OPERATION TIMBANG PLUS RESULTS IN NCR

National Capital Region

I. Introduction

Operation Timbang (OPT) Plus is the annual mass weighing and height taking of all children ages 0-59 months or below five (5) years old. It is conducted every first quarter of the year, from January to March. The objective of the OPT Plus is to generate data on the nutritional status of children in a barangay; to locate under or over-nourished children; and guide local government units (LGUs) in nutrition program management.

Data generated through the OPT Plus are used for local nutrition program planning, specifically to a) quantify the number of malnourished children; b) identify which barangays have more malnourished children for prioritization; c) identify children and families who will be given priority in the provision of nutrition interventions; and d) assessing the effectiveness of the local nutrition program.

II. How the OPT was conducted

A. Target

The estimated number of children aged 0-59 months to be weighed and measured per city/municipality and barangay were issued by the Department of Health. The National Nutrition Council personalized the eOPT Plus Tool per region to show the specific population per city/municipality and barangay within the specific region.

B. Members of the OPT Plus Team

The OPT Plus team in the barangays are led by the nutritionists and/or Barangay Nutrition Action Officers (BNAO). They are assisted by Barangay Nutrition Scholars (BNS) and Barangay Health Workers (BHW). Other members are the N1KD Coordinators (Navotas), midwives, purok/zone leaders, mother leaders, health center and barangay volunteers, day care workers, Pasig Health Aides, and other members of the barangay nutrition committee.

Orientation on the mechanics of OPT was conducted prior to implementation as well as the proper weight and length/height taking techniques and in getting the mid-upper arm circumference of children.

C. Mechanics

Most of the LGUs used the traditional method of the OPT Plus which is the weight and height measurement. A child's nutritional status was determined using the three (3) indicators based on the WHO-Child Growth Standards (CGS):

a. Weight-for-age – reflects body weight relative to the child's age
b. Length/Height-for-age – reflects attained growth in length or height at the child's age at a given time. This indicator can help identify children who are stunted (short) due to prolonged undernutrition or repeated illness.
c. Weight-for-Length/Height – reflects body weight in proportion to attained growth in length or height.

However, with the threat of the COVID-19 pandemic, some of the LGUs opted to follow the NNC Memorandum 010, "Interim Guidelines in the Conduct of OPT Plus, Nutrition Screening, Growth Monitoring and Promotion (GMP) Activities in the Context of COVID-19 Pandemic and Other Related Disasters" issued on December 15, 2020. The memorandum stated that based on the community quarantine status or situation in their area, if the traditional weight and height measurement is not possible, the LGUs can measure the mid-upper arm circumference (MUAC) and identification of bilateral pitting edema.

Members of the OPT Team wore face masks, gloves and other personal protective equipment when taking measurements and followed the minimum health standards.

In case of illness, children were immediately referred to health center physicians for further assessment and evaluation.

D. Equipment

The weight is measured using hanging infant weighing scale, hanging digital scale, digital platform scale, digital taring scale and mechanical column scale while the length/height of the child are measured using either wooden heightboard, microtoise, mobile measuring mat and mobile stadiometer. For children less than six (6) months, infant weighing scale and infantometer were used to get the weight and length, respectively. Measuring tools were calibrated and verified to ensure accuracy of data.

Hanging infant weighing scale

Digital weighing scale

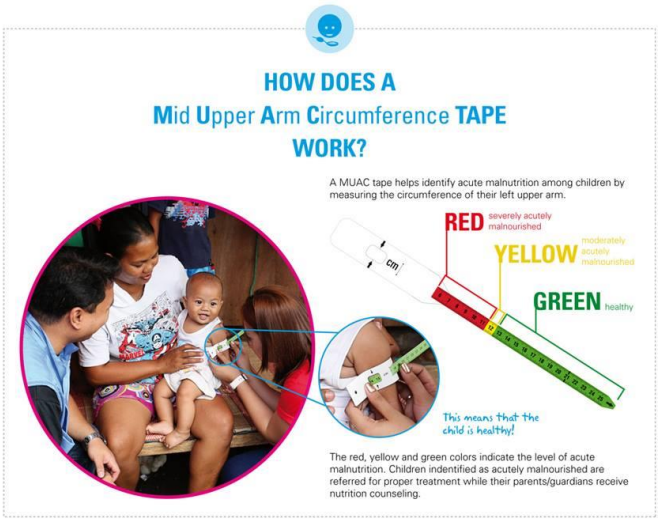
Infant weighing scale

Mechanical column scale

Wooden Height Board

Microtoise

Mobile Stadiometer



MUAC tapes were used for high-risk areas for nutrition screening of children 6-59 months.

