



# A REVIEW OF EXPENDITURE AND SERVICES OF ICDS IN KARNATAKA

Centre for Budget and Policy Studies, Bangalore with support from Unicef, Hyderabad

# Table of Contents

<b>Acknowledgements</b> .....	<b>3</b>
<b>Abbreviations</b> .....	<b>6</b>
<b>List of Tables</b> .....	<b>8</b>
<b>List of Figures</b> .....	<b>9</b>
<b>Chapter 1: Introduction</b> .....	<b>10</b>
<b>Chapter 2: Literature Review</b> .....	<b>15</b>
2.1 Early Childhood Care and Education - The Need	15
2.2 Research on Nutrition and Children’s Development	16
2.3 Deficits in Early Cognitive and Intellectual Stimulation	18
2.4 Designing Programmes for Early Childhood Care and Education	19
2.5 Review of studies on ICDS	21
<b>Chapter 3: Methodology</b> .....	<b>25</b>
<b>3.1 Sample</b>	<b>25</b>
<b>3.2 Data Collection</b>	<b>27</b>
<b>3.3 Data Analysis</b>	<b>28</b>
<b>Chapter 4: Analysis of Quality of Services (Overall Functioning of the Anganwadi Centres)</b> .....	<b>30</b>
4.1 Status of Anganwadi Infrastructure	30
4.1.1 Status of building ownership	30
4.1.2 Space available at AWCs	31
4.1.3 Availability of water facilities	33
4.1.4 Availability of electricity	35
4.1.5 Availability of toilets facilities	35
4.1.7 Availability of infantometers, adult weighing scales, growth charts and medications	36
4.2 Functioning of the centre	39
4.3 Recordkeeping	40
4.4 Working Conditions of Anganwadi Workers (AWW)	42
4.5 Summary of Findings on Overall Functions of AWCs	43
<b>Chapter 5: Quality of Services Analysis (Supplementary Nutrition)</b> .....	<b>44</b>
5.1 Findings	45
5.1.1 Provisions for SNP	45
5.1.2 Beneficiaries responses on SNP	46
<b>Chapter 7: Analysis of Quality of Services (Health Services)</b> .....	<b>54</b>
7.1 Immunization	54
7.2 Health Check-Ups	56

<b>Chapter 8: Analysis of Quality of Services (Education)</b> .....	<b>57</b>
8.1 Health and Nutrition Education (HNE)	57
8.2 Pre-school education	60
8.3 Early Childhood Care and Education (ECCE) Day	63
<b>Chapter 9: Analysis of Quality of Services (Comparison of Districts on Key ICDS Indicators)</b> .....	<b>64</b>
9.1 Bellary	64
9.2 Chamrajnagar	65
9.3 Haveri	66
9.4 Bangalore Urban	67
9.5 Overall performance of districts based on key ICDS indicators	68
<b>Chapter 10: Budget Analysis: Trends</b> .....	<b>70</b>
<b>Chapter 11: Expenditure Flow</b> .....	<b>80</b>
<b>Chapter 12: Conclusion (Considerations for Revision of Programme and Associated Costs)</b> .....	<b>87</b>
12.1 Identifying key focal areas for the efficient functioning of the programme	88
12.2 Decentralisation and Accountability	90
12.3 Realistic Planning, Avoiding Delays in fund flow and Ensuring Feasibility	93
12.4 Investment in Personnel and Improvements in Worker Service Conditions	94
<b>References</b> .....	<b>97</b>
<b>Annexure</b> .....	<b>100</b>
1. District Demographics	101
2. Field Work Tools	101
3. Chi Square Tables	137
4. Advisory Committee Participants	147
5. Consultation Meeting Participants	148
6. Delay in Anganwadi Salaries (State Component): an Illustration from one Taluk	148
7. Photos from the Field	149

## Acknowledgement

This study would not have been accomplished without the assistance of a number of people from different organizations. First, we would like to thank UNICEF Office for Andhra Pradesh, Telangana and Karnataka for providing financial assistance for the study. We sincerely thank all the members of the organization especially Ruth Leano and Deepak Kumar Dey for helping us throughout our work. A special word of thanks also goes out to Abid Ahmed and Eadara Srikanth (UNICEF / WCD), without their support our study wouldn't have been easy.

