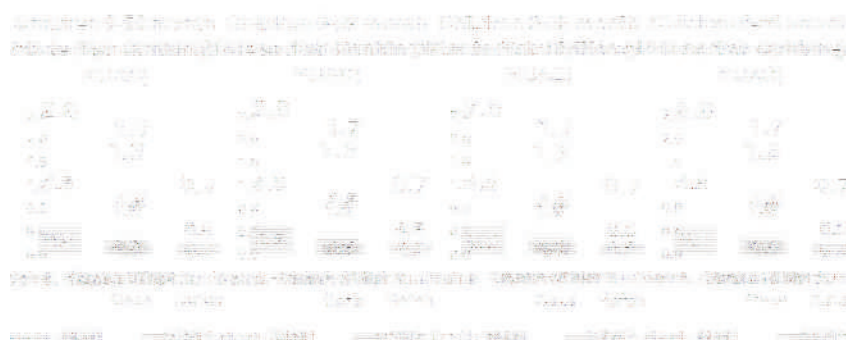
The diagnosis of acute malnutrition is based on three independent criteria: Weight-for-Height Z-score (WHZ), Mid-Upper Arm Circumference (MUAC), and bilateral edema. WHZ is assessed against the 2006 WHO growth standards, which provide sex-specific references and global classification thresholds to determine the severity of malnutrition based on prevalence. In contrast, MUAC does not have sex-specific growth references or crisis classification thresholds based on the prevalence of wasting (WHO & UNICEF, 2009; Bilukha & Leidman, 2018; Humphreys et al., 2019).

Given the varying correlation between WHZ and MUAC across different contexts, it is important to recognize that these criteria can identify distinct subsets of acutely malnourished children. This has significant implications for estimating the burden of malnutrition and determining program caseloads. To support informed decision-making by nutrition stakeholders, it is recommended to report combined Global Acute Malnutrition (cGAM), the combined prevalence of acute malnutrition in every population-representative survey, tailored to the specific context (Humphreys et al, 2019) Combined Global Acute Malnutrition integrates children identified through WHZ, MUAC, or bilateral pitting oedema, thereby providing the most comprehensive estimate of acute malnutrition within the population.

Table 10: Prevalence of acute malnutrition based on WHZ, and MUAC and/or Bilateral Oedema and by sex, children 0-59 months

Region / Governorate	Prevalence of global malnutrition (WHZ < -2 and/or MUAC < 125 mm and/or oedema)			Prevalence of severe malnutrition (WHZ < -3 and/or MUAC < 115 mm and/or oedema)		
	All	Boys	Girls	All	Boys	Girls
Region						
Gaza Strip	1.3 [0.8 - 2.2]	0.8 [0.4 - 1.9]	1.9 [1.1 - 3.3]	0.3 [0.1 - 0.8]	0.2 [0.1 - 0.9]	0.3 [0.1 - 1.4]
Governorate						
Gaza and North Gaza	1.7 [0.8 - 3.6]	2.0 [0.8 - 4.7]	1.5 [0.4 - 4.8]	0.2 [0.0 - 1.4]	0.4 [0.1 - 2.9]	0.0 [0.0 - 0.0]
Deir Al-Balah	2.0 [0.9 - 4.2]	1.0 [0.1 - 6.9]	3.2 [1.5 - 6.9]	0.5 [0.1 - 2.1]	0.5 [0.1 - 3.5]	0.5 [0.1 - 3.9]
Khan Yunis and Rafa	0.7 [0.2 - 2.2]	0.0 [0.0 - 0.0]	1.6 [0.1 - 3.6]	0.2 [0.0 - 1.8]	0.0 [0.0 - 0.0]	0.5 [0.1 - 3.6]

Figure 7: Figure 3.3.4: Prevalence of Combine GAM by WHZ and MUAC by survey domain and Gaza Strip.



For Gaza Strip, the weighted analysis estimated Combined Global Acute Malnutrition at 1.3% (95% CI: 0.8–2.2), while Combined Severe Acute Malnutrition was estimated at 0.3% (95% CI: 0.1–0.8). Combined GAM is low across all three survey domains, with the highest prevalence observed in Deir Al-Balah and the lowest in Khan Yunis/Rafah. The combined indicator identified a greater number of nutritionally vulnerable children than WHZ alone, confirming the importance of integrating both anthropometric indicators when estimating programme burden and planning nutrition services.

3.3.5 Underweight (Weight-for-Age Z-scores)

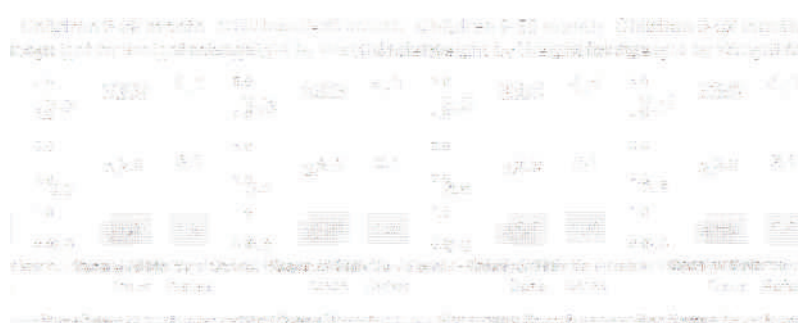
Underweight, measured using Weight-for-Age Z-scores (WAZ), reflects the combined effects of both acute and chronic undernutrition. Unlike wasting, which primarily reflects recent nutritional deterioration, or stunting, which reflects prolonged growth restriction, underweight provides a composite measure of nutritional status and is therefore particularly informative in protracted humanitarian settings.

In prolonged emergencies such as Gaza, children are often simultaneously exposed to inadequate dietary intake, recurrent infectious diseases, poor maternal nutrition, repeated displacement, and disrupted access to health services. Underweight therefore provides an important indicator of the cumulative nutritional impact of these multiple stressors.

Table 11: Prevalence of underweight among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.

Region / Governorate	Prevalence of underweight (<-2 z-score)			Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)			Prevalence of severe underweight (<-3 z-score)		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Region									
Gaza Strip	3.9 [3.0 - 5.1]	3.5 [2.3 - 5.1]	4.1 [3.0 - 6.3]	3.1 [2.4 - 4.1]	2.6 [1.7 - 4.0]	3.7 [2.5 - 5.4]	0.7 [0.4 - 1.5]	0.9 [0.4 - 2.1]	0.6 [0.2 - 1.7]
Governorate									
Gaza and North Gaza	3.9 [2.4 - 6.2]	4.4 [2.4 - 8.1]	3.3 [1.7 - 6.5]	2.9 [1.8 - 4.6]	3.6 [2.0 - 6.4]	2.2 [1.0 - 4.7]	1.0 [0.4 - 2.6]	0.8 [0.2 - 3.2]	1.1 [0.4 - 3.4]
Deir Al-Balah	3.5 [2.3 - 5.5]	2.9 [1.3 - 6.1]	4.3 [2.2 - 8.0]	3.5 [2.3 - 5.5]	2.9 [1.3 - 6.1]	4.3 [2.2 - 8.0]	0.0 [0.0 - 0.0]	0.0 [0.0 - 0.0]	0.0 [0.0 - 0.0]
Khan Yunis and Rafa	4.1 [2.5 - 6.2]	3.1 [1.5 - 6.2]	5.2 [2.8 - 9.3]	3.1 [1.9 - 5.1]	1.8 [0.7 - 4.7]	4.7 [2.6 - 8.3]	1.0 [0.4 - 2.5]	1.3 [0.4 - 3.9]	0.5 [0.1 - 3.6]

Figure 8: Prevalence of underweight by WAZ by survey domain and Gaza Strip.



The weighted analysis estimated the prevalence of underweight among children aged 0–59 months at **3.9% (95% CI: 3.0–5.1)**, while severe underweight affected **0.7% (95% CI: 0.4–1.5)** of children in Gaza Strip.

As presented in **Table 11** and **Figure 8**, underweight prevalence is relatively low across all three survey domains, although modest geographical variation was observed. The highest prevalence was recorded in Khan Younis/Rafah, while Deir Al-Balah recorded the lowest prevalence. However, overlapping confidence intervals suggest that these differences should be interpreted cautiously.

The relatively low prevalence of underweight is broadly consistent with the low levels of acute malnutrition observed elsewhere in this survey. Nevertheless, underweight should not be interpreted in isolation. Because the indicator reflects both acute and chronic nutritional processes, it provides additional evidence that many children remain nutritionally vulnerable despite the absence of widespread wasting.

3.3.6 Chronic Malnutrition (Stunting)

Stunting, measured using Height-for-Age Z-scores (HAZ), reflects chronic undernutrition resulting from prolonged exposure to inadequate dietary intake, repeated infections, poor maternal nutrition, and adverse environmental conditions during the critical periods of child growth and development.

Unlike wasting, which reflects recent nutritional stress, stunting develops gradually over time and therefore provides an important indicator of long-term nutritional well-being, healthy child development, and future human capital.

Table 12: Prevalence of stunting among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.

Region / Governorate	Prevalence of stunting (<-2 z-score)			Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)			Prevalence of severe stunting (<-3 z-score)		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Region									
Gaza Strip	12.2 [10.4 - 14.2]	11.2 [9.0 - 14.0]	13.2 [10.8 - 16.1]	9.6 [8.0 - 11.3]	8.9 [7.0 - 11.3]	10.3 [8.2 - 12.8]	2.6 [1.9 - 3.6]	2.3 [1.4 - 3.7]	3 [1.9 - 4.6]
Governorate									
Gaza and North Gaza	13.5 [10.7 - 16.9]	13.7 [9.9 - 18.6]	13.4 [9.7 - 18.1]	10.6 [8.4 - 13.4]	10.8 [7.7 - 15.0]	10.4 [7.1 - 15.1]	2.9 [1.8 - 4.5]	2.8 [1.4 - 5.6]	3.0 [1.6 - 5.5]
Deir Al-Balah	12.6 [9.0 - 17.5]	12.9 [8.7 - 18.8]	12.3 [7.5 - 19.6]	10.9 [7.4 - 15.6]	11.0 [7.2 - 16.4]	10.7 [6.3 - 17.6]	1.8 [0.9 - 3.6]	1.9 [0.7 - 4.9]	1.6 [0.5 - 4.9]
Khan Yunis and Rafa	11.0 [8.3 - 14.4]	8.8 [5.6 - 8.7]	13.5 [9.9 - 18.3]	8.1 [5.9 - 11.1]	6.6 [4.0 - 10.9]	9.9 [7.0 - 13.8]	2.9 [1.7 - 4.9]	2.2 [1.0 - 5.0]	0.5 [1.8 - 7.1]

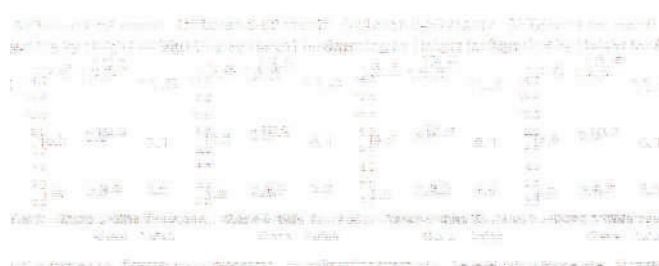


Figure 9: Stunting by Height-for-Age Z-score by survey domain and Gaza Strip

The weighted analysis estimated that **12.2% (95% CI: 10.4–14.2)** of children aged 0–59 months were stunted, while **2.6% (95% CI: 1.9–3.6)** were severely stunted. This indicates that approximately one in every eight children in the accessible population was experiencing chronic and irreversible growth failure.