Measuring equipment were disinfected using alcohol solutions with at least 70% alcohol after every use and between measurements.

E. Site of weighing

Aside from house-to-house weighing, children were also weighed in a central location within the community that is COVID-free such as health center, day care center, covered court, barangay halls, sari-sari store, among others. Weighing scale and length measuring tools were set-up in one area to facilitate faster weighing and height-taking of children. Children visiting the health center were also weighed and got their length/height taken.

To ensure that all children were covered, LGUs conduct the "bayanihan" system wherein BNSs and BHWs from other barangays help their fellow BNS weigh children in his/her assigned barangay.

F. Complementary Activities

Other health and nutrition activities were also integrated in the conduct of OPT Plus such as Vitamin A and Ferrous Sulfate supplementation; salt-testing; deworming; immunization; distribution of micronutrient powder, preparation or validation of spot map, nutrition counseling; health and nutrition promotion including the advocacy on infant and young child feeding practices; updating of family profile; and home visitation and referrals. IEC materials on health and nutrition were also given.

G. Encoding of data

All data collected were encoded in the electronic OPT (eOPT) Plus Tool developed by NNC. For 2022, the regular tool and tool for acute malnutrition (MUAC) were used..

III. Results of the OPT Plus

A total of thirteen (13) LGUs followed the traditional weight and height taking procedure of the OPT Plus for all children 0-59 months and four (4) LGUs used the MUAC measurement. Thus, the regional report will reflect the two (2) data set.

Table 1. List of LGUs per method of nutrition assessment used during OPT Plus, NCR, 2022

Weight and Height Measurement		MUAC
Caloocan	San Juan	Quezon City
Malabon	Manila	Marikina
Navotas	Pasay	Pasig
Valenzuela	Parańaque	Taguig
Pateros	Las Pińas	
Mandaluyong	Muntinlupa	
Makati		

A. Weighing Coverage

Out of the 1,710 barangays in the 17 LGUs in the region, 1,702 or 99.53% were covered by the OPT Plus teams. More barangays were covered in 2022 than in 2020 (80.29%) and 2021 (98.30%). All LGUs have 100% coverage of barangays except for the cities of Caloocan and Makati:

- Caloocan (186/188 barangays; 98.94%)
- Makati (27/33 barangays; 81.82%)

In Caloocan City, residential areas in the two (2) barangays not covered by the OPT were demolished and converted to business centers. These are the barangays near Monumento where LRT Line 2 station is found together with bus terminals, malls, supermarkets, motels/hotels, fast food restaurants. Thus, they have no recorded PSC population.

The six (6) elite villages in Makati City did not submit any weighing records even though the OPT Plus were discussed with their BNCs. Meanwhile, the two (2) disputed barangays were able to submit their OPT Plus data covering the sitios in the peripheries of Makati side since the inner sides are covered by Taguig City.

Table 2. Percent weighing coverage of LGUs based on weight and height measurement, NCR, 2022

No.	City/ Municipality	Total Number of Barangays	Number of Barangays with OPT Results	Percent Coverage (%)	Estimated Number of Preschoolers aged 0-59 months*	Actual Number of Preschoolers weighed	Percent Weighing Coverage (%)
1	Caloocan	188	186	98.94	146,188	118,119	80.80
2	Malabon	21	21	100.00	33,734	28,454	84.35
3	Navotas	18	18	100.00	23,022	14,820	64.37
4	Valenzuela	33	33	100.00	57,257	49,518	86.48
5	Pateros	10	10	100.00	5,891	4,342	73.71
6	Makati	33	27	81.82	53,769	38,761	72.09
7	Mandaluyong	27	27	100.00	35,647	32,365	90.79
8	San Juan	21	21	100.00	11,278	9,051	80.25
9	Manila	897	897	100.00	164,292	64,013	38.96
10	Pasay	201	201	100.00	38,436	31,163	81.08
11	Parańaque	16	16	100.00	61,450	49,223	80.10
12	Las Pińas	30	30	100.00	54,350	46,394	85.36
13	Muntinlupa	9	9	100.00	46,562	44,220	94.97
	Total	**1, 504**	**1,496**	**99.47%**			
	Summary for the 13 LGUs				**731,876**	**530,443**	**72.48**