Our colleagues at the Centre for Budget and Policy Studies (CBPS) have supported us in various capacities to complete this study. Thyagarajan R merits a special mention for extending himself generously with regard to support in the field. We also place on record our thanks to Harpreet Kaur, Debanita Chaterjee, Shruthi Padmanabhan, Gayathri Raghuraman, Madhusudhan BV Rao and Srinivas Alamuru for their help, at crucial times. Usha P V, Mrinalika Pandit and Ramesh K A for extending required administrative support. We also express our sincere gratitude towards the Rural Development and Panchayathi Raj Department for providing us with the budget data.

We would also like to thank Public and Social Research Center (PSRC) who did an outstanding job in the field for collecting data and being our point of contact in the field.

Furthermore, we are very grateful to Saraswathy Ganapathy, K Vijayanthi and officers of the Department of Women and Child Development as members of the Advisory Committee for guiding us throughout our study. We would also like to thank all participants of our consultation meeting who provided us with valuable inputs (detailed name list in annexure).

We are also appreciative to the respondents who willingly participated in this study and shared their information, views and pertinent experiences with the study team.

### **CBPS Team**

Dr. R Maithreyi

Nakul Nagaraj

Dr. Padmaja Pancharatnam

Nikita D' Cruz

Dr. Praveen S Nidagundi

Dr. Jyotsna Jha

## Abbreviations

ADI	Average Daily Intake
ANMs	Auxillary Nurses and Midwives
APIP	Annual Programme Implementation Plan
AWC	Anganwadi centre
AWH	Anganwadi Helper
AWW	Anganwadi worker
BBMP	Bruhut Bangalore Mahanagar Palike
BMI	Body Mass Index
BP	Blood Pressure
BPNI	Breast Feeding Promotion Network of India
BRGF	Backward Region Grants Fund
CCTs	Conditional Cash Transfer
CDPO	Child Development Project Officer
CEO	Chief Executive Officer
CSS	Centrally Sponsored Scheme
DPT	Diphtheria, Pertusis, and Tetanus
ECCE	Early Childhood Care and Education
ECD	Early Childhood Development
FCI	Food Corporation of India
FGDs	Focused Group Discussions
Gol	Government of India
GoK	Government of Karnataka
GP	Gram Panchayat
HCM	Hot Cooked Meals
HDI	Human Development Index
HNE	Health and Nutrition Education
ICDS	Integrated Child Development Services
IFA	Iron Folic Acid
IIMB	Indian Institute of Management, Bangalore
IIPS	International Institute for Population Sciences
KMF	Karnataka Milk Federation
KOF	Karnataka Oil Federation
LHV	Lady Health Visitor
MDGs	Millennium Development Goals
MIS	Management Information System
MP/MLA	Member of Parliament / Member of Legislative Assembly

MSPTC	Mahila Supplementary Nutrition Production & Training Center's
MWCD	Ministry of Women and Child Development
NCERT	National Council for Educational Research and Training
NFHS	National Family Health Survey
NGOs	Non-government Organisations
NHE	Nutrition and Health Education
NIN	National Institute of Nutrition
NIPCCD	National Institute of Public Cooperation and Child Development
NREGA	National Rural Employment Guarantee Act
NRHM	National Rural Health Mission
PHCs	Public Health Centres
PEA	Public Expenditure Analysis
P&L	Pregnant and Lactating
PSE	Pre-school Education
RDA	Recommended Dietary Allowance
RTE	Right to Education Act
SC/ST	Scheduled Caste / Scheduled Tribe
SNP	Supplementary Nutrition Programme
THR	Take Home Ration
UCs	Utilisation Certificates
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Education Fund
VHND	Village Health and Nutrition Day
WCD	Department of Women and Child Development
WHO	World Health Organization
ZP	Zilla Panchayat

