

Nutrition and Mortality Monitoring in IDP Populations

Report on Round 3 - December 2022

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Photo taken by International Rescue Committee (IRC) data collection team in a camp for newly arrived IDP in Daynille, Mogadishu, December 2022

Executive Summary

This is the third report from the 2022/2023 Nutrition and Mortality Monitoring System project. This sentinel site data collection continues to provide near real-time data on the evolution of the crisis and the adequacy of the humanitarian response. While the upscaled response has contributed to avoiding famine, projected for the end of 2022, the current situation and near term outlook continue to be very serious. It has been possible to expand the number of IDP sites included in this data collection round due to additional support provided by the Caafimaad Plus consortium

Between November 21st and December 11th, 2022, data was collected from 3,072 households in 25 IDP sites in Khada and Daynille in the Afgooye Corridor, Baidoa, Diinsor, and Galkayo. IDP had originated from villages in a variety of districts, mainly from Bay, Lower Shabelle, and Bakool. Seventy eight % of the residents in the camps interviewed in round 3 were from the Digil and Mirifle clan and 10% were from minority clans.

The predominant household water source varied by location with public taps most frequent in Kahda and Galkayo, tankers in Baidoa and Daynille, and water vendors/donkey carts in Diinsor. There was increased use of wells and springs in Baidoa, presumably due to the effect of the Deyr rains. As in Round 2, inadequate drinking water continued to be the most marked in Diinsor. Defecation in the open field was reported by a substantial proportion of respondents in all areas except Kahda. The situation in Daynille has deteriorated since round 2 with 70% now reporting open field defecation.

The GAM by MUAC prevalence measured in 3 / 5 areas continued to exceed the threshold for IPC Phase 4/5 (Critical) Acute Malnutrition. However, in Daynille there has been a sharp decrease since round 2 and this area is now classified as Serious-Critical rather than Critical-Extremely Critical. In Galkayo, a similar prevalence was observed. In all previously measured areas a decrease in acute malnutrition was observed, but the overall situation remains very serious. Malnutrition treatment coverage has decreased somewhat since round 2 with the exception of Baidoa.

There have been some improvements in health record card possession and vaccination coverage. However, only 21% of children aged 0-59 mo. possessed a health record card and measles vaccination coverage only reached 62%. The two week period prevalence of suspected measles was similar to round 2. There remains an urgent need for further action to improve vaccination campaign.

Vaccination with the oral cholera vaccine (OCV) had increased slightly and was reported by 46% of children aged 12-59 mo., and the overall two week period prevalence of acute watery diarrhoea had fallen to 10.6%.

Overall, mortality has decreased since round 2 and the CDR was found to be below emergency levels. However, the U5DR remains elevated at emergency levels (2 deaths/10,000/day).

Data from Nov/Dec 2022 indicates that IDP populations are still experiencing a serious nutrition and health crisis. Acute malnutrition in children is at critical levels, there is a continued threat from measles and AWD infections, and serious gaps remain in the provision of life saving interventions including WASH, health, and nutrition.

Recommendations

1. Despite the improvements in some programme performance indicators, an intensified humanitarian response is still required to deal with the serious health and nutrition situation in IDP populations.
2. Action to further scale up WASH services is still required to ensure adequate access to potable water and reduce the use of open field defecation.
3. Treatment of acute malnutrition should continue to be scaled up to ensure an adequate coverage of selective feeding programmes that meets Sphere standards and efforts continued to improve outreach.
4. Despite the recent Supplementary Immunization Activities (SIA) vaccination campaign, measles vaccination coverage remains low and additional action should be taken to improve coverage, including the implementation of on-demand and campaign vaccination services.
5. Vaccination services for measles and other diseases should be provided to IDP on arrival to mitigate the risks of further outbreaks occurring in the densely packed camp environment. Sphere standards require that at least 95 per cent of newcomers to a settlement aged between six months and 15 years are vaccinated.
6. Continuation of NMS data collection should be implemented within all major, urban, IDP congregation sites to enable real-time monitoring of the evolving crisis and the adequacy of the humanitarian response.

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Introduction

This is the third report from the Nutrition and Mortality Monitoring System (NMS) 2022 project, that was set up to track the health and nutrition situation of IDP populations in southern Somalia.

Somalia continues to experience a prolonged and devastating drought, and a nutrition and health emergency. The NMS project is run by the Building Resilient Communities in Somalia consortium (BRCiS), led by the Norwegian Refugee Council, and the Caafimaad Plus consortium, led by Action Against Hunger, in partnership with Evidence for Change (e4c). The NMS sentinel site data collection aims to provide regular updates about the situation of vulnerable groups in purposively selected locations in Banadir, Baidoa, Dinsoor and Galkayo.

Methods

Sampling

The Nutrition and Mortality Monitoring System (NMS) approach¹ was used to collect data from a purposively selected sample of IDP sites/camps. Details of the sampling and data collection methods can be found in the Round 1 report.²

IDP settlements in Khada, within the Afgooye Corridor, Baidoa, and Dinsoor were included in Round 1 and the area of Daynille was added in Round 2. Additional camps from new areas in Baidoa were also added. In Round 3, additional IDP sites from the north and east of Baidoa were included, as well as more sites from Khada. Galkayo was also added as a new area. The sample in Round 3 therefore contains a mix of camps that we sampled in the two previous rounds as well as camps that were selected to represent, as far as possible, the most recent arrivals.

Team training

Hybrid trainings were conducted by e4c consultants with support from health and nutrition officers from participating BRCiS and Caafimaad Plus members. Team training was conducted remotely via video link. The e4c consultants conducted 1-day refresher training for community health workers (CHW), enumerators, and supervisors who had been involved in previous data collection rounds, and a 2-day training for the teams that were starting NMS work for the first time. During the training, an overview of different types of malnutrition, a virtual demonstration of MUAC measurements, the assessment of oedema, and the identification of suspected measles were provided. The data collection process was also piloted, and mock interviews were conducted with the CHWs and enumerators. Nutrition officers provided live demonstration of MUAC measurements and the assessment of oedema. Training was provided for 68 data collectors from the 5 different partner organisations.

¹ Seal, A. J., et al. (2021). "Use of verbal autopsy for establishing causes of child mortality in camps for internally displaced people in Mogadishu, Somalia: a population-based, prospective, cohort study." *Lancet Glob Health* 9(9): e1286-e1295.

² <https://reliefweb.int/report/somalia/nutrition-and-mortality-monitoring-idp-populations-report-round-1-july-2022-report-issued-15082022>

Data collection

Data was collected at household level by trained CHW and enumerators. The questionnaire was developed by e4c after consultation with BRCiS and Caafimaad Plus, and other experts working on Somalia. It was developed in English and was later translated in Somali. The data collection form was piloted and revised based on the feedback from teams during the training sessions. It was coded in ODK and data was uploaded to the ONA Systems server. Data collectors used mobile phones or tablets running the Android operating system.

As summarised in Table 1, in Round 3 data collection took place between 21st Nov - 11th Dec, 2022. Teams were comprised of two CHW or enumerators, one of which conducted the interviews and one who performed the MUAC measurements. Data collection took approximately 20 minutes for each household and teams averaged 10 households per day.

The questionnaire included questions on household demographics, area of origin and clan affiliation, date of arrival in the IDP site, spoken dialects/languages, household WASH, possession of child-health record cards, vaccination status, morbidity, and mortality. Questions on morbidity included symptoms of measles and acute watery diarrhoea (AWD) experienced during the last 2 weeks. MUAC measurements were taken on children 6-59 months in duplicate and, in the event that the difference in measurements was greater than 0.5 cm, a third measure was taken and the mean of the two measurements with the best agreement was used.