* *Estimated population issued by DOH*

In terms of weighing coverage for the LGUs who used both weight and height measurement, the City of Muntinlupa (94.97%) has the highest weighing coverage while the City of Manila has the lowest with 38.96%. Out of the 13 LGUs, nine (9) or 69.23% have a weighing coverage of at least 80%. Meanwhile, the cities of Navotas (64.37%), Makati (72.09%), and Manila and the Municipality of Pateros (73.71%) have weighing coverage below 80%. Weighing coverage of less than 80% is considered unacceptable as it does not show the true picture of the nutrition situation of children in the community.

Table 3. Percent weighing coverage of LGUs based on MUAC and Weight-for-Length/Height, NCR, 2022

No.	City/ Municipality	MUAC (6-59 months)			Weight-for-Length/Height (0-5 months)		
		Estimated Number of Preschoolers aged 6-59 months*	Actual number of Preschoolers weighed	Percent Coverage (%)	Estimated Number of Preschoolers aged 0-5 months	Actual number of Preschoolers weighed	Percent Coverage (%)
1	Quezon City	243,971	221,310	90.71	27,004	29,642	109.77
2	Marikina	37.454	33,102	88.38	4,146	3,197	77.11
3	Pasig	62,756	50,285	80.13	6,945	5,608	80.75
4	Taguig	66,881	66,330	99.18	7,405	6,292	84.97
Summary for 4 LGUs		**411,062**	**371,027**	**90.26**	**45,500**	**44,739**	**98.33**

For acute malnutrition using the MUAC measurement, Taguig City (99.18%) has the highest weighing coverage. All 4 LGUs have a weighing coverage of 80% and above except for the weight for length/height measurement among 0-5 months in Marikina City with only 77.11% weighing coverage.

Factors cited by the LGUs that brought about the low weighing coverage include:

1. Surge of COVID-19 cases during the first quarter of 2022; due to community restrictions, some activities in the LGUs were stopped or put on hold including OPT Plus.
2. Some parents were hesitant to participate in the OPT Plus activities due to fear of transmission of COVID-19.
3. Members of the OPT Plus Team were still involved in COVID-19 response such as being stationed in vaccination sites and/or community isolation facilities.
4. Road widening along C3 and R10 road in Barangay NBBN and NBBS Proper in Navotas City causing the displacement of informal settlers.
5. Presence of elite barangays and gated subdivisions wherein homeowners do not allow the entry of the OPT Plus Team.
6. Presence of six (6) elite and two (2) disputed barangays in Makati City. The city was able to gather OPT Plus data from the disputed barangays but only covering the outside peripheries.

B. Nutritional Status of the Children 0-59 months old (based on weight and height measurement)

1. Weight – for – Age

A total of 530,443 children aged 0-59 months were weighed in 2022. The percentage of children with normal nutritional status is 96.05% or a total of 509,504 children. Prevalence of underweight is 1.82% (9,637 children) and severely underweight is 0.59% (3,111 children). On the other hand, prevalence of overweight-for-age is 1.54% or a total of 8,191 children. (Figure 1)

Figure 1. Nutritional Status of Children 0-59 months old in NCR according to Weight-for-Age, 2022

