



Government of India

Ministry of Human Resource Development

Department of School Education & Literacy



मध्याह्न भोजन योजना  
Mid Day Meal Scheme

Report of 5<sup>th</sup> Joint Review Mission on  
Mid Day Meal Scheme

Andhra Pradesh

(24<sup>th</sup> June – 3rd July, 2013)

## Acknowledgment

Our team comprising of experts from the field of nutrition, researchers from Supreme Court, Monitoring and evaluation (NIRD) UNICEF and Ministry of HRD; is grateful to the ministry of HRD, Government of India for constituting this Joint Review Mission and giving us the opportunity to undertake this task in the state of Andhra Pradesh. We thank the Department of Education (Government of Andhra Pradesh) for hosting the Joint Review Mission (JRM) in Andhra Pradesh.

We are thankful to the officials of the Department of Education (Government of Andhra Pradesh), especially Ms. V. Usha Rani (IAS) Commissioner and Director School Education (FAC), for co-operation during the entire period of JRM.

A special word of thanks to the principals, teachers, particularly the MDM in-charges and the non-teaching staff of various schools visited by the mission for their co-operative interaction and providing the relevant information regarding the status of MDM in their respective schools.

Since nutrition is important component of the current JRM, we thank the school children for the patient co-operation in the entire process of data collection particularly the data on anthropometry.

Despite the various field level constraints, the team's constant, tireless dedication brought out an insight of the present on-going MDM scheme at various schools. Jointly, it tried to cover various aspects relating to MDM which included infrastructure, fund allocation, monitoring, evaluation, school health programmes, meal service and delivery as well as anthropometric measurements of the school children which were indicated in the Terms of Reference of the JRM.

We hope that through our observations and data collection, we have been able to capture the entire array of discussions with the officials/stake holders at various levels and that the concerned recommendations put forth by the mission in this report will prove helpful to the Government of Andhra Pradesh in implementing the Mid Day Meal Scheme in a more systematic and effective manner which will go a long way in promoting health and nutritional status of the children of this state.

**JRM TEAM, Hyderabad,**

**Andhra Pradesh: June 2013**

# MID DAY MEAL SCHEME JOINT REVIEW MISSION

## Andhra Pradesh

24<sup>th</sup> June – 3<sup>rd</sup> July, 2013

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## **CHAPTER 1**

### **Composition and Terms of Reference (TOR)**

*Nutrition and Health are pre-requisites for human resource development. Our planners have been aware of these vital inputs and enshrined it in article 47 of the constitution. "The State shall regard raising the level of nutrition and standard of living of its people and improvement in public health among its primary duties."*

Nutrition is directly linked to human resource development, productivity and ultimately to the nation's growth. Malnutrition on the other hand is a complex phenomenon. It is both the cause and effect of poverty and ill health: and follows a cyclical, inter-generational pattern. It is inextricably linked with illiteracy, especially female illiteracy, lack of safe drinking water, sanitation, ignorance, lack of awareness and ill health. It creates its own cycle within the large cycle of poverty. Malnutrition adversely affects Universalization of Elementary Education (UEE). Even if a malnourished child does attend school, he/she finds it difficult to concentrate on and participate in the learning activities in school. Unable to cope, the child would very often drop out of school.

Various studies suggest that absence of an adequate breakfast over extended period can affect both behavior and nutritional status; such children exhibit irritability, decreased attentiveness and low concentration span, all of which affect their active learning capacity. Malnutrition is therefore not just an issue for the nutritionist; the planners and economists also need to recognize that the cost of malnutrition is much greater than the investments required to end hunger/malnutrition.

According to Amartya Sen (2001), Indian children/women suffer not only from educational neglect but also from under nourishment on a scale that makes India a world leader in an unenviable role; the provision of mid-day meals/ supplementary feeding programmes can be effective in jointly addressing several pivotal problems.

In a bid to boost the UEE by increasing enrollment, attendance coupled with reduction of absenteeism and simultaneously to improve the nutritional status of children in primary classes;

National Programme of Nutritional support to Primary Education (NP NSPE) , popularly known as the Mid Day Meal Scheme was launched on 15<sup>th</sup> August 1995.

Subsequent to landmark intervention by the Supreme Court of India directive was given making it mandatory for the state governments to provide cooked meals instead of dry rations.

The Mid- Day Meal (MDM) Scheme is a flagship programme of the Government of India. having the distinction of being the largest school feeding programme in the world reaching out to about 10.46 crores children in 12 lakh primary and upper primary schools (Government, Government Aided and Local bodies), Education Guarantee Scheme (EGS) / Alternative Innovative Education (AIE) centres and Madarsa and Maqtabs supported under Sarva Shiksha Abhiyan (SSA) as well as National Child Labour Project (NCLP) schools. In drought-affected areas MDM is served during summer vacation also.

A programme of scale and magnitude of Mid Day Meal requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of India, decided to review implementation of the programme in all its aspects through the Review Missions, which are also to provide suggestions for improvement.

#### **Joint Review Mission – Team Members**

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### **Co-Team Members**

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The Mission comprising of the above mentioned members visited 50 schools and centralized kitchens of Naandi (Hyderabad) and Akshaya Patra (Medak) in the districts of Hyderabad and Medak.

### **1.1 The Terms of Reference for the Review Mission were as under:**

- (i) Review the system of fund flow from State Government to Schools/cooking agency and the time taken in this process.
- (ii) Review the management and monitoring of the scheme from State to School level.
- (iii) Review the implementation of the scheme with reference to availability of food grains, quality of MDM, regularity in serving MDM as per approved norms and mode of cooking.
- (iv) Role of Teachers.
- (v) Convergence with School Health Programme (SHP) for supplementation of micronutrients and health check- ups and supply of spectacles to children suffering from refractive errors.
- (vi) Creation of capital assets through kitchen-cum-store/kitchen devices.

- (vii) Appointment of Cook-cum-Helpers for preparation and serving of meal to the children.
- (viii) Availability of dedicated staff for MDM at various levels.
- (ix) Review the maintenance of records at the level of school/cooking agency.
- (x) Review the availability of infrastructure, its adequacy and source of funding.
- (xi) Review of payment of cost of food grains to FCI by the districts.
- (xii) Review the involvement of NGOs/Trust/Centralized kitchens by States/UTs Government in implementation of the Scheme.
- (xiii) Management Information System (MIS) from school to block, district and State Level to collect the information and disseminate it to other stakeholders
- (xiv) Assess the involvement of Community in implementation of MDM scheme.

### **1.2 Terms of Reference (ToR) for Nutritional Status:**

1. To assess the anthropometric measurements of a sample of children availing MDM
  - i. Height
  - ii. Weight
  - iii. Mid arm Circumference
2. To Calculate the Body Mass Index (BMI) on the basis of measurement of Height and weight.
3. To identify the children who are undernourished and over nourished.
4. To assess the nutritive value of the served MDM on the day of visit by 24 hour food recall method.
5. To review the quality and quantity of the served MDM.
6. To review the satisfaction of the children parents and community on the served meal under MDM in respect of quality and quantity.

7. To suggest some nutritionally balanced region specific recipes.
8. To assess the ways for better convergence with School Health Programme.

### **1.3 Food and Nutrition norms through the years under MDM:**

Initially the MDM Scheme envisaged the provision of free of cost 100g of wheat /rice for children studying in classes I-V in all Government, local body and Government aided primary schools. The central government provided wheat /rice to the States/UTs; 3 kg of cereals were to be distributed free of cost to children who had over 80% attendance in the previous month. Most of the states distributed food grains to children but some states who were earlier providing cooked mid day meal or ready to eat food to school children, continued to do so.

In 2001 Honøble Supreme Court of India ruled that MDM is a legal entitlement for all children and that the government should provide a hot cooked mid day meal containing 300kcal energy and 12 g of protein/day for 200 days to all children studying in classes I-V in all government, local body and government aided primary schools .

In 2006, Department of Primary Education constituted an Expert Committee to review the content and quantity of ingredients to be provided through the MDM. The expert committee recommended that MDM should provide hot cooked meal containing 100g of cereals, 20g of pulses.

**Table 1: Revision of food norm w.e.f. 1.12.2009**

Nutritional content	Norm as per NP-NSPE,2004	Revised norm as per NP- NSPE,2006
Calories	300	450
Protein	8-12 g	120
Micro ó nutrients	Not prescribed	Adequate quantities of Micro nutrients like Iron, folic Acid and Vitamin A



Food norms have been revised to ensure balanced and nutritious diet to children of upper primary group by increasing the quantity of pulses from 25 to 30 grams, vegetables from 65 to 75 grams and by decreasing the quantity of oil and fat from 10 grams to 7.5 grams.

#### 1.4 Nutrition Content under MDMS: At present

- a) 450 kcal and 12g of protein which is derived from 100 g of food grains (rice/wheat), 20g of pulses , 50g of vegetables and 5g of oil for children studying in primary classes and
- b) 700 kcal and 20g of protein, which is derived from 150g of food grains (rice/wheat), 30g of pulses , 75g of vegetables and 7.5g of oil in upper primary classes.

**Table 2: Quantity of Ingredients**

S. No.	Items	Quantity per Child per Day	
		Primary	Upper Primary
1.	Food grains	100 g	150 g
2.	Pulse	20 g	30 g
3.	Vegetables (leafy also)	50 g	75 g
4.	Oil & fat	5 g	7.5 g
5.	Salt & Condiments	As per need	As per need

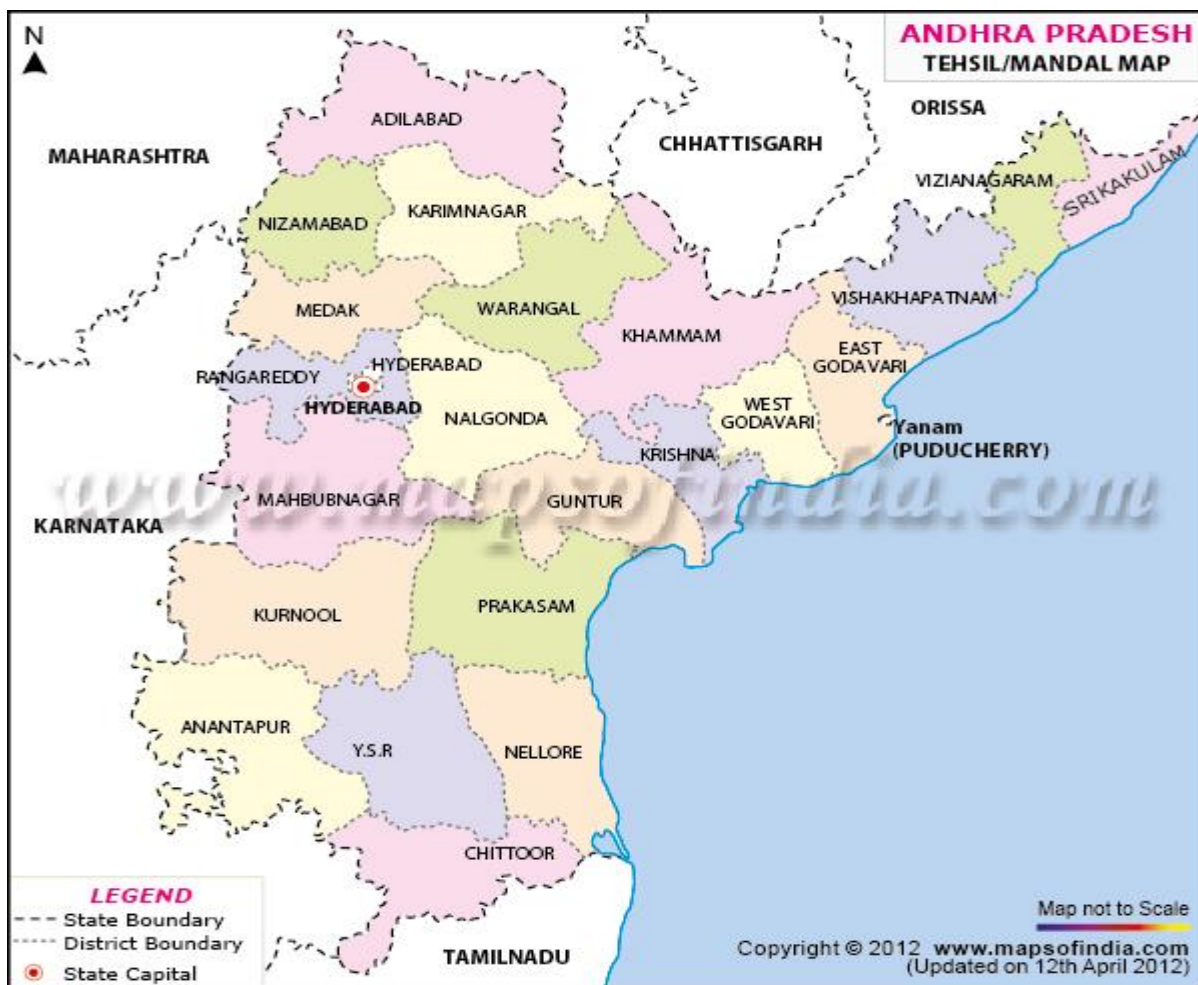
#### 1.5 Andhra Pradesh : An Introduction

Andhra Pradesh is the 5<sup>th</sup> largest State in India in area. It has an area of 2,75,045 Sq. Kms. The population of the State is 8,46,65,533 with a growth rate of 11.10% during 2001-2011. The Major languages spoken in the State are Telugu and Urdu. The Government of Andhra Pradesh has declared Urdu as second language in 13 Districts in view of a sizeable Muslim population. The density of the population is 308 per Sq. Km. The urban population is around 33.49%. The

general literacy rate as per 2011 Census is 70.84%. The male literacy rate is 78.12% and the female literacy rate is 63.54%.

The State of Andhra Pradesh with 23 districts has three distinct regions:

- a) Coastal Region familiarly known as Coastal area comprising of nine Districts viz. Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam and Nellore.
- b) Interior region familiarly known as Rayalaseema which comprises four Districts viz. Chittoor, Kadapa, Anantapur and Kurnool.
- c) Telangana Region consists of 10 Districts viz. Mahabubnagar, Ranga Reddy, Hyderabad, Medak, Nizamabad, Adilabad, Warangal, Karimnagar, Khammam and Nalgonda.



## Population:

As per 2011 census Andhra Pradesh ranks fifth in the country in area (2,75,045 sq. kms). Consequent on the introduction of Mandals system in place of Tahsils and Blocks all the 23 districts were divided into 1128 Mandals with 28,123 villages, 21,176 Gram Panchayats and 72372 Habitations.

### Population –2011 (in lakhs)

Category	Male	Female	Total	%	
				Rural	Urban
All	425.10	421.56	846.66	66.51	33.49

Source: Census of India – 2011

**The Population of the State has increased from 312.60 lakhs in 1951 to 846.65 lakhs in 2011.**

### Growth of Population in Andhra Pradesh

Year	Category	Rural	Urban	Total
1951	Male	1,30,05,673	27,37,239	1,57,42,912
	Female	1,28,16,006	27,01,215	1,55,17,221
	Total	2,58,21,679	54,38,454	3,12,60,133
2001	Male	2,79,37,204	1,05,90,209	3,85,27,413
	Female	2,74,63,863	1,02,18,731	3,76,82,594
	Total	5,54,01,067	2,08,08,940	7,62,10,007
2011	Male	2,82,19,760	1,42,90,121	4,25,09,881
	Female	2,80,92,028	1,40,63,624	4,21,55,652
	Total	5,63,11,788	2,83,53,745	8,46,65,533

Source: Census of India – 2011

The decadal Growth of Andhra Pradesh population during 1951-61 was 16% and during 1991-2001 it was 13.86% and in 2011 it was 11.10%.

## Literacy:

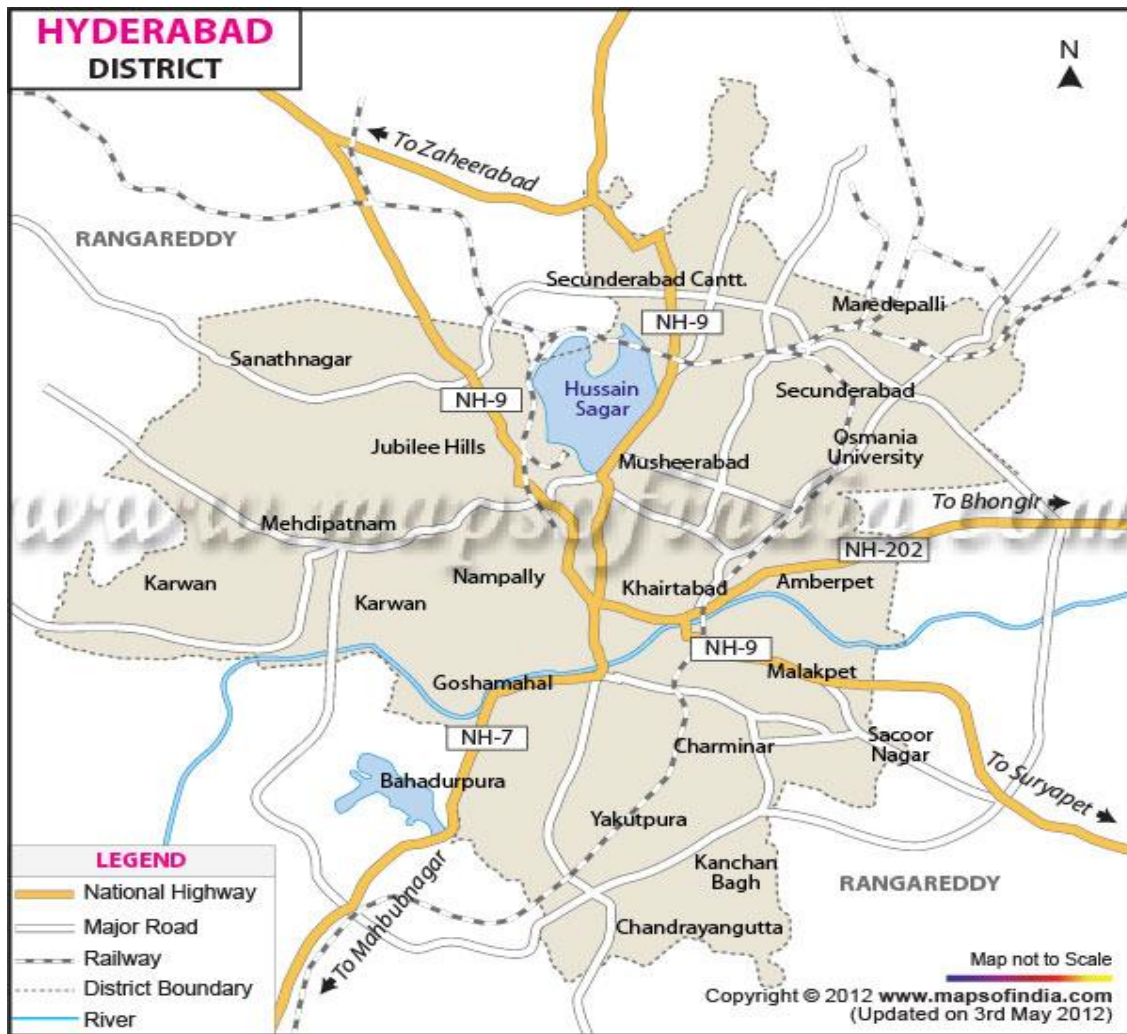
A person is considered literate if she/ he is able to read and write with understanding in any language. One who can merely read but cannot write is not considered as a literate. However, to qualify as a literate it is not necessary that a person should have received any formal education. All the children below 7 years of age have been treated as illiterates during the Census of India 2001.