Data management

MUAC measurements and questionnaire data, collected by the CHW and enumerators, were entered into the ODK data form on mobile phones or tablets running the Android operating system. Data was uploaded to a server run by ONA after forms were finalised, and an internet connection was available. The data files were then downloaded from the ONA server in .csv format and loaded into Excel and R for analysis. Unique IDs for each household and individual were created during data collection using a unique household identifier number and sequential individual ID numbers within each household. To avoid the creation of duplicate ID numbers a paper 'cluster control sheet' was used to monitor the collection of data by each team. To find households that had been previously interviewed, household identifiers were uploaded to the digital devices so that the household identify could be confirmed at the start of each interview.

Data analysis

Data analysis was performed in R. Pie charts and graphs were created in Excel. The prevalence of GAM and SAM by MUAC was calculated taking in to account the prevalence of nutritional oedema.

The under-five and crude death rates were measured using separate recall periods for households newly enrolled during Round 3 and those that had been previously interviewed in Round 2. A memorable date of October 9th, 2022, which coincides with the end of Mawlid, was used for new households and the time since the previous interview was used for the others. Household members that joined, left, or died within the recall period contributed half of the recall period to the rate denominator. To cross-check that the date of death fell within the recall period follow-up questions were asked to confirm the number of weeks since the death occurred, and whether the location of the death was consistent with the household's date of arrival in the IDP camp. These were used during analysis to exclude any deaths that occurred outside of the recall period, or deaths that had occurred in a location outside of the IDP camp after the household reported arriving in the camp.

A verification exercise was performed to confirm the deaths reported in camps with higher than average death rates. In round 3 this was done in Durdur camp in Dayniile. To ascertain if the deaths in this camp had been correctly validated a follow-up interview was carried out in the days immediately following the end of the main data collection exercise. This verification interview was conducted by two members of the original data collection team that had been specially trained on the how to conduct the interview and it was ensured that no household was re-interviewed by the same CHW that had conducted the initial data collection interview. This verification exercise was conducted over 2 days and resulted in the exclusion of several reported deaths.

To assess whether conditions within IDP camps are improving or deteriorating over time, bar graphs or tables were prepared to show key indicators for each camp and how they changed between data collection rounds. If the humanitarian response is adequate a positive improvement in performance and outcome indicators is expected as the time since arrival increases.

Results

IDP Sample Characteristics

The characteristics of the samples collected in each area and IDP site are described in table 1. In total, during round 3 data was collected from 3,072 IDP households in 25 sites. The sampled households contained 17,808 individuals.

The average time since arrival for the 25 IDP sites was 9.4 months, ranging from 2.3 months up to 33.9 months. The sites with the most recent arrivals were the new sites from Baidoa and Kahda that were included in round 3, while the newly included sites in Galkayo had IDP with the longest duration of residence.

Two households withheld consent during Round 3; 1 from Biilale Two and 1 from Tunida. Data was not collected from these households, and they are not included in the data tables.

Region of Origin

Figure 1 shows the region of origin for all the IDP Mothers/Carers interviewed in round 3. IDPs had migrated from a range of different regions with the majority coming from Lower Shabelle, Bay, and Bakool.

Clan and Language

The clan affiliation of all the IDP mothers/caregivers who were interviewed during Round 3 is shown in the tree plot, figure 2, below. The great majority of displaced people in the camps continue to belong to the Digil and Mirifle (Rahanweyn) clans.

The languages spoken by Mothers/Carers are shown in Figure 3. The largest category were those who reported speaking only Maay. This was followed by those who spoke Maay and Mahatiri, or Mahatiri only. Jido was reported as the sole language by some respondents, and other languages and combinations were also noted.

Table 1: Data collection summary

Area	Partner	IDP site	Round 1 (18 th Jul - 2 nd Aug)			Round 2 (21 st Aug - 10 th Sep)			Round 3 (21 st Nov - 11 th Dec)			Overall Change ²		Months since arrival ¹		
			Households	Population	Household size	Households	Change	Population	Household size	Households	Change	Population	Household size		HH	Pop.
Kahda - Banadir	Action Against Hunger	Wabiyarow	198	1,092	5.5	190	-8	1079	5.7	166	-24	935	5.6	-32	-157	7.1 (5,64)
		Kuntuwareey	241	1,310	5.4	227	-14	1283	5.7	220	-7	1,203	5.5	-21	-107	7.0 (5, 8)
		Canooole	164	680	4.1	144	-20	652	4.5	117	-27	527	4.5	-47	-153	9.2 (5,33)
		Al Karim	-	-	-	-	-	-	-	57	-	263	4.6	-	-	2.8 (0,36)
		Calafsuge	-	-	-	-	-	-	-	29	-	145	5	-	-	4.6 (0,10)
		Mahad Alle	-	-	-	-	-	-	-	50	-	298	6	-	-	4.3 (1,8)
Combined			603	3,082	5	561		3,014	5.4	639		3,371	5.3	36	289	6.7 (0,64)
Daynille - Banadir	IRC	Durdur	-	-	-	247		1045	4.2	186		898	4.8	-61	-147	5.5 (3,13)
		Horseed	-	-	-	311		1701	5.5	292		1,690	5.8	-19	-11	4.5 (4,7)
		Furuqly	-	-	-	117		566	4.8	107		579	5.4	-10	13	5.4 (4,9)
Combined			-	-	-	675		3,312	4.8	585		3,167	6	-90	-145	5.0 (3,13)
Baidoa City	GREDO	Bogey	109	570	5.2	79	-30	571	5.2	109	30	608	5.6	0	38	6.5 (4,14)
		Abag Dheere	122	511	4.2	110	-12	482	4.1	58	-53	289	5	-64	-222	5.1 (4,7)
		Barbaare	79	511	6.5	63	-16	497	6.4	75	12	521	6.9	-4	10	7.9 (4,22)
		War Ajiin	126	754	6	113	-13	724	6.4	99	-14	637	6.4	-27	-117	7.6 (4,27)
	SOS	Garas	-	-	-	149		869	5.8	146	-3	832	5.7	-3	-37	4.8 (3,10)
		Lowfooraar	-	-	-	131		664	5.1	130	-1	750	5.8	-1	86	4.8 (3,18)
Combined			436	2,346	5.5	645		3,807	5.5	1,220		7,374	6	784	5,028	6.5 (0,61)
Dinsoor Town	GREDO	Biilale One	119	669	5.6	94	-25	623	5.5	111	17	633	5.7	-8	-36	10.2 (4,14)
		Biilale Two	165	914	5.5	125	-40	864	6	143	18	845	5.9	-22	-69	7.7 (4,44)
		Korkaamare	95	460	4.8	80	-15	423	4.7	90	10	423	4.7	-5	-37	7.2 (4,14)
		Tunida	73	441	6	64	-9	366	6	57	7	351	6.2	-16	-90	5.3 (4,8)
Combined			452	2,484	5.5	363		2,276	5.5	401		2,252	5.6	-51	-232	7.9 (4,44)
Galkayo	IMC	Baantu 1	-	-	-	-		-	-	36		258	7.2	-	-	37.1 (2,96)
		Baxsan 1	-	-	-	-		-	-	77		560	7.3	-	-	16.4 (2,72)
		Bulojawan 1	-	-	-	-		-	-	114		826	7.2	-	-	44.9 (0,240)
Combined			-	-	-	-		-	-	227		1,644	7.2	-	-	33.9 (0,240)

¹ mean and range; ²Change in household and population number is shown since the previous data collection using red and blue bars, and the overall change since the first round is also shown.