## List of Tables

Table 1	Distribution of AWCs into rural/urban type	26
Table 2	Classification of AWCs by social category	26
Table 3	Distribution of respondents	27
Table 4	Number of AWCs that are rented/ owned /leased across districts	31
Table 5	Fisher's exact test of significance for rented /owned and leased AWCs by district	31
Table 6	Distribution of AWCs according to the space available by district	31
Table 7	Fishers exact test of significance comparing the size of AWCs across districts	32
Table 8	Fishers test of significance comparing size of AWCs across locations	32
Table 9	Number of centres with separate space for cooking, storing provisions and teaching children across districts	32
Table 10	Number of AWCs with a water source within the premise across districts	33
Table 11	Chi square test of significance comparing availability of water facilities within AWCs across districts	34
Table 12	Chi square scores comparing AWCs with water facilities within the premise by AWC type	34
Table 13	Number of centres with water filters across the four districts	35
Table 14	Chi square scores comparing AWCs with electricity across locations	35
Table 15	Number of centres with toilets across the four districts	35
Table 16	Chi square test showing differences in number of centres with usable toilets across the districts	36
Table 17	Number of centres having infantometers across the districts	36
Table 18	Number of AWCs with an adult working scale across the four districts	36
Table 19	Chi square scores comparing availability of adult weighing scales across districts	37
Table 20	Chi square scores comparing AWCs with working adult weighing scales across the districts	37
Table 21	Chi square test of significance comparing AWCs with adult weighing scales across locations	38
Table 22	Chi square test of significance comparing AWCs with IFA tablets by type of AWC	39
Table 23	Beneficiary responses about the duration of AWC remaining open every day	39
Table 24	Average time spent on different activities across the districts	39
Table 25	Chi square scores comparing time spent on various activities across the districts	40
Table 26	Chi square test scores for maintenance of records across the districts	41
Table 27	Chi square test of significance comparing maintenance of records across urban-rural centre types	41
Table 28	Chi square scores comparing maintenance of records across AWC type	41
Table 29	Number of AWWs who have received training for new MIS by district	41
Table 30	Chi square test of significance comparing workers who received training to maintain the new registers across districts	41

Table 31	Workers trained to use the new registers by AWC type	42
Table 32	Chi square test of significance comparing workers who received training to use the new registers AWC type	42
Table 33	Regularity of supervisors' visits across districts	42
Table 34	Chi square test of significance comparing supervisors' visit across districts	43
Table 35	Chi square test of significance for supervisors' visit across AWC types	43
Table 36	Display food menu and matching with what is served/distributed across the districts	45
Table 37	Food menu across the districts based on reports of AWWs and Pregnant and Lactating (P&L) women	45
Table 38	Knowledge of SNP among beneficiaries	46
Table 39	Chi square test of significance comparing beneficiaries education levels	47
Table 40	Regression coefficients for factors affecting knowledge of SNP in Pregnant and Lactating women and Parents	47
Table 41	Beneficiaries responses on regularity of SNP	48
Table 42	AWW responses on delay in food distribution	48
Table 43	Beneficiaries and AWWs responses on sufficiency of food	49
Table 44	Chi-Square test of significance for comparing difference in sufficiency of food reported by parents of children receiving THR and HCM	49
Table 45	Chi-Square test of significance comparing sufficiency of food received reported by all groups of beneficiaries	49
Table 46	Beneficiaries satisfaction with quality of SNP	50
Table 47	Chi square test of significance between parents of children receiving THR and HCM	51
Table 48	Chi square test of significance for quality of SNP reported by beneficiaries	51
Table 49	Chi square test of significance for quality of SNP reported by beneficiaries by AWC type	51
Table 50	Chi square test of significance showing beneficiaries satisfaction with quality of food across districts	52
Table 51	Regression analysis for factors influencing satisfaction with quality of SNP for pregnant and lactating women	52
Table 52	Knowledge of immunization among beneficiaries	54
Table 53	Knowledge of prefixed immunization between beneficiaries	55
Table 54	AWW responses on immunization regularity across District	55
Table 55	Knowledge of Health check up between beneficiaries	56
Table 56	Beneficiaries responses on conducting health check up	56
Table 57	Chi square test of significance with respect to regularity of health check-ups reported by beneficiaries	56
Table 58	AWW responses on organizing VHND across district	58
Table 59	Chi square test of significance on conducting VHND across district	58
Table 60	Chi square test of significance with respect to regularity of VHND across district	58