Although classified as a **medium public health problem** according to WHO thresholds, the persistence of stunting remains concerning within the context of prolonged humanitarian crisis because of its implications for child growth, cognitive development, educational achievement, future productivity, and human capital.

As shown in **Table 12**, stunting was consistently observed across all three survey domains. Although prevalence varied modestly, chronic undernutrition was evident throughout the accessible population. The coexistence of low acute malnutrition with persistent stunting represents one of the most important findings of the survey.

This apparent contrast reflects the different biological processes measured by these indicators. While humanitarian assistance and nutrition services may rapidly improve body weight and reduce wasting, they cannot immediately reverse the cumulative effects of prolonged nutritional deprivation experienced during pregnancy, infancy, and early childhood.

Collectively, these factors contribute to irreversible chronic growth failure and help explain why stunting persists despite relatively low levels of wasting. The findings therefore suggest that the principal current nutrition challenge in Gaza is increasingly one of chronic nutritional vulnerability rather than widespread acute malnutrition.

3.3.7 Overweight Among Children

Although humanitarian nutrition programmes primarily focus on undernutrition, assessment of overweight provides important insight into the broader spectrum of child nutritional status. Overweight among children is defined according to the WHO Child Growth Standards as a Weight-for-Height Z-score greater than +2 standard deviations.

Monitoring overweight has become increasingly important because many populations affected by prolonged humanitarian crises experience a double burden of malnutrition, in which undernutrition coexists with overweight and poor dietary quality.

Region / Governorate	Prevalence of overweight (WHZ > 2 SD)			Prevalence of moderate overweight (2 < WHZ ≤ 3)			Prevalence of severe overweight (WHZ > 3 SD)		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Region									
Gaza Strip	4.0 [3.0 - 5.4]	3.1 [2.0 - 4.9]	5 [3.4 - 7.4]	3.8 [2.8 - 5.1]	2.8 [1.7 - 4.5]	4.9 [3.2 - 7.3]	0.2 [0.1 - 0.7]	0.3 [0.1 - 1.4]	0.1 [0.0 - 0.9]
Governorate									
Gaza and North Gaza	3.3 [2.0 - 5.3]	2.8 [1.2 - 6.6]	3.7 [1.9 - 7.3]	3.1 [1.8 - 5.2]	2.8 [1.2 - 6.6]	3.3 [1.6 - 7.0]	0.2 [0.0 - 1.4]	0 [0.0 - 0.0]	0.4 [0.1 - 2.7]
Deir Al-Balah	3.5 [2.1 - 6.0]	5.3 [2.7 - 10.0]	1.6 [0.5 - 4.8]	10.0 [1.9 - 5.7]	10.0 [2.4 - 9.6]	0.0 [0.5 - 4.8]	0.0 [0.0 - 0.0]	0.0 [0.0 - 0.0]	0.0 [0.0 - 0.0]
Khan Yunis and Rafa	12.9 [3.0 - 7.5]	2.2 [0.9 - 5.3]	12.9 [4.6 - 12.9]	4.5 [2.8 - 7.3]	1.8 [0.7 - 4.7]	12.9 [4.6 - 12.9]	2.9 [0.0 - 1.8]	1.3 [0.1 - 3.3]	12.9 [0.0 - 0.0]

Table 13: Prevalence of overweight among children aged 0–59 months by survey domain and Gaza Strip weighted analysis.

Several findings from the survey provide further insight into this pattern. The results revealed low dietary diversity and poor minimum acceptable diet among children, alongside suboptimal exclusive breastfeeding practices and a high prevalence of mixed milk feeding. The survey also documented persistent maternal malnutrition, as well as frequent episodes of diarrhoea and fever among children, all of which are likely contributing factors to the observed nutrition outcomes.

Figure 10: Overweight prevalence by survey domain and Gaza Strip.

The survey found that the prevalence of overweight remained low across the Gaza Strip and all three survey domains. Although overweight does not currently represent a major public health concern within the accessible population, continued monitoring remains important as dietary patterns evolve during humanitarian response and eventual recovery.

3.4 Nutritional Status of Women (15–49 Years)

Women of reproductive age play a central role in determining maternal, newborn, and child nutritional outcomes. Adequate maternal nutrition before conception, throughout pregnancy, and during lactation is essential for healthy fetal growth, favourable birth outcomes, successful breastfeeding, and optimal child growth and development.

In humanitarian settings, women often experience increased nutritional vulnerability resulting from food insecurity, repeated displacement, disrupted livelihoods, increased caregiving responsibilities, psychological stress, and reduced access to essential health and nutrition services. Consequently, assessment of maternal nutritional status provides important insight into the broader nutritional well-being of households and the potential intergenerational transmission of malnutrition.

The Gaza SMART Survey assessed the nutritional status of women aged 15–49 years using Mid-Upper Arm Circumference (MUAC), together with information on physiological status, allowing separate assessment of pregnant, lactating, and non-pregnant/non-lactating women.

3.4.1 Physiological Status of Women

Understanding the physiological status of women is important because nutritional requirements vary considerably during pregnancy and lactation. Interpretation of maternal nutritional indicators therefore requires consideration of women's reproductive status.

In summary, the physiological status of women, particularly during their reproductive years, requires targeted attention. Multiple micronutrient supplementation serves as an effective intervention to address specific health needs, promoting overall well-being and healthier pregnancies. Public health initiatives play a pivotal role in raising awareness and integrating these interventions into comprehensive maternal health programs.

Table 14: Physiological status of women aged 15–49 years by survey domain and Gaza Strip weighted analysis.

PHYSIOLOGICAL STATUS OF WOMEN (15 - 49 YEARS)				
Region / Governorate	Non-pregnant, non-lactating	Pregnant	Lactating with infants < 6 months	Lactating with an infant > 6 months
	Prevalence (%)	Prevalence (%)	Prevalence (%)	Prevalence (%)
Region				
Gaza Strip	80.6 [78.6 - 82.4]	8.2 [7.2 - 9.4]	30.5 [25.6 - 35.9]	69.5 [64.1 - 74.4]
Governorate				
Gaza and North Gaza	77.3 [73.8 - 80.5]	9.6 [7.7 - 12.0]	32.4 [24.2 - 41.7]	67.6 [58.3 - 75.8]
Deir Al-Balah	81.3 [78.2 - 84.1]	7.9 [6.3 - 10.0]	29.1 [20.8 - 39.1]	70.9 [60.9 - 79.2]
Khan Yunis and Rafah	82.5 [79.0 - 85.5]	7.4 [5.8 - 9.4]	29.5 [21.7 - 38.8]	70.5 [61.2 - 78.3]

As presented in **Table 14**, the majority of surveyed women were neither pregnant nor lactating, while smaller proportions were pregnant or breastfeeding at the time of the survey. This distribution reflects the reproductive profile of the surveyed population and provides the basis for interpreting maternal nutritional status presented in the following section.

Although, pregnant and lactating women have substantially increased nutritional requirements, all women of reproductive age require adequate nutritional status to support healthy pregnancies, breastfeeding, and future child growth. Consequently, maternal nutrition interventions should not be limited exclusively to pregnancy but should extend throughout the reproductive life course.

3.4.2 Acute Malnutrition Among Women of Reproductive Age

Maternal malnutrition remains an important public health concern in humanitarian settings because of its direct implications for maternal health, fetal development, birth outcomes, breastfeeding, and child survival. The Gaza SMART Survey assessed acute malnutrition among women of reproductive age using Mid-Upper Arm Circumference (**MUAC <230 mm**).

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Table 15: Prevalence of malnutrition among women aged 15–49 years by physiological status, survey domain and Gaza Strip weighted analysis.

The weighted analysis estimated that **9.4%** of non-pregnant and non-lactating women were acutely malnourished (MUAC <230 mm), while **7.2%** of pregnant and lactating women were classified as acutely malnourished.

As shown in **Table 15**, maternal malnutrition was observed across all three survey domains, indicating that nutritional vulnerability among women remains an important public health concern throughout the accessible population.

This findings demonstrate that many women continue to experience nutritional stress during one of the most critical periods of their life course.

The slightly lower prevalence observed among pregnant and lactating women compared with non-pregnant/non-lactating women may reflect prioritization of these groups within humanitarian assistance programmes, including antenatal care, targeted nutrition support, and supplementary feeding interventions. Nevertheless, continued acute malnutrition among both groups demonstrates that important nutritional gaps remain.

Maternal nutritional status should also be interpreted alongside the child nutrition findings. The coexistence of maternal malnutrition, persistent stunting, poor dietary diversity, suboptimal breastfeeding practices, and low minimum acceptable diet suggests that nutritional vulnerability extends beyond individual children and affects households more broadly.

Maternal undernutrition before conception, during pregnancy, and throughout lactation increases the risk of adverse birth outcomes, low birth weight, impaired breastfeeding performance, and poor child growth. Consequently, maternal nutrition represents one of the principal pathways through which nutritional vulnerability may be transmitted across generations.

These findings reinforce the importance of viewing maternal nutrition not as an isolated programme component but as an integral element of child nutrition, maternal health, and early childhood development.

3.5 Child Health and Public Health Interventions

The nutritional status of young children is closely linked to their overall health and access to preventive and curative health services. Frequent episodes of infectious disease increase metabolic demands, reduce appetite, impair nutrient absorption, and contribute directly to both acute and chronic forms of malnutrition. Conversely, effective disease prevention, timely healthcare, and appropriate management of childhood illnesses play a critical role in protecting child nutritional status and survival.

