**Nutritional Monitoring in the BRCiS Safety Net Pilot Population**

**Report on Data Collection up to January 2022**

**Report issued: 10/01/2022**

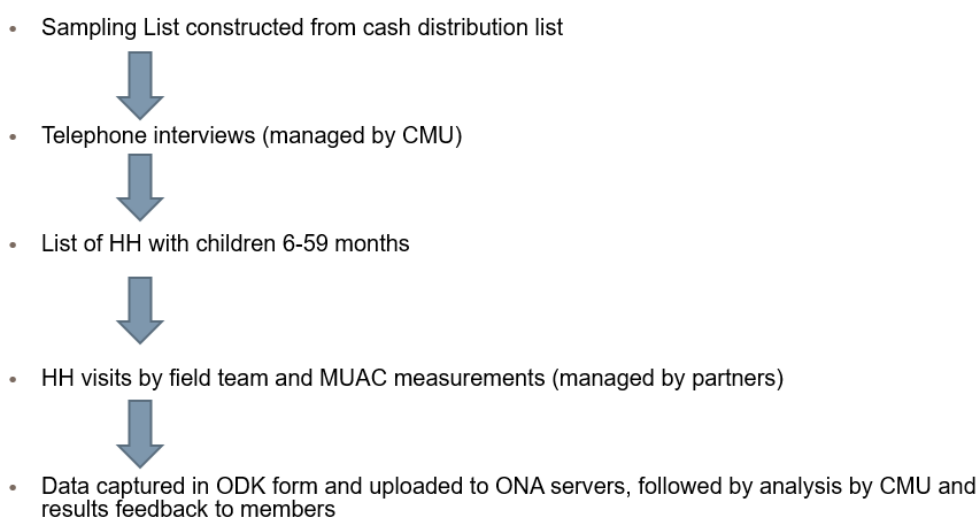## Introduction

The Building Resilient Communities in Somalia consortium (BRCiS) is comprised of eight partner NGOs and is led by the Norwegian Refugee Council (NRC). BRCiS has initiated the monitoring of nutritional status within the beneficiaries of its Safety Net pilot cash transfer programme to help evaluate the impact of its resilience programming and to contribute to the monitoring of the evolving crisis in Somalia. Evidence for Change (e4c), a humanitarian research and learning generation organisation was contracted to provide technical support for this work. This is the second report on the collection of MUAC data, and covers the period up to January 4 2022. MUAC measurement was introduced as a pilot during round 5 of Safety Net post-distribution monitoring data collection and expanded into two new areas in round 6.

## Methods

The monitoring system used a convenience sample of the households covered by the BRCiS Safety Net pilot project. A team of enumerators, closely supported and supervised by e4c technical consultants, collected longitudinal data on households that are receiving Safety Net cash transfers. Household heads were initially interviewed by telephone and data was captured on mobile devices using ODK software. Following completion of the round 6 telephone interviews, a sampling list of all households containing children 6-59 months was compiled and face-to-face home interviews were conducted with these households by trained community health workers (CHW). The CHW were part of the regular outreach team for Action Against Hunger, GREDO, and KAALO. The data collection process is summarised in Figure 1.

*Figure 1 - Summary of the data collection process*



- Sampling List constructed from cash distribution list
- Telephone interviews (managed by CMU)
- List of HH with children 6-59 months
- HH visits by field team and MUAC measurements (managed by partners)
- Data captured in ODK form and uploaded to ONA servers, followed by analysis by CMU and results feedback to members

***Team training***

To ensure collection of high-quality MUAC data in the household and child cohorts, team training was conducted remotely via video link. The e4c consultant conducted a 1-day training for CHWs and supervisors prior to the start of data collection. During this training, we gave an overview of different types of malnutrition, a virtual demonstration of MUAC measurements, the assessment of oedema, and the identification of suspected measles. We also piloted the data collection process and did some mock interviews with the CHWs.

For KAALO in Qardho and Iskushuban, new teams were trained to conduct the MUAC measurements and household questionnaire in round 6. The training involved the standard one-day virtual training described above and face-to-face MUAC demonstrations conducted by KAALO's health and nutrition specialist followed by a standardization exercise.