Figure 1 - Region & District of Origin of all IDP Mothers/Caregivers Interviewed in Round 3 (n=2,444)

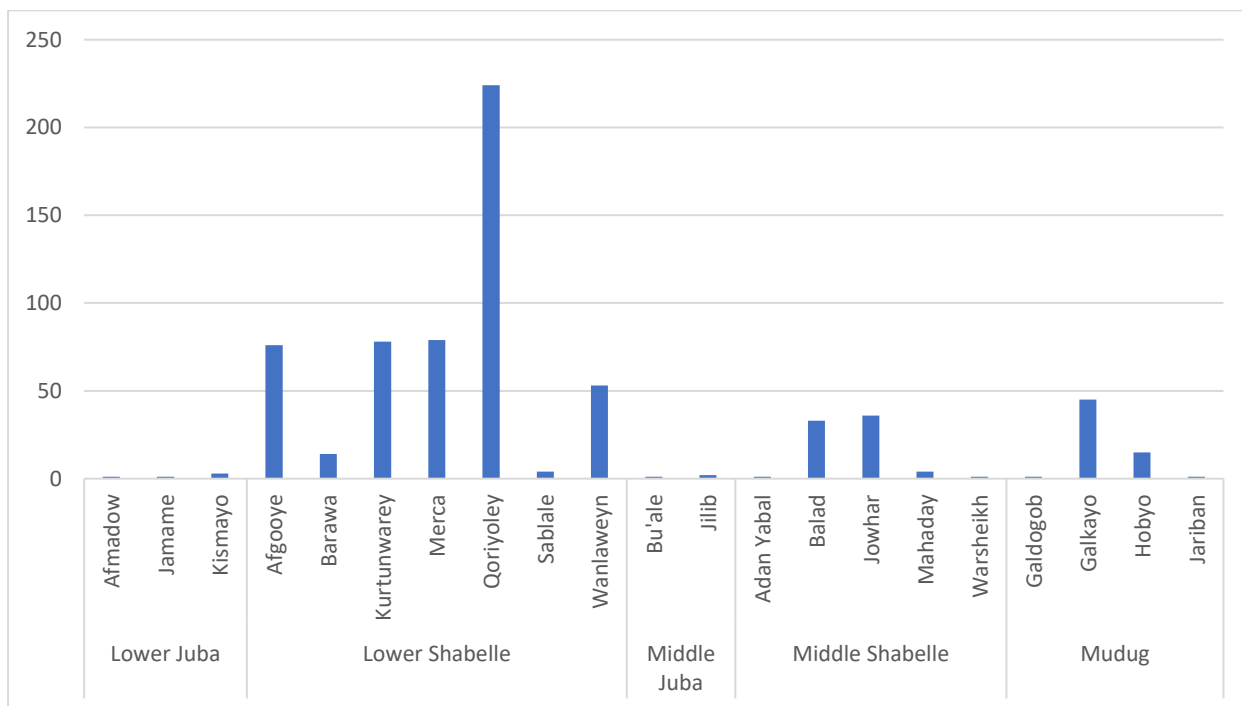
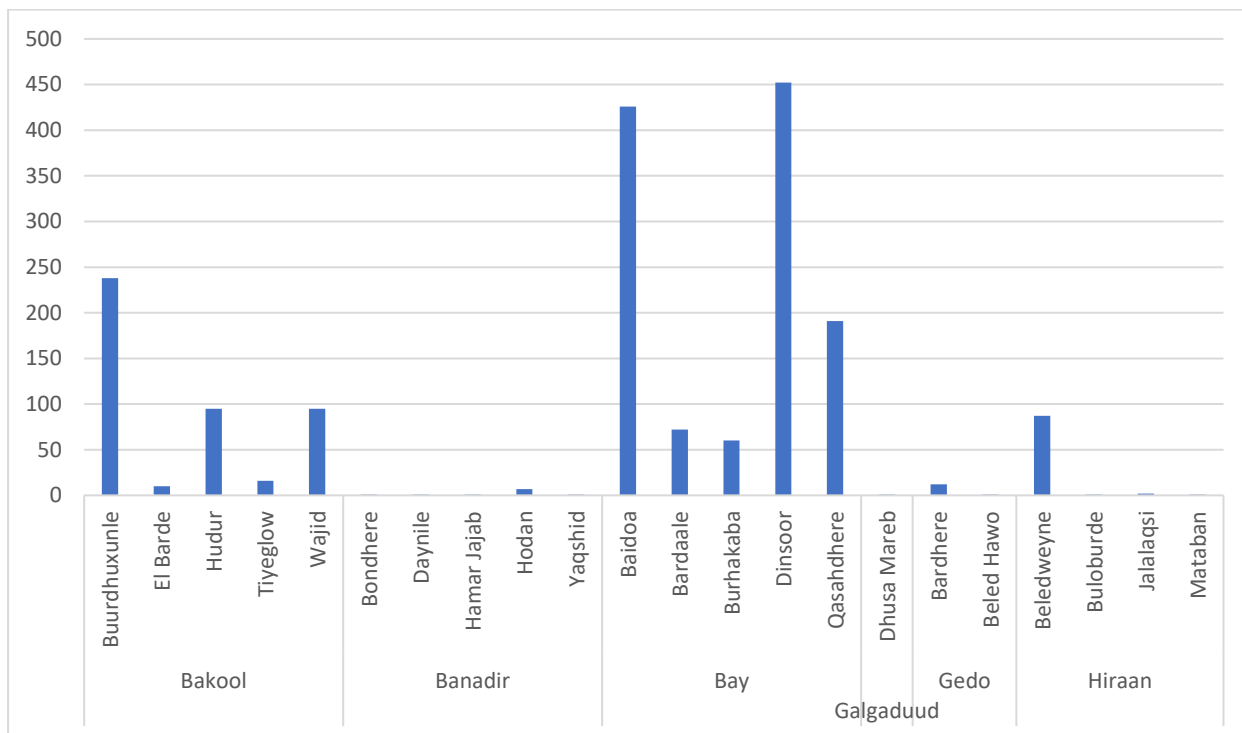


Figure 2 - Clan of IDP Mothers/Caregivers in All Camps Surveyed in Round 3 (n=2,444)