The Gaza SMART 2026 Survey assessed the prevalence of diarrhoea, fever, and symptoms of acute respiratory infection (ARI) during the two weeks preceding the survey. The survey also examined care-seeking behaviour, management of diarrhoeal disease, and coverage of key preventive child health interventions, including measles vaccination, vitamin A supplementation, and deworming.

Together, these indicators provide important insight into the immediate health determinants of malnutrition among children living in the accessible areas of the Gaza Strip.

3.5.1 Childhood Morbidity

Childhood illness remains one of the principal immediate determinants of malnutrition. Episodes of diarrhoea, fever, and acute respiratory infection increase nutritional requirements while simultaneously reducing dietary intake, impairing nutrient absorption, and contributing directly to both acute weight loss and chronic growth faltering.

Table 16: simultaneously reducing dietary intake, impairing nutrient absorption, and contributing directly to both acute weight loss and chronic growth faltering.

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Figure 11: Childhood morbidity among children aged 0–59 months.

The weighted analysis estimated that **37.1% (95% CI: 34.4–40.0)** of children experienced diarrhoea, **31.9% (95% CI: 28.9–35.1)** experienced fever, and **6.0% (95% CI: 4.6–7.8)** experienced symptoms of acute respiratory infection (ARI) during the two weeks preceding the survey. As presented in **Table 16** and **Figure 11**, diarrhoea was the most frequently reported childhood illness, affecting more than one in three children. Fever was also common, while ARI occurred less frequently but remained an important contributor to childhood morbidity.

These findings indicate that infectious diseases continue to represent a substantial burden among children despite the relatively low prevalence of acute malnutrition observed during the survey. The persistence of childhood illness is consistent with the broader humanitarian context, where many households continue to experience overcrowded living conditions, disrupted water and sanitation services, reduced access to safe drinking water, and constraints in primary healthcare service delivery. Together, these conditions increase children's exposure to infectious diseases and contribute to ongoing nutritional vulnerability.

3.5.2 Management of Childhood Diarrhoea

Appropriate management of childhood diarrhoea is essential for preventing dehydration, reducing mortality, and minimizing nutritional deterioration. WHO recommends treatment with oral rehydration salts (ORS) together with zinc supplementation to reduce the duration and severity of diarrhoeal episodes.

Among children who experienced diarrhoea during the two weeks preceding the survey, **49.7% (95% CI: 44.7–54.8)** sought care from an appropriate health provider. However, only **25.6% (95% CI: 21.3–30.4)** received oral rehydration salts (ORS), **18.9% (95% CI: 15.6–22.7)** received zinc supplementation, and only **12.3% (95% CI: 9.6–15.7)** received the recommended combination of both ORS and zinc.

These findings indicate that although approximately half of caregivers sought professional care, appropriate case management remained substantially below international recommendations. Given the high prevalence of diarrhoea documented in the survey, these treatment gaps represent an important opportunity to strengthen child survival and nutrition programmes.

3.5.3 Care-Seeking Behaviour for Childhood Illness

Prompt and appropriate care-seeking is essential for reducing childhood morbidity, preventing complications, and minimizing nutritional deterioration. Timely access to appropriate healthcare facilitates early diagnosis and treatment, reduces the severity and duration of illness, and contributes directly to improved child survival.

Among children who experienced symptoms of acute respiratory infection (ARI) during the two weeks preceding the survey, **78.7% (95% CI: 68.3–86.4)** were taken to an appropriate health provider for advice or treatment. Similarly, **74.2% (95% CI: 68.8–78.9)** of children with fever received professional healthcare (Table 16).

These findings indicate that the majority of caregivers sought professional healthcare when children became ill. Nevertheless, approximately one in five children with ARI and one in four children with fever did not receive appropriate medical attention, leaving a considerable proportion of sick children at increased risk of prolonged illness and nutritional deterioration.

The relatively high care-seeking rates observed are encouraging and likely reflect the continued availability of humanitarian-supported primary healthcare services in accessible areas. However, ongoing disruptions to health infrastructure, shortages of medicines, insecurity, transportation challenges, and repeated displacement continue to limit timely access to healthcare for many families.

Measles Vaccination

Table 17: Measles vaccination coverage among children aged 9–23 and 9-59months.children aged 0–59 months by survey domain

Region / Governorate	Children 9-59 months					Children 9-23 months		
	MEASLES COVERAGE					MEASLES COVERAGE		
	Overall coverage		Coverage (card seen)		Coverage (card not seen)	Overall coverage	Coverage (card seen)	(card not seen)
Region								
Gaza Strip	93.9 [91.8-95.5]		62.5 [56.4-68.3]		31.3 [25.6-37.7]	75.9 [68.5-82.0]	58.4 [51.1-65.4]	17.5 [12.6-23.7]
Governorate								
Gaza and North Gaza	92.7 [89.0-95.3]		36.7 [25.9-49.1]		56.0 [44.4-67.0]	67.4 [55.3-77.6]	38.2 [25.7-52.5]	29.2 [18.2-43.3]
Deir Al-Balah	93.6 [90.0-95.9]		74.3 [64.8-82.0]		19.3 [12.1-29.3]	76.1 [65.3-84.3]	65.2 [54.0-74.9]	10.9 [4.8-22.8]
Khan Yunis and Rafah	94.8 [90.5-97.3]		74.2 [64.4-82.0]		20.7 [13.0-31.3]	80.4 [65.6-89.8]	66.0 [53.6-76.5]	14.4 [8.3-23.9]

The weighted analysis estimated that **75.9% (95% CI: 68.5–82.0)** of eligible children aged 9–23 months had received measles vaccination, either confirmed by vaccination card or caregiver recall. Approximately one-quarter of eligible children had not been vaccinated, indicating that coverage remains below the level generally required to achieve herd immunity.

Vitamin A Supplementation and Deworming

Vitamin A supplementation is a widely recognized public health strategy aimed at addressing vitamin A deficiency, a leading cause of preventable blindness and increased susceptibility to infections. Regular supplementation ensures that vulnerable groups, particularly children under five, receive adequate vitamin A, supporting immune function, vision health, and overall growth and development

Deworming programs play a critical role in preventing malnutrition by targeting parasitic infections such as intestinal worms, which impair nutrient absorption and contribute to chronic malnutrition. By administering anthelmintic medications, these programs help reduce the prevalence of parasitic infections, thereby improving the nutritional status of affected populations, particularly in children.

Table 18: Vitamin A supplementation and Deworming among children aged 6–59 months.

Region / Governorate	Children age 6-59 months given Vitamin A last 6 months			Vitamin A Coverage			Children age 12-59 months dewormed last 6 months		
				Yes, card seen	Yes, recall				
	% [CI]			% [CI]		% [CI]	% [CI]		
Region									
Gaza Strip	71.0 [65.9- 75.5]	11.2 [9.0 - 14.0]	13.2 [10.8 - 16.1]	9.6 [8.0 - 11.3]	32.9 [27.3-39.0]	38.1 [31.9-44.6]		12.4 [10.4-14.7]	12.8 [10.4-14.7]
Governorate									
Gaza and North Gaza	88.9 [81.7- 16.5]	13.7 [9.9 - 18.6]	13.4 [9.7 - 18.1]	10.6 [8.4 - 13.4]	29.3 [20.0-40.7]	59.6 [47.3-70.8]		13.5 [10.5-17.2]	13.5 [10.5-17.2]
Deir Al-Balah	46.9 [90.0-17.5]	12.9 [8.7 - 18.8]	12.3 [7.5 - 18.6]	10.9 [7.4 - 15.6]	35.3 [27.3-44.2]	11.6 [7.2-18.1]		15.5 [11.7-20.3]	15.5 [11.7-20.3]
Khan Yunis and Rafah	70.5 [60.9-78.5]	8.8 [5.6 - 8.7]	13.5 [9.9 - 18.3]	8.1 [59.9-11.1]	34.1 [24.9-44.7]	36.3 [26.3-47.7]		10.0 [7.0-14.5]	10.0 [7.0-14.1]

The survey estimated that **71.0% (95% CI: 65.9–75.5)** of eligible children received vitamin A supplementation during the previous six months. Although coverage remained relatively encouraging considering the humanitarian context, nearly one-third of eligible children had not received supplementation, indicating opportunities to strengthen programme delivery.

The survey documented only 12.4% (95% CI: 10.4–14.7) deworming coverage among eligible children aged 12–59 months. Coverage varied across survey domains, reflecting differences in programme implementation and access to routine child health services.

3.6 Infant and Young Child Feeding (IYCF)

Optimal Infant and Young Child Feeding (IYCF) practices are fundamental to child survival, healthy growth, cognitive development, and long-term nutritional well-being. Appropriate breastfeeding and complementary feeding provide the nutrients required during the critical first 1,000 days of life, strengthen immunity, reduce susceptibility to infectious diseases, and contribute substantially to the prevention of both acute and chronic malnutrition.

In humanitarian emergencies, IYCF practices are frequently disrupted by food insecurity, repeated displacement, psychosocial stress, limited caregiver support, interruptions to maternal and child health services, and reduced access to diverse and nutritious foods. Consequently, assessment of IYCF practices provides important insight into the immediate dietary determinants of malnutrition and helps explain many of the anthropometric findings presented earlier in this report.

Because of the survey sampling strategy, all IYCF indicators are representative of the accessible population of the Gaza Strip rather than individual survey domains.

3.6.1 Breastfeeding Practices

Breastfeeding provides optimal nutrition during infancy while protecting children against infectious diseases and reducing infant mortality. The World Health Organization recommends initiation of breastfeeding within one hour of birth, exclusive breastfeeding during the first six months of life, and continued breastfeeding alongside complementary feeding until at least two years of age (WHO, 2008; WHO & UNICEF, 2023). The Gaza SMART 2026 Survey assessed key breastfeeding indicators among children aged 0–23 months.

Table 19: Breastfeeding indicators among children aged 0–23 months.