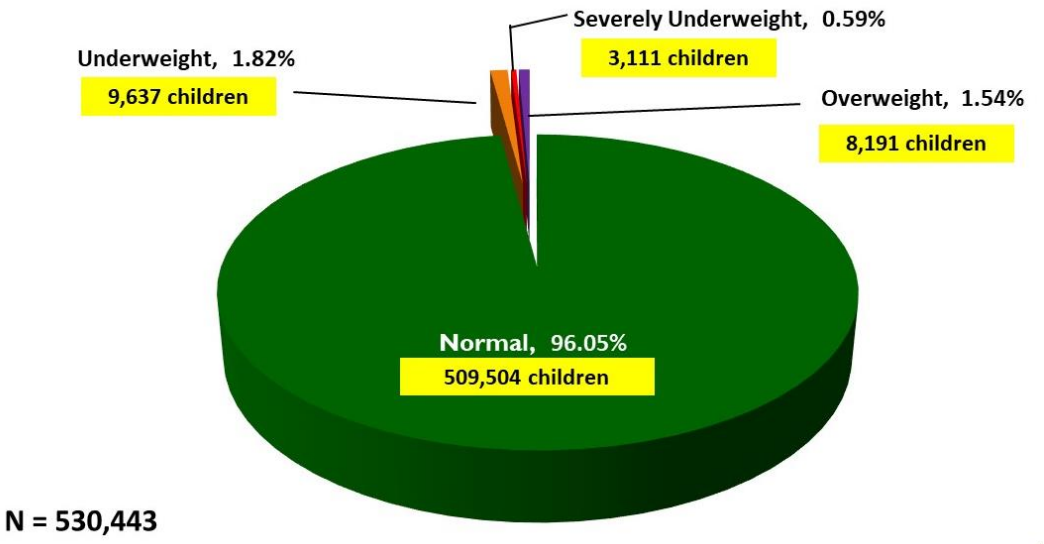


Table 4. Ranking of Cities/Municipality based on Prevalence of Undernutrition (Underweight and Severely Underweight) among Children 0-59 months old in NCR, 2022

Rank	Cities/ Municipality	Prev. Rate (%)	Total # of children
1	**Manila**	**10.74**	**6,874**
2	Malabon	2.53	721
3	Paranaque	2.27	1,116
4	Pateros	2.05	89
5	Las Pinas	1.76	815
6	Pasay	1.56	487
7	Navotas	1.42	210
8	Caloocan	1.08	1,275
9	San Juan	1.04	94
10	Valenzuela	0.96	475
11	Muntinlupa	0.64	284
12	Mandaluyong	0.53	170
13	Makati	0.36	138

Based on Table 4, the prevalence of underweight in the cities of Manila (10.74%) and Malabon (2.53%) are higher than the regional prevalence of 2.41%. Based on the prevalence rate and actual total number of underweight children, the City of Manila ranks first among the 13 LGUs who used the traditional method of OPT Plus. Prevalence rates for the previous years cannot be compared since 5 out of 13 LGUs used the MUAC measurement in 2021.

2. Length/Height – for- Age

Figure 2 shows the nutritional status of children 0-59 months old according to length/height-for-age. The percentage of children with normal length or height in 2022 is 93.97%. Out of the total children measured, 3.68% or 19,477 children were identified to be stunted and severely stunted while 2.36% or 1,506 children was found to be tall. Based on the WHO cut-off values for public health significance, the regional prevalence for stunting of 3.68% is considered low in severity.

Figure 2. Nutritional Status of Children 0-59 months old in NCR according to Length/Height-for-Age, 2022, NCR