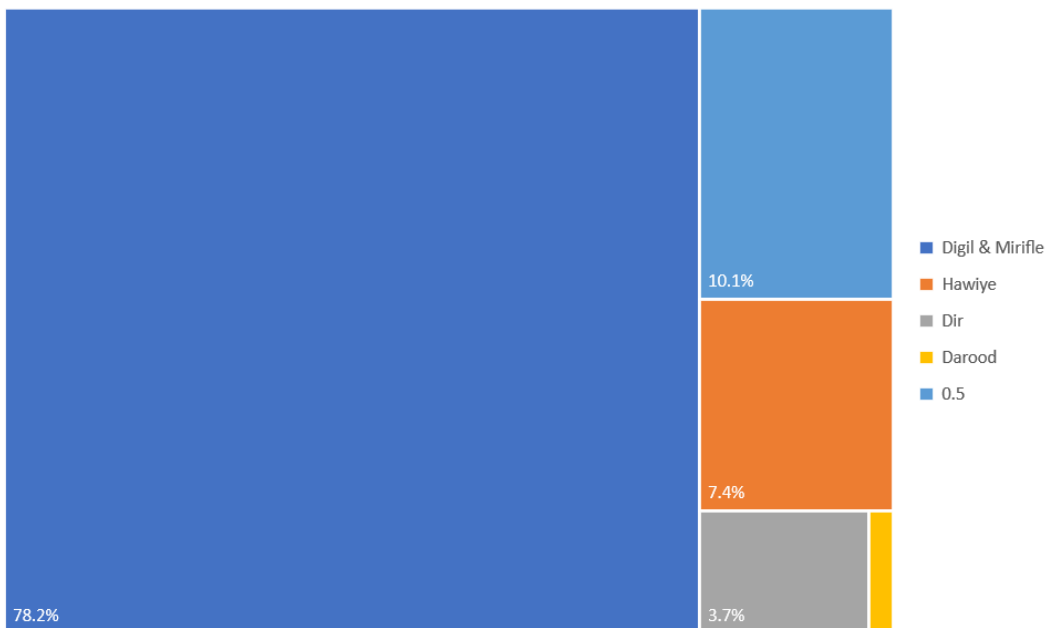
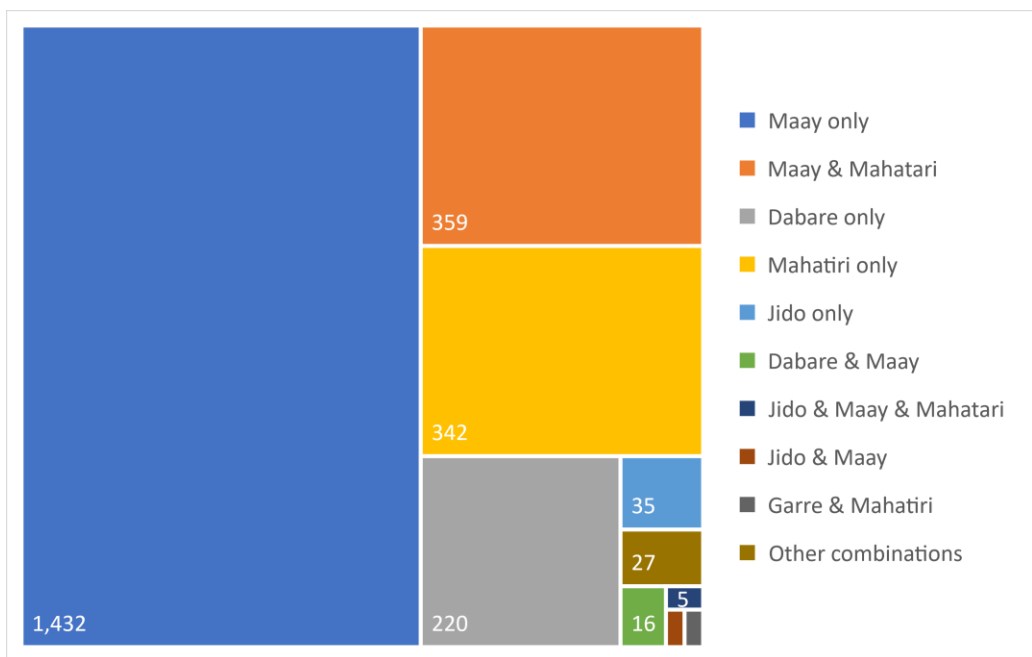


Figure 3 – Language of Mothers/Caregivers in All Camps Surveyed in Round 3 (n=2,444)



WASH

The household WASH situation in IDP camps in the five areas is shown in the 3 figures below. The predominant water source varied by location with public taps most frequent in Kahda and Galkayo, tankers in Baidoa and Daynille, and water vendors/donkey carts in Diinsor. The use of tankers had decreased in both Baidoa and Dayniile, and there was a marked increase in the use of wells or springs in Baidoa, presumably associated with the onset of the Deyr rains.

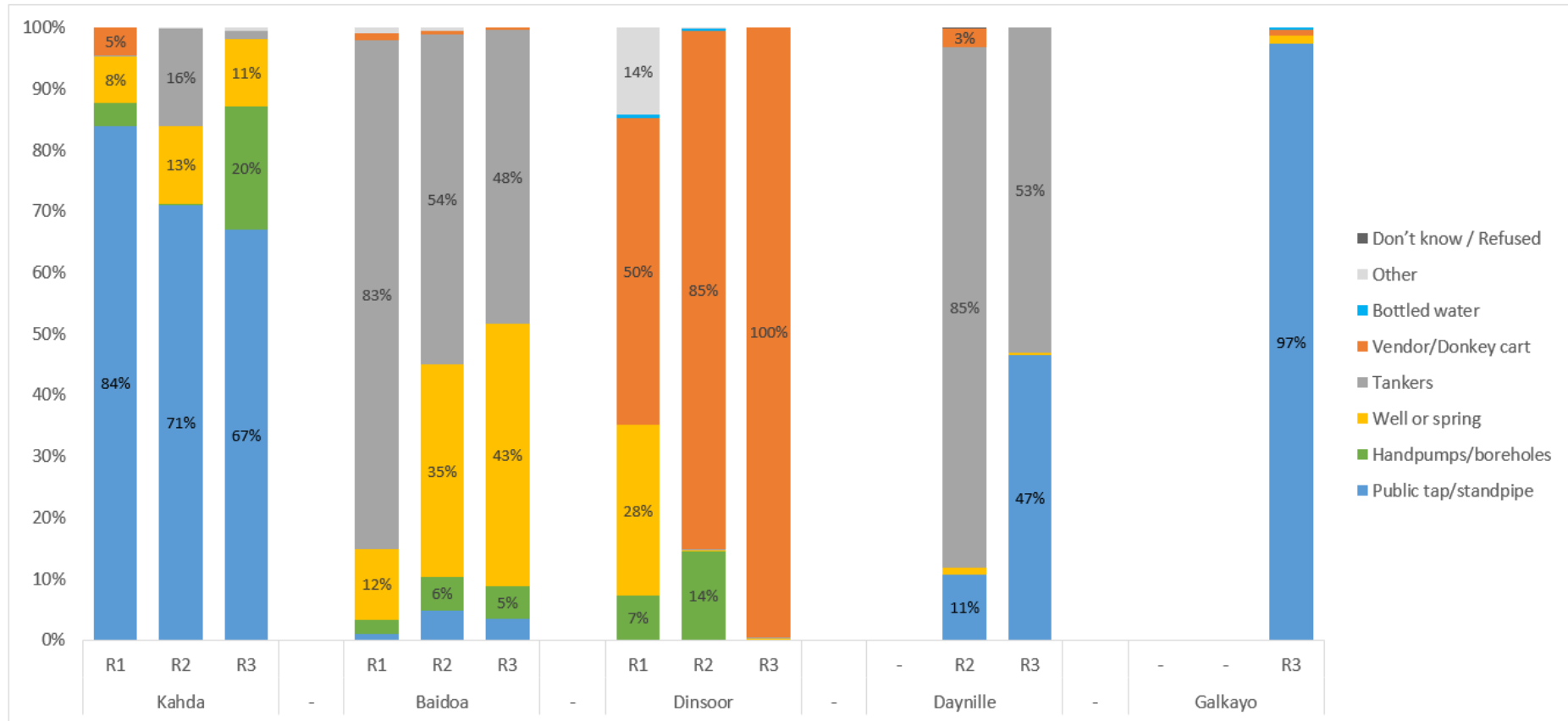
Drinking water adequacy was sometimes an issue for some households in all 5 locations, but as in Round 2, inadequate drinking continued to be the most marked in Diinsor, where 26% of households reported drinking water was sometimes, often, or always inadequate. However, these proportions had continued to improve since Round 2. A decrease in reliance on water takers appeared to be associated with a small improvement in the adequacy of drinking water.

Disposal of faeces (Figure 6) was found to be a continued and substantial problem in most areas. Defecation in the open field was reported by a substantial proportion of respondents in all areas except Kahda. The situation in Dayniile has deteriorated since round 2 with 70% reporting open field defecation in round 3.

