



Daycare Survey Report 2023

Grenada Food and Nutrition Council

Grenada Food and Nutrition Council (GFNC)
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The annual GFNC Day Care Survey is to assess the nutritional status of all children attending daycares in Grenada and Carriacou. The survey is coordinated and conducted by GFNC's Surveillance Department and executed by the Nutritionists and Nutrition officers of the Council.

Target Population

Children in government and private daycares between ages 3 months and 3 years.

GOAL

The goal is to monitor the trends in growth patterns within the target population.

Objectives of the Survey

To assess children's health and nutritional status in government and private daycares between ages 3 months and 3 years.

INSTRUMENTS USED

A Seca digital flat scale that weighs kilograms and a Stadiometer were used to measure standing height in centimeters for children 2 years of age and above. A Length Board was used to measure the length of children below 2 years of age.

METHODOLOGY

The survey was conducted during the months of February and March. Children at Forty-eight (48) daycare centres were assessed in this year's survey, (thirty-seven (37) private and eleven (11) government/government-assisted). Anthropometric (weight and height/length measurement) and personally identifiable data (child's name, sex, daycare center, and date of birth) were collected and documented.

The data was analyzed using WHO Anthropometric software, and the anthropometric indices; BMI-for-age (BAZ) and height-for-age (HAZ) were used to determine the nutritional status of the children.

BMI-for-age (BAZ) indicator identifies children who are of a “Normal” weight (At -2 through to +2 Z-Score), ‘overweight’ (Above 2 below 3 Z-Score), ‘obese’ (Above 3 Z-Score), ‘Wasted’ (Below -2 Z score) and ‘Severely Wasted’ (Below -3 Z-Score). Height-for-age (HAZ) reflects growth in length/height and would identify children who are stunted (Below -2 Z score), and severely stunted (-3 Z-score) for their age. It should be noted that stunted can be an indication of malnutrition.

Growth indicators

Table 1: Key used to determine the nutritional status of children.

Z-score	Height-for-age	BMI-for-age
Above 3		Obese
Above 2 below 3		Overweight
Above 1 below 2		Possible risk of being overweight
At -2 through to +2	Normal	Normal
Below -2	Stunted	Wasted
Below -3	Severely stunted	Severely wasted

RESULTS:

In total, *Nine Hundred and Fifty-one (951)* children were assessed:

- Four Hundred and Seventy-nine (479) were males.
- Four Hundred and Seventy-two (472) were females.

Nutritional Status

Normal Status:

- Eight Hundred and Seventy-five (875) or **92%** of the children were determined to have a '*Normal*' BMI-for-age (BAZ).
 - o Four Hundred and Thirty-six (436) or **49.8 %** are boys
 - o Four Hundred and Thirty-nine (439) or **50.2 %** are girls

Children, though with '*Normal*' BAZ,

- One Hundred and Sixty-one (161) or **18.4%** of the children were '*At risk of being overweight*'.
 - o Seventy-seven (77) or **47.8%** are boys.
 - o Eighty-four (84) or **52.2%** are girls.

Abnormal Status:

Seventy-six (76) or **8%** of the children were determined to have an *abnormal* BMI-for-age (BAZ).

Sixteen (16) or **1.7%** of the children had a BAZ below -2 which indicate *wasted/ severely wasted or thin*:

- o Nine (9) or **56%** are boys.
- o Seven (7) or **44%** are girls.

Sixty (60) or **6.3%** of the children had a BAZ above +2 which indicates *overweight/obese*.

- o Forty-four (44) or **4.6%** are '*Overweight*' (BAZ above +2 and below +3)
 - Twenty-four (24) or **55%** are boys.
 - Twenty (20) or **45%** are girls.
- o And sixteen (16) or **1.7 %** are '*Obese*' (BAZ above +3)
 - Ten (10) or **62.5 %** are boys.
 - Six (6) or **37.5 %** are girls.

Abnormal Height/length Status

Fifty-Three (53) or **5.6%** had a HAZ below -2 which indicates '**Stunted/Severely Stunted**'.

- Thirty-one (31) or **58.5%** are boys.
- Twenty-two (22) or **41.5%** are girls.

Two or more abnormal Statuses

Eight (8) or **10.5 %** of the children have two (2) abnormal statuses.