***Data collection***

To implement nutritional monitoring the data collection was conducted at ground level using household visits by trained CHWs. Prior to this an ODK form was developed by e4c, initial data collection checks were performed, and the revised form was uploaded to the ONA Systems server.

As summarised in Table 1, in nutrition round 1 data collection took place in IDP settlements in Khada, within the Afgooye Corridor, and in 4 locations within Dinsoor: Abdulle Xassan, Kacaan, Ramadhawi, and Yaaqshid. In round 2, two additional locations were added; Qardho and Iskushuban districts in Puntland. Table 1 also summarises the data collection periods in rounds 1 and 2.

A questionnaire was used during the household face to face visits to collect information on possession of child health record cards. In round 2 we also asked about symptoms of measles experienced during the last 2 weeks due to the ongoing concern about possible measles outbreaks and the implication of this for the risks of malnutrition and mortality.

*Table 1 Summary of MUAC data collection rounds*

| Location | BRCiS Partner | Data collection | |
| --- | --- | --- | --- |
| | | **Nutrition Round 1** | **Nutrition Round 2** |
| Kahda District, Afgooye Corridor | Action Against Hunger | 27/06/2021 - 04/07/2021 | 20/12/2021-04/01/2022 |
| Dinsoor, Bay Province | GREDO | 17/08/2021 - 19/08/2021[1] | 20/012/2021-25/12/2022 |
| Qardho, Puntland | KAALO | - | 22/12/2021-23/12/2021 |
| Iskushuban, Puntland | KAALO | - | 20/12/2021-21/12/2021 |

[1] Data collection was repeated after initial problems with quality were detected

***Data management***

MUAC measurements and questionnaire data collected by the community health workers were entered into an ODK data form on mobile phones. Data was uploaded to the ONA server 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 Power Query for data cleaning and merging, as necessary, of longitudinal household and individual data. Unique IDs for each child were created during data collection using a unique household identifier number and sequential individual ID numbers within each household.

***Data analysis***

Data analysis was performed using Excel. The prevalence of GAM and SAM by MUAC was calculated taking in to account the prevalence of nutritional oedema.

## Results

### Table 2: Sample Characteristics

| District | Population type | Sample | Nutrition Round 1 | Nutrition Round 2 |
|---|---|---|---|---|
| Kahda | Urban IDP | Household target sample | 118 | 118 |
| | | Sample achieved | 107 (91%) | 100 (85%) |
| | | Child target sample | 277 | 277 |
| | | Sample achieved | 230 (83%) | 205 (74%) |
| Dinsoor | Agricultural, Agro-pastoral, Pastoral urban | Household target sample | 135 | 135 |
| | | Sample achieved | 129 (96%) | 131 (97%) |
| | | Child target sample | 289 | 289 |
| | | Sample achieved | 282 (98%) | 247 (85%) |
| Qardho | | Household target sample | - | 43 |
| | | Sample achieved | - | 40 (93%) |
| | | Child target sample | - | 92 |
| | | Sample achieved | - | 74 (82%) |
| Iskushuban | | Household target sample | - | 31 |
| | | Sample achieved | - | 29 (94%) |
| | | Child target sample | - | 62 |
| | | Sample achieved | - | 50 (81%) |

### Table 3: Child Status

| Area | Status | Nutrition Round 1 | | Nutrition Round 2 | |
|---|---|---|---|---|---|
| Kahda | Present | 185 | 80.4 % | 163 | 79.5% |
| | Moved away | 39 | 17.0 % | 38 | 18.5% |
| | In hospital | 3 | 1.3 % | 4 | 2.0% |
| | Died | 3 | 1.3 % | 0 | 0.0% |
| | Combined | 230 | 100.0 % | 205 | 100.0% |
| Dinsoor | Present | 281 | 99.6% | 244 | 98.9% |
| | Moved away | 1 | 0.4 % | 0 | 0.0% |
| | In hospital | 0 | 0.0% | 3 | 1.2% |
| | Died | 0 | 0.0% | 0 | 0.0% |
| | Combined | 282 | 100.0% | 247 | 100.0% |
| Qardho | Present | - | - | 35 | 47.3% |
| | Moved away | - | - | 39 | 52.7% |
| | In hospital | - | - | 0 | 0.0% |
| | Died | - | - | 0 | 0.0% |
| | Combined | - | - | 74 | 100.0% |
| Iskushuban | Present | - | - | 37 | 74.0% |
| | Moved away | - | - | 12 | 24.0% |
| | In hospital | - | - | 1 | 2.0 |
| | Died | - | - | 0 | 0.0% |
| | Combined | - | - | 50 | 100.0% |