Table 61	Knowledge of VHND among beneficiaries	58
Table 62	Knowledge of home visit between beneficiaries	59
Table 63	Beneficiaries responses on regularity of Home visits	59
Table 64	Chi square test of significance comparing regularity of home visit reported by beneficiaries	59
Table 65	AWW responses on time spent on home visits across district, urban/rural and AWC type	59
Table 66	AWW responses on topics discussed during home visit across district	60
Table 67	AWW responses on time on PSE activities	61
Table 68	Chi square test of significance comparing AWWs responses on time spent on PSE a across district	61
Table 69	Chi square test of significance comparing AWWs responses on time spent on PSE across centres classified as 'SC/ST' and 'general'	61
Table 70	Chi square test of significance for availability of PSE materials across district	62
Table 71	Chi square test of significance comparing centres that possess both academic and play related materials across districts	62
Table 72	Parents response on regularity of PSE across district	62
Table 73	Parents' response on quality of PSE	63
Table 74	Chi square test significance on respondent knowledge about ECCE day between beneficiaries	63
Table 75	Comparison of districts based on facilities	68
Table 76	Anganwadi sizes in Bangalore Urban	69
Table 77	Anganwadi sizes in Chamrajnagar	69
Table 78	Significant differences across districts on select variables	69
Table 79	ICDS Expenditures (Head of Accounts)	71
Table 80	Quarterly release details for SNP (Haveri)	84
Table 81	Quarterly release details for Additional Honorarium to Anganwadi Workers/ Helpers (Haveri)	84
Table 82	Quarterly release details for Additional Honorarium to Anganwadi Workers/ Helpers (Bengaluru South)	84
Table 83	Chi square test of significance in perception about sufficiency of contingency across districts	85
Table 84	Chi square test of significance in perception about sufficiency of contingency across anganwadi locations	85
Table 85	Chi square test of significance in perception about AWWs using own money across anganwadi locations	86

## List of Figures

Figure 1	Distribution of centres by type of building	31
Figure 2	AWCs with separate room for cooking and provisions by location	33
Figure 3	AWCs with separate room for cooking and provisions by AWC type	33
Figure 4	Distribution of working infantometers by location and by AWC type	36
Figure 5	Distribution of working adult weighing scales by location and AWC type	37
Figure 6	Number of AWCs that have a growth chart across the districts	38
Figure 7	Number of AWCs with growth chart by location and by type	38
Figure 8	Percentage of AWCs with IFA tablets district-wise	38
Figure 9	Distribution of IFA tablets by location and AWC type	55
Figure 10	Pre-fixed immunization day by district	55
Figure 11	Total Expenditure on ICDS	70
Figure 12	Total state expenses per Anganwadi center	72
Figure 13	Ratio of actual expenses to budget estimates	72
Figure 14	Proportion of ICDS expenses wrt Total state budget	73
Figure 15	Proportion of ICDS budgets wrt Total WCD Budget	73
Figure 16	State and Central share in ICDS expenses	74
Figure 17	District sector vs State sector schemes	74
Figure 18	Expenses Based On Components of Scheme	75
Figure 19	Proportion of Infrastructure expenses wrt total ICDS expenditure	76
Figure 20	Expenses on infrastructure	76
Figure 21	Proportion of training expenses wrt total ICDS expenditure	76
Figure 22	Total expenses on training	77
Figure 23	Total expenses on administration and salaries	77
Figure 24	Admin and Salary Expenses per Anganwadi Center	78
Figure 25	Total expenditure on Nutrition	78
Figure 26	Total nutrition expenses per beneficiary per day	79
Figure 27	Flow of expenses	80
Figure 28	ICDS expenditure accounted at different heads	81
Figure 29	ICDS Expenditure Flow: An illustration	82
Figure 30	Food procurement at Haveri district: An illustration	83
Figure 31	Use of contingency fund across districts	85

# Chapter 1: Introduction

Globally, 200 million children under the age of 5 years fail to reach their developmental potential due to nutritional deficits and lack of adequate stimulation (Jolly, 2007). Children, whose earliest years are afflicted by hunger, illness and lack of appropriate stimulation are found to suffer greater disadvantages throughout life (Young, 1996). These children are more likely to perform poorly at school, drop out, remain functionally illiterate and lack the appropriate skills for attaining full employment (ibid).

Thus, policy makers, along with health, nutrition and education experts have strongly advocated for early childhood interventions to improve children's health, nutrition and education. Early Childhood Development (ECD) programmes are often cross-cutting, covering the domains of health, education and child protection and welfare (Britto, Yoshikawa & Boller, 2011). ECD programmes have shown to improve children's school readiness, as well as produce better returns on investments in primary schooling and human capital formation, thereby lessening social welfare expenditure and behavioural problems (Young, 1996).

Despite its instrumental position in preventing irreversible damages with regards to development, the reach of programmes targeting child development has been dismal. It has been pointed out that the group that could benefit most from such programmes suffers impediments in access due to household risks or structural barriers to access (UNESCO, 2007; as cited in Britto et al., 2011). However, in the past, ECD programmes have also accorded disproportionately higher attention on building access with little emphasis on quality. This has particularly been an issue for low and middle income countries

that have failed to achieve desired child and family outcomes due to poor quality of such programmes (Britto et al., 2011). Thus, current thinking on ECD takes both access and quality to be key parameters in assessing equity with regards to ECD programmes.