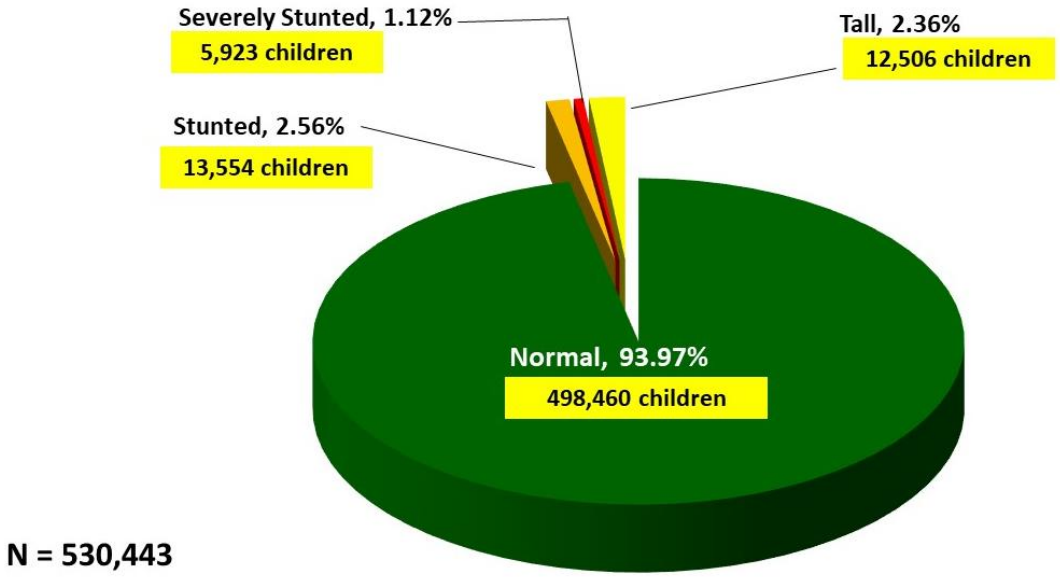


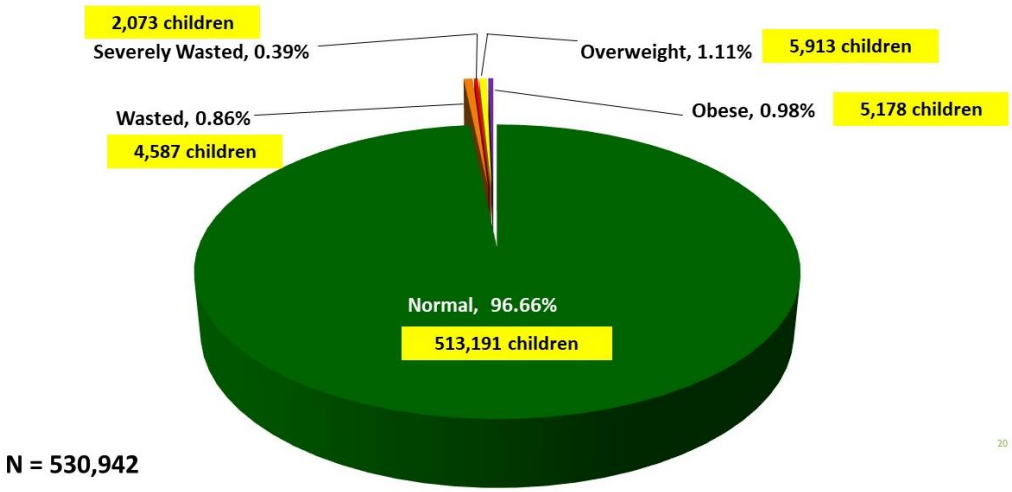
Table 5. Ranking of Cities/Municipality based on Prevalence of Stunting (Stunting and Severely Stunting) among Children 0-59 months old in NCR, 2022

Rank	Cities/ Municipality	Prev. Rate (%)	Total # of children
1	**Manila**	**18.15**	**11,617**
2	Pateros	3.63	1,032
3	Malabon	3.34	1,645
4	Navotas	2.67	116
5	Valenzuela	2.26	705
6	Paranaque	1.91	886
7	Caloocan	1.59	788
8	Las Pinas	1.46	1,725
9	Pasay	1.30	193
10	Mandaluyong	0.91	82
11	San Juan	0.72	279
12	Muntinlupa	0.67	295
13	Makati	0.35	114

Same with underweight, the City of Manila ranks first among the 13 LGUs with the highest prevalence rate of stunting with 18.15% with a total of 11,617 children. Only Manila has a higher stunting prevalence than the regional prevalence of 3.68%.

3. Weight – for – Length/Height

Figure 3. Nutritional Status of Children 0-59 months old in NCR according to Weight-for-Length/Height, 2022, NCR



The percentage of children with normal weight for their length or height is 96.66%. Out of the total children measured, 1.25% or 6,660 children were identified to be wasted and severely wasted while 2.09% or 11,091 children were found to be overweight and obese. (Figure 3)

Based on the WHO cut-off values for public health significance of wasting, the regional prevalence of 1.25% is considered very low in severity. The regional prevalence for overweight and obesity of 2.09% is also considered as very low public health significance.

Table 6. Ranking of Cities/Municipality based on Prevalence of Wasting (Wasting and Severely Wasting) among Children 0-59 months old in NCR, 2022

Rank	Cities/ Municipality	Prev. Rate (%)	Total # of children
1	**Manila**	**6.10**	**3,907**
2	Pateros	1.20	52
3	Malabon	1.07	305
4	Navotas	1.05	155
5	Valenzuela	0.88	438
6	Paranaque	0.76	373
7	Caloocan	0.74	871
8	Las Pinas	0.51	235
9	Pasay	0.33	102
10	Mandaluyong	0.27	89
11	San Juan	0.27	24
12	Muntinlupa	0.15	65
13	Makati	0.11	44

The City of Manila has the highest prevalence of wasting with 6.10% or a total of 3,907 children. Manila. It is the only LGU with a higher wasting prevalence than the regional prevalence of 1.25%.