*Table 4 (A): Nutritional Status Using Mid-Upper Arm Circumference (MUAC) in Nutrition Round 1*

| Area | Sex | N (%) | Mean MUAC (cm) | Oedema | GAM (MUAC < 12.5 cm or oedema) | | MAM (MUAC < 12.5 cm & ≥ 11.5) | | SAM (MUAC < 11.5 cm or oedema) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Kahda | Combined | 185 (100.0%) | 14.5 | 1 | 17 | 9.2% | 12 | 6.5 % | 5 | 2.7% |
| | Male | 106 (57.3%) | 14.5 | 1 | 9 | 8.5% | 7 | 6.6 % | 2 | 1.9% |
| | Female | 79 (42.7%) | 14.5 | 0 | 8 | 10.1% | 5 | 6.3 % | 3 | 3.8% |
| Dinsoor | Combined | 281 (100.0%) | 13.8 | 3 | 55 | 19.6% | 47 | 16.7% | 8 | 2.8% |
| | Male | 130 (46.1%) | 13.8 | 1 | 20 | 15.4% | 17 | 6.0% | 3 | 1.1% |
| | Female | 151 (53.7%) | 13.7 | 2 | 35 | 23.2% | 30 | 10.7% | 5 | 1.8% |

*Table 5 (B): Nutritional Status Using Mid-Upper Arm Circumference (MUAC) in Nutrition Round 2*

| Area | Sex | N (%) | Age (mo.) | Mean MUAC (cm) | Oedema | GAM (MUAC < 12.5 cm or oedema) | | MAM (MUAC < 12.5 cm & ≥ 11.5) | | SAM (MUAC < 11.5 cm or oedema) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Kahda | Combined | 163 | 34.8 | 14.3 | 5 | 13 | 8.0% | 8 | 4.9% | 5 | 3.1% |
| | Male | 93 | 33.9 | 14.3 | 3 | 9 | 9.7% | 6 | 6.5% | 3 | 3.2% |
| | Female | 70 | 36.0 | 14.3 | 2 | 4 | 5.7% | 2 | 2.9% | 2 | 2.9% |
| Dinsoor | Combined | 244 | 38.1 | 13.7 | 0 | 31 | 12.7% | 29 | 11.9% | 2 | 0.8% |
| | Male | 112 | 40.0 | 13.8 | 0 | 10 | 8.9% | 9 | 8.0% | 1 | 0.9% |
| | Female | 132 | 36.6 | 13.6 | 0 | 21 | 15.9% | 20 | 15.2% | 1 | 0.8% |
| Qardho | Combined | 35 | 40.8 | 14.6 | 0 | 1 | 2.9% | 1 | 2.9% | 0 | 0.0% |
| | Male | 18 | 40.2 | 14.4 | 0 | 1 | 5.6% | 1 | 5.6% | 0 | 0.0% |
| | Female | 17 | 41.5 | 14.8 | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Iskushuban | Combined | 37 | 35.4 | 14.9 | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| | Male | 18 | 28.8 | 14.8 | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| | Female | 19 | 41.5 | 15.1 | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |

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

The GAM by MUAC prevalence measured in Dinsoor exceeded the threshold of 15% for IPC Phase 4 (Critical) Acute Malnutrition in the previous round but the situation has improved somewhat since then.[1] However, the prevalence of GAM remains at a serious level in Dinsoor and at an Alert level in Kahda.