Wasted and stunted

St. George: One (1) male

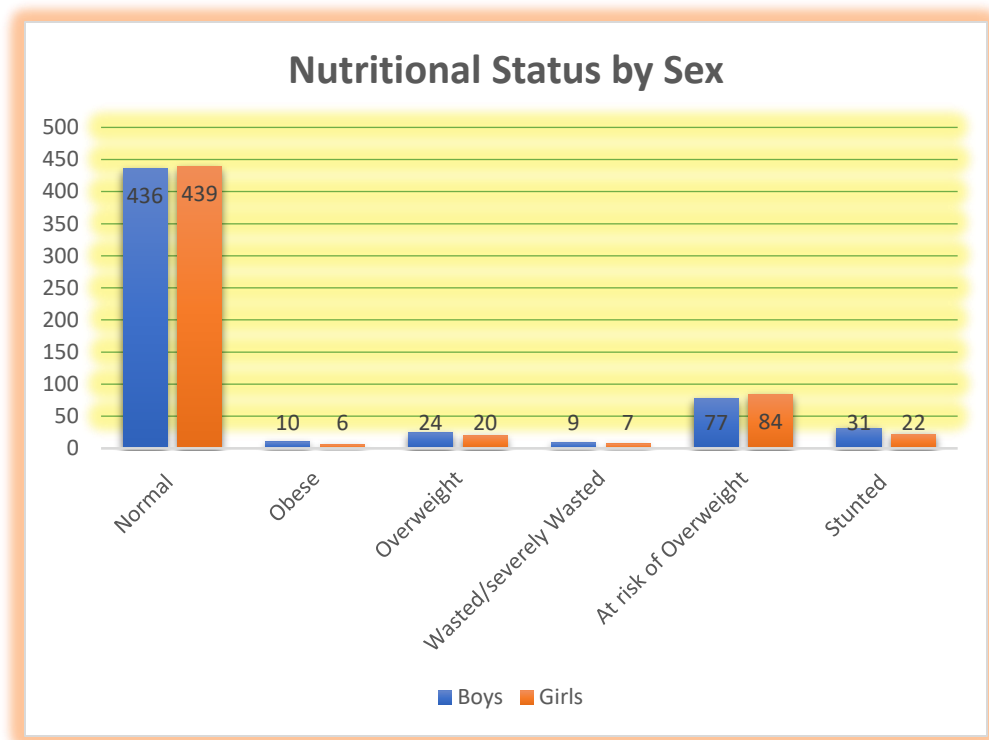
Overweight/Obese and Stunted

Carriacou: Six (6) 4 males and 2 females

St. George: one (1) Male

Table 2: Nutritional Status Assessment by Gender

Nutritional status	Definition	Boys		Girls		Total	
		No.	%	No.	%	No.	%
Normal	<i>At -2 through to +2 (BAZ)</i>	436	49.8%	439	50.2%	875	92%
Obese	<i>Above 3 (BAZ)</i>	10	62.5	6	37.5	16	1.7
Overweight	<i>Between 2 and 3 (BAZ)</i>	24	55%	20	45%	44	4.6
Wasted	<i>Between -2 and -3 (BAZ)</i>	7	50	7	50	14	1.5
Severely wasted	<i>Below -3 (BAZ)</i>	2	100	0	0	2	0.2
						Total 951	100%
At risk of being overweight	<i>Between 1 and 2 (BAZ)</i>	77	47.8	84	52.2	161	18.4
Stunted/ Severely Stunted	<i>Below-2 and Below -3 (HAZ)</i>	31	58.5	22	41.5	53	5.6



Nutritional Status by Sex

Of the *Nine Hundred and Fifty-one (951)* children screened:

More females than males have a status of '*Normal*'; Four hundred and thirty-nine (439) females and four hundred and thirty-six (436) males.

More males than females have a status of '*overweight /obese*'; thirty-four (34) males and twenty-six (26) females.

More females than males are '*at risk of being Overweight*'; Eighty-four (84) females and seventy-seven (77) males.

More males than females were '*Wasted/ Severely Wasted*'; Nine (9) males and seven (7) females.

More males than females are '*Stunted/ severely Stunted*'; *Thirty-one* (31) males and twenty-two (22) females.