Indicator	Definition	95% CI	95% CI	95% CI	95% CI	95% CI	95% CI	95% CI	95% CI
Initiation of breastfeeding	Initiated within 1 hour of birth	71.0	65.9	75.5	71.0	65.9	75.5	71.0	65.9
Exclusive breastfeeding	Only breast milk for 6 months	12.4	10.4	14.7	12.4	10.4	14.7	12.4	10.4
Continued breastfeeding	At least 2 years of age	45.2	40.1	50.3	45.2	40.1	50.3	45.2	40.1
Complementary feeding	Appropriate introduction	68.5	63.4	73.6	68.5	63.4	73.6	68.5	63.4
Feeding frequency	At least 8 times per day	55.1	50.0	60.2	55.1	50.0	60.2	55.1	50.0
Feeding volume	At least 100 ml per feed	42.3	37.2	47.4	42.3	37.2	47.4	42.3	37.2
Feeding duration	At least 10 minutes per feed	38.7	33.6	43.8	38.7	33.6	43.8	38.7	33.6
Feeding consistency	Consistent feeding schedule	51.9	46.8	57.0	51.9	46.8	57.0	51.9	46.8
Feeding responsiveness	Responsive feeding practices	63.4	58.3	68.5	63.4	58.3	68.5	63.4	58.3
Feeding environment	Safe and hygienic feeding	70.1	65.0	75.2	70.1	65.0	75.2	70.1	65.0
Feeding caregiver	Primary caregiver feeding	82.5	77.4	87.6	82.5	77.4	87.6	82.5	77.4
Feeding support	Supportive feeding environment	59.8	54.7	64.9	59.8	54.7	64.9	59.8	54.7
Feeding knowledge	Knowledge of feeding practices	66.2	61.1	71.3	66.2	61.1	71.3	66.2	61.1
Feeding skills	Skills for feeding practices	53.7	48.6	58.8	53.7	48.6	58.8	53.7	48.6
Feeding resources	Access to feeding resources	47.9	42.8	53.0	47.9	42.8	53.0	47.9	42.8
Feeding barriers	Barriers to feeding practices	34.5	29.4	39.6	34.5	29.4	39.6	34.5	29.4
Feeding facilitators	Facilitators to feeding practices	61.3	56.2	66.4	61.3	56.2	66.4	61.3	56.2
Feeding outcomes	Outcomes of feeding practices	58.6	53.5	63.7	58.6	53.5	63.7	58.6	53.5

Figure 12: Breastfeeding practices among children aged 0–23 months.

Breastfeeding remains a well-established practice in Gaza. Overall, **96.5% (95% CI: 94.2–97.9)** of children had **ever been breastfed**, indicating that breastfeeding initiation remains almost universal. However, important gaps were observed in recommended breastfeeding practices. Only 67.2% (95% CI: 62.1–71.9) of infants were breastfed within the first hour after birth, while 53.5% (95% CI: 48.3–58.6) were exclusively breastfed during the first two days following delivery.

More importantly, the prevalence of exclusive breastfeeding among infants younger than six months was only **20.4% (95% CI: 13.5–29.5)**, indicating that only one in five infants received the recommended feeding practice during early infancy. Conversely, **45.9% (95% CI: 36.2–55.9)** of infants younger than six months had already received mixed milk feeding, while only **50.3% (95% CI: 42.7–57.9)** of children aged 12–23 months continued breastfeeding. Collectively, these findings demonstrate that although breastfeeding initiation remains nearly universal, adherence to optimal breastfeeding recommendations declines substantially during infancy.

Several contextual factors may contribute to these practices, including maternal stress and or malnutrition, displacement, inadequate breastfeeding counselling, concerns regarding breastmilk sufficiency, and disruptions to routine maternal and newborn services. Suboptimal breastfeeding practices increase infants' exposure to contaminated foods and liquids, reduce protection against infection, and may contribute to poor growth during the critical first months of life.

3.6.2 Complementary Feeding Practices

Appropriate complementary feeding becomes essential after six months of age when breastmilk alone is no longer sufficient to meet children's nutritional requirements. WHO recommends that complementary foods should be introduced at six months while continuing breastfeeding and that children receive diets that are sufficiently diverse, frequent, and nutritionally adequate.

The Gaza SMART 2026 Survey assessed multiple complementary feeding indicators among children aged 6–23 months, including dietary diversity, meal frequency, minimum acceptable diet, consumption of animal-source foods, sweet beverages, unhealthy foods, bottle feeding, and fruit and vegetable consumption.

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Introduction of Complementary Foods

The survey estimated that 92.1% (95% CI: 81.7–96.8) of children aged 6–8 months had received solid, semi-solid, or soft foods, indicating that introduction of complementary feeding generally occurred at the recommended age. This finding suggests that the timing of complementary feeding is not the principal nutritional challenge in Gaza.

Dietary Diversity

Dietary diversity emerged as one of the most important nutritional concerns identified by the survey. Only 30.3% (95% CI: 25.0–36.1) of children aged 6–23 months achieved the Minimum Dietary Diversity (MDD), indicating that fewer than one-third consumed foods from at least five recommended food groups during the previous day. Conversely, approximately 70% of young children failed to achieve adequate dietary diversity. This finding suggests that poor dietary quality rather than food quantity has become a major nutritional challenge.

Meal Frequency

Compared with dietary diversity, meal frequency was relatively better. Overall, 64.7% (95% CI: 59.0–69.9) of children achieved the Minimum Meal Frequency (MMF), indicating that approximately two-thirds of children were fed the recommended number of meals during the previous day. While encouraging, adequate meal frequency cannot compensate for poor dietary quality if meals lack essential nutrients.

Minimum Acceptable Diet

Minimum Acceptable Diet (MAD) combines dietary diversity and meal frequency to provide a comprehensive assessment of complementary feeding adequacy. The survey estimated that only **22.4% (95% CI: 17.7–27.9)** of children aged **6–23 months** achieved the Minimum Acceptable Diet. This means that nearly four out of every five young children did not receive diets meeting both recommended dietary diversity and feeding frequency standards. This represents one of the strongest nutritional findings of the survey and provides an important explanation for the persistence of chronic undernutrition.

Table 21: Complementary feeding indicators among children aged 6–23 months.

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Quality of Children's Diets

The survey further assessed the nutritional quality of complementary foods consumed by young children. Only 43.7% (95% CI: 37.4–50.3) of children consumed eggs and/or flesh foods during the previous day.

At the same time:

- **62.6% (95% CI: 56.2–68.5)** consumed **sweet beverages**.
- **73.0% (95% CI: 67.7–77.7)** consumed **unhealthy foods**.
- **52.7% (95% CI: 46.9–58.5)** consumed **no fruits or vegetables**.
- **45.4% (95% CI: 40.5–50.4)** were **bottle-fed**.

These findings indicate that although many children receive food regularly, the nutritional quality of their diets remains poor. Taken together, the complementary feeding findings suggest that the principal dietary challenge in Gaza is increasingly one of diet quality rather than feeding frequency alone. Poor dietary diversity, limited access to nutrient-rich foods, and high consumption of energy-dense, nutrient-poor foods likely contribute to the persistence of chronic undernutrition documented elsewhere in this survey.

3.7 Summary of Major Findings

The Gaza SMART 2026 Survey provides the first population-representative assessment of the nutritional status of women and children residing within the accessible areas of the Gaza Strip since the escalation of the humanitarian crisis. Despite exceptionally challenging operational conditions, the survey achieved excellent implementation, high-quality anthropometric data, and representative estimates for approximately 83% of the accessible population, providing a robust evidence base for humanitarian programming and future nutrition surveillance.

Overall, the survey presents a complex but coherent picture of the nutrition situation in Gaza. At the population level, the prevalence of acute malnutrition remained relatively low across all three survey domains, with both WHZ-based Global Acute Malnutrition and Combined Global Acute Malnutrition remaining below internationally recognized emergency thresholds. These findings indicate that widespread population-level acute malnutrition was not observed among the accessible population during the 2026 survey period.

However, the relatively low prevalence of acute malnutrition should **not** be interpreted as evidence that the nutrition crisis has been resolved. The survey simultaneously documented persistent chronic undernutrition, maternal malnutrition, poor dietary diversity, suboptimal infant and young child feeding practices, and a substantial burden of childhood illness. Collectively, these findings demonstrate that nutritional vulnerability remains widespread despite the relatively favourable acute malnutrition profile. Furthermore, inaccessible areas (17% of the total) consist of clusters of highly vulnerable families. Their inclusion is necessary to obtain a full picture of malnutrition in Gaza.

One of the most important findings of the survey was the persistence of **stunting**, affecting approximately one in every eight children. This indicates that many children continue to experience the cumulative effects of prolonged nutritional deprivation and repeated exposure to adverse health, dietary, and environmental conditions. The coexistence of low wasting with persistent stunting suggests that while humanitarian interventions have likely prevented widespread acute nutritional deterioration, they have not fully addressed the longer-term determinants of child growth and development.

The survey also identified important nutritional challenges among women of reproductive age. Maternal malnutrition remained evident among both pregnant/lactating and non-pregnant/non-lactating women, highlighting the continuing nutritional vulnerability of women and reinforcing the close relationship between maternal nutrition, pregnancy outcomes, breastfeeding, and child growth. These findings emphasize that improving child nutrition will require sustained investment in maternal nutrition throughout the reproductive life course.

Childhood morbidity remained an important concern. Diarrhoea and fever affected a substantial proportion of children, while recommended treatment of diarrhoeal disease with ORS and zinc remained below optimal levels. Although care-seeking for fever and acute respiratory infection was relatively high, these findings demonstrate that infectious diseases continue to represent an important contributor to nutritional vulnerability among children.

Infant and young child feeding practices emerged as one of the strongest determinants of the nutritional situation. Although breastfeeding remains nearly universal, exclusive breastfeeding under six months remains low, while complementary feeding practices are characterized by poor dietary diversity, low minimum acceptable diet, and frequent consumption of unhealthy foods and sweetened beverages. These findings suggest that many children receive food regularly but do not consume diets of sufficient diversity and nutritional quality to support optimal growth and development.

Coverage of key preventive child health interventions, including measles vaccination and vitamin A supplementation, remained encouraging considering the humanitarian context. Nevertheless, important coverage gaps remain, leaving a considerable proportion of children vulnerable to preventable illness and its nutritional consequences.

Taken together, the survey findings indicate that the nutrition situation in Gaza is increasingly characterized by persistent nutritional vulnerability rather than widespread acute malnutrition. The relatively low prevalence of wasting likely reflects the combined protective effects of sustained humanitarian assistance, nutrition services, primary healthcare, and the relative stabilization observed during the survey period. At the same time, persistent chronic undernutrition, poor dietary quality, maternal malnutrition, and childhood illness demonstrate that significant nutritional challenges remain. Overall, the findings reinforce the importance of maintaining life-saving humanitarian assistance while progressively strengthening preventive nutrition interventions, maternal nutrition, infant and young child feeding, child health, dietary quality, and integrated multi-sectoral programming.

Such investments will be essential to preserve current gains, reduce chronic nutritional vulnerability, and improve the long-term health, growth, and development of women and children across the Gaza Strip.