*Table 6: Possession of a Child Health Record Card*

| Area | Sex | Nutrition Round 1 | | Nutrition Round 2 | |
|---|---|---|---|---|---|
| Kahda | Male | 97/106 | (91.5%) | 78/93 | (83.9%) |
| | Female | 70/79 | (88.6 %) | 47/70 | (67.1%) |
| | Combined | 167/185 | (90.3%) | 125/163 | (76.7%) |
| Dinsoor | Male | 1/130 | (0.8%) | 107/112 | (95.5%) |
| | Female | 0/151 | (0.0%) | 125/132 | (94.7%) |
| | Combined | 1/281 | (0.4%) | 132/244 | (95.1%) |
| Qardho | Male | - | - | 12/18 | (58.8%) |
| | Female | - | - | 10/17 | (66.7%) |
| | Combined | - | - | 22/35 | (62.9%) |
| Iskushuban | Male | - | - | 16/18 | (88.9%) |
| | Female | - | - | 12/19 | (63.2%) |
| | Combined | - | - | 28/37 | (75.7%) |

Possession of a child health record card was assessed in round 2 by including all types of vaccination cards, health passports and other record cards. This resulted in an estimate of coverage that was markedly improved compared to round 1. Coverage ranged from a low of 64% in Qardho up to 95% in Dinsoor.

*Table 6: Two Week Period Prevalence of Suspected Measles[1]*

| Area | Nutrition Round 2 | |
|---|---|---|
| Kahda | 8/163 | 4.9% |
| Dinsoor | 9/244 | 3.7% |
| Qardho | 0/35 | 0.0% |
| Iskushuban | 0/37 | 0.0% |

[1]Measles symptoms were not assessed in nutrition round 1

Due to concerns about possible outbreaks of measles the two-week period prevalence of suspected measles was measured. 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).[2] Results are presented in table 6 and show that in both Dinsoor and Kahda there was quite a high period prevalence, but no cases were detected in the other two areas.

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

[2] Measles Vaccine-Preventable Diseases Surveillance Standards (2018) WHO https://www.who.int/immunization/monitoring_surveillance/burden/vpd/WHO_SurveillanceVaccinePreventable_11_Measles_R1.pdf

## Conclusions

Analysis of nutrition data from Nutrition Round 2 suggests that the very worrying nutritional situation in Dinsoor, that was reported in round 1, has eased somewhat. Following publication of the round 1 results, BRCiS acted by: (1) Advocating to nutrition stakeholders to scale up services (2) Donating 500 cartons of RUSF, which had been out of stock, to support TSFP programmes (3) Launching a MPCA targeting 867 households in January 2022. A SMART nutrition survey is also being conducted. These actions, together with actions taken by other agencies and stakeholders, are likely to have contributed/will contribute to an improvement of the situation in Dinsoor.

However, it should be noted that the prevalence of malnutrition in both Dinsoor and the Khada IDP camps remains at *serious* and *alert* levels, respectively.

During the current round of data collection, a significant prevalence of suspected measles was identified in both Kahda and Dinsoor. This may lead to elevated morbidity and mortality due to associated complications and malnutrition. Monitoring of the situation should continue and strengthening of the measles vaccination services should be considered to try and ensure adequate vaccination coverage is achieved.

The collection of MUAC data using face-to-face household visits during Nutrition Rounds 1 and 2 was successfully implemented in BRCiS operational areas. However, a limitation to the results reported here are the relatively small sample sizes that were sampled in Qardho and Iskushuban districts.

## Recommendations

- Further scaling up of MUAC data collection with other partners and regular periodic collection should be implemented to help monitor the evolution of the current food security crisis in Somalia and provide evidence for early warning/early action.
- Actions to tackle the suspected outbreak of measles in Dinsoor and Kahda should be prioritised, including, but not limited to, an assessment of the local availability of measles vaccine and the functioning of the routine vaccination programme.
- Supervision of the CHWs during the data collection process continues to be a key issue and it is recommended that each partner organisation considers appointing a dedicated person for this role with a nutrition background and practical MUAC measurement experience.
- Continued monitoring of the COVID-19 situation during the current wave of infections, caused by the omicron variant, will be necessary to ensure appropriate infection control measures are in place during face-to-face data collection.