Analysis by Parish

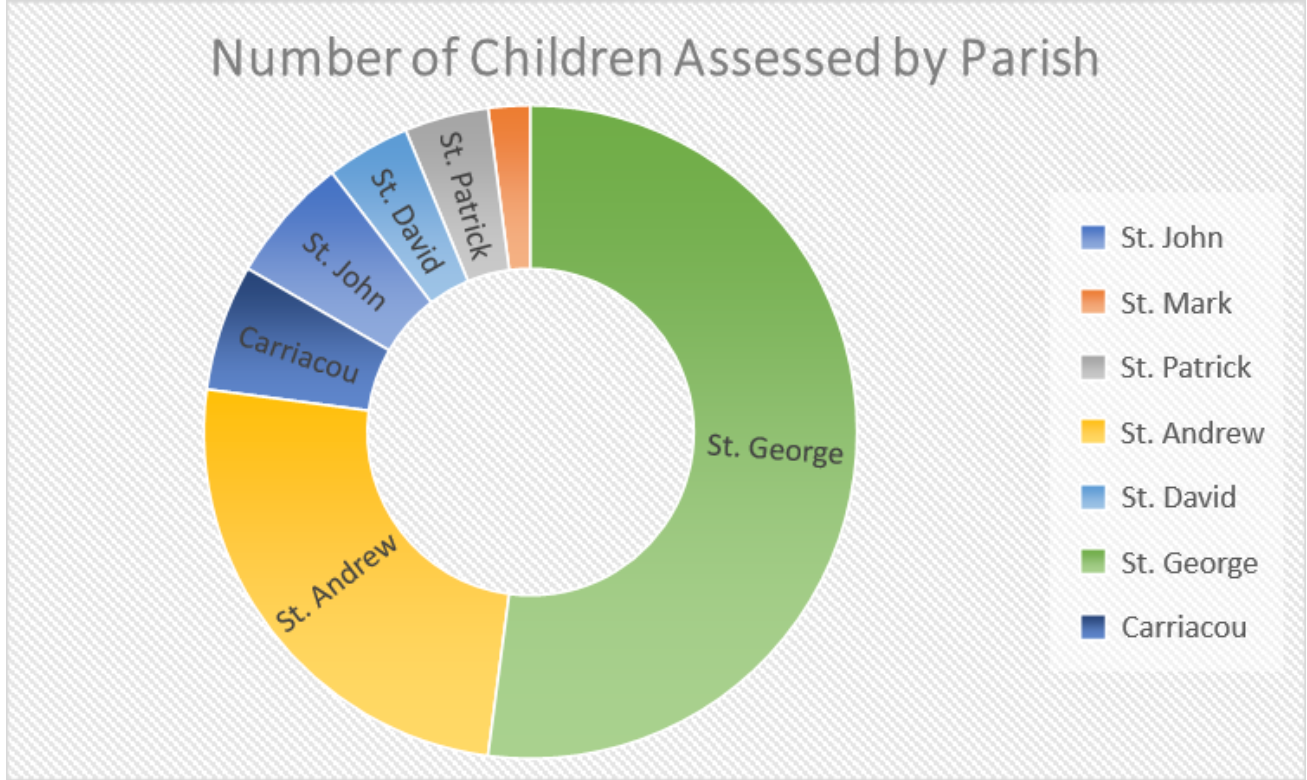
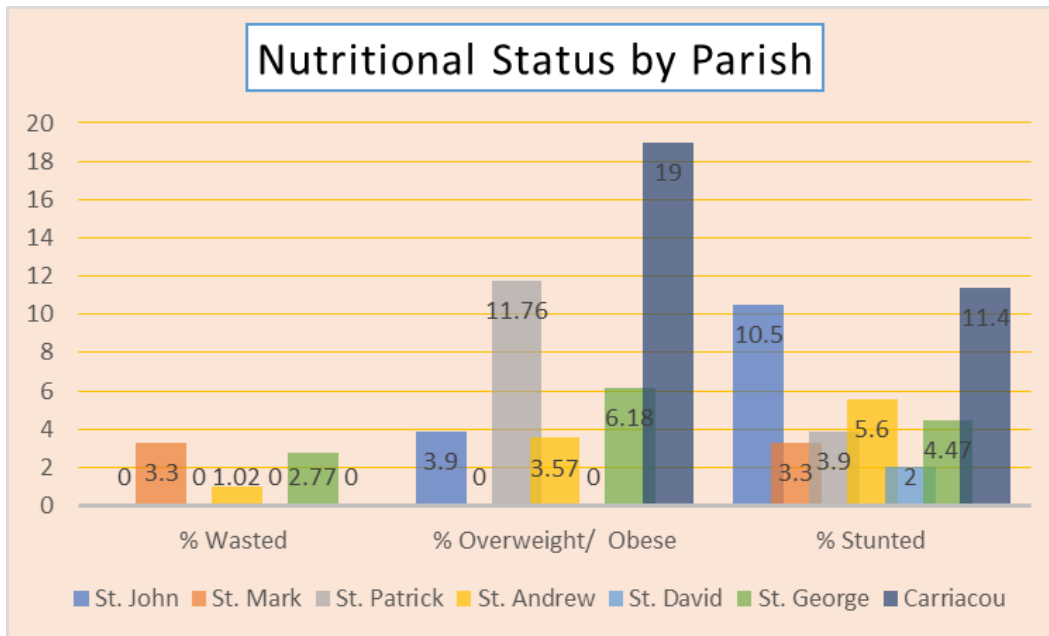