Table 7. Ranking of Cities/Municipality based on Prevalence of Overweight and Obesity among Children 0-59 months old in NCR, 2022

Rank	Cities/ Municipality	Prev. Rate (%)	Total # of children
1	**Manila**	**8.31**	**5,322**
2	Pateros	3.52	153
3	San Juan	2.11	191
4	Caloocan	1.78	2,105
5	Paranaque	1.53	752
6	Pasay	1.45	452
7	Navotas	1.34	199
8	Makati	1.28	495
9	Malabon	1.25	356
10	Valenzuela	1.21	597
11	Las Pinas	0.77	359
12	Muntinlupa	0.16	72
13	Mandaluyong	0.12	38

The City of Manila again has the highest prevalence of overweight and obesity with 8.31% or a total of 5,322 children. Manila. Including Manila, there are three (3) LGUs with a higher prevalence of overweight and obesity than the regional prevalence of 2.09%: Pateros with 3.52% and San Juan with 2.11%.

Table 8. Prevalence of Malnutrition among Children 0-59 months old in NCR, per city/municipality, 2022

	Underweight			Stunting			Wasting			Overweight and Obesity	
City/ Municipality	**Prev. rate (%)**	**Total # of Children**		**Prev. rate (%)**	**Total # of Children**		**Prev. rate (%)**	**Total # of Children**		**Prev. rate (%)**	**Total # of Children**
NCR	**2.41**	**12,748**		**3.68**	**19,477**		**1.25**	**6,660**		**2.09**	**11,091**
Caloocan	1.08	1,275		1.46	1,725		0.74	871		1.78	2,105
Malabon	2.53	721		3.63	1,032		1.07	305		1.25	356
Navotas	1.42	210		1.30	193		1.05	155		1.34	199
Valenzuela	0.96	475		1.59	788		0.88	438		1.21	597
Pateros	2.05	89		2.67	116		1.20	52		3.52	153
San Juan	1.04	94		0.91	82		0.27	24		2.11	191
Mandaluyong	0.53	170		0.35	114		0.27	89		0.12	38
Makati	0.36	138		0.72	279		0.11	44		1.28	495
Manila	10.74	6,874		18.15	11,617		6.10	3,907		8.31	5,322
Pasay	1.56	487		2.26	705		0.33	102		1.45	452
Las Piñas	1.76	815		1.91	886		0.51	235		0.77	359
Parañaque	2.27	1,116		3.34	1,645		0.76	373		1.53	752
Muntinlupa	0.64	284		0.67	295		0.15	65		0.16	72

Table 8 shows the prevalence of underweight, stunting, wasting, and overweight and obesity for the 13 LGUs as well as the prevalence per city/municipality. Total number of children 0-59 months old who are underweight, stunted, wasted and overweight and obese are also shown per city/municipality. There are 10 LGUs who have higher number of children who are stunted than underweight or wasted.

Figure 4. Prevalence of malnutrition among Children 0-59 months old, in NCR by LGU, 2022