To compare trends in WASH indicators between data collection rounds a score for drinking water inadequacy was calculated and is shown in Table 2. An increasing score indicates more inadequate access to drinking water. The scores reveal that, overall, the adequacy of drinking water access had slightly improved but deteriorated in Kahda and Dayniile.

Use of pit latrines was also compared by looking at the proportion of households that reported using them in Round 2 and Round 3. The results, also shown in Table 2, indicate a good improvement in access to pit latrines in all areas except Daynille, with a very marked improvement in use in Dinsoor.

Figure 4: Main Sources of Household Drinking Water by Area (R3 n=3,065)¹



¹Two households in Dinsoor were excluded during R3 for responding NA

Figure 5: Frequency of Inadequate Household Drinking Water by Area (n=3,065)

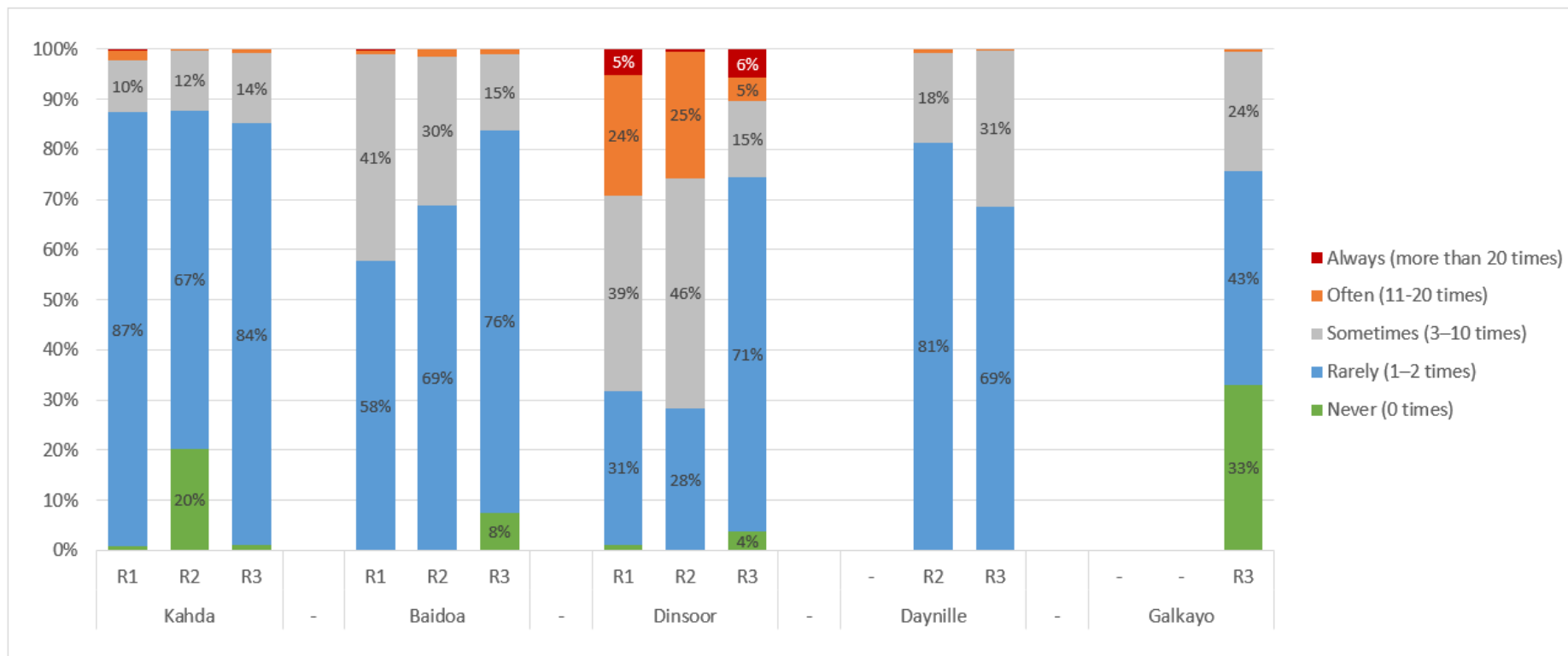


Figure 6: Household Defecation Site by Area (R3 n=3,065)