Among the districts, Hyderabad is at the top with 80.96 % followed by Ranga Reddy, Krishna, West Godavari and Chittoor districts. The least literate district is Mahabubnagar with 56.06%

Among the males the literacy rate is 75.56% as against 59.74 % among females. Among the 23 districts, 9 districts i.e., Hyderabad, Ranga Reddy, West Godavari, Krishna, East Godavari, Chittoor, Nellore, Guntur and Visakhapatnam have recorded higher female literacy rate when compared to State's average of female literacy rate. On the whole, 10 districts have shown a higher literacy rate than the State's average. They are Hyderabad, Ranga Reddy, Krishna, West Godavari, Chittoor, East Godavari, Nellore, Guntur, Kadapa and Visakhapatnam.

## **1.6 District : Hyderabad**

Hyderabad serves as a capital city to the state of Andhra Pradesh in India and is formed of the twin cities of Hyderabad and Secunderabad. It is a busy metropolis where around 6 million people reside. In yester years, the city was the main administrative center of the Nizams of Hyderabad. The city, located on the pristine banks of Musi River, looks mesmerizing with its vast landscape dotted with old and new structures



As the Mughal Empire decayed and began to disintegrate, the victory, Asaf Jah-I proclaimed himself the Nizam and established independent rule of the Deccan. Hyderabad once again became a major capital city, ruled by successive Nizams of the Asaf Jah dynasty until the state was merged into the Indian Union in 1948.

The City of Hyderabad is famous for its minarets and its pearl bazaar. Pearl from all over the world are said to come to Hyderabad because the artisans here are skilled in piercing and stringing pearls without damaging them. The city's gypsy tribes called "Lambadas" and "Banjaras" are known throughout the country for their colorful costumes - and Hyderabadi cuisine is much sought after.

Hyderabad is at an altitude of 536 meters with the mean summer temperature going up to a maximum of 40 degrees Celsius and the minimum average temperature being around 22 degrees. The maximum winter temperature is around 22 with the minimum going down to around 12 degrees. Light woollens are required during early mornings and late evenings.

## **POPULATION:**

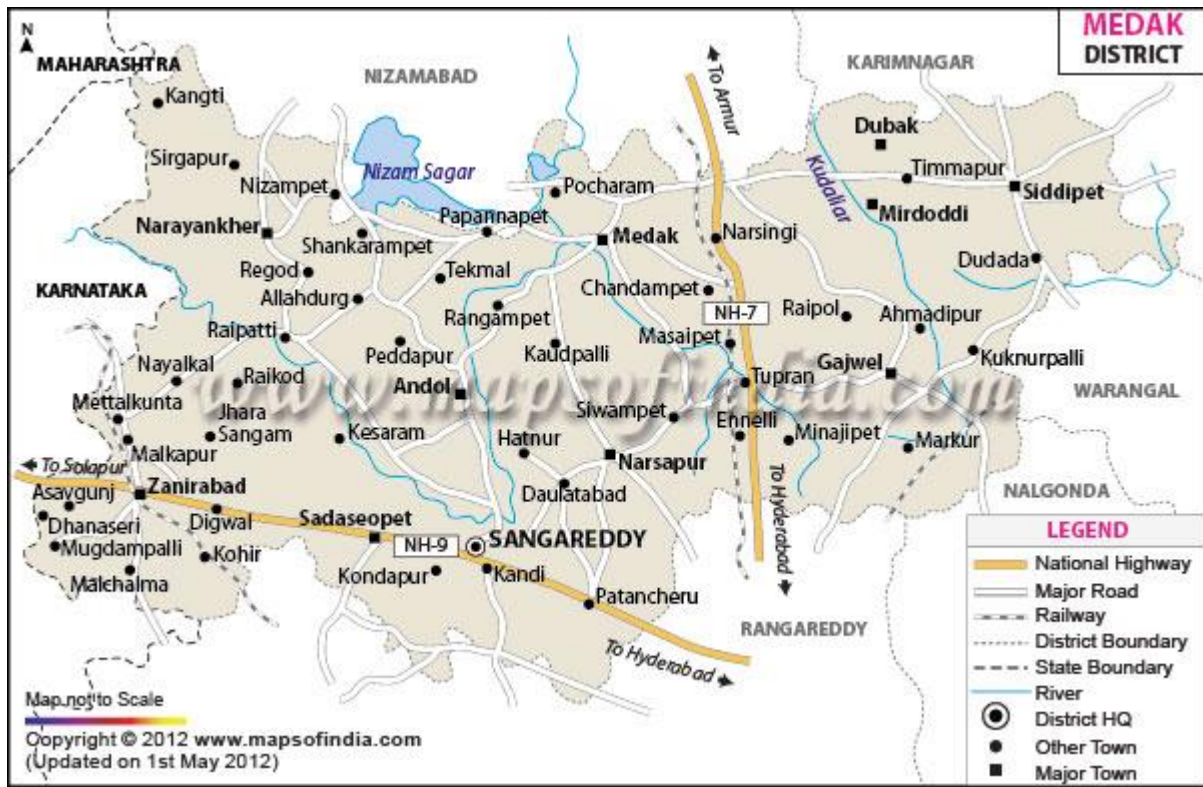
According to the 2011 census Hyderabad district, India has a population of 4,010,238, This gives it a ranking of 57th in India (out of a total of 640).The district has a population density of 18,480 inhabitants per square kilometre (47,900 /sq mi). Its population growth rate over the decade 2001-2011 was 4.71%. Hyderabad has a sex ratio of 943 females for every 1000 males, and a literacy rate of 80.96%.

### **1.7 District : Medak**

Medak District is located in the state of Andhra Pradesh, India. Sangareddi is the district headquarters of Medak and Siddipet is the most populous city. The district had a population of 26,70,097, of which 14.36% were urban as of 2001. Medak district occupies an area of approximately 9,699 square kilometres (3,745 sq mi), comparatively equivalent to Canada's Prince Charles Island. It is located at 18.03° N 78.27° E.[1] It has an average elevation of 442 metres (1450 feet).

Other big towns in the Medak district include Medak, Siddipet, Dubbaka, Narsapur, Ramayampet, Gajwel, Narayankhed, Zaheerabad, Jogipet, Patancheru, Sadasivpet, Sangareddy, Ramachandrapuram, and Gummadidala. IIT Hyderabad is also located in this district





**POPULATION:**

As per the Census-2011, Medak District had population of 3,031,877 of which male and female are 1,524,187 and 1,507,690 respectively. There was change of 13.55 percent in the population compared to population as per 2001. In the previous census of India 2001, Medak District recorded increase of 17.64 percent to its population compared to 1991.

	1991 Census	2001 Census	2011 Census
Female	1152079	1347241	1,507,690
Male	1117721	1315055	1,524,187
Total	2269800	2662296	3,031,877

➤ AREA, DENSITY, SEX RATIO & GROWTH RATE

Sl No	Variable	ANDHRA PRADESH	MEDAK DISTRICT
		2011 ( Provisional)	2011 ( provisional)
1	Area in Sq.Kms	2,75,045	9700
2	Density of population (per Sq. Km)	308	313
3	Sex Ratio	992	989
4	Growth Rate (2001-2011)	11.10	13.55

➤ LITERACY RATE:

Variable	Andhra Pradesh		Medak District	
	2001 Census	2011 Census	2001 Census	2011 Census
Male	70.85	75.56	64.33	72.50
Female	51.17	59.74	38.66	52.49
Total	61.11	67.66	51.65	62.53
% of Increase		6.55		10.88



## CHAPTER : 2

### Methodology for Sample Data Collection and Analysis:

The districts have been selected on the basis of performance of the Scheme during the last year. As per the ToR for the Review Mission, one district Hyderabad was selected by the Govt. of India and the other district Medak was selected by the State Govt.

The multistage stratified random sampling was used for selection of schools in the selected districts. 50 schools were visited. The Review Mission followed a methodology to capture the intricacies involved in the implementation of the programme. From each of the two districts 6-7 mandals were selected and from each mandal 2-4 schools were selected randomly. From Medak district mandals were selected purposively so as cover schools getting MDM from Akshaya patra (ISKON) or cooked by Self Help Groups . A total sample of 990 children were selected for the study, among these 535 girls and 455 boys. 609 children from primary (I-V class) and 381 upper primary schools (VI-VIII class). Instead of selecting a large sample, the review mission emphasized for a greater in depth study to see the details in their entirety.

- i. The documents available with the implementing agencies were carefully studied and analyzed. Detailed discussions were held with State, District, Mandal and School level functionaries
- ii. Interview with stakeholders, observations, focused group discussions and record based inquiry methodology was followed to capture the information on the performance of the scheme during the visits.
  - ✓ Food Samples: Food samples for each dish were taken randomly in duplicate from two different containers containing the mid day meal. Weight on serving portion of the cooked food items ( $\pm 10g$ ) was noted separately for the 2 items served on the day (such as Sambhar and Chawal separately). Further these food samples were subjected to sensory evaluation by the nutrition experts in the team. Nutrition experts also studied these food items to assess the approximate quantity of raw food items (per serving) going in the preparation such as rice, Dal, vegetables, fats etc. in to the preparation of these dishes.

- ✓ Children from every school under study: Six students 3 boys and 3 girls (Ist to VIIIth ) were randomly selected for gathering MDM related data and their anthropometric measurements. Thus from each school 30 (Classes I-V) and 18 (Classes VI-VIII) or 48 (I-VIII) children were randomly selected for data collection.

### iii. Anthropometric measurements

Nutrition anthropometry is one of the most important tool used for assessing the health and nutrition status of a population. The physical dimensions of the body are influenced by nutrition/ during the growing period of school age. Height and weight are the most commonly used anthropometric measurements. The related indices generally used to assess nutritional status of the children are height for age, weight for age and body mass index for age which are age and gender dependent.

**Height** was measured using a flexible but non-stretchable standardized measuring tape. It was recorded to the nearest  $\pm 0.1$  centimeters. Height was taken with the child standing erect on a flat surface without shoes, with his/her arms hanging naturally at the sides. The child held his head in a comfortably erect position, with the lower border of the eye in the same horizontal plane as the external auditory meatus. A scale was held over the child's head without much pressure in the sagittal plane (central part of head). The height was then converted to meters for calculating the body mass index (BMI).

**The weight** of children was taken on spring based electronic balance having an accuracy of  $\pm 100$  g. In order to obtain accurate results, an area in the classroom was selected which was away from the wall. The weighing scale was placed on a flat and even surface. Since it was not feasible, to take weight with minimal clothing, it was taken while the child was wearing the school uniform but without shoes. Each child was requested to stand straight i.e. without any support and not move while the reading was being noted.

**Body Mass Index (BMI) or Quetlet's index** is a statistical measure of the weight of a person scaled according to height (WHO, 2003). BMI is a reliable indicator of body fatness for most children. It was calculated by using weight and height data. The BMI values were compared with the international classification of BMI, as given by the World Health Organization for children aged five to eighteen years (WHO, 2007).

The calculated Body mass index of each child was plotted in the age specific BMI percentiles graphs redesigned by Indian Academy of Pediatrics for boys and girls separately and compared with Hyderabad standards, Harvard standards and NCHS standards. Each category was coded with alphabets.

- a) Severe under weight : less than the 5<sup>th</sup> percentile
- b) Mild under weight: Between the 5-50<sup>th</sup> percentile
- c) Ideal weight: Between the 5<sup>th</sup> and the 85<sup>th</sup> percentiles ( 50<sup>th</sup> percentile is average)
- d) At risk for overweight: Between the 85<sup>th</sup> and 95<sup>th</sup> percentiles
- e) Overweight: higher than the 95<sup>th</sup> percentile

**Table 7: Nutritional Status Classification of Children According to Body Mass Index (WHO, 2007)**

Classification	BMI (Principal cut off points)
Severe thinness	< minus 3SD
Mild thinness	< minus 2SD
Normal Range	+1 SD to -2 SD
Overweight	>+1SD
Obesity	>+ 2SD

- iv. From the Body full Data commonly used under nutrition indicators viz underweight, stunting and thinness have been employed to evaluate nutritional status of the children. Thus in the current analysis WAZ, HAZ & BAZ indices have been used.
- v. **Underweight:** A child, who is 15-20% below the normal weight for his age and height, is classified as underweight. Underweight reveals low body mass relative to chronological age which is influenced by both, height and weight of the child.
- vi. **Stunting:** According to World Health Organization stunting refers to insufficient gain of height relative to age (WHO, 1995). It is an indicator of chronic under nutrition and is the result of extended periods of inadequate food intake or increased morbidity or a combination of both.

vii. **Thinness:** It is an indicator of acute under nutrition, the result of most recent food deprivation or illness (Bose et al, 2008). It is defined as body weight significantly below the weight expected of a child of same length or height.

viii. **Evaluation of MDM**

- ✓ **Serving Size of Mid Day Meals:** The serving size of MDM on the day of visit was observed to determine the quantity of energy and nutrients present. The usual portion size being served to children on the day of visit was weighed on a spring balance having an accuracy of  $\pm 10$  grams. In order to minimize variation, two serving portions of each dish were weighed separately. The weight of plate or tiffin box etc. was subtracted from the total weight.
- ✓ **Sensory Evaluation of MDM:** The colour, texture, taste, flavor and mouth feel determine the acceptability of a meal. The mid day meal being served on the day of visit was evaluated for their sensory attributes such as consistency of dal/sambar. The JRM members also conducted Qualitative sensory evaluation as and when possible.
- ✓ **Anthropometric measurements:** Nutrition anthropology is one of the most important tools used for assessing the health and nutrition status of a population. The physical dimensions of the body are influenced by nutrition/ during the growing period of school age. Height and weight are the most commonly used anthropometric measurements. The related indices generally used to assess nutritional status of the children are height for age, weight for age and body mass index for age which are age and gender dependent.

## CHAPTER 3

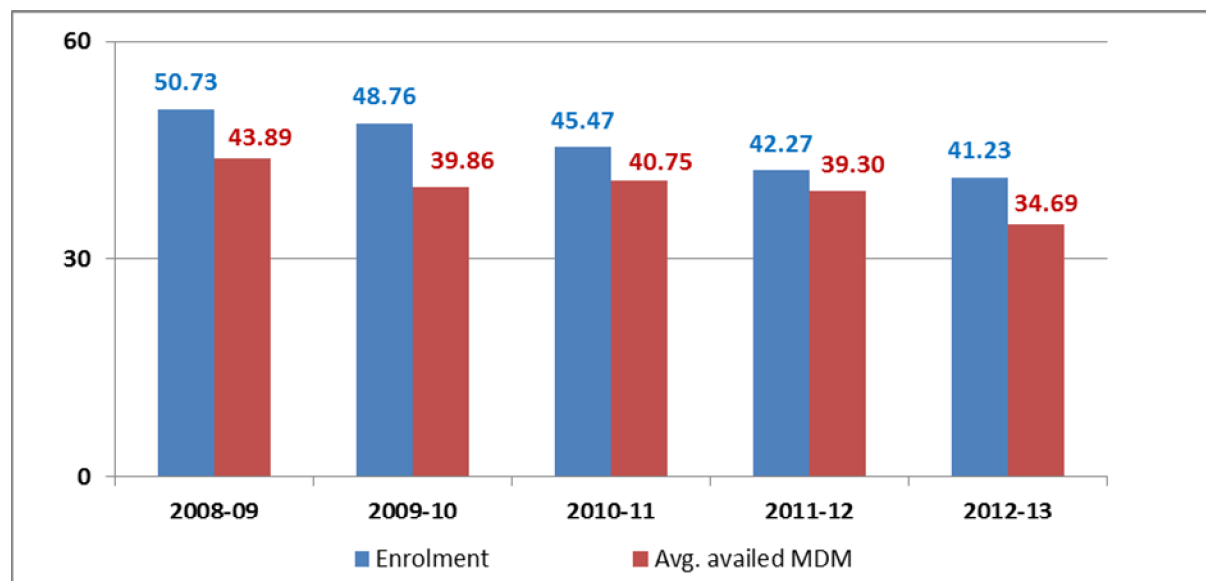
### Review of performance: Physical and financial (2008-09 to 2012-13)

#### 3.1 Coverage of children: Primary

A perusal of the figures given in the below table shows a constant decreasing trend of enrolment i.e. enrolment has been reduced by almost 8.5 lakh children in the primary section.

Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB approval
2008-09	5073213	5073213	4388594	87%	87%
2009-10	4876214	4388594	3985837	82%	91%
2010-11	4546650	3876590	4075385	90%	105%
2011-12	4227205	4121285	3929735	93%	95%
2012-13	4123057	3742000	3469144	86%	97%

Graph : Decreasing trends of enrolment and Average number of children availing MDM (in lakh): Primary

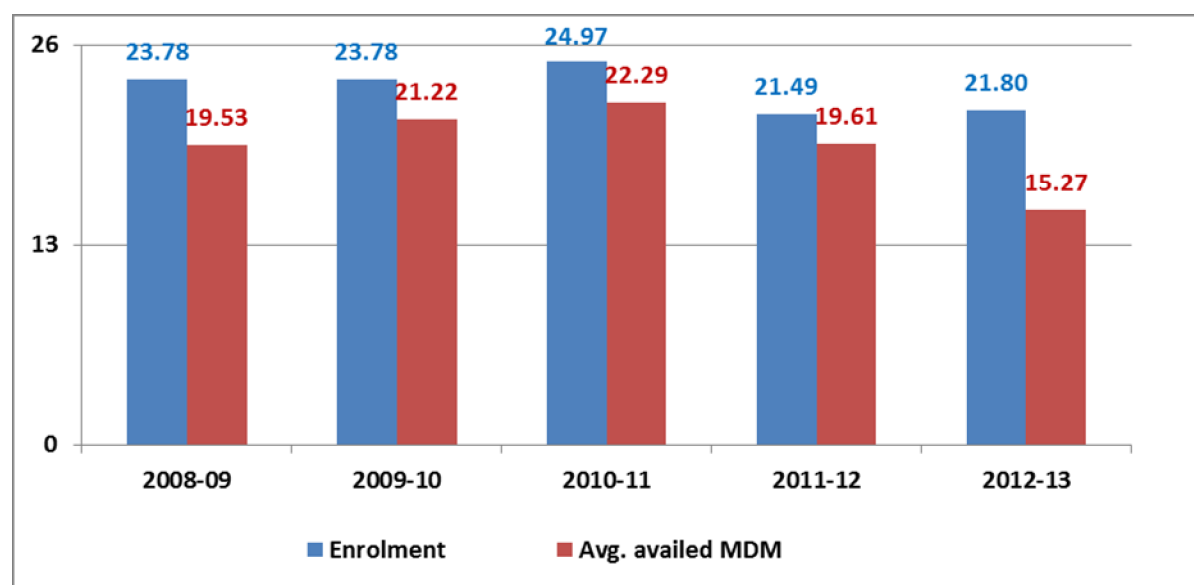


### 3.2 Coverage of children: Upper Primary

Unlike Primary the decline in enrolment is not as much in upper primary stage, but at the same time the decline in coverage of children under MDMS is quite sharp, as only 70% of the enrolled children have availed mid day meal on an average basis during 2012-13, whereas the coverage during 2011-12 was 91%.

Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB app.
2008-09	2377731	1814065	1953494	82%	108%
2009-10	2377731	1953494	2122125	89%	109%
2010-11	2496615	2122125	2228854	89%	105%
2011-12	2149089	2261000	1961430	91%	87%
2012-13	2180078	2038000	1526575	70%	75%

Graph : Trends of enrolment and Average number of children availing MDM (in lakh) : Upper Primary

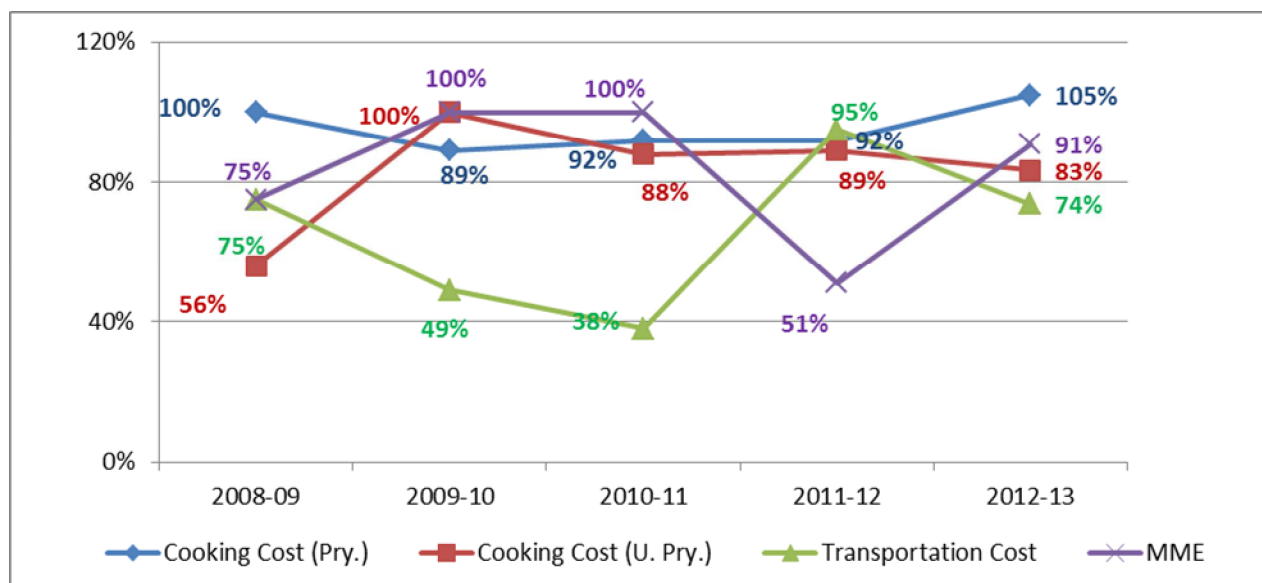


### 3.3. Details of Availability of funds and Expenditure against Central Assistance

*Rs. in Lakh*

Year	2008-09		2009-10		2010-11		2011-12		2012-13 as on 31.07.2012	
Component	Availability of Funds	Exp.	Availability of Funds	Exp.	Availability of Funds	Exp.	Availability of Funds	Exp.	Availability of Funds	Exp.
Cost of FG Payment to FCI (Pry.) & (U.Pry.)	3513.96		10782.2		7648.98	7013.98	9358.75	9358.75	9980	9960.7
Cooking Cost (Pry.)	17634.5	17634.5	15254.8	13627.8	17227.6	15807.6	19753	18108.6	18813.56	19753.04
Cooking Cost (U.Pry.)	8380.98	4694.32	9025.14	9025.14	14099.4	12412.4	16166.2	14367.7	19408.97	16166.15
Transportation Cost	1286.06	964.55	1207.59	589.45	960.59	361.59	1242.31	1179.12	1123	827
MME	661.18	495.89	618.14	618.14	742.81	742.81	1060.42	542.03	723.02	657.08
Honorarium to cook-cum-helpers	NA				10687.70	9434.73	12392	12285.4	11996	11356

% Utilization of Central Assistance against Availability					
Component	2008-09	2009-10	2010-11	2011-12	2012-13
Cost of FG	100%	100%	92%	100%	100%
Cooking Cost (Pry.)	100%	89%	92%	92%	105%
Cooking Cost (U. Pry.)	56%	100%	88%	89%	83%
Transportation Cost	75%	49%	38%	95%	74%
MME	75%	100%	100%	51%	91%
Honorarium to cook-cum-helpers	NA	NA	88%	99%	95%



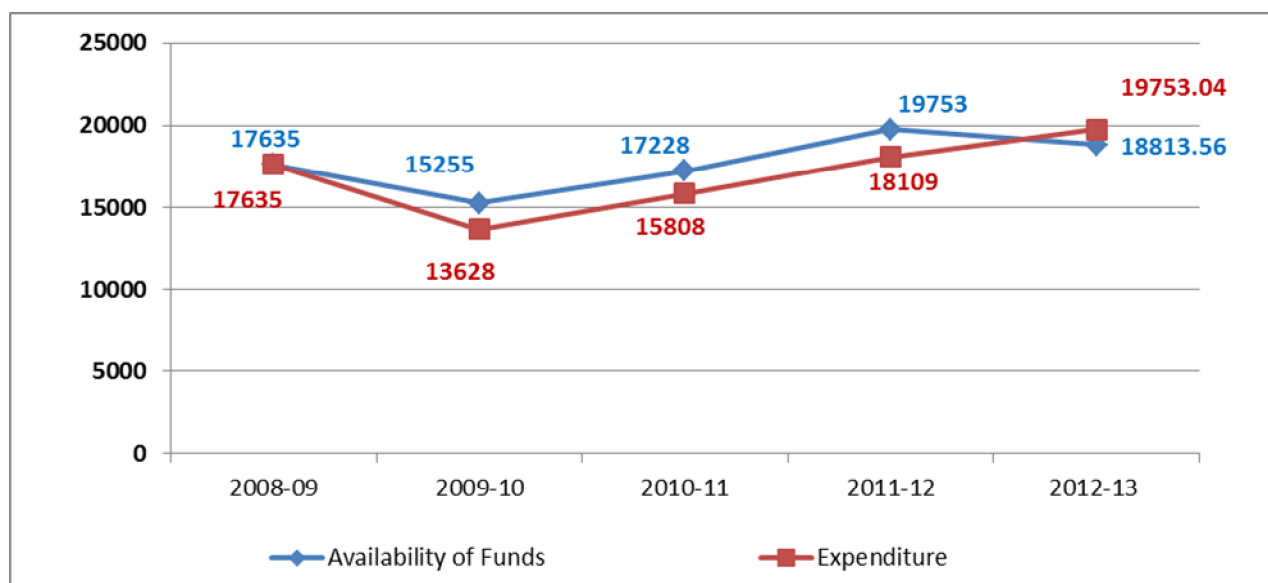


### 3.4 Component wise Details of Availability and Expenditure of funds against Central Assistance

#### ◆ Utilisation of Cooking Cost (Pry)

(Rs in lakh)

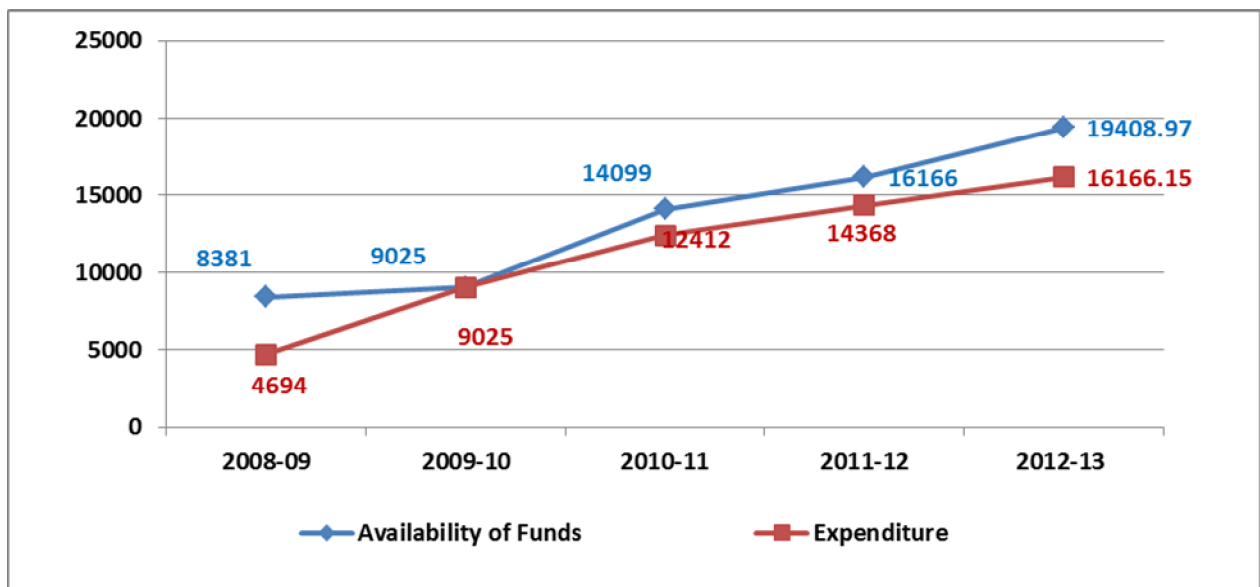
Cooking Cost (Pry)	2008-09	2009-10	2010-11	2011-12	2012-13
Availability of Funds	17634.5	15254.8	17227.6	19753.0	18813.56
Expenditure	17634.5	13627.8	15807.6	18108.6	19753.04



#### ◆ Utilisation of Cooking Cost (U. Pry)

(Rs in lakh)

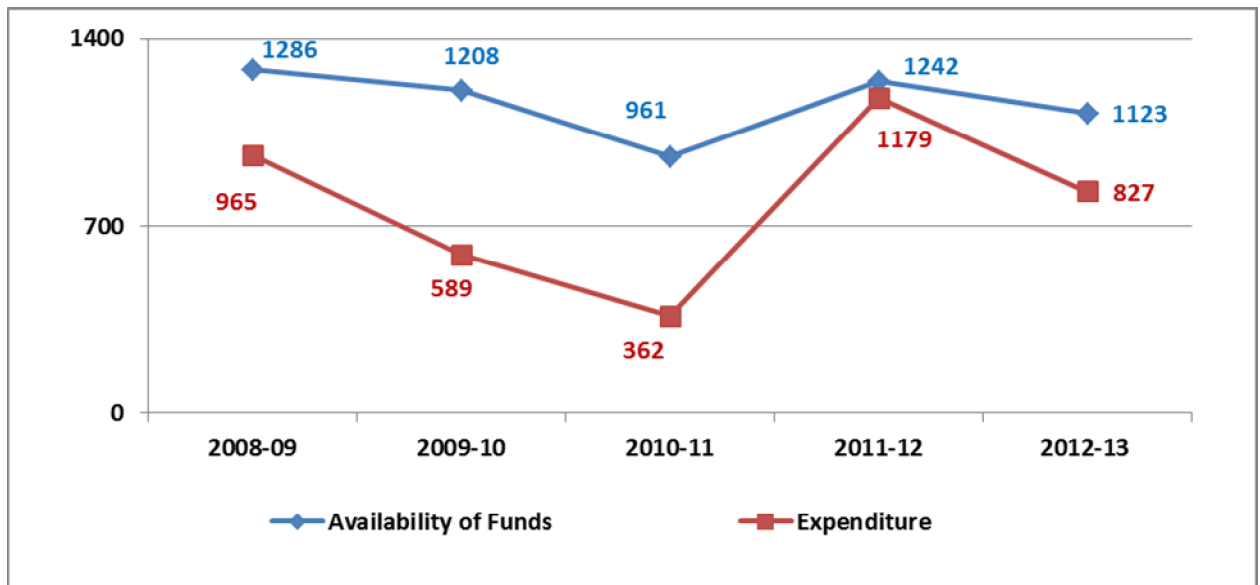
Cooking Cost (U. Pry)	2008-09	2009-10	2010-11	2011-12	2012-13
Availability of Funds	8380.98	9025.14	14099.4	16166.2	19408.97
Expenditure	4694.32	9025.14	12412.4	14367.7	16166.15



◆ **Utilisation of Transportation Assistance**

(Rs. in lakh)

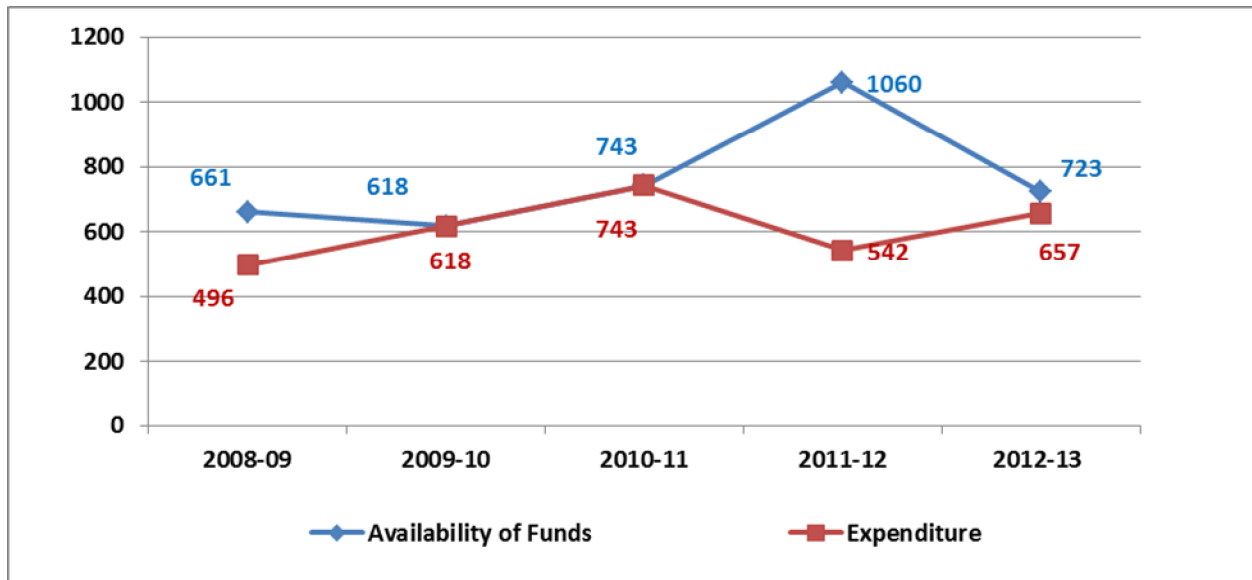
Transportation Asst.	2008-09	2009-10	2010-11	2011-12	2012-13
Availability of Funds	1286.06	1207.59	960.59	1242.31	1123
Expenditure	964.55	589.45	361.59	1179.12	827



◆ Utilisation of Management Monitoring and Evaluation (MME)

(Rs. in lakh)

MME	2008-09	2009-10	2010-11	2011-12	2012-13
Availability of Funds	661.18	618.14	742.81	1060.42	723.02
Expenditure	495.89	618.14	742.81	542.03	657.08



## CHAPTER: 4

### Observations from the Field as per the ToR

#### 4.1 Fund flow Mechanism from State Government to Schools/cooking agency and the time taken in this process.

The Government of Andhra Pradesh has introduced 'Green Channel Fund Release System' making arrangements for release of funds immediately on requirement for Mid Day Meal Scheme along with some other priority welfare schemes i.e. Agriculture, Rural Development, School Education, Medical and Health, Hostels run by Welfare Departments. The State Government is placing 100% of funds readily available at the beginning of the year itself even before the Government of India releases their share.