4.1 Discussion of Findings

The Gaza SMART 2026 Survey provides the first population-representative assessment of the nutritional status of women and children residing within accessible areas of the Gaza Strip since the escalation of the current humanitarian crisis. The survey therefore represents an important milestone in restoring evidence-based nutrition programming, humanitarian planning, and policy development in one of the world's most complex humanitarian emergencies.

Unlike routine surveillance systems, facility-based reporting, or programme monitoring data, the SMART methodology provides representative population estimates of nutritional status and its immediate determinants at one point in time. The findings therefore offer a unique opportunity to understand not only the current nutrition situation but also the broader health, dietary, and humanitarian factors influencing maternal and child nutrition across the Gaza Strip.

This chapter interprets the survey findings within the broader humanitarian context, drawing together evidence from anthropometry, maternal nutrition, childhood illness, infant and young child feeding practices, and public health interventions to provide an integrated understanding of nutritional vulnerability.

4.2 Overall Interpretation of the Nutrition Situation

The Gaza SMART 2026 Survey presents a complex but internally consistent picture of the nutrition situation across the accessible population of the Gaza Strip. At first glance, the relatively low prevalence of acute malnutrition may appear inconsistent with the severity of the ongoing humanitarian crisis. However, when considered together with the broader survey findings, a more nuanced picture emerges.

The survey demonstrates that the nutrition situation cannot be adequately described using a single anthropometric indicator. Rather, it reflects the interaction of multiple nutritional, health, and humanitarian factors operating simultaneously. While the prevalence of acute malnutrition remained low across all three survey domains, the survey also documented persistent chronic undernutrition, maternal malnutrition, poor dietary diversity, suboptimal infant and young child feeding practices, high childhood morbidity, and continued dependence on humanitarian assistance. These findings collectively demonstrate that nutritional vulnerability remains widespread despite the absence of widespread acute malnutrition. This apparent paradox reflects the multidimensional nature of malnutrition during prolonged humanitarian crises.

Acute malnutrition represents only one manifestation of nutritional deprivation and responds relatively rapidly to changes in dietary intake, disease patterns, and humanitarian interventions. In contrast, indicators such as stunting, maternal malnutrition, poor dietary diversity, and inadequate infant feeding practices reflect prolonged exposure to nutritional stress and adverse living conditions. These differences in the biological and temporal characteristics of nutritional indicators are important when interpreting the findings. The survey itself does not establish why the observed prevalence of acute malnutrition was relatively low.

Importantly, the relatively low prevalence of acute malnutrition should not be interpreted as evidence that nutritional needs have substantially diminished. The survey simultaneously documented maternal malnutrition, stunting, poor dietary diversity suboptimal feeding practices and high childhood morbidity. Taken together these findings show that acute malnutrition represents only one dimension of a broader pattern of nutrition vulnerability.,

4.3 Interpreting the Observed Prevalence of Acute Malnutrition in the Humanitarian Context

One of the most striking findings of the survey is the relatively low prevalence of acute malnutrition observed across the accessible population of the Gaza Strip during SMART survey time. Given the prolonged conflict, widespread displacement, extensive destruction of infrastructure, severe food insecurity, and disruption of essential services, these findings may initially appear unexpected.

However, acute malnutrition should be interpreted within the broader humanitarian and operational context in which the survey was conducted. Weight-for-Height Z-scores and MUAC primarily reflect recent nutritional status and are particularly sensitive to short-term changes in dietary intake, infectious disease, and humanitarian assistance. Consequently, these indicators may respond relatively rapidly to improvements in food access, nutrition services, and primary healthcare, even when the underlying determinants of malnutrition remain unresolved. Several contextual factors are relevant when interpreting the relatively low prevalence of acute malnutrition observed during the survey period.

The survey was conducted in June 2026, following changes in humanitarian access and the scale of food, nutrition, health and other essential services reported by humanitarian partners during the preceding months. These contextual developments are relevant to interpretation of the survey but should not be understood as establishing the cause of the observed anthropometric outcomes.

The survey also documented continued utilization of selected preventive child health services within accessible areas, including measles vaccination and vitamin A supplementation. These findings provide information on service reach but do not establish their contribution to the observed nutritional outcomes.

Third, while wasting is shown to be low, the survey simultaneously documented persistent maternal malnutrition, poor dietary diversity, inadequate complementary feeding, high childhood morbidity, and continued dependence on humanitarian assistance. These findings indicate that the underlying determinants of malnutrition remain largely unchanged and continue to place women and children at nutritional risk.

Importantly, the survey does not demonstrate that humanitarian assistance caused the observed nutritional outcomes. It did not measure individual or household exposure to assistance, compare exposed and unexposed populations, or establish a counterfactual. Humanitarian assistance should therefore be treated as part of the broader context for interpreting the findings rather than as an effect demonstrated by the survey.

The survey should therefore be interpreted as a snapshot of conditions among the accessible population during the June 2026 data-collection period. Findings should not be extrapolated to inaccessible areas or assumed to represent conditions during earlier or later periods of the crisis.

As a cross-sectional assessment, the survey cannot retrospectively determine the prevalence of acute malnutrition during earlier periods of the crisis. The June 2026 findings therefore should not be used, on their own, to validate or invalidate assessments describing nutritional conditions at different points in time.

The findings further emphasize that observed nutrition situation remain highly fragile. Any interruption in humanitarian assistance, deterioration in food security, renewed displacement, disease outbreaks, or reduction in health and nutrition services could rapidly increase the prevalence of acute malnutrition.

Low acute malnutrition does not mean the nutrition crisis is over.

The Gaza SMART 2026 Survey indicates that acute malnutrition remained relatively low among the accessible population during the survey period. However, persistent stunting, maternal malnutrition, poor dietary diversity, suboptimal infant and young child feeding practices, and high childhood morbidity demonstrate that nutritional vulnerability remains widespread.

The findings most likely reflect the combined protective effects of humanitarian assistance, nutrition services, primary healthcare, and relative stabilization rather than resolution of the underlying nutrition crisis.

4.4 Persistent Chronic Undernutrition: The Emerging Nutrition Challenge

While the relatively low prevalence of acute malnutrition represents an encouraging finding, the Gaza SMART Survey simultaneously demonstrates that chronic undernutrition remains an important public health concern among children living within the accessible areas of the Gaza Strip. The survey therefore highlights a critical distinction between the immediate nutritional consequences of the humanitarian crisis and its longer-term effects on child growth and development.

Chronic undernutrition, measured by stunting, develops gradually as a result of prolonged exposure to inadequate dietary intake, repeated infectious diseases, poor maternal nutrition, suboptimal infant and young child feeding practices, and adverse environmental conditions. Unlike wasting, which reflects relatively recent nutritional stress, stunting represents the cumulative effect of nutritional deprivation experienced during pregnancy, infancy, and early childhood (WHO, 2006; Black et al., 2013).

The survey estimated that 12.2% (95% CI: 10.4–14.2) of children aged 0–59 months were stunted, while 2.6% (95% CI: 1.9–3.6) were severely stunted. This indicates that approximately one in every eight children was experiencing irreversible chronic growth failure.

The persistence of stunting remains particularly concerning within the context of prolonged humanitarian crisis because of its lifelong consequences for child survival, cognitive development, educational attainment, future productivity, and human capital.

Importantly, stunting should not be viewed simply as another anthropometric indicator. Rather, it represents one of the clearest manifestations of prolonged nutritional vulnerability and accumulated disadvantages during early childhood. One of the most important observations emerging from the survey is the coexistence of low wasting with persistent stunting.

While acute malnutrition can change over relatively short periods in response to changes in dietary intake and disease, stunting reflects cumulative nutritional and health exposures over a much longer period. The two indicators can therefore show different patterns at the same point in time without being contradictory

This interpretation is strongly supported by several additional findings from the survey.

The survey documented:

- persistent maternal malnutrition among women of reproductive age;
- low prevalence of exclusive breastfeeding;
- poor complementary feeding practices;
- low dietary diversity;
- low minimum acceptable diet;
- high consumption of unhealthy foods and sweetened beverages;
- recurrent episodes of diarrhoea and fever.

Collectively, these findings demonstrate that many children continue to experience nutritional environments that are insufficient to support optimal linear growth despite the apparent stabilization of acute nutritional status. The survey therefore suggests that the nutritional challenge facing Gaza is increasingly one of diet quality rather than food quantity alone.

Although many households continue to receive humanitarian food assistance, the complementary feeding assessment indicates that young children's diets frequently lack sufficient diversity and nutrient density to support healthy growth. This pattern is reflected by the relatively high proportion of children achieving minimum meal frequency but failing to achieve minimum dietary diversity or minimum acceptable diet.

Maternal nutrition further reinforces this interpretation.

The survey documented acute malnutrition among both pregnant/lactating women and non-pregnant/non-lactating women, highlighting continued nutritional vulnerability throughout the reproductive life course. Maternal undernutrition before conception, during pregnancy, and throughout lactation adversely influences fetal growth, birth outcomes, breastfeeding performance, and child nutritional status, thereby perpetuating the intergenerational cycle of malnutrition.

The findings also emphasize the close relationship between nutrition and child health.

Frequent episodes of diarrhoea and fever increase nutrient losses, reduce appetite, impair nutrient absorption, and increase metabolic demands, thereby contributing to chronic growth failure when repeated over extended periods. Consequently, improvements in child growth cannot be achieved through nutrition interventions alone but require integrated action across nutrition, health, food security, water, sanitation, hygiene, and social protection sectors.

Taken together, the findings support maintaining capacity to identify and treat acute malnutrition while also strengthening preventive interventions addressing maternal nutrition, breastfeeding, complementary feeding, dietary quality, child health and other determinants of healthy growth. These priorities are complementary rather than sequential, particularly in a humanitarian context where conditions may change rapidly.

The findings of this survey indicate that these interventions have likely succeeded in preventing widespread acute nutritional deterioration among the accessible population. However, the emerging challenge is now protecting healthy child growth and development.

Future nutrition programming must therefore maintain life-saving interventions while simultaneously increasing investment in maternal nutrition, breastfeeding, complementary feeding, dietary diversity, child health, and other interventions that address the underlying determinants of chronic undernutrition. Importantly, improvements in stunting should not be expected over short periods. Because linear growth reflects cumulative nutritional experiences during early childhood, reductions in chronic undernutrition require sustained improvements in maternal nutrition, dietary quality, health services, infection prevention, household food security, and caregiving practices over many years.

The findings therefore reinforce the importance of maintaining humanitarian assistance while progressively strengthening longer-term nutrition-sensitive interventions capable of protecting child growth and preserving future human capital across the Gaza Strip.

The principal nutrition challenge in Gaza is increasingly one of chronic nutritional vulnerability rather than widespread acute malnutrition.