Table 3: Nutritional Status Assessment by Parish

Parish	No. of Centres	No. of Children Assessed	No. Wasted (BAZ <- 2)	% Wasted	No. Overweight/ Obese (BAZ >2)	% Overweight/ Obese	No. Stunted (HAZ <- 2)	% Stunted
St. John	3	76	0	0 %	3	3.9 %	8	10.5 %
St. Mark	1	30	1	3.3%	0	0 %	1	3.3 %
St. Patrick	2	51	0	0 %	6	11.76 %	2	3.9%
St. Andrew	12	196	2	1.02%	7	3.57 %	11	5.6 %
St. David	2	50	0	0 %	0	0 %	1	2%
St. George	25	469	13	2.77%	29	6.18 %	21	4.47 %
Carriacou	3	79	0	0 %	15	19 %	9	11.4%
Total	48	951	16	1.7%	60	6.3 %	53	5.6 %

Table 4: Percentage of Children Assessed by Parish

Parish	Percent of Children Assessed
St. George	49.3%
St. Andrew	20.6%,
Carriacou	8.3%,
St. John	8%,
St Patrick	5.4%
St David	5.3%
St. Mark	3%



Percentage of Obese/Overweight by Parish

Carriacou:(19%),

St. Patrick: (11.76%)

St. George: (6.18 %)

St. John: (3.9 %)

St. Andrew: (3.57%).

The parishes of St. Mark and St. David had no children with '*Obese/overweight*' status.

Percentage of Wasted/ Severely Wasted by Parish

St. Mark (3.3 %)

St. George: (2.77%)

St. Andrew: (1.02%).

The parishes of St. John, St. Patrick, St. David and Carriacou recorded no wasted/thin children.

Percentage of Stunted/ Severely Stunted by Parish

Carriacou: (11.4%)

St. John: (10.5%)

St. Andrew: (5.6 %)

St. George: (4.47%)

St. Patrick: (3.9%)

St. Mark: (3.3 %)

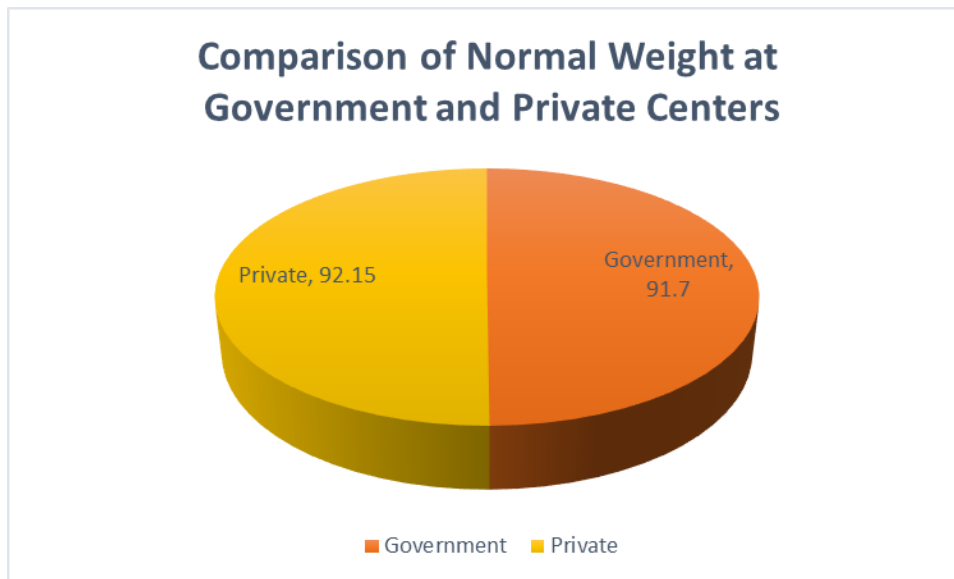
St. David: (2%).