#### The procedure adopted for payment of bills are as follows:

- (1) Finance Department will release Budget Release Order for balance budget provision for the above schemes / programmes for current year, without any formal request from the concerned departments.
- (2) Administrative Department will issue required approvals based on the BRO issued by Finance Department.
- (3) The Head of the Department will give distribution statement for the entire year based on periodicity of release indicated for each programme / scheme in the Annexure.
- (4) The Director of Treasury Authorities will give single authorization for scheme / programme as per Budget Release Order released by Finance Department and the distribution statement of the Head of the Department while clearly indicating the maximum amount that can be drawn per periodic interval (month /quarter etc) by each Drawing & Disbursing Officer.
- (5) District officials / implementing agencies shall prefer bills as per periodicity indicated in the annexure subject to a maximum of the amounts authorized per period.

(6) The District Treasury Officer/Pay and Accounts Officer shall pass bills and ensure the payment under intimation to Finance Department within the periodic ceilings prescribed under point 4 above.

(7) It is the responsibility of respective Departments to ensure that Programmes / Schemes are implemented smoothly without any hindrance of the Government Order.

Funds allocated by Government of India and State Government as per the Annual Work Plan and Budget to the Commissioner & Director of School Education.

The details of fund releases during 2012-13 are given here under:

**Central Funds:**

(Rs. in lakhs)

Directorate / Authority				District*			
Date			Amount	Date			Amount
Amount			Date	Amount			Date
Gen	SC	ST		Gen	SC	ST	
37169.63	9602.37	5104.66	05/06/12 11/07/12 01/08/12	37169.63	9602.37	5104.66	15/06/12 21/07/12 06/08/12

The Review Mission observed that funds were available in all the visited schools in district Medak and as such there was no delay in releasing of funds to the schools and payment of honorarium to the cook-cum-helpers. However, the managers at centralized kitchen of NAANDI informed about a general delay of about 4 months in payment of cooking cost.

#### 4.2 Management and Monitoring Mechanisms

The MDM scheme is being monitored by Additional Director (MDM), Assistant Director (MDM) and other staff at State level. There is no exclusively designated officer for MDM scheme at District and Mandal levels.

**The non-availability of regular staff for Mid-Day Meal Scheme is affecting the monitoring of the scheme at the grass root level.**

The Government of Andhra Pradesh has taken a decision to make it mandatory for all the inspecting officers from State level to Mandal level to inspect the Mid Day Meal Programme in their Visits and inspecting schedule. Instructions have been issued by the C&DSE for minimum Coverage, monthly as follows:

- ❖ Regional Joint Directors of School Education :5%
- ❖ District Educational Officers :10%
- ❖ Deputy Educational Officers (Sub Division level) :30%
- ❖ Mandal Educational Officers :30%

The Joint Review Mission was briefed that schools are being inspected by the State, District and Mandal Level Officers. However, it has been observed that none of the visited schools has ever been visited by the State level officials. Although all schools are being visited by Mandal Officials but it seems that the vital parameters were neglected related to MDMS. The MEOs are looking at only the regularity of serving of the MDM but not at the records, quality or quantity being given to children. They have never checked or attested any register of MDM.

The implementation of MDM Scheme in the schools being covered/served by Centralised Kitchens like Akshaya patra/Naandi is left entirely to their own ways. No supervision is being carried out by the MDM/Educational department officials at any stage of the operations.

It is observed that, the MEOs are involved in the school based kitchens as budget releasing authority to schools like honorarium to CCHs, cooking cost and MME and for allocation of food grains to schools monthly. However, the quality of their monitoring and involvement is very poor. It has also been observed that the some teachers especially in Medak District, where meal is being served by Akshyapatra, are not aware about the MDM norms/entitlements at all.

It is strongly felt that all officers dealing with MDM need orientation and awareness of MDM scheme and implementation urgently. It is also recommended that all the officials at the level of MEO posts and Dy.E.O posts should be filled with regular fulltime officers for better & effective implementation of the scheme as it is noticed that out of 1140 MEO posts, 823 posts are vacant in the state. The appointment of regular fulltime officials as MEOs and DyEOs bring more

responsibility, accountability and involvement in the scheme. At the selected districts level under study, the picture is more grim as seen below:

District	Deputy Educational Officers			Mandal Educational Officers/ Deputy Inspector of Schools		
	Sanctioned	Working	Vacant	Sanctioned	Working	Vacant
Hyderabad	12	02	10	24	05	19
Medak	04	-	04	46	05	41

Further, creation of separate MDM cells at State, District and Mandal levels are dire and urgent necessity for better implementation & coordination of MDM and its reach to the children as envisaged by the programme.

#### **4.3 Engagement of Cook cum Helpers in Andhra Pradesh:**

The State Government has engaged 1,65,227 Cook-cum-helpers (34322 SC, 20103 ST, 80265 OBC, 8245 Minority and 22292 others) at State level. 90% (148643) of the cooks are women. Thus the State Government is following the MDM guidelines for empowering the women by providing them opportunities for employment and income generation.

The Review Mission observed in the visited schools that adequate number of cook-cum-helpers have been engaged in school based kitchens for preparing and serving of the mid-day-meal to the children in Medak districts. In Hyderabad district, the MDM is completely being served by NAANDI foundation, whereas in Medak district (35) mandals are being covered by SHGs and (11) mandals are being covered by Akshaya Patra, Centralized kitchen.

In the State level Steering cum Monitoring Committee meeting held on 14/09/2011, the Committee has agreed the following apportionment for honorarium payment to CCHs working in NGOs is proposed.

- i. One CCH in each school covered by NGOs shall be engaged by school.

- ii. Out of the remaining eligible CCHS to NGOs, (as per GOI guidelines) the no. of CCHS engaged by NGOs or remaining of eligible CCHS, which ever is less will be allowed to be engaged by NGOs.

Accordingly, 951 cook cum helpers are sanctioned to the NGOs to help them at their centralized kitchen and 2420 CCHs per school at school level to serve during the year 2012-13. Remaining 1,64,276 CCHs are serving MDM at schools independently where school based kitchens are operational. Accordingly, in Hyderabad and Medak districts it is seen as that:-

Sl.No.	Agency name	District	No. of CCHs allotted		
			In schools covered by NGOs	At centralized kitchen	SHGs
1.	Naandi Foundation	Hyderabad	963	354	0
2.	Akshaya Patra	Medak	244	105	6968

It has been observed that the teacher incharge of MDM scheme in school based kitchens notes down the no. of children present on that particular day and accordingly CCHs prepare food for the present children where SHGs are serving Mid Day meal.

In case of the schools where NGOs are serving the MDM, the procedure being followed is as follows:

- ✓ The District Collectors of Hyderabad and Medak district have instructed to indent average no. of children availing MDM, fortnightly.
- ✓ The Akshaya Patra is serving MDM for the same no. of children for the whole month but not fortnightly. Mission has also observed a strange practice of not maintain the general attendance register or MDM register at all where Akshaya Patra is serving the meal. It came to knowledge that the MDM register is prepared at the end of the month on the basis of the bill submitted by Akshyapatra. In the case of the schools served by Naandi foundation, the figures of previous day intake are also not taken into consideration in most of the schools and meals are being served on the basis of fortnightly average intake figures as ordered by the District Collector being used for placing the indent.

It is therefore evident that there is every possibility of under indenting and over indenting of



MDM meals in the methods adopted by both Akshyapatra and Naandi Foundation. The widely used method for placing the indent all over the country is based on the previous day's intake of MDM.

It was found that the payment of the honorarium to cook-cum-helpers is being made on time and through e-payment. During the field observations and check of pass books of CCHs in Hyderabad and Medak District, it is found that cooks have been paid honorarium till April 2013 @ Rs.1000/- per month per cook-cum-helper at both schools as well as centralized kitchens of Akshyapatra and Naandi Foundation. It is also observed that CCHs in all the schools have not been appointed in Hyderabad District at school points for serving MDM supplied by Naandi Foundation.

The District-wise and mandal-wise details of Cook-cum-Helpers working under Mid Day Meal Scheme in schools/centralized kitchen sheds have also been furnished to SERP, Hyderabad for providing training to them.

Meanwhile the District Educational Officers have conducted training for CCHs at mandal-level on scheme, cleanliness and nutrition aspects. In Medak district, the training was conducted on 11/06/2013.

It is recommended to engage initially at least one CCH in all schools served by Centralized kitchens and additional CCH for schools where the number of children availing MDM is more than 150 will be engaged in a phased manner.

Frequent and regular training/orientation of CCHs on related subjects will enhance quality of MDM prepared and served.

#### **4.4 Availability of dedicated staff for Mid-Day Meal at various levels**

The review mission observed that there is no dedicated staff for mid day meal scheme at all levels. At the State level the MDM scheme is being looked after by Commissioner of School Education who is assisted by Additional Director (MDM) and Assistant Director (MDM). At the District level District Education Officer is responsible for implementation of MDMS. There is no exclusively designated officer for MDM scheme at District and Mandal levels.

The non-availability of regular and dedicated staff for Mid-Day Meal Scheme is affecting the smooth implementation of the scheme. It is pertinent to mention that the 2<sup>nd</sup> Review Mission which visited the State during August, 2010, had also observed the same and recommended for creation of dedicated posts and engagement of professionals at State and district levels for MDMS. However, the issue remains unaddressed by the State Govt.

The Review mission was briefed that the issue was discussed in the State Level Steering cum Monitoring Committee meeting and it was agreed and approved to appoint (3) Consultants at State Level and (23) District Coordinators at District level. The appointment of Consultants at State level is in process. It is proposed to appoint Co-coordinators at District level on deputation from the cadre of Tahsildar from Revenue department to monitor the implementation of MDM scheme in each district. Request for permission to incur expenditure from MME for the salaries of deputed officials from Revenue Department as District Coordinators is under process.

The Review Mission observed that the MME guidelines does not allow to pay salaries for regular employees, and therefore, State Govt. should meet out the salaries from their own funds. However, the consultancy fee of salary for outsourced persons could be met out from the MME funds.

The Review mission recommends creation of a separate authority for MDMS headed by a Director level officer on the lines of Uttar Pradesh and Rajasthan.

#### **4.5 Convergence with School Health Programme**

The MDMS guidelines envisage that necessary interventions like regular health checkups, provision for de-worming tablets and supplementation of micronutrients like Vitamin A dosage and IFA tablets are to be provided in convergence with the National Rural Health Mission (NRHM) of Ministry of Health & Family Welfare. The School Health Programme is the only public sector programme specifically focused on school age children. Successful school health programmes ensure better educational outcomes, improved social equity and improved capabilities to handle the adult world.

School Health Program is envisaged as an important tool for the provision of preventive, promotive and curative health services to the population. The states can, in the spirit of the

flexibility of RCH and NRHM, modify the options as per their needs and the available options for service delivery.

#### **4.5.1 Components of School Health Program:**

##### **Health service provision:**

##### ➤ **Screening, health care and referral:**

- ❖ Screening of general health, assessment of Anaemia/Nutritional status, visual acuity, hearing problems, dental check up, common skin conditions, heart defects, physical disabilities, learning disorders, behavior problems.
- ❖ Basic medicine kit to be provided to take care of common ailments prevalent among young school going children.
- ❖ Referral Cards for priority services at District / Sub-District hospitals.

##### ➤ **Immunization:**

- ❖ As per national schedule
- ❖ Fixed day activity
- ❖ Coupled with education about the issue

##### ➤ **Micronutrient (Vitamin A & Iron Folic Acid) management:**

- ❖ Weekly supervised distribution of Iron-Folate tablets coupled with education about the issue
- ❖ Vitamin-A as per national schedule.

##### ➤ **De-worming**

- ❖ As per national guidelines
- ❖ Biannually supervised schedule
- ❖ Prior IEC with intimation to families to bring siblings to school on the fixed day
- ❖ Siblings of students also to be covered

##### ➤ **Health Promoting Schools**

- ❖ Counseling services, Promotion of mental well-being.

- ❖ Regular practice of Yoga, Physical education, health education
  - ❖ Peer leaders as health educators
  - ❖ Adolescent health education
  - ❖ Linkages with the out of school children
  - ❖ Health clubs, Health cabinets, Health jamborees
  - ❖ First Aid room/corners or clinics.
- **Capacity building of teachers and involved health personnel**
  - **Monitoring & Evaluation**

A School Health Programme called 'Jawahar Bala Arogya Raksha' (JBAR) is introduced in Andhra Pradesh in convergence with SSA and Health Department to cover all children in Government, Local body and Govt. Aided Schools / Hostels from Classes I to X from the year 2011-12. The following are the components of Health services covered under this Programme:

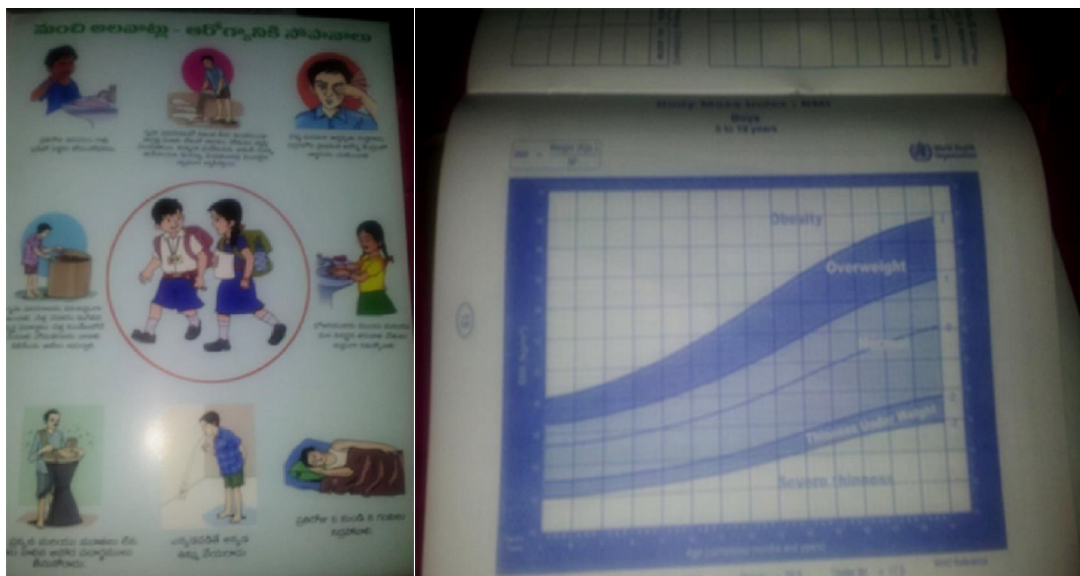
- Screening, Health care and referral
- Immunization
- Micronutrient management like Vitamin A and Iron Folic Acid
- De-worming
- Health promoting schools
- Under the School Health Programme, Rajiv Vidya Mission is taking up 'Eye checkup' for the students. About 5,39,069 students were identified with vision problems and treated. Spectacles were supplied to 1,25,559 students

Stage	Health Check up carried out		Distribution of Iron Folic Acid Tablets		Distribution of De-worming Tablets	
	No. of Schools/Centers	No. of Children	No. of Schools / Centers	No. of Children	No. of Schools / Centers	No. of Children
1	2	3	4	5	6	7
Primary & Upper Primary	78253	4593814	78253	2626242	78253	15950000

õJawahar Bala Arogya Rakshaö has issued õSchool Health cum Education Recordsö (SHERs) to all schools which are being maintained, updated and monitored, jointly, by both Education and Health Department personnel. The mission has observed that the convergence with School Health Programme for supplementation of micronutrients, health check-ups and for supply of spectacles is extremely poor.

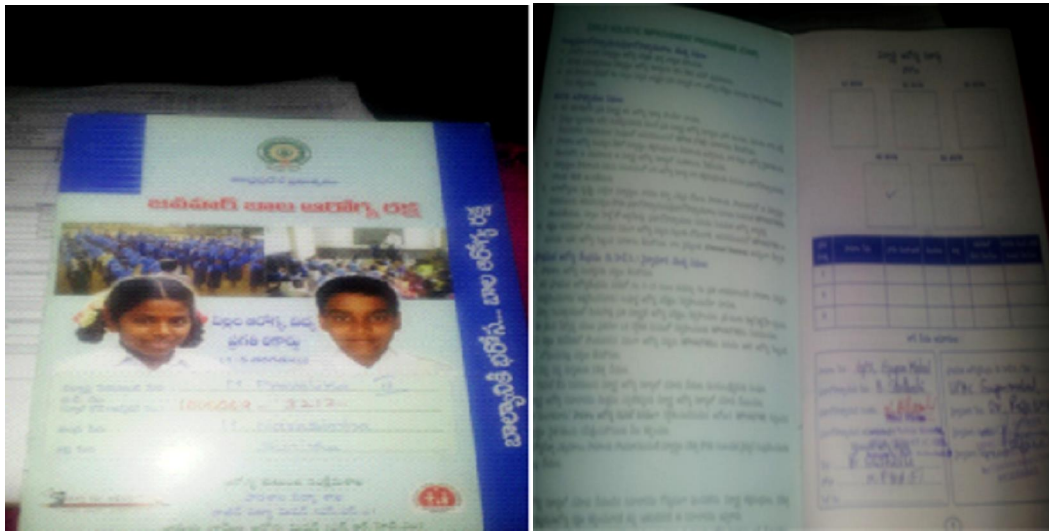
#### 4.6 Some of the major observations in this regard are:-

- a. Most of the visited schools has Individual School Health Cards of students while the health check- up registers are available only in a few schools. In many schools. However, individual health cards are not being maintained properly. Only names of the students are written on it without any mention of their height, weight, health status or any other deficiency or health problem. In the absence of such records, follow up and monitoring becomes difficult.