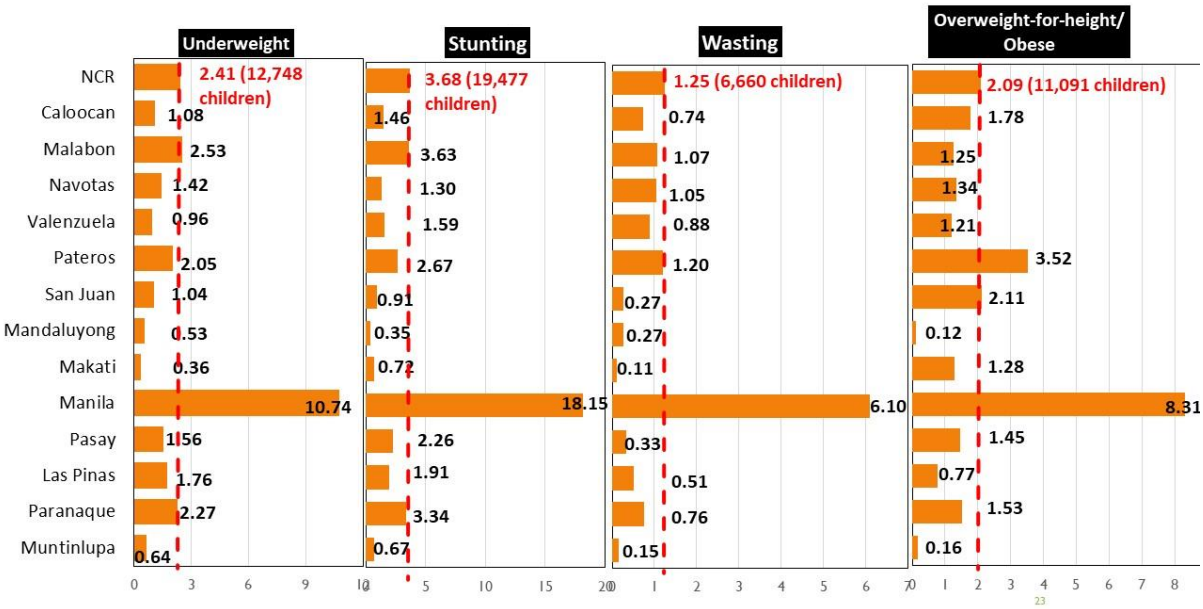


Figure 4 shows the prevalence of underweight, stunting, wasting and overweight and obesity of the 13 LGUs in relation to the regional prevalence. For underweight, two (2) LGUs have prevalence higher than the regional prevalence of 2.41%: Malabon and Manila.

For stunting and wasting, only one (1) LGU has higher prevalence than the region's 3.68% and 1.25% respectively: Manila.

Lastly, for overweight and obesity, there are three (3) LGUs that have higher prevalence than the region's 2.09%: Pateros, Manila, and San Juan.

C. Nutritional Status of the Children 6-59 months old (based on Mid-Upper Arm Circumference and weight-for-length/height)

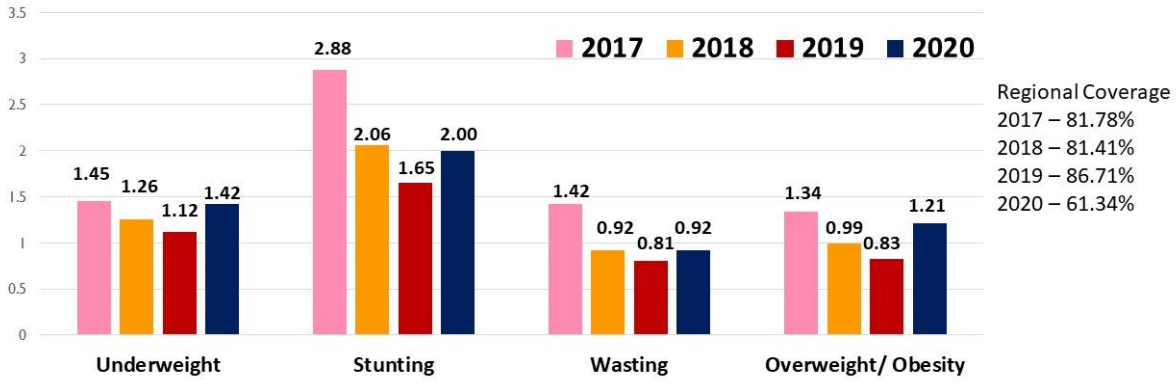
Table 8. Prevalence of Moderate and Severe Acute Malnutrition (M/SAM) among Children 0-59 months old in NCR, per city/municipality, 2022

	Mid-Upper Arm Circumference (6-59 months)			Weight-for-Length/Height (0-5 months)			Overweight and Obesity (0-5 months)	
City/ Municipality	**Prev of MAM + SAM (%)**	**Total # of Children with MAM + SAM**		**Prev. of Wasting + Moderate Wasting (%)**	**Total # of wasted and moderately wasted Children**		**Prev. rate (%)**	**Total # of Children**
NCR*	**0.18**	**662**		**0.58**	**258**		**1.13**	**505**
Quezon City	0.17	386		0.07	183		1.37	407
Marikina	0.06	19		0.01	3		0.28	9
Pasig	0.12	58		0.08	53		1.36	76
Taguig	0.30	199		0.03	19		0.21	13

** Summary for the 4 LGUs*

Table 8 shows the regional prevalence for moderate and severe acute malnutrition and overweight and obesity as well as the prevalence per city. Identified MAM and SAM children were immediately referred to the nearest health center for checkup and health and nutrition assessment. Weight and length of children of 0-5 months were taken at the health facility during consultation.