The survey demonstrates that while humanitarian interventions have likely protected many children from severe acute nutritional deterioration, persistent stunting, maternal malnutrition, poor dietary quality, suboptimal infant feeding practices, and recurrent childhood illness continue to compromise healthy child growth and development.

Future nutrition programming should therefore maintain life-saving treatment services while progressively increasing investment in prevention, maternal nutrition, infant and young child feeding, dietary quality, child health, and integrated multi-sectoral programming to interrupt the intergenerational cycle of malnutrition.

4.5 Child Feeding, Diet Quality and Childhood Morbidity: Understanding the Immediate Determinants of Malnutrition

The UNICEF Conceptual Framework for Maternal and Child Malnutrition recognizes inadequate dietary intake and disease as the immediate determinants of malnutrition. The findings of the Gaza SMART Survey strongly support this framework and demonstrate that persistent nutritional vulnerability among women and children is driven not by a single factor, but by the interaction of suboptimal infant feeding practices, poor dietary quality, recurrent childhood illness, and maternal nutritional challenges (UNICEF, 2021).

The survey findings suggest that although widespread acute malnutrition was not observed, the immediate determinants necessary to support optimal child growth remain compromised across much of the accessible population. One of the most important observations emerging from the survey is that feeding frequency is not the principal nutritional challenge facing young children in Gaza.

Approximately two-thirds of children achieved the Minimum Meal Frequency, indicating that many caregivers continue to feed children the recommended number of times each day despite the ongoing humanitarian crisis. However, only **30.3%** of children achieved Minimum Dietary Diversity, and just **22.4%** received a Minimum Acceptable Diet. These findings indicate that many children receive food frequently but do not receive diets of sufficient nutritional quality or diversity to support optimal growth and development.

The complementary feeding assessment provides further insight into this pattern. Consumption of sweetened beverages and unhealthy foods was common, while more than half of young children consumed no fruits or vegetables during the previous day. Consumption of eggs and other animal-source foods also remained relatively limited. Together, these findings suggest that the principal dietary challenge facing many households is increasingly one of nutrient quality rather than caloric intake alone.

These dietary patterns are consistent with the broader humanitarian context.

Following prolonged conflict, many households remain heavily dependent on humanitarian food assistance while simultaneously facing reduced purchasing power, disrupted livelihoods, damaged food systems, and limited availability of fresh and nutrient-rich foods. Under these circumstances, caregivers often prioritize foods that satisfy immediate household food needs but provide limited nutritional diversity for young children.

The breastfeeding findings reinforce this interpretation.

Although breastfeeding remains almost universal, exclusive breastfeeding during the first six months of life remained very low, while mixed milk feeding was common during early infancy. These findings suggest that breastfeeding is widely accepted culturally but that maintaining optimal breastfeeding practices remains difficult under current humanitarian conditions.

Multiple contextual factors are likely to contribute to these practices, including maternal stress, inadequate breastfeeding support, concerns regarding breastmilk sufficiency, interruptions to maternal and newborn health services, and the practical challenges associated with prolonged displacement. Suboptimal breastfeeding practices increase infants' exposure to contaminated foods and liquids, reduce protection against infectious diseases, and may contribute to impaired growth during the first months of life.

The survey also documented a substantial burden of childhood illness.

More than one-third of children experienced diarrhoea during the two weeks preceding the survey, while almost one-third experienced fever. These illnesses increase nutritional requirements, reduce appetite, impair nutrient absorption, and contribute directly to both acute weight loss and chronic growth failure.

Although the majority of caregivers sought professional healthcare for children experiencing fever or symptoms of acute respiratory infection, important treatment gaps remained for diarrhoeal disease. Coverage of ORS and zinc supplementation remained below internationally recommended levels, suggesting opportunities to strengthen integrated child health and nutrition programming.

Maternal nutrition represents another critical component of this pathway.

The survey documented acute malnutrition among women of reproductive age, including pregnant and lactating women. Maternal nutritional status before conception, during pregnancy, and throughout lactation influences fetal growth, birth weight, breastfeeding performance, infant nutritional status, and subsequent child growth. The coexistence of maternal malnutrition with persistent stunting and poor complementary feeding therefore highlights the importance of adopting a life-course approach to nutrition programming.

Collectively, these findings demonstrate that the immediate determinants of malnutrition in Gaza extend beyond food availability alone. The principal challenge increasingly lies in ensuring that women and young children have sustained access to diverse, nutrient-rich, safe, and age-appropriate diets, while simultaneously reducing childhood illness, strengthening maternal nutrition, and improving caregiver support.

The survey also reinforces the interconnected nature of nutrition, health, food security, water, sanitation and hygiene (WASH), and social and behaviour change (SBC). Progress in child nutrition is unlikely to be achieved through nutrition-specific interventions alone. Instead, sustained improvements will require integrated multi-sectoral programmes that simultaneously address dietary quality, disease prevention, maternal nutrition, food security, caregiving practices, and healthy child development.

As the humanitarian response continues to evolve, nutrition programming should increasingly prioritize interventions that improve the quality of children's diets, strengthen breastfeeding and complementary feeding, support maternal nutrition, prevent childhood illness, and protect child growth throughout the first 1,000 days of life.

Such investments are essential not only for reducing chronic undernutrition but also for safeguarding future human capital and improving the long-term health and well-being of children across the Gaza Strip.

Poor diet quality and recurrent childhood illness, not food quantity alone, appear to be the principal immediate drivers of persistent nutritional vulnerability among children in Gaza.

The survey suggests that many children receive food frequently enough, but the nutritional quality and diversity of their diets remain insufficient to support optimal growth. Combined with suboptimal breastfeeding practices, maternal malnutrition, and frequent childhood illness, these factors provide a compelling explanation for the persistence of chronic undernutrition despite relatively low levels of acute malnutrition. Addressing these immediate determinants will require integrated **Nutrition, Health, Food Security, WASH, SBC and Social Protection** programming that prioritizes women and children throughout the first 1,000 days of life.

4.6 Humanitarian Assistance in the Context of the Survey Findings

The relatively low prevalence of acute malnutrition observed among the accessible survey population should be interpreted within the broader humanitarian context prevailing during the survey period.

The survey was not designed to evaluate the effectiveness or impact of humanitarian programs. It did not collect sufficiently detailed information on household exposure to different forms of assistance or compare nutritional outcomes between exposed and unexposed groups. The contribution of humanitarian assistance to the observed outcomes therefore cannot be estimated from this survey.

According to humanitarian program monitoring and coordination data, food assistance, nutrition services, CMAM, primary healthcare, micronutrient supplementation, vaccination and WASH interventions were operating across accessible areas during the period preceding the survey. The scale and reach of these interventions provide important contextual information for interpreting the nutritional situation but do not establish their effect on the survey outcomes.

Acute malnutrition remained below internationally recognized emergency thresholds across all three survey domains, while severe acute malnutrition affected only a very small proportion of children. In addition, relatively encouraging coverage of several preventive child health interventions—including measles vaccination and vitamin A supplementation—suggests that essential child health services continued to function within accessible areas despite the prolonged humanitarian crisis.

The findings also underscore that addressing nutritional vulnerability requires action across multiple determinants, including maternal nutrition, diet quality, infant and young child feeding, childhood illness, food security, health and WASH.

Persistent stunting, maternal malnutrition, poor dietary diversity, suboptimal breastfeeding and complementary feeding practices, and recurrent childhood illness indicate that many households continue to experience prolonged nutritional vulnerability despite ongoing humanitarian support.

Emergency humanitarian assistance is primarily designed to save lives, prevent excess mortality, and stabilize nutritional status during crises. It is not intended to fully overcome the structural determinants of chronic undernutrition, including prolonged poverty, disrupted livelihoods, reduced dietary diversity, poor maternal nutrition, repeated infectious diseases, and limited opportunities for healthy child development.

The findings therefore suggest that humanitarian assistance has likely prevented a much worse nutritional outcome, rather than indicating that nutritional needs have been resolved.

The relatively low prevalence of acute malnutrition should therefore be interpreted alongside, rather than instead of, the substantial nutritional vulnerabilities documented elsewhere in the survey.

While acute malnutrition remained relatively uncommon, approximately one in eight children were stunted, maternal malnutrition persisted, dietary diversity remained poor, and childhood morbidity continued to affect a substantial proportion of children.

Taken together, these findings demonstrate that humanitarian assistance has likely protected children from widespread acute nutritional deterioration while simultaneously highlighting persistent vulnerabilities that continue to threaten healthy child growth and development.

Another important consideration relates to the representativeness of the survey.

The findings are representative of the accessible survey population, comprising of approximately 83% of the estimated Gaza Strip population. Approximately 17% of the population could not be included because of security and access constraints. , The nutritional situation of populations living in these excluded areas cannot be inferred from the survey findings and may differ substantially from the estimates presented in this report.

The observed nutritional situation remains sensitive to changes in humanitarian access, food availability, disease patterns, displacement and the availability of health, nutrition and WASH services. Looking forward, the survey also highlights the need for a gradual evolution of humanitarian programming. While maintaining life-saving assistance remains essential, increasing attention should be directed towards interventions that improve maternal nutrition, strengthen breastfeeding and complementary feeding, increase dietary diversity, improve child health, and progressively restore household resilience and healthy food systems.

Such investments will be essential to translate the current stabilization of acute malnutrition into sustained improvements in child growth, development, and long-term nutritional well-being.

Humanitarian assistance has likely protected many children from a much more severe nutrition crisis, but nutritional vulnerability remains widespread.

The Gaza SMART Survey suggests that sustained humanitarian assistance has played an important protective role in preventing widespread acute malnutrition among the accessible population.

However, stunting, maternal malnutrition, poor dietary diversity, suboptimal infant and young child feeding practices, and continuing childhood illness demonstrate that underlying nutritional vulnerability remains substantial.

Continued investment in life-saving humanitarian assistance, together with increasing emphasis on preventive nutrition and recovery programming, will be essential to preserve current gains and improve long-term nutrition outcomes across the Gaza Strip.

4.7 Strengths and Limitations of the Survey

Every population-based survey has inherent methodological strengths and limitations that should be considered when interpreting its findings. The Gaza SMART 2026 Survey was implemented under one of the most complex humanitarian operating environments globally. Despite these challenges, the survey achieved exceptionally high implementation standards, excellent anthropometric data quality, and representative estimates for the accessible population of the Gaza Strip. Nevertheless, several operational and methodological limitations should be acknowledged.

4.7.1 Strengths of the Survey

The Gaza SMART 2026 Survey possesses several important methodological strengths that substantially increase confidence in the reliability and validity of the findings.