- b. In majority of the schools, it was reported that the health check-up has not been done for the past one year while in a few schools it was held in the year 2011. The practice of giving deworming tablets to the students every six months was not prevalent in most of the visited schools, however routine medicine of paracetolmol etc has been provided and dental and eye check up has been done occasionally.

- c. Even when deworming tablets and IFA supplementation is given, the teachers are not given any clear cut instructions regarding their intake.
- d. The teachers and the students in majority of the upper primary schools reported that IFA tablets to combat anaemia are given only to the students who are identified as anaemic by the Health Department. Thus, the coverage of the students to combat anemia is considerably less.



The Joint Review Mission recommends that the BMI of the children should be taken regularly on annual basis and the malnourished children should be identified and necessary corrective action be taken.

The mission further stressed and recommends that urgent action be taken for a greater convergence and effective implementation of the School Health Programme so that children could receive vitamin A supplementation as well as IFA as per schedule and their periodic health check ups , necessary referrals and timely corrective measures are requires to be taken to improve nutrition and health status of our school children.

**4.7 Creation of Capital Assets through Kitchen-cum-stores / Kitchen Devices**

Central assistance has been released to the State for the construction of 75283 kitchen-cum-stores. The State has able to constructed only 6578 (9%) kitchen-cum-stores in schools. The



more worrisome is the fact that construction has not even started for 68,705 kitchen-cum-stores due to various reasons like non-availability of land, increase in the construction cost etc.

In Hyderabad district all the schools are covered by the centralized kitchen of Naandi. In Medak district construction has been completed for only 702 kitchen-cum-stores against the sanctioned 2025, and construction work is yet to start in 615 schools.



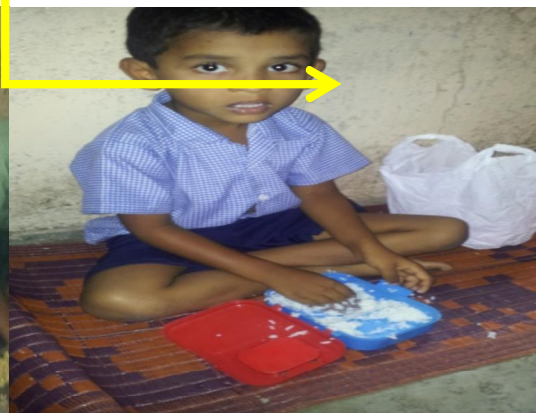
The environment near the kitchen-cum-store are a source of infection to the cooked mid-day meal in GPHS Manoharabad. The school authorities were advised to take adequate steps to ensure that the water does not stagnate near the kitchen-cum-store and create a boundary between the toilets and kitchen-cum-store so that the flies, bacteria/viruses from the toilet do not become source of infection to the cooked mid day meal. The school authorities were also advised to keep the cooked mid day meal away from the toilet area and cover it properly till it is distributed to the children. Kitchen shed was not there in GPHS Manoharabad , GHS Nasarpur , and ZPHS Macharpur. In the school GPHS Manoharabad the cooking was being done in a classroom and it was filled with logs and smoke, it was difficult for the children in the adjoining classes to concentrate on studies due to smoke.



### Kitchen Devices:

The C&DSE, AP, Hyderabad has released an amount of Rs.1,66,75,000/- to Medak district towards the procurement of Kitchen Devices for (3335) schools during the year 2007-08 & 2008-09. The entire amount has been utilized

Joint Review Mission also observed that adequate number of cooking utensils were available in most of the visited schools. However, it has also been noticed that some children are bringing their own eating plates resulting in a lot of variation in the shapes and sizes of utensils and quantity of meal. As seen in picture, many of these eating utensils are not suitable for having meal. Some of the children were found to bring only curd or pickle from home and taking rice from MDM at school and as they did not like the pulses or vegetables served under MDM. (Government Primary School, Dattanagar, Himayatr Nagar)





## Dirty plates



### 4.8 MENU:

Menu is flexible, with cooked rice, dal and vegetables, sambar, *ōPulihoraō*, with egg twice a week and banana to students who do not eat eggs.

Day	Menu
Monday	Sambar
Tuesday	Vegetables
Wednesday	Dal and vegetables
Thursday	Sambar
Friday	Vegetables
Saturday	Dal and vegetables
Egg/banana	Twice a week

The prescribed quantities are as shown hereunder.

S.No	Items	Quantity per Day per child	
		Primary ( IōV )	Upper Primary ( VI-VIII)
1	Food Grains	100 gms	150 gms
2	Pulses	20 gms	30 gms
3	Vegetables	50 gms	75 gms
4	Oil & Fat	5 gms	7.5 gms
5	Eggs/Banana	Twice a week	Twice a week



As per MDMS Guidelines, the menu should be decided by the School Management Committee according to the local taste and availability of local ingredients. The MDM guidelines have not been followed in deciding/prescribing the above menu.

The menu has not been displayed outside the kitchen or at a prominent place in the most of the visited schools. The entitlement of food grain, vegetables, pulses etc have also not been displayed on the walls of most of visited schools. As per the GOI guidelines, certain information should be displayed on a weekly/ monthly basis as *suo moto* disclosure of information under the Right to Information Act.

#### 4.9 Quality and Quantity of foodgrain

The quality of food grain was found to be satisfactory, although it contained higher percentage of broken grains in the rice supplied by Naandi/Akshayapatara. However the rice provided under MDM in Medak district was of relatively better quality in school based kitchens.



Vegetables such as potatoes, onion, etc. are provided twice a week. Green leafy vegetables are also served in the schools during the visit of the Review Mission. On an average the sambar and rice are found to be the staple food. The meals supplied by Naandi are not liked by some children. The quality of dal and sambar provided by Naandi needs improvement. The sambar and dal are being supplied in plastic containers. These needs to be replaced with steel containers immediately. The meal supplied by the Akshaypataraí í í í .

### Meals supplied by Naandi



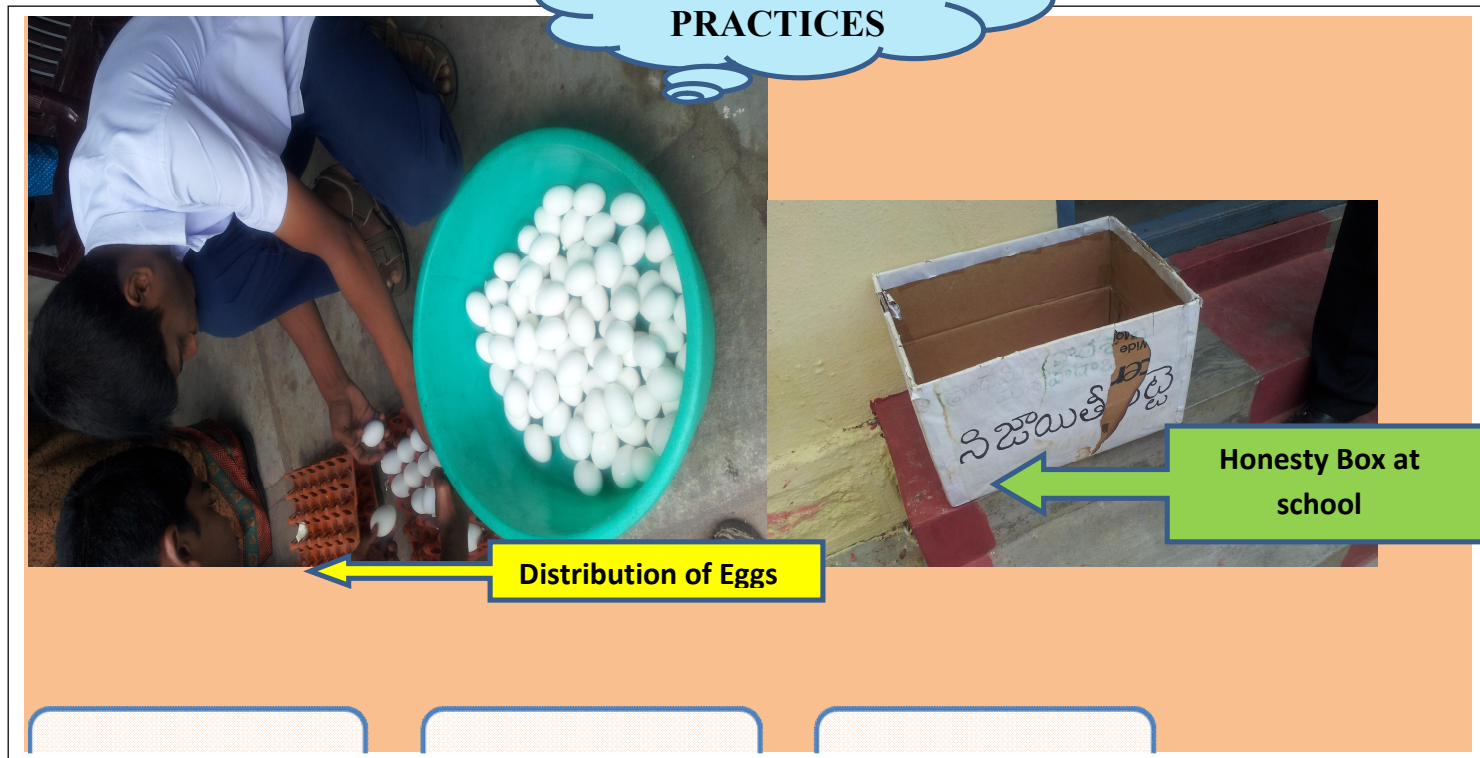
### Sensory Evaluation of MDM

The colour, texture, taste, flavor and mouth feel determine the acceptability of a meal. Salient observations indicated that the texture of rice was not satisfactory and the consistency of dal was



fairly thin in most samples. The sensory characteristics of Sambar and dal was satisfactory in most school based kitchen of Medak district.

### BEST PRACTICES



#### 4.9 Availability of food grains, quality of MDM, regularity in serving MDM

Under this Scheme, the food grains are supplied by Government of India, free of cost, through the Food Corporation of India. The District Educational Officers are nominated as Nodal Officers at District level to execute all the issues pertaining to procurement, lifting, quality of food grains, payment of cost of food grains and submission of monthly reports.

Role of Teachers / Headmasters:

- ❖ Certifies attendance of students
- ❖ Supervises quality of food
- ❖ Ensures Hygienic conditions

Role of teachers:

- ❖ Inculcates good habits
- ❖ Supervises hygiene of students, kitchen and dining areas.
- ❖ Tastes the Food before serving

#### **4.10 Involvement of NGOs/Centralized kitchens in implementation of the Scheme.**

The Review Mission observed that the Centralised kitchen operational by Akshaya Patra is serving MDM in 11 mandals in Medak district and Nandi is serving MDM in entire Hyderabad district. As per MDM guidelines centralized kitchen can serve MDM in the urban areas where construction of Kitchen-cum-stores is not possible. The mission was surprised to notice that centralized kitchen is serving MDM in the schools in Medak district, where proper kitchen sheds, kitchen devices and cook-cum-helpers all are available and on top of this the MDM was cooked in these kitchens up till 2012. It is hard to understand why the school based kitchens are replaced with centralized kitchen. Moreover, the staff of SHGs which used to cook and serve MDM in the schools are now only serving the MDM which is cooked at the centralized kitchen. ***The Mission strongly recommends to discontinue the serving of MDM through the centralized kitchen in the schools where construction of kitchen is possible or where it is already existed and go on with the school based kitchen at the earliest.***

The review mission observed that the traveling time for cooked meal to the schools is upto 3 hours in some cases. Further it was also observed that food preferences changes very much in different parts of city. ***It is therefore recommended to increase the number of centralized kitchen in a manner so that no kitchen will cover more than 20,000 children.***

During its visits to centralized kitchen of Nandi in district Hyderabad it was observed that the premise is large and there is enough space for preparing food for the children of Hyderabad city. However the maintenance, mechanization as required for such large kitchens, operating procedures leave a lot to be done. The utensils which are used for distribution of MDM to schools were washed in a large shed on return from schools but there seems be no system of placing them in order or shifting them to indoor storage. This leaves the vessels outside in the

open for a considerable length of time and gives room for any form of contamination or dust flying into them.

Standard Operating Procedures on storage and handling requires to be followed. If necessary the functionaries of centralised kitchens should undergo this training and this should be strictly adhered to. They mentioned that pest control is done twice a week but this will not prevent rodents & other creatures from wandering into the easily accessible storage areas. All food grains, spices and edible items need to be kept covered and labeled.

The Nutritional value of food served in schools left a lot to be said. There was no aroma of any spice, was dry and the dal lacked any flavour. The flavoured rice served on two consecutive days had only pieces of potatoes and some carrots.

The Second NGO kitchen visited was that of Akshaya Patra at Patancheru Medak. This kitchen works under severe space crunch hence dirty and unhygienic. This kitchen revealed the presence of some vegetables. The rice made on the day of the visit had an odd smell and butter milk was watery, smelling sour. This NGO kitchen needs more mechanization and sanitation.

They are providing some additional items to children in the form of sweet pongal, peanut and jaggerychikkis, black gram sundal, buttermilk and pickles as they do not serve egg and showing them as 'NGO contribution' which is false as they are getting additional Rs.1/- for eggs, from Government of Andhra Pradesh.

The ratio of rice and dal in the dry khichdi served on the day of the visit seemed very inadequate though their recipe mentions 35kgs of dal to every 100kgs of rice.

Their food distribution system requires an overhauling to ensure that food reaches school between 11:30 am & 12:45 pm instead of arriving at the school gate at 7:45 & 8:00 am.

Though this appears a little less business oriented this group also has to improve the taste and Nutritional value of what it provides and follow greater hygiene practices and proper timing of supplying Mid Day Meal to Schools.

The record maintenance was very poor at the centralized kitchen at Medak district, and the managers at the kitchen could not show any record related to Mid day Meal.

#### **4.11 Management Information System (MIS):**

Web portal was launched by the GoI for monitoring the Mid-day meal scheme on real time basis. In this connection, the state had also organized a two days orientation for district and mandal level officials. The data entry in MIS portal of MDM scheme is being done by hiring the data entry operators.

At the State level only one Data entry operator is working but 3 computer systems with two printers are available in MIS unit, out of which only one computer system is having internet facility. In the sample districts visited by JRM, it is noticed that only one data entry operator is working in Hyderabad DEO's office. Where 2 computers systems installed and similarly the same type of arrangement is observed in Medak's DEO office. Below the district level i.e. Divisional, Mandal level also minimum infrastructure i.e. only one computer and one operator are available. At the school Point there is no computer facility to up load the information. The Data available at various levels is having lot of gaps and discrepancy. No proper management of data and records is found in some of the visited schools in Hyderabad and Medak districts.

Coming to Management of Data on MDM of Centralized kitchen in both the districts reveals that the DEO office is not having proper records and checks and as a result the implementation of the scheme is poor and ineffective.

On the whole it observed that MIS unit right from State level to School complex level is not having proper infrastructure as well as personnel to manage the system. The available staff is also not having requisite capabilities to handle the MIS.

#### **4.12 Community Participation in MDM:**

For effective and better implementation of a social scheme Community participation is an essential tool. In Hyderabad the MDM is being served by Naandi Foundation through its Centralized Kitchen. It is observed that there was no community participation in monitoring of the meals prepared and served at the school point. The children do not have any idea about what is going to be served on a particular day under MDM through the centralized kitchen. Menu and

entitlements of the children under MDMS were not displayed at a prominent place in most of the schools. For a programme like MDMS advocacy holds utmost importance and the information and norms of the scheme should be displayed prominently as per the MDM guidelines. It has also been observed that the key functionaries of MDM i.e. Dy. Education Officers and Head teachers in most of the schools were not aware of the entitlements of the children under MDM.

In Medak district, where MDM is being served by NGO (Akshayapatra) as well as by Self Help Groups through school based kitchen, also the scenario regarding community participation in supervision and management of MDMS is also very low like Hyderabad. Most of the children and parents are not aware about the menu and entitlements.



## CHAPTER : 5

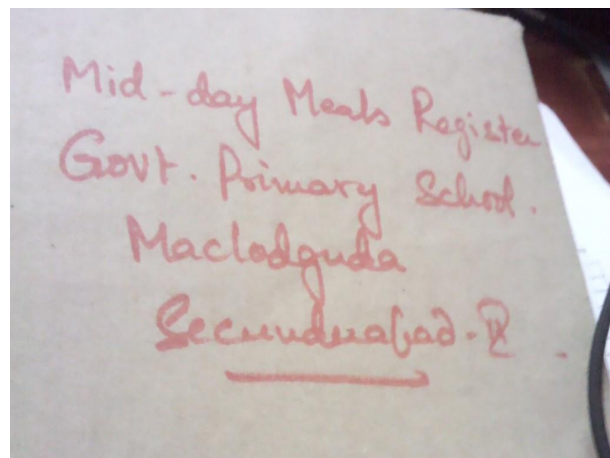
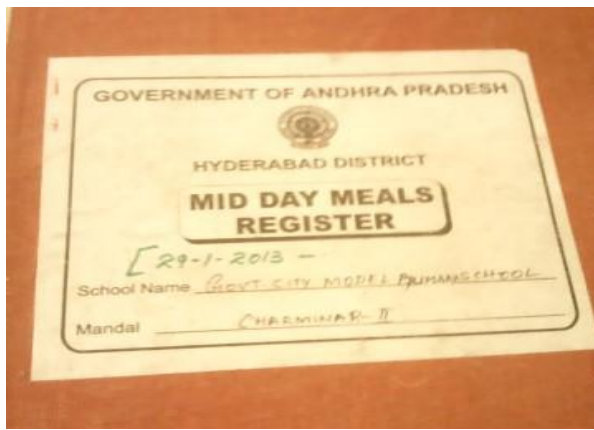
### Observations from the field

The MDM in Hyderabad district is supplied by Naandi Foundation to all the schools in the district and Akshaya Patra in 11 mandal of Medak district, rest of the Medak district is covered by SHGs through school based kitchens.