Figure 5. Prevalence of malnutrition among children less than 5 years old, in NCR, 2017-2020



As observed in Figure 5, all forms of malnutrition showed a downward trend from 2017-2019. However, in 2020, all forms of malnutrition increased. It was also observed that the weighing coverage in 2020 was below 80%. It is inferred that the LGUs were not able to identify and locate all malnourished children in 2020 since the weighing coverage is only 61.34%.

IV. Issues and challenges encountered in the conduct of OPT Plus

The following issues, concerns and challenges were reported by the LGUs which influenced the field implementation of the OPT Plus in their communities.

Issues/Concerns/Problems	Actions taken by the LGUs
1. Surge of COVID-19 during the first quarter of 2022/Late start of OPT Plus due to quarantine protocols and community restrictions	Extended the conduct of OPT Plus by two (2) months to cover all children less than 5 years old.
2. Some households refused to have their children participate in the OPT Plus due to transmission of COVID-19	Used personal protective equipment (face mask and face shield); followed health protocols and informed the parents/caregivers of the objectives and benefits of the program.
3. Too high projected population (from DOH-NCRO) used in target setting compared with the actual population	In some areas, informal settlers were relocated resulting to a decrease in the population. Coordinated with the barangay regarding the relocated families.
4. Elite barangays/villages were not covered by the OPT Plus teams.	Some households specifically in elite and affluent areas still refuse to participate in the OPT and growth monitoring done by the BNSs or BHWs. In the case of Makati City, the OPT survey was communicated to all barangays through the Punong Barangays with the assistance of Liga ng Makati Office and DILG-Makati. They nutrition secretariat also mobilized the barangay nutrition action officers.

Issues/Concerns/Problems	Actions taken by the LGUs
5. Lack of or inadequate logistic/ financial support	Some LGUs reported having difficulties in mobilizing BNSs and BHWs due to limited or lack of financial support for the transportation expenses and refreshments for the volunteer workers. Coordinated with barangay officials for the use of utility vehicles to ferry OPT Plus Teams. Provision of transportation from the LGU/barangay lessened the burden of the team in carrying heavy tools such as the heightboard. Requested the health office and BNC to provide monetary incentives to BNS and BHWs who joined the activity. Some barangays also provided food and refreshments for the team.

V. Conclusion and recommendations

Data show that there is indeed a double burden of malnutrition in the region due to the presence of both under and overnutrition among children. Also, the COVID-19 pandemic has greatly affected the conduct of the OPT Plus as well as the health and nutrition situation of the region.

There is no regional data available for two (2) consecutive years since some LGUs followed the interim guidelines on the conduct of OPT Plus.

Amidst the COVID-19 pandemic, LGUs were able to conduct the programs under the Philippine Plan of Action for Nutrition to address the hunger and malnutrition problem in their localities.

Since there are more stunted children, it is imperative to scale up nutrition actions in the First 1000 Days. The following interventions should be intensified during the First 1,000 days to ensure that both the mother and baby get the proper nutrition they need for a healthy life: (1) promotion of exclusive breastfeeding up to 6 months and timely and appropriate complementary feeding starting at 6 months with continued breastfeeding; (2) improve maternal care especially during pregnancy and lactation;

(3) improve child caring practices of parents and caregivers; and (4) increase coverage of maternal and child health services – pre/post-natal care, immunization, micronutrient supplementation and deworming. Better coverage of nutrition-specific and nutrition-sensitive interventions especially for women, children and other nutritionally vulnerable groups should also be prioritized.

LGUs are requested to conduct weight and length/height taking to generate data on the nutrition situation of the community especially stunting for proper planning of interventions for target groups. They should ensure the correct conduct of OPT Plus in all levels to generate correct data on the nutrition situation of the community for proper planning of interventions for target groups. LGUs are also encouraged to analyze the reports generated from the eOPT Tool and identify reasons of the prevalence of malnutrition in their locality.

LGUs should also use the data generated from the OPT Plus in target setting and in identification of priority individuals and families for enrollment in the nutrition programs. Local nutrition committees should collaborate and work together to develop a local nutrition action plan that will address the malnutrition problem present in the area.

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