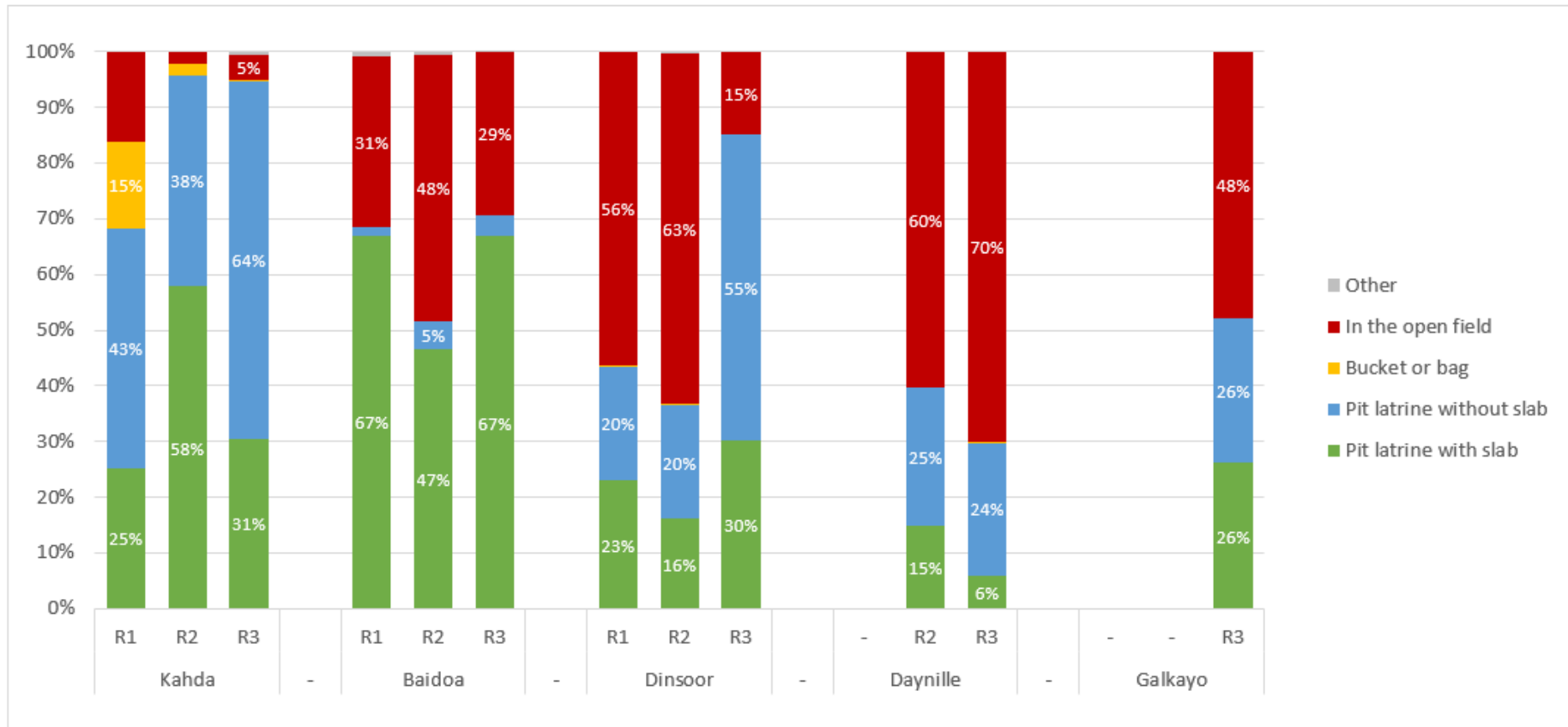


Table 2: Changes in Drinking Water Adequacy and Use of Pit Latrines

	Frequency of inadequate drinking water ¹							Use of pit latrines ²						
	Round 1		Round 2		Round 3		Change in score ³	Round 1		Round 2		Round 3		Change (% points) ³
	N	Score	N	Score	N	Score		N	%	N	%	N	%	
Kahda	596	2.1	561	1.9	646	2.1	+0.2	407/596	68.3%	537/561	95.7%	603/637	94.7%	-1.0%
Baidoa	337	2.4	636	2.5	1289	2.3	-0.2	231/337	68.5%	328/636	51.6%	859/1217	70.6%	+19.0%
Dinsoor	333	3.0	409	3.4	401	2.4	-1.0	144/333	43.2%	149/409	36.4%	339/401	85.0%	+48.6%
Daynille	-	-	673	2.2	585	2.3	+0.1	-	-	267/673	39.7%	174/585	29.7%	-10.0%
Galkayo	-	-	-	-	227	1.9	-	-	-	-	-	118/227	52.0%	-
Combined	1,266	2.4	2,175	2.3	3,148	2.2	-0.1	782/ 1,266	61.8%	1,281/ 2,279	56.2%	2,093/ 3,067	68.2%	+12.0%

¹ Drinking water inadequacy scores are calculated based on the reported frequency of inadequate supply, with a larger score indicating that there was a greater number of times in the last month when there was not adequate drinking water for the household.

² Use of pit latrines is calculated as the proportion of households that reported using a pit latrine, with or without a slab, as their usual defecation site.

³ The change in score is shown for the current data collection round compared to the round immediately before it.

Acute Malnutrition

The GAM by MUAC prevalence measured in 3 areas continued to exceed the threshold of 15% for IPC Phase 4/5 (Critical) Acute Malnutrition.³ However, in Dayniile there has been a sharp decrease in GAM by MUAC since round 2 and this area is now classified as Serious-Critical rather than Critical-Extremely Critical. And in Galkayo a similar prevalence was observed. In all previously measured areas a decrease in GAM by MUAC was observed but the overall situation remains very serious.

The changes in prevalence of GAM, MAM, and SAM are shown for individual camps in Figure 6. In 8 sites the prevalence was above 15% and in some of these the trend was also upwards. However, camps in Dayniile and Kahda all showed a decrease in prevalence since round 2.

³ IPC Technical Manual Version 3.0, Evidence and Standards for Better Food Security and Nutrition Decisions (2019)

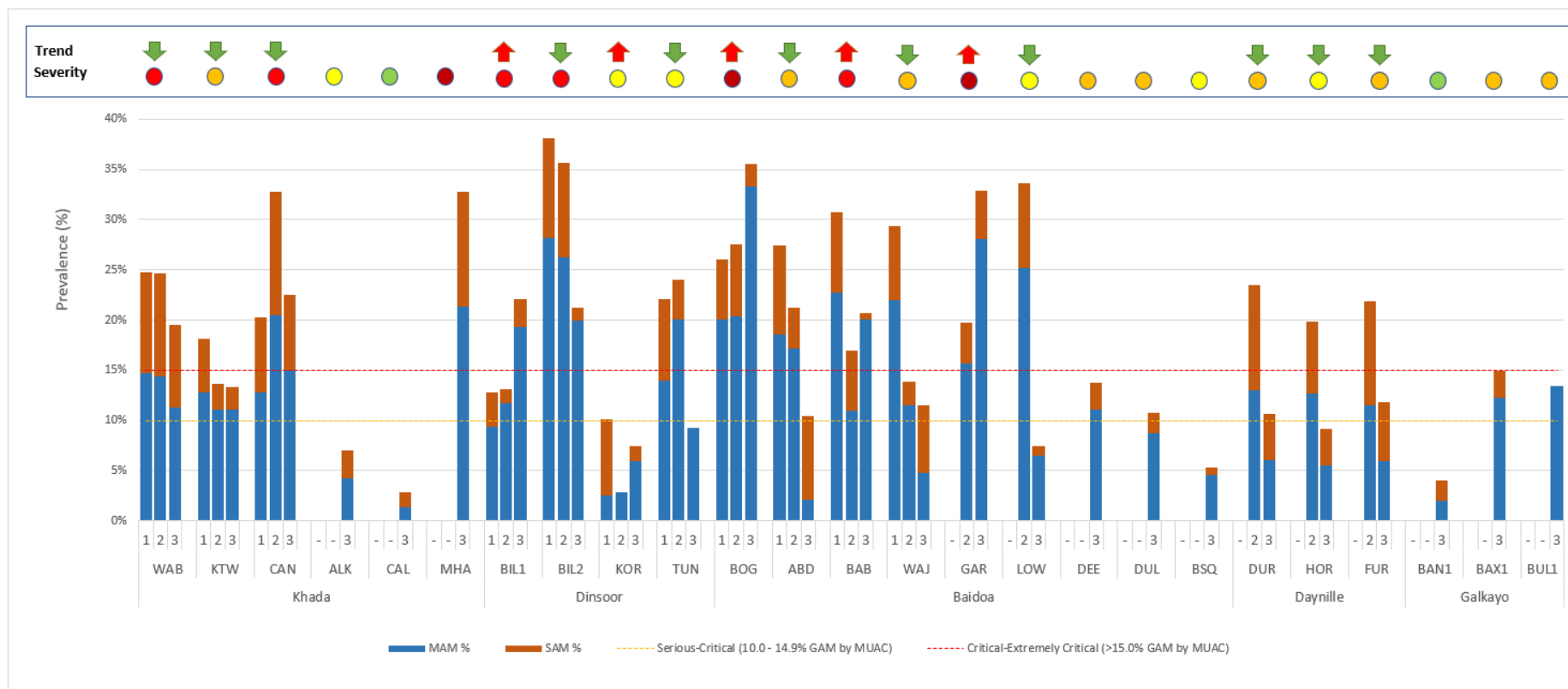
Table 3: Prevalence of GAM by MUAC in Sentinel Site Camp Areas¹

Area	Sex	Round 1					Round 2					Round 3 ²					Change (% points)
		N (%)	Age (mo.)	Oedema	GAM (MUAC < 12.5 cm or oedema)		N	Age (mo.)	Oedema	GAM (MUAC < 12.5 cm or oedema)		N	Age (mo.)	Oedema	GAM (MUAC < 12.5 cm or oedema)		
Kahda	All	752	31.4	4	158	21.0%	680	32.3	2	153	22.5%	811	31.8	3	136	16.8%	-5.7%
	Male	371	31.1	3	69	18.6%	342	32.8	2	66	19.3%	383	31.7	1	64	16.7%	
	Female	381	31.5	1	89	23.4%	338	31.7	0	87	25.7%	428	31.7	2	72	16.8%	
Baidoa	All	423	28.4	4	120	28.4%	681	30.6	1	148	21.7%	1531	29.7	6	278	18.2%	-3.5%
	Male	218	27.7	3	58	26.6%	351	30.3	1	75	21.4%	139	29.5	3	752	18.5%	
	Female	205	29.1	1	62	30.2%	330	30.8	0	73	22.1%	139	29.9	3	779	17.8%	
Dinsoor	All	495	29.7	1	115	23.2%	450	31.1	0	96	21.3%	436	32.8	1	77	17.7%	-3.6%
	Male	263	30.1	0	53	20.2%	245	31.6	0	47	19.2%	241	32.8	1	42	17.4%	
	Female	232	29.1	1	62	26.7%	205	30.5	0	49	23.9%	195	32.7	0	35	17.9%	
Daynille	All	-	-	-	-	-	581	29.8	10	124	21.3%	500	30.2	1	51	10.2%	-11.1%
	Male	-	-	-	-	-	321	29.5	5	62	19.3%	283	30.0	1	27	9.5%	
	Female	-	-	-	-	-	260	30.3	5	62	23.8%	217	30.5	0	24	11.1%	
Galkayo	All	-	-	-	-	-	-	-	-	-	-	254	29.6	2	31	12.2%	-
	Male	-	-	-	-	-	-	-	-	-	-	121	29.6	1	18	14.9%	
	Female	-	-	-	-	-	-	-	-	-	-	133	29.5	1	13	9.8%	