#### 5.1 Maintenance of Records:

It is noticed that the visited schools are not maintaining their records properly i.e. the general attendance register and MDM register. In Hyderabad district it is found that despite of having MDM registers they are not maintained properly, precisely to say that the entry of the students availing MDM happens to be same in the registers for the last six months. It is also found that there is a mismatch of the students availing the MDM and indent given by the school authorities to the Naandi foundation for supply of meals. In Hyderabad district, the fortnight figure of the students present is taken as the average number to supply of the meals to the schools those availing MDM. It came to knowledge during interactions with the children that the number of children availing MDM increase sharply on the days eggs or bananas are served and due to which the indented meal could not be sufficient for the increased number of children.

Medak district: In the visited schools some schools are maintaining registers for MDM prepared by their own as they have not yet received the formatted registers as given to their counterparts in Hyderabad. The records are maintained poorly in the mandal where Akshaya Patra is supplying the food. However, the records were maintained satisfactorily in most of the schools having school based kitchens.



MDM Register issued by the department to all the schools in the district where as it is notice that the ordinary book MDM register is maintained in the same district rather than the prescribed register

GOVERNMENT OF ANDHRA PRADESH - SCHOOL EDUCATION DEPARTMENT MID DAY MEALS SCHEME - HYDERABAD DISTRICT							
Sl. No.	CLASS	I	II	III	IV	V	TOTAL
01.	Class						
02.	Total Enrollment	09+20	17+27	30+16	35+32	18+21	91+116 207
03.	No. of Students Physically Present	08+17	16+12	15+12	18+22	16+18	73+85 158
04.	Indent Placed for Supply of MDM						21
05.	No. of Students Taken Meals	1/5	2/3	6/4	6/6	9/11	26+25 51
06.	Reasons for not taking MDM by rest of students	Bringing lunch box					
07.	Quantity Supplied Rice @ 100gms						
08.	Whether the Supplied Quantity Consumed or not						
09.	If not consumed left over quantity						
10.	Insufficient quantity supplied						
11.	Food Menu						

GOVERNMENT OF ANDHRA PRADESH - SCHOOL EDUCATION DEPARTMENT MID DAY MEALS SCHEME - HYDERABAD DISTRICT 61							
Sl. No.	CLASS	I	II	III	IV	V	TOTAL
01.	Class						
02.	Total Enrollment	08+20	14+27	20+16	25+31	17+18	86+112 200
03.	No. of Students Physically Present	14+7	15+18	11+11	19+25	15+18	72+78 150
04.	Indent Placed for Supply of MDM						
05.	No. of Students Taken Meals	4/6	4/3	6/6	5/6	4/5	23/22 45
06.	Reasons for not taking MDM by rest of students	Bringing lunch box					
07.	Quantity Supplied Rice @ 100gms						
08.	Whether the Supplied Quantity Consumed or not						
09.	If not consumed left over quantity						
10.	Insufficient quantity supplied						
11.	Food Menu						

Irregularities in register Indent given and meals taken mismatch and also Class wise strength is not entered in the register and indent is not placed

GOVERNMENT MID DAY MEALS SCHEME - HYDERABAD DISTRICT								
Name of the School : G.G.H.S Nallagutta (old)		Date : 05/12/13						
School Code : 1613614		Mandal : Sec'bad						
CLASS	VI	VII	VIII	Sub Total (VI to VIII)	IX	X	Sub Total (IX & X)	Grand Total (VI to X)
Class	VI	VII	VIII	VI to VIII	IX	X	IX to X	VI to X
Total Enrollment	49	36	43	128	37	47	84	212
No. of Students Physically Present	40	29	37	106	33	39	72	178
Incident Placed for Supply of MDM	5	5	5	15	3	-	3	18
No. of Students taken Meals	3	3	3	9	1	-	1	10
Reasons for not taking MDM by list of students	Parents are not willing to take							
Quantity Supplied @ 100gms	yes							
Whether the supplied Quantity consumed or not	Consumed							

As per the records there are 10 students availing MDM out of 212 students and the reasons given are same for the whole month.

NAANDI FOUNDATION MID DAY MEAL PROGRAMME, HYDERABAD.	
WEEKLY MENU	
Monday	: Rice with Curd, Sambar
Tuesday	: Rice with Mix Veg. Kurma
Wednesday	: Rice with Veg. Sambar
Thursday	: Rice with Alu Mutter Curry / Tomato Kurma
Friday	: Rice with Curd Sambar
Saturday	: Rice with Veg. Dal (Palak/Bottle Guard/Cucumber)
<b>Special Rice : (Any Two in a week)</b>	
1)	Sweet Rice
2)	Tamarind Rice with Pickle
3)	Veg. Kichidi with Pickle
4)	Biryani with Sambar / Kurma
5)	Tomato Rice
<b>Add ons : (4 Times in a month)</b>	
1)	Butter Milk / Egg
2)	Fruit/Biscuits
<b>Note :</b> There might be last minute changes in the Menu which may arise due to unforeseen circumstances (Eg. Sandh / Non-availability of Vegetables, etc.)	
Sd/- Manager NAANDI FOUNDATION	

The menu displayed by Naandi foundation does not include the logo of MDM and emblem of Government of Andhra Pradesh

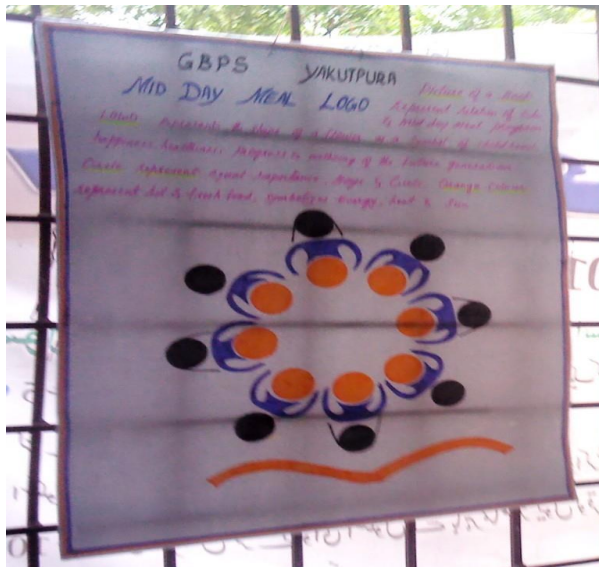




### FOOD NORMS FOR MID DAY MEALS

Sl.No.	ITEMS	QUANTITY PER DAY	
		FOR PRIMARY SCHOOLS	FOR UPPER PRIMARY SCHOOLS
1.	FOOD GRAINS	100 gms.	150 gms.
2.	PULSES	20 gms.	30 gms.
3.	VEGETABLES	50 gms.	75 gms.
4.	OIL & FAT	5 gms.	7.5 gms.
5.	SALT & CONDIMENTS	As per Need	As per Need

Logo of MDM is painted on the wall of the school without display of menu the Flexi banner of the menu placed just before the visits of JRM in chavani.



(MDM logo on paper chart not on the wall)

GOVERNMENT OF ANDHRA PRADESH - SCHOOL EDUCATION DEPARTMENT  
MID DAY MEALS SCHEME - HYDERABAD DISTRICT

Date: 12-6-2020  
Mandal: \_\_\_\_\_

Sl. No.	CLASS	VI	VII	VIII	Sub Total (VI to VIII)	Mandal		Sub Total (IX & X)	Grand Total (VI to X)
						IX	X		
01.	Class								
02.	Total Enrollment	31	27	29	87	23	27	50	137
03.	No. of Students Physically Present	26	21	21	68	16	22	38	106
04.	Identified for Supply of MDM								89
05.	No. of Students Taken Meals								89
06.	Reasons for not taking MDM by rest of students								
07.	Quantity Supplied Rice @ 700gms								
08.	Whether the Supplied Quantity Consumed or not								
09.	If not consumed left over quantity								
10.	Insufficient quantity supplied								
11.	Food Menu Supplied								
12.	Time of Delivery								
13.	Remarks								
14.	Signature of the Class Teacher								

Signature of the \_\_\_\_\_

(Teachers neglect the intake menu for the higher class which is 150 grms and even the HM never checks it)





**5.2 Water facilities:** It is found that most of the schools in Hyderabad district as well in Medak district have drinking water facility under RWS scheme. Some of the schools were also having water filters, sponsored by individuals or through CSR.



*Water purifier is being installed in the school and Unused water cooler and sports material in the school*



*Drinking water tap is constructed by the help of RWS*

### **5.3 Sanitation:**

The toilets are poorly maintained by the school authorities in both the visited districts, where most of the schools toilets with stink. In Medak district even the newly constructed toilets were not in use due to lack of water supply or connection.

It is also noticed that most of the girls don't use the toilets in the schools where they are poorly maintained. "the girl students of ZPHS Ramachandrapuram said that though we complain to the HM but nobody bothers about it they only make it clean once in a month" the toilets in this school were not even cleaned since the reopening of the school on 12<sup>th</sup> June, 2013. It is after an hour of the JRM team visits the school management arranged someone to clean the toilets. When enquired about the situation, the HM said that there are 1000 students in this school as well as there are various buildings in this single premises and we don't even have a fund to make it clean. Later when enquired about the fund it seems that HM is not aware of the grants available in the School.

It is also noticed that there are no proper place for the students to have a meal they all take it in veranda or in open space in the school and throw the leftover haphazardly. There are no pits/dustbins installed in the schools.



*GHMC garbage pit is kept just beside the school wall where as the toilets were locked and one is used by girl students of this school in Sultan Shahi*





*Boys toilet in bad shape in government high school in Sultan Shahi*



*Toilets constructed but locked due to without water in Chinnakodur, Medak district*





*Drinking Water is being purchased from the water plant in the village by using the water card in primary school in chinnakodu mandal*

#### 5.4 Infrastructure:



*The temporary kitchen shed was used earlier by the SHGs in Jannaram Mandal now the meals is supplied by Akshaya Patra*



*Only one school primary school in Nallakunta has the proper MDM hall in the schools visited in both the districts.*





*Students sitting in a disciplined manner to get their meal*



*(A girl child enjoying her meal)*



*(SHGs are still using firewood for cooking they are not supplied with LPG whitewash is not done to this kitchen shed and storage facility in Chinnakodur, Medak District).*

### **5.5 Extra Curricular Activities:**

It is noticed that most of the schools are not having any space for play/sports material with them. Apart from the studies and food a child also needs to be physically strong, for which sports and participating in other activities is very important as it helps in overall development of the child.

### **5.6 Responsibility:**

None of the teacher is taking responsibility for implementing MDM, when they are asked to explain the mismatch of the attendance and MDM register they said *“Sir, I am recently transferred”* and no senior teacher of the school is coming forward to address the problem.

***It is observed that in the schools where teachers are active the MDM is implemented well.***

It is also observed that in ZP High School of chinnakodu mandal, they have a group of 4 students for fifteen days to serve the MDM it is known as students committee for MDM.

### **5.7 Advocacy:**

The team noticed that there is no MDM logo painted in the school building along with menu which is mandatory for the schools those provide MDM. Most of the schools made a make shift arrangement of the logo and menu.

It is observed that the food is supplied too early to the schools by Akshaya Patra even before starting of the school and the container of the meals are kept in the premises without handing over it to the concern in charge.

The print and Electronic Media should be use for advocacy of the programme.

### **5.8 Complaint Mechanism:**

There is no complain readressal mechanism in the schools, the parents don't even complain about the MDM, even the teachers don't bother about it. Each and every school should have a complaint register on which students can register their complaints, if any. This register should be put up in the SMC meeting. This can give more voice for the improvement of quality of food.

The SHGs should be given preference in rural areas as the schools have enough space for kitchen shed, they can even promote Kitchen gardens.

It is found that in last couple of years many schools were forced to shut down because of zero strength. Majority of the children studying in the schools covered under MDM belong to economically poor backward class and due to poor and inadequate infrastructure/ambiance, even these poor parents opting to stop their child to sent school.

In the visited Madrasa most of the teachers and students were not aware of the facilities being provided to them through SSA/RVM however all the children were availing MDM. It is also noticed by the mission that no health cards have been given to the madrasa and no health checkup for the students done. It is suggested that the educational officers should ensure that all madrasas are appraised of the facilities they are entitled to.

## CHAPTER - 6

### Nutritional and Anthropometric Assessment

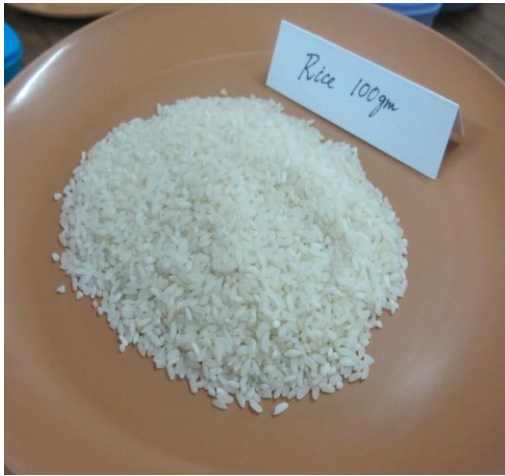
#### 6.1 Average Quantity of Cooked Rice served to Children in the schools (gm)

SL.No.	Classes	As per Norms (cooked rice in grams)	MDM from Centralized Kitchen		MDM from SHGs	
			Served Food (g)	Difference in serving (g)	Served Food(g)	Difference in serving (g)
1	1-5 (Primary)	350	90-150	<200	260-280	<70
2	6-8 (Upper Primary)	575	200-300	<275	290-465	<110

As per the norms the quantity of rice used for primary section is 100grams and 150 grams for upper primary, which amounts to 350g, 575g respectively. It was found that the meal supplied by both the centralized kitchens in Hyderabad and Medak district was served in quantities less than the norms. Though the quantities served in SHG schools was more compared to others, there is still a gap of 70 and 110g respectively even in these schools.

There is great need to see that the quantities served are in the required proportions as per age and care has to be taken to monitor the quantities while serving. MDM in charge has to be vigilant in this aspect.

*Note: 100grms of raw rice when cooked weights about 340-370 grams where as 150 grams of raw rice when cooked weight about 550-585 grams.*



### Observations

- ◆ On an average 40-60% of children in the schools of Hyderabad are taking MDM where as in Medak 85-90% of children are taking MDM.
- ◆ Percent of children taking MDM is more with the SHG kitchens when compared to centralized kitchen.
- ◆ The quantity of food served for children either primary or high school is not sufficient and is not as per the quantities recommended..
- ◆ On the day when interesting food like tamarind rice, vegetable biryani was served, more number of children ate than indented, thus reduce the quantity served for those were regularly dependent on MDM.
- ◆ More than 50% of children come without any breakfast.

### 6.2 Quality of MDM

**This academic year quality of rice is better when compared to previous years.**

- ◆ Frequent complaints of stones in rice.
- ◆ Most often rice becomes lumpy, sometimes uncooked and grainy.
- ◆ Temperature of food in the cans was 45-60°C. most of the time food was either cool or Luke warm when served through central kitchens.
- ◆ Rice from Centralized kitchen in medak smelt slight musty might be due to not washing rice.

- ◆ Vegetables like potato and carrots are not peeled leaving behind mud, bruised and decayed portions.
- ◆ In centralized kitchen Hyderabad an even and irregular cutting of vegetables lead to mashy vegetable curry / sambar / Dalcha which is not relished by children.
- ◆ Use of too many vegetables either in vegetable fried rice or in kurma/ Dalcha/ Sambar will cause monotonous taste and flavor to the rice and curry and children might lose interest.

### 6.3 Nutritional Concerns

- ◆ Except on the days of egg, dhal, the rest of the days children are not getting the expected protein owing to the quantity of dhal used and the quantity eaten by the child specially with food from centralized kitchens.
- ◆ In general no child is getting the entitled 1/3 requirement of calories or protein from the school lunch because of inadequate serving and the bulk of food in the case of young children.
- ◆ In both the centralized kitchens of Hyderabad and Medak respectively the cooking water/ starch water is drained off which leaches away the most essential B vitamins that dissolve in the cooking water.
- ◆ Where ever kitchens are not constructed, the SHGs are cooking food in the open area the possibility of dust and leaves falling in to food cannot be ignored.

### 5.4 Kitchens

- ◆ The consistency of dal/sambar is varied from can to can from a watery consistency to thin dhal to thick dhal. Proper blending before delivering into the cans should be ensured.
- ◆ In centralized kitchens Hyderabad washed cans without lids kept upside down on the floor, which is not hygienic.
- ◆ More mechanization for cooking and delivering in to the cans will ensure uniform consistency of food.
- ◆ There is no control on quantity of food in cans distribution according to number of children in schools.