Representative Population-Based Design

The survey employed internationally standardized SMART methodology using a two-stage probability cluster sampling design. Despite the challenging humanitarian context, the survey generated representative estimates for approximately 83% of the estimated Gaza Strip population residing within accessible areas. This represents one of the largest and most comprehensive population-based nutrition assessments conducted in Gaza since before the current conflict.

High Survey Completion and Participation

The survey successfully completed 147 of the planned 150 clusters (98%), achieved high household participation across all survey domains, and exceeded the planned sample size for children. These achievements increased the statistical precision of prevalence estimates while minimizing the potential for non-response bias.

Excellent Anthropometric Data Quality

Comprehensive enumerator training, anthropometric standardization, intensive field supervision, and continuous quality assurance contributed to good to excellent anthropometric data quality across all three survey domains. Throughout the SMART surveys, we implemented daily plausibility monitoring, allowing potential measurement issues to be identified and corrected while data collection remained ongoing.

Operational Innovations

The survey introduced several important operational adaptations specifically designed for the Gaza humanitarian context. These included:

- dedicated Cluster Preparation Teams;
- pre-census verification of household lists;
- full integration of SMART+ Infrastructure throughout the survey lifecycle;
- security-informed field deployment planning.

These innovations strengthened adherence to SMART methodology while substantially improving operational efficiency and reducing field exposure without compromising scientific rigor.

Independent Technical Oversight

The survey benefited from continuous technical oversight provided by the Gaza SMART Technical Working Group, comprising UNICEF, Action Against Hunger, the Nutrition Cluster, the SMART Initiative, and other partners. This collaborative governance mechanism strengthened methodological consistency, supported rapid operational problem-solving, and ensured independent validation of the survey findings.

Independent Ethical Review

The survey protocol underwent independent ethical review and received formal approval from the HML Institutional Review Board (**HML IRB**) **Research and Ethics Committee**, ensuring compliance with internationally accepted ethical standards for research involving human participants. Collectively, these methodological strengths provide a high degree of confidence that the survey findings accurately reflect the nutritional situation of women and children residing within the accessible areas of the Gaza Strip during the survey period.

4.7.2 Limitations of the Survey

Despite these considerable strengths, several limitations should be considered when interpreting the survey findings.

Restricted Geographic Coverage

The survey was representative of the accessible population only. Approximately 17% of the estimated Gaza Strip population residing within areas affected by active conflict, military restrictions, humanitarian buffer zones, or severe security constraints could not be included within the sampling universe. Consequently, the survey findings should not be generalized to populations residing within inaccessible areas, whose nutritional situation may differ substantially.

Dynamic Humanitarian Context

Population displacement, humanitarian access, security conditions, and household circumstances continued to evolve throughout the survey period. Although considerable efforts were made to update the sampling frame immediately before data collection, minor population movements may have occurred between cluster preparation and household interviews.

Cross-sectional Design

The survey provides a population-level snapshot during the defined data collection period. It cannot establish temporal trends, determine whether individual nutritional outcomes improved or deteriorated from earlier periods, or establish causal relationships between humanitarian assistance, food access, disease, service availability and nutritional status. Comparisons with earlier assessments should therefore take account of differences in timing, population coverage, sampling design and indicator definitions.

Recall Bias

Several survey indicators including childhood morbidity, care-seeking behaviour, infant and young child feeding practices, vitamin A supplementation, deworming, and vaccination status (when vaccination cards were unavailable) were based on caregiver recall. These indicators are therefore subject to the possibility of recall bias and reporting error despite careful interviewer training and standardized questionnaires.

Temporal Context

The survey describes conditions prevailing during the June 2026 data-collection period. Nutritional status, humanitarian access, food availability, disease patterns and population movements may change rapidly. Consequently, the findings should not be extrapolated to earlier or later periods without considering the timing and context of the relevant evidence. The survey therefore cannot retrospectively determine nutritional conditions during previous periods of the conflict.

Overall Interpretation

Despite these limitations, the Gaza SMART 2026 Survey represents one of the most comprehensive and methodologically robust population-based nutrition assessments conducted in the Gaza Strip since before the conflict. The combination of representative sampling, high survey completion, excellent anthropometric data quality, operational innovations, external ethical approval, independent technical oversight, and rigorous quality assurance provides strong confidence in the validity and reliability of the findings.

At the same time, interpretation of the results should recognize that the survey reflects the nutritional situation of the accessible population during a specific period within an evolving humanitarian emergency. Continued nutrition surveillance, routine programme monitoring, sentinel surveillance, and periodic population-based nutrition assessments will therefore remain essential for monitoring changes in nutritional status and informing evidence-based humanitarian decision-making.

5.1 Conclusions

The Gaza SMART Survey 2026 provides the first comprehensive, population-representative assessment of the nutritional status of women and children residing within accessible areas of the Gaza Strip since the escalation of the current humanitarian crisis. Conducted under exceptionally challenging operational and security conditions, the survey achieved excellent implementation, high-quality anthropometric data, and representative estimates for approximately 83% of the accessible population, thereby providing a robust evidence base for humanitarian response, policy development, and future nutrition surveillance.

Overall, the survey presents a nuanced but coherent picture of the nutrition situation among the accessible surveyed population. The survey found no evidence of widespread population-level acute malnutrition among the accessible population during the survey period. Both WHZ-based Global Acute Malnutrition and Combined Global Acute Malnutrition remained below internationally recognized emergency thresholds across all three survey domains. However, these findings should not be interpreted as evidence that the nutrition crisis has been resolved. Rather, the survey clearly demonstrates that persistent nutritional vulnerability remains widespread.

The coexistence of relatively low acute malnutrition with stunting, maternal malnutrition, poor dietary diversity, suboptimal infant and young child feeding practices and childhood morbidity demonstrates the multidimensional nature of nutritional vulnerability. These findings should not be interpreted as evidence that nutritional needs have been resolved.

The survey was conducted in a context in which substantial humanitarian food, nutrition, health and WASH assistance was being delivered in accessible areas. While this context is relevant to interpretation, the survey was not designed to quantify the contribution of these interventions to the observed nutritional outcomes.

The survey identifies poor dietary quality as an important concern among young children.

Although many children receive food with adequate frequency, relatively few consume sufficiently diverse and nutrient-rich diets to support optimal growth and development. Poor complementary feeding practices, together with low dietary diversity and frequent consumption of unhealthy foods, provide an important explanation for the persistence of chronic undernutrition observed among children.

Maternal nutrition also emerged as an important concern. Acute malnutrition among women of reproductive age highlights the continuing nutritional vulnerability of mothers and reinforces the close relationship between maternal nutrition, pregnancy outcomes, breastfeeding, and child growth. Improving child nutrition will therefore require simultaneous investment in maternal nutrition before conception, during pregnancy, throughout lactation, and during early childhood.

The survey also demonstrates the close interaction between nutrition and child health. The continued burden of diarrhoea and fever, together with gaps in recommended management of childhood illness, illustrates the importance of maintaining integrated Nutrition–Health–Food Security–WASH programming to reduce disease-related nutritional deterioration and protect healthy child growth.

Importantly, the findings should be interpreted within the representativeness of the survey. The results are representative of the accessible population residing within the survey universe and should not be generalized to populations living within inaccessible areas affected by severe insecurity and operational constraints. Continued monitoring of these populations will remain important whenever humanitarian access permits.

The survey findings should be interpreted within the humanitarian context prevailing during the survey period, including the continued delivery of food assistance, CMAM, primary healthcare, micronutrient supplementation, immunization and other services in accessible areas. The survey did not assess the causal contribution of these interventions to the observed prevalence of acute malnutrition.

The observed nutritional situation remains fragile in an evolving humanitarian context. Changes in food access, disease burden, displacement, humanitarian access or availability of essential health, nutrition, and WASH services could alter nutrition conditions, reinforcing the importance of continued monitoring and preparedness.

Looking ahead, the survey supports a gradual evolution of humanitarian nutrition programming. While maintaining life-saving interventions remains essential, increasing emphasis should be placed on preventive nutrition interventions that improve maternal nutrition, breastfeeding, complementary feeding, dietary diversity, child health, and healthy growth throughout the first **1,000 days of life**.

Such investments will be critical for translating the current stabilization of acute malnutrition into sustained improvements in nutritional well-being, child development, and future human capital.

Ultimately, the Gaza SMART Survey demonstrates that protecting nutritional status during prolonged humanitarian crises requires more than preventing acute malnutrition alone. Sustained investment in maternal nutrition, healthy diets, child health, infant and young child feeding, and integrated multi-sectoral programming will be essential to protect child growth, preserve human capital, and improve the health and well-being of future generations across the Gaza Strip

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Annex 2: List of Indicators

S.N	Indicators	Numerator	Denominator
1. Child Nutrition			
1.1 Underweight			
1.1.1	Underweight prevalence	Number of children under age 5 who fall below minus two standard deviations from the median weight for age of the WHO standard	Total number of children aged 0-59 months
1.1.2	Moderate underweight prevalence	Number of children under age 5 who fall between below minus two to greater than or equal to minus three standard deviations from the median weight for age of the WHO standard	Total number of children aged 0-59 months
1.1.3	Severe underweight prevalence	Number of children under age 5 who fall below minus three standard deviations from the median weight for age of the WHO standard	Total number of children aged 0-59 months
1.2 Stunting			
1.2.1	Stunting prevalence	Number of children under age 5 who fall below minus two standard deviations from the median height for age of the WHO standard	Total number of children aged 0-59 months
1.2.2	Moderate Stunting prevalence	Number of children under age 5 who fall between below minus two to greater than or equal to minus three standard deviations from the median height for age of the WHO standard	Total number of children aged 0-59 months
1.2.3	Severe Stunting prevalence	Number of children under age 5 who fall below minus three standard deviations from the median height for age of the WHO standard	Total number of children aged 0-59 months
1.3 Wasting (Z-Score)			
1.3.1	Wasting prevalence	Number of children aged 0-59 months who fall below minus two standard deviations from the median weight for height of the WHO standard	Total number of children aged 0-59 months
1.3.2	Moderate Wasting prevalence	Number of children aged 0-59 months who fall between below minus two to greater than or equal to minus three standard deviations from the median weight for height of the WHO standard	Total number of children aged 0-59 months
1.3.3	Severe Wasting prevalence	Number of children aged 0-59 months who fall below minus three standard deviations from the median weight for height of the WHO standard	Total number of children aged 0-59 months