¹IPC levels of acute malnutrition: Critical-Extremely Critical (>15.0% GAM by MUAC)
 Serious-Critical (10.0 - 14.9% GAM by MUAC)
 Alert-Serious (5.0 - 9.9% GAM by MUAC)
 Acceptable-Alert (<5.0% GAM by MUAC)

²Data on oedema cases have been updated for R1 and R2.

Figure 7 Prevalence of SAM and MAM by MUAC in Individual Camps, Round 1 to Round 3^{1,2}



¹ An increase or decrease in prevalence since the last data collection round is indicated by a red or green arrow. The current severity is shown using a coloured circle with a scale from dark red if over 30% down to green if less than 5%. IDP sites with red circles and an increasing trend are of most concern.

Camp Names and Abbreviations

Abag dheere	ABD	Biilale Two	BIL2	Durdur	DUR	Mahad Alle	MHA
Al Kariim	ALK	Bogey	BOG	Furuqly	FUR	Tunida	TUN
Baantu 1	BAN1	Bulojawan 1	BUL1	Garas	GAR	Wabiyarow	WAB
Bansadiiq	BSQ	Calafsuge	CAL	Horseed	HOR	War Ajiin	WAJ
Barbaare	BAB	Canooole	CAN	Korkaamare	KOR		
Baxsan 1	BAX1	Dee	DEE	Kuntuwareey	KTW		
Biilale One	BIL1	Dulmadiid	DUL	Lowfooraar	LOW		

Coverage of nutrition treatment programs

Enrolment in Selective Feeding Programmes is described in table 4. Overall, programme coverage in Round 3 was 73% for MAM and 66% for SAM, with Daynille showing the lowest programme coverage. In some areas assessed in Round 2 there were improvements observed in programme coverage, with the large improvements seen in Baidoa and Kahda. However, in no area was the target coverage of >90% achieved yet for MAM or SAM treatment.

Table 4: Coverage of Selective Feeding Programmes for Children, Aged 6-59 months, with MAM by MUAC or SAM by MUAC

Area	Moderate Acute Malnutrition (MUAC < 12.5 & ≥ 11.5 cm)					Severe Acute Malnutrition (MUAC < 11.5 cm or oedema)				
	Percentage and number of cases in OTP or SFP					Percentage and number of cases in OTP				
	Round 1	Round 2	Round 3	Change	> 90% Coverage ¹	Round 1	Round 2	Round 3	Change	> 90% Coverage ¹
Khada	74 % (75/101)	90 % (88/98)	74% (68/92)	-16.0 %	NO	83 % (45/57)	64 % (34/53)	77.3% (34/44)	+13.3 %	NO
Baidoa	39 % (34/88)	42 % (47/112)	66% (124/188)	+24.0 %	NO	19 % (6/32)	46 % (16/35)	75.7 % (28/37)	+29.7 %	NO
Diinsor	41 % (32/79)	87 % (66/76)	80% (56/70)	-7.0 %	NO	78 % (28/36)	90 % (18/20)	42.9 % (3/7)	-47.1 %	NO
Daynille	-	89 % (65/73)	34.5% (10/29)	-54.5 %	NO	-	73 % (37/51)	27.3 % (6/22)	-45.7 %	NO
Galkayo			35.7% (10/28)		NO			33.3 % (1/3)		NO
Combined	53 % (141/268)	74 % (266/359)	66 % (268/406)	-8 %	NO	63 % (79/125)	66 % (105/159)	63.7 % (72/113)	-2.3 %	NO

¹ https://handbook.spherestandards.org/#ch007_004_001

Vaccination and Morbidity

Possession of a child health record card was assessed for all children less than 5 years of age. All types of vaccination cards, health passports, and other record cards were counted. Coverage had improved in all areas since round 3, with the largest improvement seen in Baidoa.

However, the overall coverage of health record cards remains low and will therefore continue to impede the delivery and monitoring of essential child health and nutrition services. Coverage is particularly low in Daynille and Dinsoor where it is below 20%

Table 5: Possession of a Health Record Card in Children aged 0-59 months

Area	Round 1		Round 2		Round 3		Change (% points)
Kahda	25.0%	199/795	34.1%	245/719	47.4%	388/818	+13.3
Baidoa	10.5%	50/476	15.1%	1,010/729	46.7%	703/1,513	+31.6
Dinsoor	5.8%	29/497	9.0%	41/456	19.2%	85/442	+10.2
Daynille	-	-	10.1%	66/655	10.9%	58/531	+0.8
Galkayo	-	-	-	-	67.0%	177/264	-
Combined	15.7%	278/1,768	18.1%	462/2,559	39.5%	1,411/3,568	21.4%+

Measles vaccination coverage has also improved somewhat since Round 2 but remains low, with an overall coverage estimate, using recall and record cards combined, of only 62%. According to Sphere Standards (Child health standard 2.2.1: Childhood vaccine-preventable diseases) there is still a need to launch a further measles campaign as coverage remains well below the 90% threshold.

Table 6: Measles Vaccination (MCV1) Coverage in Children aged 9-59 months

Area	Indicator	Round 1		Round 2		Round 3		Change ¹ (% points)	90% Coverage ²
Kahda	Record card	9.8%	70	18.9%	123	21.0%	157		
	Recall	41.6 %	298	46.7%	304	58.5%	437		
	Combined	51.3%	368/717	65.6%	427/651	79.5%	594/747	+13.9	NO
Baidoa	Record card	3.2%	13	6.0%	36	23.9%	331		
	Recall	26.9%	111	37.7%	227	39.1%	542		
	Combined	30.0%	124/413	43.7%	263/602	63.0%	873/1386	+19.3	NO
Dinsoor	Record card	1.04%	5	0.0%	0	14.2%	61		
	Recall	20.4%	98	25.7%	96	58.5%	117		
	Combined	21.4%	103/481	25.9%	96/374	41.4%	178/430	+15.5	NO
Daynille	Record card	-	-	0.5%	3	4.5%	21		
	Recall	-	-	24.0%	133	29.4%	138		
	Combined	-	-	24.5%	136/554	33.8%	159/470	+9.3	NO
Galkayo	Record card	-	-	-	-	49.4%	122		
	Recall	-	-	-	-	40.5%	100		
	Combined	-	-	-	-	89.9%	222/247		NO
Combined	Record card	5.5%	88	7.4%	162	21.1%	692		
	Recall	31.1%	507	34.8%	760	40.7%	1334		
	Combined	36.9%	595/1,611	42.3%	922/2,181	61.8%	2,026/3,280	+19.5	NO

¹The change shown is the difference between the vaccination coverage measured in the current round and the coverage measured in the round immediately before.