## 6.5 Nutritional status on Sub sample of School Children Availing MDM

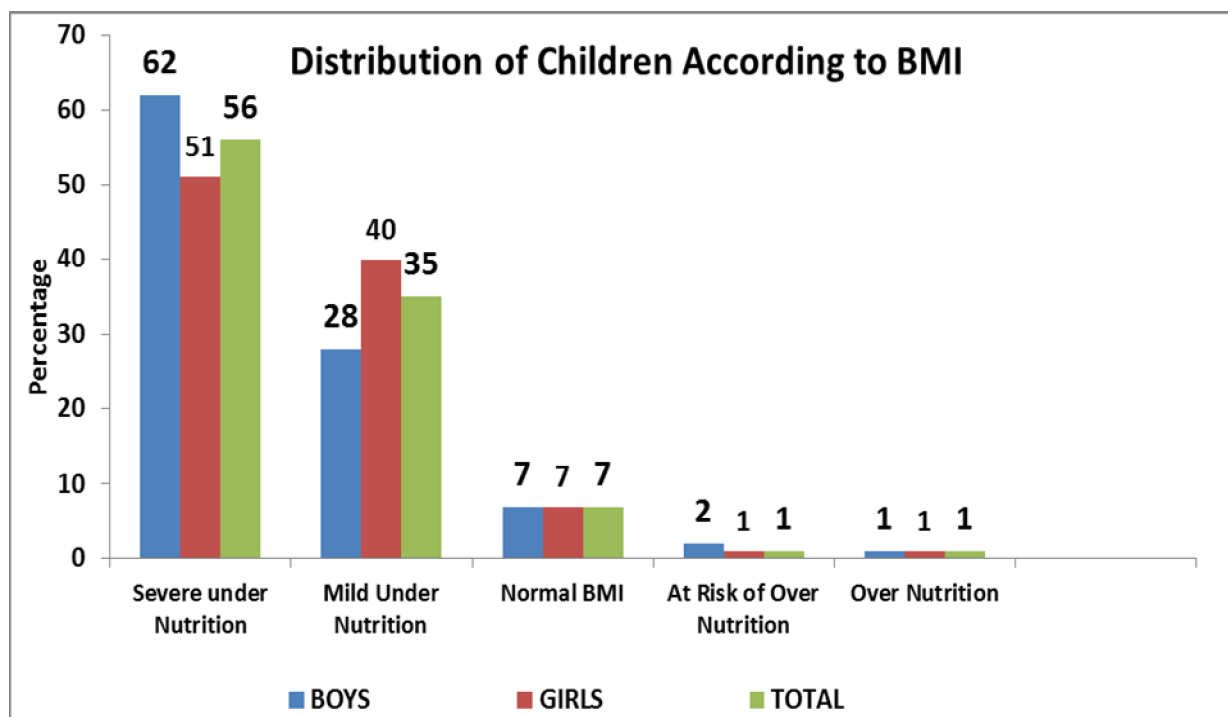
Nutritional status of children was assessed through anthropometric measurements of Weight, Height & BMI. The mean height and weight of children from I to VIII class is given in Table 1 along with standard deviation.

**Table: Anthropometric data of School Children**

Age	Boys			Girls		
	Height (Cm)	Weight (Kg)	BMI	Height (Cm)	Weight (Kg)	BMI
4yrs	104±11	13±2	12±2	103±7	13±3	13±1
5yrs	114±7	17±3	15±5	106±7	15±2	13±1
6yrs	116±7	17±2	13±1	143±7	17±4	13±2
7yrs	117±8	19±5	14±2	19±10	20±5	14±2
8yrs	120±18	20±5	13±2	124±7	21±4	13±2
9yrs	130±7	23±4	14±2	128±7	22±4	14±3
10yrs	131±16	24±6	14±3	133±8	26±5	15±3
11yrs	139±8	28±6	15±2	139±8	28±7	14±2
12yrs	15±2	142±9	30±7	143±8	33±9	18±15
13yrs	147±9	35±6	17±3	147±9	35±6	17±3
14yrs	149±3	36±3	17±2	147±7	36±8	16±3
15yrs	138±138	24±24	13±13	153±3	41±6	18±3

The average values of height, weight and BMI were too low compared to the reference values for the respective ages. The BMI of children was distributed in the WHO percentile tables and are given in figure 1. It was observed that as many as 56% of children were malnourished, while 35% are in mild under nourished condition. Only 7% of children are having normal BMI.

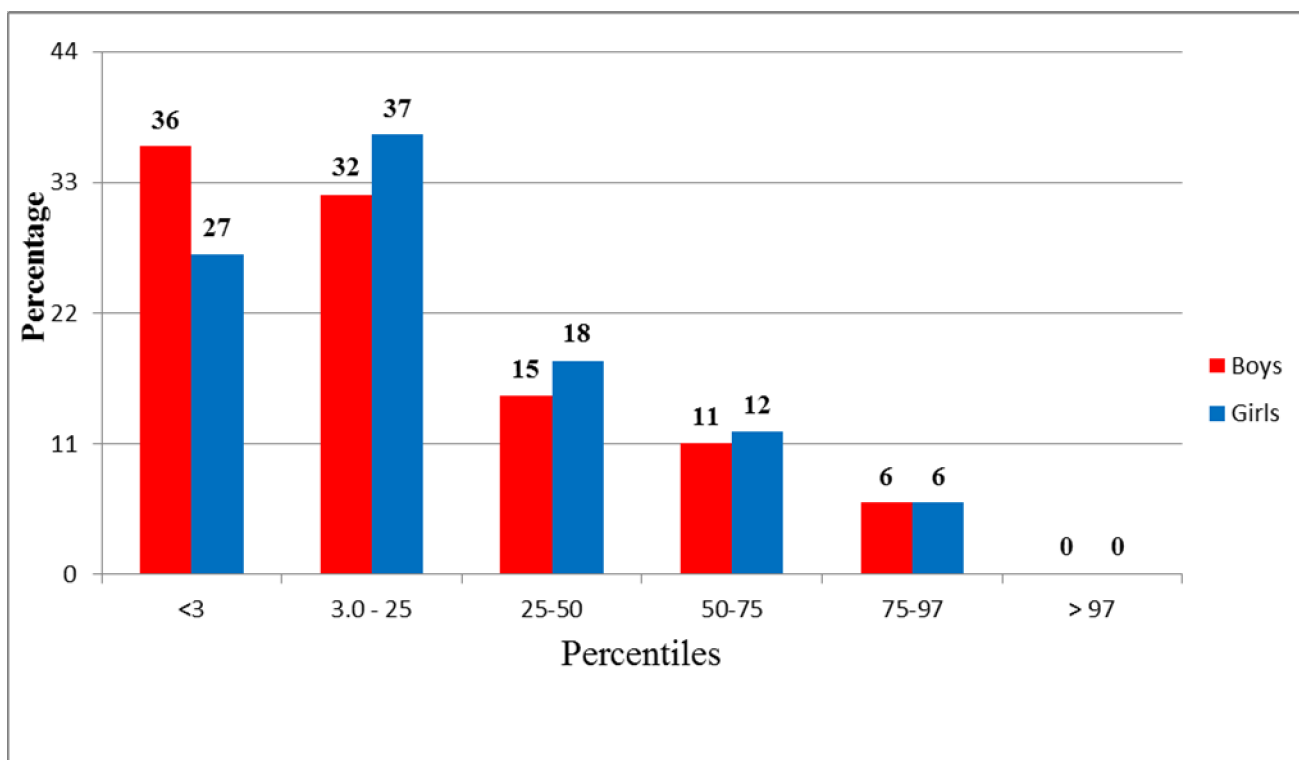




The weight and height for age of children from all age groups were plotted in the WHO classification of percentiles and gender wise number of children falling under each percentile is given in tables 2 and 3 respectively and the percent figures are shown in figures 2 and 3.

**Table DISTRIBUTION OF CHILDREN AS PER WEIGHT/AGE**

Percentile Classification	Boys		Girls		Total	
	Nos	%	N0s	%	N0s	%
<3	166	36	143	27	309	31
3 - 25	146	32	199	37	345	35
25 - 50	67	15	98	18	165	17
50 - 75	49	11	63	12	112	11
75 - 97	26	6	30	6	56	5.5
> 97	1	0	2	0	3	0.5
Total	455	100	535	100	990	100

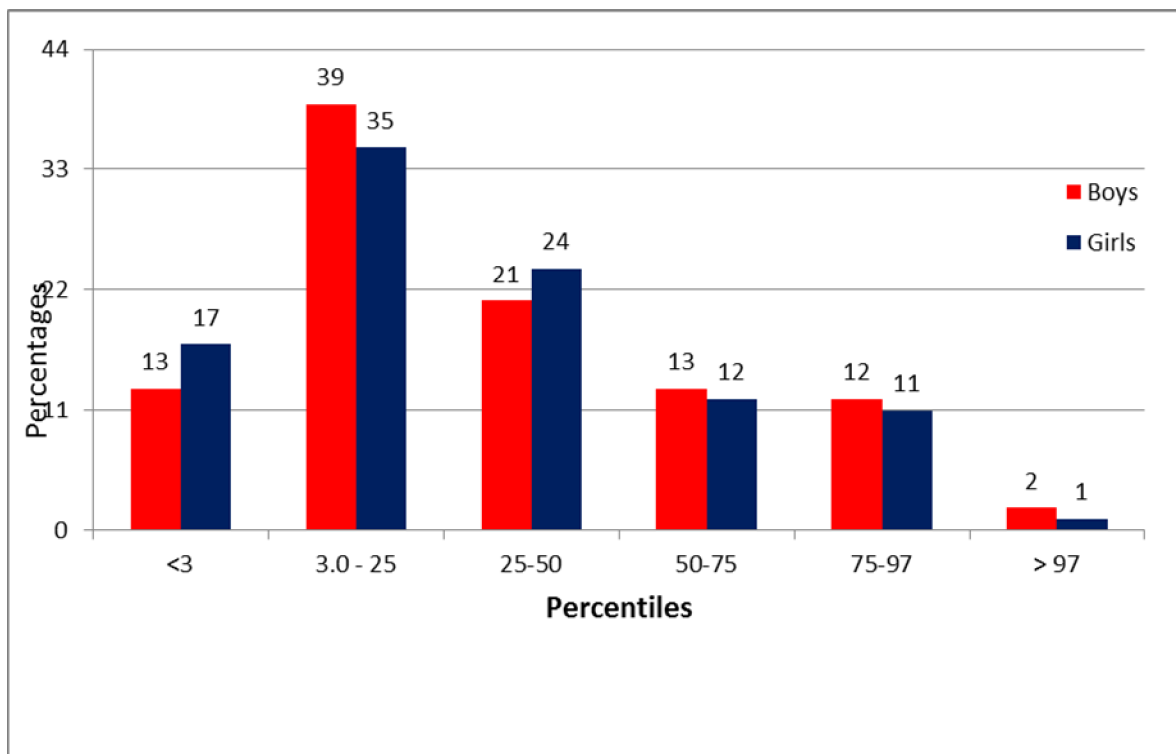


**Fig : Distribution of children as per Weight for Age**

Nearly 1/3<sup>rd</sup> of boys or girls were in the weight for age percentiles of <3 and 3-25, indicating that majority of the children are low in weight for their age and amounts to a z score of -2 to -3 standard deviation. very less percent of children were in the ideal weight for age range.

**Table : DISTRIBUTION OF CHILDREN AS PER HEIGHT/AGE**

Percentile	Boys	%	Girls	%	Total	%
<3	57	13	90	17	147	15
3-25	176	39	187	35	363	37
25-50	96	21	129	24	225	23
50-75	58	13	65	12	123	12
75-97	57	12	57	11	114	11
>97	11	2	7	1	18	2
<b>Total</b>	<b>455</b>	<b>100</b>	<b>535</b>	<b>100</b>	<b>990</b>	<b>100</b>



**Fig: DISTRIBUTION OF CHILDREN AS PER HEIGHT/AGE**

Height for age percentiles are slightly better compare to Wt/age in that there are less number of children in <3 percentile. But the number of children in the 3-25 percentiles are quiet high indicating low height for age caused by inadequate nutrition of protein. The situation of malnutrition both from the angle of height and weight for age could be attributed to low intake of both calorie and protein foods which is due to irregular or no breakfast as orally expressed by the children, meager or inadequate intake of lunch and in general poor intake of food at home. From the health records of a few schools, it was observed that children are suffering from anemia.

## **Suggested New Recipes for MDM suitable for Andhra Pradesh**

### **6.6 TAMARIND RICE (WITH SPICY DAL POWDERS)**

#### **Ingredients:**

**Rice-**

**Tamarind Extract seasoned-**

**Roasted Bengal gram-**

**Groundnut Powder-**

## **Oil-**

METHOD: Cook the rice. Make required amount of tamarind extract both of them well add salt to taste, turmeric, season with spices in oil them add to rice finally mix well with mixture of groundnut / bengalgram, jeera / cumin powder to the rice.

## **6.7 HOT PONGAL WITH BENGALGRAM CHUTNEY**

### **Ingredients:**

#### **Rice-**

#### **Greengramdal-**

#### **Spices-**

#### **Oil-**

METHOD: Season the spices with oil to that add water bring it to boiling then add rice, green gram dal, add salt to taste let it cook for 15-20mins.

### **BENGAL GRAM CHUTNEY:**

#### **Ingredients:**

#### **Bengalgram-**

#### **Chillies-**

#### **Salt-**

METHOD: Take roasted Bengal gram add chillies ,required amount of water and salt to taste then grind all of them together.

### **6.8 PEAS PULAV:**

#### **Ingredients:**

#### **Rice-**

#### **Peas-**

#### **Salt-**

**METHOD:** First soak the peas and keep aside. Add oil , required spices, peas, ginger garlic paste mix well finally add water and rice, cook for 15-20mins.

### **6.9 RICE WITH SOYAGRANUEL CURRY:**

**Ingredients:**

**Rice-**

**Soya granules-**

**Carrot-**

**Potato-**

**Ginger garlic paste-**

**Spices-**

**Oil-**

**METHOD:** Add oil, spices ,onion, ginger garlic paste, vegetables, turmeric powder add soya granules(10-15mins) then a cook till soft add chili powder, salt and masala.

### **6.10 SWEET PONGAL**

**Ingredients:**

**Rice-**

**Greengramdal /Bengalgramdal/milk powder-**

**Jaggery-**

**Fat-**

**METHOD:** Boil rice and pulse (green/bengalgramdal) in water after soft cooking add jaggery mix well and cardamom powder.

### **6.11 RICE WITH EGG CURRY:**

**Ingredients:**

**Rice-**

**Eggs-**

**Onion-**

**Chilies-**

**Ginger garlic paste-**

**Chili powder-**

**Turmeric powder**

**Salt-**

**Oil-**

**METHOD:** Boil the eggs keep aside. Add oil, onions, chilies, ginger garlic paste then add turmeric, salt mix well then add boiled eggs with a slit on sides then finally add chili powder.

## **6.12 RICE WITH CABBAGE CURRY**

**Ingredients:**

**Rice-**

**Cabbage-**

**Bengal gram dal-**

**Chilies-**

**Onion-**

**Turmeric-**

**Chili powder-**

**Salt-**

**Oil-**

**Spices-**

**METHOD :** Soak Bengal gram dal keep aside, Add oil, spices, chilies, onion, turmeric, salt ,then add soaked Bengal gram dal cabbage close the lid cook it finally add chili powder.

## **6.13 PALAK RICE WITH KABULLI CHANNA:**

**Ingredients:**

**Rice-**

**Spinach-**

**Kabulli channa-**

**Salt-**

**METHOD:** Soak channa over night keep aside. Blanch spinach make it a puree. Add oil and spices take require amount of water to that add spinach puree, soaked channa, rice, salt and cook for 15-20 mins.

#### **6.14 RICE WITH CLUSTER BEANS CURRY:**

##### **Ingredients:**

**Rice-**

**Cluster beans-**

**Onion-**

**Chilies-**

**Salt-**

**Turmeric-**

**Chili powder-**

**Roasted bengalgram powder-**

**Oil-**

**METHOD:** Add water and salt boil till cooked and keep it aside. Add oil, onions, chilies, turmeric add cooked cluster beans cook for sometime , add chili powder and then finally add roasted Bengal gram powder mix well.

#### **6. 15 BISIBILIBATH:**

##### **Ingredients:**

**Rice-**

**Redgramdal**

**Beans-**

**Carrot-**

**Curry leaves-**

**Salt-**

**Tamarind-**

**Spices (masala)-**

## Oil-

MEATHOD: Extract tamarind juice and keep it aside now add it to required amount of water taken for cooking rice and redgramdal to it add directly vegetables, salt , masala and pressure cook it for 15-20mins.

### Suggested New Recipes for MDM suitable for Andhra Pradesh

S.No	Standard Recipe	Value addition	New Recipe	Remarks
1.	Tamarind rice	Spicy masala Bengalgram powder/groundnut powder	-	To replace the pickle intake. To substitute protein spicy dhal powders were incorporated
2.	Hot Pongal	Hot Pongal with Bengalgram chutney	-	It will meet protein requirement of children
3.	-	-	Peas pulav	Adds new variety and taste
4.	-	-	Rice with Soya granule curry	High in protein and new variety for children
5.	Sweet pongal	Green gram dhal/Bengal gram dhal/Milk powder	-	To meet the requirement of both calories and protein and new variety for children
6.	Rice, vegetable curry and boiled egg.	Egg vegetable curry	-	Boiled egg is monotonous.
7.	Rice and dhal	Cabbage with Bengal gram/green gram dhal	-	Good combination of protein with vegetable.
8.	Rice and vegetable curry	Cluster beans with roasted gram dhal powder	-	Good combination of protein with vegetable.
9.	Rice and palak dhal		Palak rice with kabulli chana	New combination rich in vitamins and protein
10.	Tomato rice		Bisibilibath	Rich in protein along with good amount of vegetables.

The table indicates the recipes that are suggested for MDM. The standard recipes were value added with pulses New recipes also suggested to change of monotonous menu and also to add variety and improve the quality of nutrition and to balance cereal and pulse ratio.



## CHAPTER: 7

### RECOMMENDATIONS AND SUGGESTIONS

#### i) MENU AND RECIPES

- a) Recipes for quantity food production of each dish should be standardized. Such standardized recipes should be provided to each NGO/kitchen supervisor.
- b) The portion size of each dish to be served to primary and upper primary students should be standardized and this information should be communicated to all school authorities.
- c) Use of iron, calcium and vitamin A-rich vegetables should be encouraged.
- d) Use of seasonal low cost unconventional foods should be promoted. Home Science based colleges may be involved for developing and popularizing such recipes.
- e) Fermented or sprouted foods must be incorporated at least once a week.

#### ii) FOOD SAFETY (in case of centralized kitchen):

- (a) All kitchens must follow the principles of HACCP (Hazard Analysis Critical Control Point) to ensure that compromised quality food products are not prepared and food related hazards do not occur.
- (b) Insulated transportation vans or Insulated containers should be used by the food suppliers so that food temperature can be maintained above 70<sup>0</sup>C which would minimize the risk of microbial contamination during transportation and storage.
- (c) Safe drinking water must be used for food preparation. A suitable water purification system must be available in all kitchens.
- (d) The primary (bulk) containers should be preferably sterilized before packing food. This would minimize the risk of food infection outbreaks especially during rainy season.