1.4 Acute malnutrition (MUAC &/or bilateral oedema)

1.4.1	Wasting prevalence	Number of children aged 6-59 months who fall below MUAC 125 mm	Total number of children aged 6-59 months
1.4.2	Moderate Wasting prevalence	Number of children aged 6-59 months fall between below MUAC 125 mm and greater or equal to 115 mm	Total number of children aged 6-59 months
1.4.3	Severe Wasting prevalence	Number of children aged 6-59 months who fall below MUAC 115 mm	Total number of children aged 6-59 months

1.5 Acute Malnutrition (WHZ &/ or bilateral oedema)

1.5.1	Acute malnutrition prevalence	Number of children aged 0-59 months who fall below minus two standard deviations from the median weight for height of the WHO standard	Total number of children aged 6-59 months
1.5.2	Moderate acute malnutrition prevalence	Number of children aged 0-59 months who fall between below minus two to greater than or equal to minus three standard deviations from the median weight for height of the WHO standard	Total number of children aged 6-59 months
1.4.1	Severe acute malnutrition prevalence	Number of children aged 0-59 months who fall below minus three standard deviations from the median weight for height of the WHO standard	Total number of children aged 6-59 months

2. Child Health

2.1	Measles vaccination coverage	Number of children aged 9 to 59 months who received measles vaccine before the survey	Total number of children 9 to 59 months
2.2	Prevalence of diarrhoea among children under age 5 years	Number of children under age 5 years who had diarrhoea in the last two weeks	Total number of children under age 5 years
2.3	Diarrhoea treatment with oral rehydration salts (ORS) and zinc	Number of children under age 5 years with diarrhoea in the previous 2 weeks who sought for care with ORS and Zinc	Total number of children under age 5 years with diarrhoea in the previous 2 weeks
2.4	Prevalence of diarrhoea among children under age 5 years	Number of children under age 5 years who had fever in the last two weeks	Total number of children under age 5 years

2.4	Treatment of fever among children under age 5 years	Number of children under age 5 years with fever who sought for care	Total number of children under age 5 years with fever in the previous 2 weeks
2.5	Prevalence of ARI among children under age 5 years	Number of children under age 5 years who had cough and rapid breathing in the last two weeks	Total number of children under age 5 years
2.6	Treatment of ARI with antibiotics	Number of children under age 5 years who had cough and rapid breathing in the last two weeks who sought for care	Total number of children under age 5 years with cough and rapid breathing in the previous 2 weeks
2.7	Prevalence of diarrhoea among children under age 5 years	Number of children under age 5 years who had fever in the last two weeks	Total number of children under age 5 years

3. Public Health Campaigns

3.1	Deworming among children 12-59 months	Number of children aged 12-59 months who given deworming drug in the 6 months preceding the survey	Total number of children aged 12-59 months
3.2	VAS among children 6-59 months	Number of children aged 6-59 months who received vitamin A supplementation in the 6 months preceding the survey	Total number of children aged 6-59 months
3.3	MNP among children 6-59 months	Number of children aged 6-59 months who MNP in the 6 months preceding the survey	Total number of children aged 6-59 months

4. Women Nutrition

4.1	Acute Malnutrition prevalence	Number of women aged 15 - 49 years with a MUAC value less than or equal to 230 mm	Total number of women aged 15 to 49
4.2	Women Physiological Status	Number of women aged 15 - 49 years physiological (non-pregnant & non-lactating, Pregnant, lactating with infant < 6 months, lactating with infant > 6 months)	Total number of women aged 15 to 49

5 Infant & Young Child Feeding

5.1	Children ever breastfed	Number of children 0-23 (born in the last 24) months who were ever breastfed	Total number of children aged 0-23 months
5.2	Early initiation of breastfeeding	Number of children 0-23 months who were put to the breast within the first hour of birth	Total number of children aged 0-23 months
5.3	Exclusive breastfeeding for the first 2 days after birth	Number of children born in the last 24 months who were fed exclusively with breast milk only for the first two 2 days after birth	Total number of children born in the last 24 months
5.4	Exclusive breastfeeding	Number of infants 0-5 months who received breast milk the previous day (in the past 24 hours) and did not receive any other foods or liquids during the previous day	Total number of infants aged 0-5 months
5.5	Continuous breastfeeding	Number of children 12–23 months of age who received breast milk during the previous day	Total number of children aged 12-23 months
5.6	Introduction of solid- semi-solid or soft foods	Number of infants 6–8 months of age who breastfed and also received solid- semi-solid or soft foods during the previous day	Total number of children aged 6-8 months
5.7	Minimum Dietary Diversity	Number of children 6–23 months of age who received foods from ≥ 4 food groups during the previous day	Total number of children aged 6-23 months
5.8	Minimum Meal Frequency	Number of breastfed and non-breastfed children 6–23 months of age who received solid- semi-solid or soft foods the minimum number of times or more during the previous day	Total number of breastfed children aged 6-23 months
5.9	Minimum Acceptable Diet	Number of breastfed and non-breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day	Total number of breastfed children aged 6-23 months

Annex 3:

Recommendations for Humanitarian Response, Recovery and Resilience

The Gaza SMART Survey demonstrates that while widespread acute malnutrition was not observed among the accessible population during the survey period, significant nutritional vulnerability persists among women and children. These recommendations are derived directly from the survey findings and are intended to guide humanitarian response, recovery programming, policy development, resource mobilization, and future nutrition programming.

The recommendations are organized according to implementation timeframe. Although presented separately, many interventions should be implemented concurrently through coordinated multi-sectoral action involving nutrition, health, food security, WASH, social protection, early childhood development, education, and social and behaviour change programmes.

6.2 Immediate Priorities (0–6 Months)

The immediate priority should be to protect current nutrition gains and prevent deterioration. Given the fragile humanitarian context, maintaining uninterrupted life-saving interventions remains essential.

Nutrition

- Sustain uninterrupted Community-based Management of Acute Malnutrition (CMAM) services across all accessible areas.
- Maintain routine community nutrition screening using MUAC and strengthen active case finding for children and women at nutritional risk.
- Ensure uninterrupted availability of Ready-to-Use Therapeutic Food (RUTF), therapeutic milks, anthropometric equipment, and other essential nutrition commodities.
- Continue blanket and targeted nutrition interventions for nutritionally vulnerable populations where appropriate.
- Strengthen referral pathways between community screening and nutrition treatment services.

Maternal Nutrition

- Prioritize pregnant and lactating women within humanitarian nutrition programmes.
- Expand routine MUAC screening during antenatal and postnatal care.
- Ensure continuous availability of maternal micronutrient supplementation.
- Strengthen maternal nutrition counselling throughout pregnancy and lactation.

Infant and Young Child Feeding

- Intensify breastfeeding counselling and skilled lactation support.
- Protect and promote exclusive breastfeeding during the first six months of life.
- Strengthen complementary feeding counselling using locally available nutritious foods.
- Increase support for caregivers of children during the first 1,000 days.

Child Health

- Ensure uninterrupted availability of ORS, zinc, vaccines, vitamin A, and essential medicines.
- Strengthen Integrated Management of Childhood Illness (IMCI).
- Improve early detection and management of diarrhoea, fever, and acute respiratory infections.
- Expand community-based child health outreach services.

WASH

- Improve access to safe drinking water.
- Strengthen hygiene promotion.
- Expand community-based diarrhoea prevention interventions.
- Improve sanitation conditions in displacement settings.

Immediate Risk

Failure to sustain these interventions may rapidly increase acute malnutrition among vulnerable women and children should humanitarian access deteriorate.

6.3 Medium-Term Priorities (6–24 Months)

As humanitarian conditions stabilize, programming should progressively shift toward preventing chronic nutritional vulnerability while maintaining emergency response capacity.

Nutrition

- Expand preventive nutrition programming alongside CMAM.
- Strengthen routine growth monitoring and promotion.
- Integrate preventive nutrition services into primary healthcare.

Maternal Nutrition

- Integrate maternal nutrition into reproductive, maternal, newborn, child, and adolescent health services.
- Improve maternal dietary diversity through nutrition-sensitive programming.
- Strengthen nutrition interventions before conception and throughout pregnancy.

Infant and Young Child Feeding

- Improve dietary diversity among children aged 6–23 months.
- Reduce consumption of unhealthy foods and sugar-sweetened beverages.
- Expand Social and Behaviour Change (SBC) programmes promoting optimal IYCF practices.

Child Health

- Restore routine child health services.
- Improve immunization coverage.
- Strengthen integrated child nutrition and health services.

Food Security

- Improve access to diverse, nutrient-rich foods.
- Promote nutrition-sensitive food assistance.
- Support household food security interventions where operationally feasible.

WASH

- Strengthen sanitation infrastructure.
- Improve environmental health.
- Reduce childhood exposure to diarrhoeal disease.

Nutrition Surveillance

- Strengthen routine nutrition surveillance.
- Maintain sentinel surveillance systems.
- Continue periodic SMART surveys to monitor trends and evaluate programme effectiveness.

6.4 Long-Term Recovery and Resilience Priorities (>24 Months)

Long-term investments should focus on building resilient systems capable of sustaining improvements in maternal and child nutrition beyond the humanitarian response.

Nutrition and Human Capital

- Reduce chronic undernutrition through comprehensive first 1,000 days programming.
- Integrate nutrition within early childhood development programmes.
- Promote nutrition-sensitive social protection policies.

Health Systems

- Rebuild resilient primary healthcare and nutrition systems.
- Strengthen emergency preparedness for future nutrition emergencies.
- Improve routine nutrition information systems.

Food Systems

- Restore access to diverse, nutritious foods.
- Support local food production where feasible.
- Strengthen household resilience and sustainable livelihoods.

Education and Early Childhood Development

- Integrate nutrition-sensitive interventions within early childhood development programmes.
- Strengthen nutrition education within schools as services recover.
- Promote healthy dietary behaviours among children and caregivers.

Multi-sectoral Coordination

- Strengthen coordination between Nutrition, Health, Food Security, WASH, Social Protection, Agriculture, Education, and SBC sectors.
- Promote integrated programming that simultaneously addresses the multiple determinants of malnutrition.

Research and Evidence Generation

- Continue investment in nutrition surveillance, operational research, and periodic population-based assessments.
- Promote operational research examining maternal nutrition, dietary quality, micronutrient deficiencies, and household resilience.
- Strengthen utilization of nutrition evidence for humanitarian planning, advocacy, and policy development.

Monitoring and Evaluation

- Conduct periodic SMART surveys every 12–24 months, subject to operational feasibility, to monitor changes in nutritional status and evaluate programme performance.
- Strengthen routine monitoring systems capable of detecting early deterioration in nutritional status.

Annex 4: Domain Level Reports

Available on SMART + Aggregator for each domain