Table 5: Government and Private Daycare Assessment Table

Centres	No. of Centres	No. Assessed	% Assessed	No. Wasted/ severely Wasted	% Wasted	No. Overweight/Obese	% Over-weight/ Obese	No. Stunted	% Stunted
Government/ Government Assisted	11	301	32%	5	1.7%	20	6.6%	11	3.7%
Private	37	650	68%	11	1.7%	40	6.2 %	42	6.5%
TOTALS	48	951	100%	16	1.7 %	60	6.3 %	53	5.57%

Nutritional Status Comparison of Government and Private Daycares

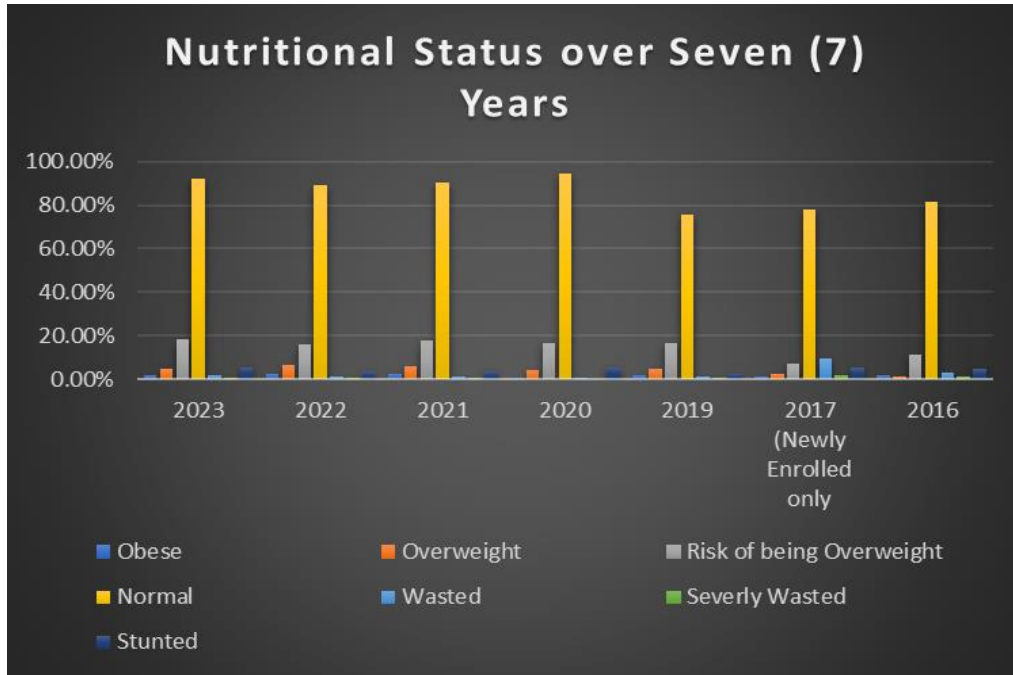
There are more Private Daycares than Government/ Government Assisted Daycares assessed. Of the children with a *‘Normal’* status, five hundred and ninety-nine (599) are from Private centres while two hundred and seventy-six (276) are from Government centers. Both the government and private centres have just about the same percentage of children having an adequate nutritional status of 91.7% and 92.15 %, respectively.



The percentage of *'Wasted/severely wasted'* in both government and private daycares are 1.7%.

The percentage of *'Overweight/ Obese'* in government daycares is 6.6% compared to 6.2% in private daycares.

Private



daycares have a higher percentage of *'Stunted/ Severely Stunted'* children of 6.46% compared to those in Government daycares of 3.6%.