- (e) A duty roaster for periodic cleaning of kitchen fixtures/equipment etc. must be prepared and put up on a wall outside kitchen.
- iii) Placing of indent on the basis of attendance in case of meal serving by the centralized kitchen.
- iv) Discontinuation of serving of Mid Day Meal by centralized kitchen in the schools in rural areas where Kitchen sheds are available or there is enough space for construction of kitchen-cum-stores.
- v) Students have to stand in a line to take food in some schools and mostly the small children were pulled aside by which they sometimes don't even take and bring lunch boxes from home the .The food distribution system could be streamlined across the state for efficiency.
- vi) Vegetables and pulses should be added daily in the mid day meal as per prescribed under MDM guidelines. The meals should be more nutrient dense and nutritionally balanced. Inclusion of higher amounts of non tuber vegetables is recommended. The School Management Committee may be authorized to decide the menu according to the availability of local ingredients and the liking of the school children.
- vii) Setting up of Management Structure at State, Districts, and Mandal levels:**
- a) Setting up of structure as proposed by Review Mission
- b) Filling up of posts on deputation/contractual basis.
- c) Providing mobility facilities to the officers at various levels.
- d) Provision of CUG mobile connection etc to the officials
- viii) The gunny bags can be auctioned and the amount can be utilized for better Implementation of the MDMS.
- ix) Strengthening of monitoring**
- a) Use of the Management Information System (MDM MIS) launched by MHRD.

- b) The meetings of the District and Mandal Level Steering-cum-Monitoring Committee should be held at regular intervals as per the MDMS Guidelines.
- c) Exposure visit - Inter-State exposure visits for officials of State Governments should be mandated to enable them to learn best practices on MDM followed in other States.
- d) Inspections by the officials- Considering that the scheme is not properly monitored in the State, State may ensure that the targeted inspections at different levels are taking place.
- e) Research Study: A research study to understand the current practices in the area of quality.
- f) Setting up of State Review Mission to review the Scheme in a district on bi-monthly basis.

#### **x) Capacity Building and Training -**

The Review Mission recommends the following for capacity building of the stakeholders:

- a) Periodic feedback may be obtained from the stakeholders and other concerned officials/teachers who are engaged at the grass root level.
- b) Awareness and sensitisation of all the stakeholders and officials is also must.
- c) Periodic orientation of teachers, Mandal Education Officers, Dy. Education officers, District Education Officers for proper management and maintenance of accounts and other registers is also very important.
- d) **Community Mobilisation** - Community mobilisation efforts need to undergo a qualitative shift by taking RTE norms into consideration whereby communities are also empowered to monitor the implementation of mid-day-meal scheme. The training of SMC should also reflect specific needs and concerns of mid- day-meal scheme. The training guideline for school based cooking should be different from the centralised kitchens.
- e) **Use of distance learning method** - The Review Mission noted that distance education is a necessary mode for overcoming capacity building and training to functionaries of

the mid-day-meal including cook-cum-helpers. The Mission recommends that the State should utilize EDUSAT facility available at schools to impart training to the stakeholders

- f) Training module and material for imparting training to functionaries at various levels and cook-cum-helpers may be organized in consultation with corporate bodies under Corporate Social Responsibility (CSR).
- g) The curriculum for source books for primary and upper primary levels is prepared by NCERT. The States should now ensure that a chapter on mid-day meal scheme is included in the text books of all classes of elementary school.

**xi) Convergence -**

- a) Improved hygienic practices through education in terms of hand-washing, safe drinking water etc. This will enhance the health benefits of this scheme.
- b) Regular health check up and supply of IFA tablets, Vitamin A, De-worming tablets and spectacles in convergence with School Health Programme of NRHM.
- c) Construction of dining hall in convergence with MPLAD Scheme.
- d) Maintenance of kitchen-cum-store from maintenance grant under SSA.

**xii) Publicity**

- a) Observance of MDM Day and MDM Month.
- b) Adequate advocacy of the scheme with use of an IEC campaign in the State to highlight the scheme, its norms so as to bring in a component of community ownership of the scheme.
- c) MDM logo should also be exhibited prominently in the school.



- d) The rights and entitlement of children and daily menu should be displayed prominently on the outside wall of the schools.
- e) The best performing school at Mandal, district and State level must be awarded.

**xiii) Grievance Redressal Mechanism (GRM)**

- a) Setting up of GRM at various levels.
- b) Suggestion box / complaint register should be kept at a convenient place in the school to enable the visitors to give their suggestion and views for improving the scheme.
- c) A toll free number may be installed for lodging complaints and giving suggestions and it may be widely publicized.
- d) Use of MIS system in online registration of complaints of the stakeholders and its redressal.

**Annexure-I****School wise details of Attendance and Avg. children availed MDM during last ten days****District Medak**

S. No.	District	Name of School	Enrol.	Attendance										Avg. Children availed MDM
				Day-1	2	3	4	5	6	7	8	9	10	
1	Medak	GPHS Kadlakal	247	207	213	207	224	204	204	156	197	197	192	120
2	Medak	PS Kalaka	250	240	245	245	240	235	240	223	220	219	199	231
3	Medak	ZPHS Muppireddypally	74	66	70	69	67	65	67	58	65	66	64	65
4	Medak	MPPS Manoharabad	160	139	137	131	124	125	129	123	123	126	125	128
5	Medak	ZPHS Manoharabad	250	213	204	200	200	196	213	217	231	200	200	181
6	Medak	GHS Nasarpur	96	75	67	61	9	35	76	84	61	76	77	62
7	Medak	ZPGS Toopran	245	207	209	196	212	175	194	200	192	196	126	154
8	Medak	PS Machapur	98	85	91	93	84	90	91	93	92	93	91	90
9	Medak	ZPHS Machapur	90	74	73	70	69	72	69	66	68	70	65	70
10	Medak	PS Peddagokodur	125	121	116	114	117	118	119	120	118	120	121	118
11	Medak	ZPHS Peddakodu	96	87	88	83	85	86	86	91	92	91	87	87
12	Medak	ZPPS R.C.Purum	250	135	141	170	146	162	183	206	210	186	192	173
13	Medak	ZPHS R.C.purum	360	295	353	350	406	427	465	477	509	408	466	83
14	Medak	ZPPS Madhavapuram	144	115	127	129	115	120	111	113	119	121	115	118
15	Medak	ZPHS Madhavapuram	190	175	175	149	158	162	166	141	162	145	163	143
16	Medak	PS R.C.Puram	250	135	141	170	146	167	183	206	210	186	192	173
17	Medak	M.P.P.S.Madharam	140	115	127	129	115	120	111	113	119	121	115	118
18	Medak	PS , Chinnakodur	170	158	130	133	132	137	147	149	178	178	178	131
19	Medak	ZPHS Ibrahim nagar	210	119	157	167	198	190	191	202	198	200	207	181
20	Medak	UPS kasturipalli	70	63	68	68	68	59	70	70	70	70	72	67
21	Medak	ZPHSchinnakodur	275	188	195	212	223	226	243	264	275	272	272	123

**School wise details of Attendance and Avg. children availed MDM during last ten days**

**District Hyderabad**

S. No.	District	Name of School	Enrol.	Attendance										Avg. Children availed MDM
				Day-1	2	3	4	5	6	7	8	9	10	
1	Hydrabad	GHS Golkunda	103	45	73	73	75	69	71	55	66	55	64	54
2	Hydrabad	GPS Golkunda	79	22	39	42	36	32	28	21	12	17	17	26
3	Hydrabad	Kulsumpura High School	516	436	436	397	373	361	376	376	374	288	268	118
4	Hydrabad	GPS Kulsumpura	878	712	704	708	708	708	703	705	702	702	699	424
5	Hydrabad	GGHS Lancer	306	154	203	204	197	196	201	201	182	174	164	74
6	Hydrabad	GBPS Mutadadpura	235	202	189	167	174	168	158	94	117	117	117	105
7	Hydrabad	GPS, Himayatnagar	100	60	69	58	61	60	55	48	34	29	97	35
8	Hydrabad	GHS Nallakunta	77	63	56	50	65	63	51	45	33	28	31	21
9	Hydrabad	GPS Gaganmal	121	72	42	77	74	74	72	68	57	29	23	65
10	Hyderabad	GHS Golkunda	103	45	73	73	75	69	71	55	66	55	64	364
11	Hyderabad	GPS Golkunda	79	22	39	42	36	32	28	21	12	17	17	26
12	Hyderabad	Kulsumpura High School	516	436	436	397	373	361	376	376	374	288	268	118
13	Hyderabad	GPS Kulsumpura	878	712	704	708	708	708	703	705	702	702	699	424
14	Hyderabad	GGHS Lancer	306	154	203	204	197	196	201	201	182	174	164	74
15	Hyderabad	GBPS Mutadadpura	235	202	189	167	174	168	158	94	117	117	117	55
16	Hyderabad	GPS, Himayatnagar	100	60	69	58	61	60	55	48	34	29	97	35
17	Hyderabad	GHS Nallakunta	77	63	56	50	65	63	51	45	33	28	31	21
18	Hyderabad	GPS Gaganmal	121	72	42	77	74	74	72	68	57	29	23	65
19	Hyderabad	GPS Mekelamandi	160	61	62	61	101	104	113	108	118	118	113	95
20	Hyderabad	GGPS, Nallagutta old	207	65	96	61	132	126	139	147	155	150	158	32

S. No.	District	Name of School	Enrol.	Attendance										Avg. Children availed MDM
				Day-1	2	3	4	5	6	7	8	9	10	
21	Hyderabad	Govt.City Model PS,Chaderghat	384	107	59	104	166	190	218	228	254	241	175	83
22	Hyderabad	Govt.City Model HS,Chaderghat	298	104	109	87	182	191	206	202	217	177	162	85
23	Hyderabad	GGPS, Kattel guda,Chaderghat	138	36	28	43	50	60	65	60	59	55	75	38
24	Hyderabad	GGHS,Chowni Nade Ali Baig,Yakuthpura	196	82	105	95	143	142	151	132	139	118		96
25	Hyderabad	GBHS,Sultanshahi, Hyderabad	108	110	103	106	98	103	112	105	88	49	71	83
26	Hyderabad	GBPS, Yakuthpura,charminar,Hyderabad 167-165	170	59	160	140	160	125	116	114	121	118		50
27	Hyderabad	GPS,Talab Mirjumja, sultan shahi,Hyd	88	50	50	59	69	68	76	78	65	20	5	65



**Annexure-III****School wise details of Infrastructure facilities  
District: Medak**

S.No.	Name of the District	Name of the school	Enrol.	Avg. Children availed MDM	No. of CCH	Caste of the CCH	Separate toilet	Drinking water	Fuel	Health check up
1	Medhak	GPHS Kadlakal	247	120	4 female	OBC	Yes	Tap water	Firewood	Yes
2	Medhak	PS Kalaka	250	231	4 female	OBC	Yes	Tap water	Firewood	Yes
3	Medhak	ZPHS Muppireddypally	74	65	2 female	SC	Yes	Borewell	Firewood	Yes
4	Medhak	MPPS Manoharabad	160	128	3 female	OBC	Yes	Tap water	Firewood	Once
5	Medhak	ZPHS Manoharabad	250	181	4 female	OBC	Yes	Tap water	Firewood	Once
6	Medhak	GHS Nasarpur	96	62	3 female	OBC	Yes	Tap water	Firewood	Once
7	Medhak	ZPGS Toopran	245	154	5 female	SC	Yes	Tap water	Firewood	Once
8	Medhak	PS Machapur	98	90	2 female	BC	Yes	Handpump	Firewood	Once
9	Medhak	ZPHS Machapur	90	70	2 female	1 SC,1 OBC	Yes	Tap water	Firewood	Once
10	Medhak	PS Peddagokodur	125	118	2 female	BC	Yes	Tap water	Firewood	Once
11	Medhak	ZPHS Peddakodu	96	87	2 female	SC	Yes	Tap water	Firewood	Once
12	Medak	ZPPS R.C.Purum	250	173						
13	Medak	ZPHS R.C.purum	360	83	NA	NA	NA	NA	NA	NA
14	Medak	ZPPS Madhavapuram	144	118	1	OBC	yes-locked	NO	YES	once in a year
15	Medak	ZPHS Madhavapuram	190	143	1	OBC	NO	Tubewell	YES	once in a year
16	Medak	PS R.C.Puram	250	173						
17	Medak	M.P.P.S.Madharam	140	118	1	OBC	Yes-locked	NO	NO	once in a year

S.No.	Name of the District	Name of the school	Enrol.	Avg. Children availed MDM	No. of CCH	Caste of the CCH	Separate toilet	Drinking water	Fuel	Health check up
18	Medak	PS , Chinnakodur	170	131	2	OBC	Yes	No-Tanker	YEs	once in a year
19	Medak	ZPHS Ibrahim nagar	210	181	3	OBC	Yes	Tap water	YES	once in a year
20	Medak	UPS kasturipalli	70	67	2	OBC	YES	Tube well	YEs	once in a year
21	Medak	ZPHSchinnakodur	275	123	4	OBC	Yes	Tap water	yes	once in a year

**Annexure-IV****School wise details of Infrastructure facilities  
District Hyderabad**

SN	Name of the District	Name of the Mandal	Name of the school	Enrol.	Avg. No. of children availed MDM	Separate toilet	Drinking water	Health check up	SMC constituted Register Maintained for meeting	Inspection
1	Hydrabad	Golkunda	GHS Golkunda	103	54	Yes	Tap water	Once in a Year	Yes	Yes
2	Hydrabad	Golkunda	GPS Golkunda	79	26	Yes	Tap water	Once in a Year	Yes	Yes
3	Hydrabad	Asifnagar	Kulsumpura High School	516	118	Yes	Tap water	Once in a Year	No	No register maintained
4	Hydrabad	Asifnagar	GPS Kulsumpura	878	424	Yes	Tap water	Once in a Year	No	Yes
5	Hydrabad	Golkunda	GGHS Lancer	306	74	Yes	Tap water	Once in a Year	Yes	Yes
6	Hydrabad	Asifnagar	GBPS Mutadadpura	235	105	Yes	Tap water	Nil	Yes	Yes
7	Hydrabad	Himayat Nagar	GPS, Himayatnagar	100	35	Yes	Tap water	Once in a Year	Yes	Yes
8	Hydrabad	Meesheerabad	GHS Nallakunta	77	21	Yes	Tap water	Once in a Year	Yes	Yes
9	Hydrabad	Himayat Nagar	GPS Gaganmal	121	65	Yes	Tap water	Once in a Year	Yes	Yes
10	Hyderabad	golkonda	GHS Golkunda	103	364	Yes	Tap water	Once in a Year	Yes	Yes
11	Hyderabad	Golkonda	GPS Golkunda	79	26	Yes	Tap water	Once in a Year	Yes	Yes
12	Hyderabad	Golkonda	Kulsumpura High	516	118	Yes	Tap water	Once in a Year	No	No register

SN	Name of the District	Name of the Mandal	Name of the school	Enrol.	Avg. No. of children availed MDM	Separate toilet	Drinking water	Health check up	SMC constituted Register Maintained for meeting	Inspection
			School							maintained
13	Hyderabad	Asifnagar	GPS Kulsumpura	878	424	Yes	Tap water	Once in a Year	No	Yes
14	Hyderabad	golkonda	GGHS Lancer	306	74	Yes	Tap water	Once in a Year	Yes	Yes
15	Hyderabad	Asifnagar	GBPS Mutadadpura	235	55	Yes	Tap water	Nil	Yes	Yes
16	Hyderabad	Himayat Nagar	GPS, Himayatnagar	100	35	Yes	Tap water	Once in a Year	Yes	Yes
17	Hyderabad	Musheerabad	GHS Nallakunta	77	21	Yes	Tap water	Once in a Year	Yes	Yes
18	Hyderabad	Himayat Nagar	GPS Gaganmal	121	65	Yes	Tap water	Once in a Year	Yes	Yes
19	Hyderabad	Bokkalapur	GPS Mekelamandi	160	95	Yes	Tap water	Once in a Year	No	No records
20	Hyderabad	Secunderabad -II	GGPS, Nallagutta old	207	32	Yes	Tap and Tube	Once in a Year	yes	No
21	Hyderabad	secunderabad-II GGHS,Nallagutta,old		206	12	Yes-Bad	Tap and Tube	Once in a Year	Yes	No
22	Hyderabad	Secunderabad -II	GPS,Macloedguda	133	49	Yes	Tap water	Once in a Year	No	Yes
23	Hyderabad	Charminar-II	Govt.City Model PS,Chaderghat	384	83	No	Tap and Tube	Once in a Year	Yes	Not regular
24	Hyderabad	Charminar-II	Govt.City Model	298	85	No	NA	Once in a Year	No	No

SN	Name of the District	Name of the Mandal	Name of the school	Enrol.	Avg. No. of children availed MDM	Separate toilet	Drinking water	Health check up	SMC constituted Register Maintained for meeting	Inspection
			HS,Chaderghat							
25	Hyderabad	Charminar-II	GGPS, Kattel guda,Chaderghat	138	38	No	NA	No	No	No
26	Hyderabad	Charminar-II	GGHS,Chowni Nade Ali Baig,Yakuthpura	196	96	Yes	Tap, Hand andTube	Once in a Year	Yes	No
27	Hyderabad	Charminar-II	GBHS,Sultanshahi, Hyderabad	108	83					
28	Hyderabad	Charminar-II	GBPS, Yakuthpura,charminar,Hyderabad 167-165		50	yes	Tap and Hand	Once in a Year	No	No
29	Hyderabad		GPS,Talab Mirjumja, sultanshahi,Hyd	88	55	yes--Bad	NO	Once in a Year	No	No