²Sphere standards indicate the need for a measles campaign if vaccination coverage is below 90%.

https://handbook.spherestandards.org/en/sphere/#ch009_004_001_001

The two-week period prevalence of suspected measles was measured again in Round 3. For each child, questions were asked about the presence of fever, a rash, cough coryza, and conjunctivitis, during the last two weeks. A child was classified as having suspected measles if they had a fever *and* a rash, as well

as at least one out of the other 3 symptoms (cough, coryza, or conjunctivitis).⁴ Results are presented in table 7 and show that in both Dinsoor and Galkayo there are ongoing measles outbreaks with a period prevalence above 5%. Overall, there has been little difference in the period prevalence since Round 2.

Table 7: Two Week Period Prevalence of Suspected Measles in children 6-59 mo.

Area	Round 1		Round 2		Round 3		Change (% points)
Kahda	9.8%	78/800	4.3%	31/726	2.0%	16/791	-2.3%
Baidoa	6.9%	33/478	4.6%	34/734	1.7%	25/1465	-2.9
Dinsoor	1.0%	5/497	0.4%	2/458	5.1%	22/434	+4.7%
Daynille	-	-	4.0%	26/656	4.4%	22/496	+0.4%
Galkayo	-	-	-	-	10.2%	26/255	-
Combined	6.5%	116/1,775	3.6%	93/2,574	3.2%	111/3,441	-0.4%

The coverage of Oral Cholera Vaccine in children between 12 and 59 months was assessed in all five areas. Overall, coverage had improved since round 3 with an overall coverage of 46%. In Khada coverage had improved by 17 percentage points and was now at 71%. In contrast, the coverage in Daynille was only 9% and had fallen since round 3.

Table 8: Oral Cholera Vaccine (OCV) Coverage in Children aged 12-59 months

Area	Indicator	Round 1		Round 2		Round 3		Change (% points)
Kahda	Record card	7.6%	50	8.1%	48	11.5%	81	
	Recall	26.5%	175	45.8%	273	59.3%	417	
	Combined	34.0%	225/661	53.9%	321/596	70.8%	498/703	+16.9%
Baidoa	Record card	1.8%	7	5.0%	28	20.1%	260	
	Recall	22.0%	85	31.4%	177	29.8%	385	
	Combined	23.8%	92/386	36.4%	205/563	49.8%	645/1294	+13.4%
Dinsoor	Record card	0.7%	3	0.0%	0	1.7%	7	
	Recall	20.4%	91	26.7%	94	26.3%	110	
	Combined	21.1%	94/446	26.7%	94/352	28.0%	117/418	+1.3%
Daynille	Record card	-	-	0.8%	4	1.6%	7	
	Recall	-	-	12.1%	63	7.5%	33	
	Combined	-	-	12.9%	67/520	9.1%	40/441	-3.8%
Galkayo	Record card	-	-	-	-	20.3%	46	
	Recall	-	-	-	-	36.7%	81	
	Combined	-	-	-	-	55.9%	127/227	-
Combined	Record card	4.0%	60	3.9%	80	13.0%	401	
	Recall	23.5%	351	29.9%	607	33.3%	1,026	
	Combined	27.5%	411/1,493	33.8%	687/2,031	46.2%	1,427/3,083	+12.4%

Acute Watery Diarrhoea had declined in all areas except Kahda since round 2, with an overall decrease of 3.5 percentage points. A marked decrease was seen in Baidoa and a small increase in Kahda.

⁴ Measles Vaccine-Preventable Diseases Surveillance Standards (2018) WHO <https://www.who.int/publications/m/item/vaccine-preventable-diseases-surveillance-standards-measles>

Table 9: Two Week Period Prevalence of AWD in children 0-59 mo.

Area	Round 1		Round 2		Round 3		Change (% points)
Kahda	21.8%	173/795	7.8%	56/719	10.4%	85/818	+2.6%
Baidoa	26.9%	128/476	20.0%	146/729	12.3%	186/1,513	-7.7%
Dinsoor	6.2%	31/497	10.7%	49/456	10.2%	45/442	-0.5%
Daynille	-	-	15.0%	98/655	6.6%	35/531	-8.4%
Galkayo	-	-	-	-	3.8%	10/264	-
Combined	18.8%	332/1,768	13.6%	349/2,559	10.1%	361/3,568	-3.5%

Mortality

Death rates were assessed using separate recall periods for households newly enrolled during Round 3 and these that had been previously interviewed in Round 2. The memorable date used for defining the recall period for new households was the end of Mawlid on October 9th, and the time since the previous interview was used for households that had been interviewed in previous rounds. A verification exercise was performed to confirm the deaths reported in camps with higher than average death rates. Results from the combined camps in the 5 areas indicate that the CDR has now fallen below the emergency level but that the U5DR remains elevated at ‘emergency’ levels, corresponding to an IPC Phase 4 classification. As in previous rounds, most child deaths were reported to be due to measles or diarrhoea.

Table 10: Crude Death Rate (CDR) and Under-five Death Rate (U5DR) in the Combined Areas

Indicator	Combined Areas				Change (R2 to R3)
	Round 1	Round 2	Round 3		
Persons under observation	8,029	12,400	17,808		
Average recall period (days) ¹	30.4	41.8	78.6		
Person days of observation	244,082	514,878	1,388,362		
Total deaths reported	23	32	58		
Deaths in children <5 years	17	24	43		
<i>Crude Death Rate² (CDR) deaths/10,000/day</i>	0.9	0.6	0.4		-0.2
<i>Under Five Death Rate³ (U5DR) deaths/10,000/day</i>	3.0	2.2	1.5		-0.7

¹ The recall periods/days of exposure were set at a fixed one month (30.4 days) for each household in round 1 but were calculated for each household individually during subsequent rounds. In round 2 we used a memorable date (July 9th) to define the recall period for newly recruited households, and for household that had been recruited during round 1 we used the date of the first interview. In round 3 we used the end of Mawlid, (October 9th) to define the recall period for newly recruited households, and for household that had been previously recruited we used the date of the last interview.

² Threshold levels for CDR are: 1/10,000/day = Emergency; 2/10,000/day = Out of control

³ Threshold levels for U5DR are: 2/10,000/day = Emergency; 4/10,000/day = Out of control

Source: Humanitarian Charter and Minimum Standards in Humanitarian Response; Essential health services standard <http://www.spherehandbook.org/en/essential-health-services-standard-1-prioritising-health-services/> and Interpreting and using mortality data in humanitarian emergencies, Checchi and Roberts (2005) <http://odihpn.org/wp-content/uploads/2005/09/networkpaper052.pdf>

Conclusions

Data from Round 3 indicates improvements in a number of indicators but also shows that newly displaced populations are continuing to experience a serious nutrition and health situation.

Acute malnutrition in children 6-59 mo. has declined but remains at critical levels in some camps, while measles and AWD infections persist and have increased in some areas. There have been some continued improvements in the delivery of vaccination and malnutrition treatment services, but gaps persist, and coverage is still well below Sphere Standards. While the CDR has decreased below emergency levels the U5DR still remains elevated.

Efforts need to be sustained and intensified to ensure the humanitarian response meets Sphere standards and the risk factors for excess mortality are controlled and reduced.

The outlook for the next few months remains worrying, with uncertainty about the outcomes of the Deyr rains and the extent to which livelihoods will recover. The war in Ukraine continues and the two-way sanctions imposed by NATO and Russia mean global food, fertilizer, and energy prices are likely to remain high and volatile. Water prices have been very high, especially in Baidoa, although they may be falling with the rains. Additionally, due to the military operation against Al-Shabaab by government and local forces, it is possible that the influx of IDP may increase.