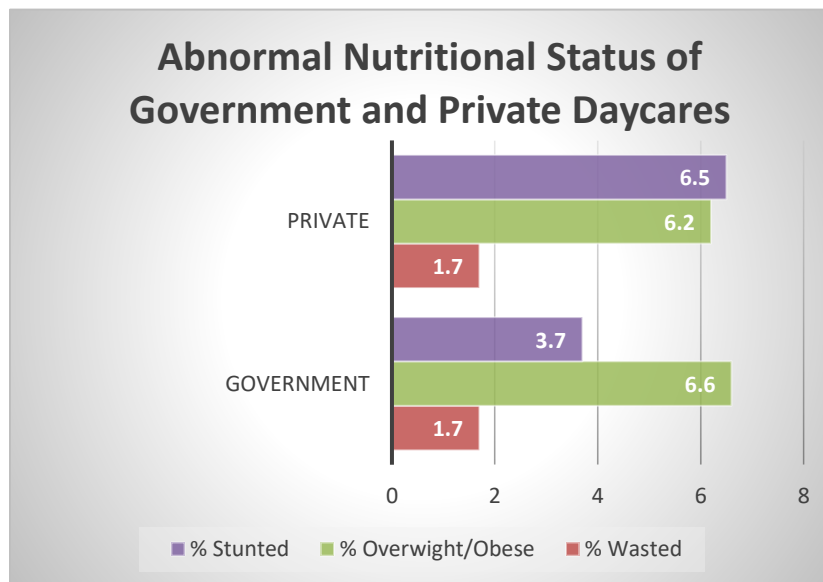


Table 6: Nutritional Status of Children over the past Seven (7) years, Z-score (BAZ and HAZ)

	2023	2022	2021	2020	2019	2017 (newly enrolled only)	2016
	%	%	%	%	%	%	%
Obese	1.7	2.5	2.5	0.7	1.8	0.9	1.5
Overweight	4.6	6.7	5.7	4.3	4.7	2.5	1.4
Risk of being overweight	18.4	16	17.7	16.3	16.3	6.9	11.3
Normal	92	89.3	90.5	94.4	75.7	78.0	81.7
Wasted	1.5	1.3	1.2	0.6	1.1	9.7	3.0
Severely wasted	0.2	0.3	0.1	0	0.4	2.0	1.1
Stunted /Severely Stunted	5.57	3.5	3.8	5.4	2.5	5.3	4.7

Summary

This year's survey data shows:

- An increase in the percentage of children of '**Normal**' status, from 89.3% in 2022 to 92% in 2023.
- A decrease in '**Overweight**' from 6.7% in 2022 to **4.6%** in 2023 but, there have been fluctuations of since 2019.
- A decrease in '**Obese**' from 2.5% in 2022 to 1.7% in 2023.

Though there have been oscillations since 2019, the current 'Overweight/Obese' percentages are lower than in 2019 and the past previous two years.

However, there has been an increase of more than two (2) percent of children '**At risk of being Overweight**', from 16% in 2022 to **18.4 %** in 2023.

The analysis shows a slight increase in the percentage of '**Wasted/Severely Wasted**' within the last four (4) years.

There has been a significant percentage increase of children being '**Stunted/Severely Stunted**' within the last three (3) years.

Challenges

The flu and Gastroenteritis on the island impacted children's attendance at daycares. Therefore, most Daycares were visited a second time to assess those that were missed in the first visit.

Implications

The current results show an increase in wasting and stunted growth, which can cause both immediate and long-term effects such as, delayed brain development, a compromised immune

system which increases the risk of infections, as well as increases the risk of non-communicable diseases later in life among the affected children.

The decrease in *overweight/ obesity* gives hope for a reduction of incidents of non-communicable diseases, in the long-term, if this trend persists.

Recommendations:

- Nutrition Officers and Nutritionists follow up with children identified with an abnormal status in their respective parishes.
- Nutrition Officers to discuss findings with caregivers and give guidance to address identified problems.
- Nutrition Officers schedule discussions with parents of children identified with abnormal status, within the current school term.
- Provide nutrition education and meal planning sessions for parents at Daycares with several nutritional abnormalities.
- Nutrition Officers and Nutritionists monitor daycare centres to supervise preparation of meals and assist with meal planning, with an emphasis on preparation for overweight/obese children.
- Nutrition Officers and Nutritionists to reinforce the meal portioning standards with cooks and caregivers at centres with emphasis on increasing protein, based on observation of inadequate protein portions being served at the centres.
- Share this information with Child Development Centers, Min of Social Development, Min of Health- Epidemiology Unit, and Central Statistical Office and engage them for planning intervention strategies.