Research has also illustrated the need for a multi-dimensional, comprehensive ECD programme that focuses on areas such as health, education, protection and welfare. It is argued that a holistic approach to ECD is central to achieving its goals rather than a shifting focus from health to education from 0 to 3 years (Odom, Bryant & Maxwell, 2011). However, this is very rarely achieved. Britto et al. (2011, p.6) have noted that "Most ECD health programs remain focused on child survival and physical health rather than holistic approaches including cognitive stimulation and support for socio-emotional development." India may be at an advantage on that front with its Integrated Child Development Services (ICDS) programme, which has been conceived to impact multiple areas of child development. Yet the potential of this programme is underachieved, as will be shown in the discussion that follows.

## Integrated Child Development Services

The Integrated Child Development Services (ICDS) is the flagship programme of the Government of India (GoI) on Early Childhood Care and Education (ECCE). ICDS was started in 1975 with the aim of preventing child malnutrition and morbidity through comprehensive healthcare, nutrition and education for the mother and the child. Having initially started in 33 community blocks across the country, the programme currently covers 7075 blocks with a total of

13,46,186 anganwadi centres catering to a total population of 10,22,33,029 children and mothers today.

While initially the programme covered specific marginalised and disadvantaged groups, since 2008-09 it has been extended to all children between 0-6 years. Within this total pool of children between 0-6 years, focus is especially given to children between 0-3 years, as this is the period identified as most vulnerable for infection and morbidity (Ministry of Women and Child Development, 2016).

The ICDS is a central government programme, managed by the Department of Women and Child Development, and it provides a comprehensive package of services related to primary healthcare, nutrition, education, water and sanitation. The programme also provides a convergent platform for communities, state programmes, non-government organisations (NGOs) and international development agencies to come together in addressing child nutrition, development and health (Kapil, 2002; MWCD, 2016).

Specifically, the programme has been conceived to provide “a continuum of care” through a life-cycle approach that targets the mother and child (MWCD, 2016), through five services:

- **Supplementary nutrition** - a multiple nutritional support programme that has been conceived to break the intergenerational cycle of under-nutrition, and address specific disadvantages faced by girls and women with respect to nutrition and health. The supplementary nutrition programme (SNP) includes supplementary feeding and dietary supplements for the prevention of vitamin A deficiency and nutritional anaemia. Supplementary nutrition is provided to all children between 0-6 years, and the total population

of pregnant and lactating women within the coverage area of the anganwadi (a village-level government centre and pre-school through which the ICDS services are rendered). Supplementary nutrition is provided for a total of 300 days in a year to bridge the nutrition gap between the recommended dietary allowance and actual average dietary intake of the beneficiaries. In addition Iron Folic Acid (IFA) tablets are provided to expectant mothers and adolescents and vitamin A doses are provided to children for prevention of nutritional anaemia and blindness caused by vitamin A deficiency.

- **Immunization** - Under the immunization programme, children between 12-23 months are immunized against preventable diseases such as poliomyelitis, diphtheria, pertussis, tetanus, tuberculosis. Further, pregnant women receive immunization for the prevention of tetanus as part of the programme.
- **Health checkups and referral services** - Health services provided under the ICDS programme include antenatal care for expectant mothers and post-natal care for nursing mothers, and regular health checkups for children below six years. As part of the health check up, weight and height of children and pregnant women is regularly recorded; growth monitoring is undertaken; abdominal girth, BP and haemoglobin levels of pregnant women is checked; malnourished children are identified and monitored, and other simple illnesses, such as diarrhoea and de-worming is managed through simple medication available at the anganwadi centre (AWC). In addition, children identified with specific illnesses, severe

malnutrition, specific disabilities etc., are brought to the notice of the medical officer by the anganwadi worker (AWW), and referred appropriately for treatment to primary or tertiary care centres or hospitals, along with the support of other relevant departments such as Health, Education and Social Welfare.

- **Nutrition and health education** - Information about health, nutrition, sanitation, childcare and infant feeding practices, and availability of health services is offered by the AWW to pregnant and lactating (P&L) women enrolled in the AWC through monthly meetings organised for them and through home visits. In addition, the AWW also arranges for monthly nutrition and health education camps at the village level for the general public, known as the Village Health and Nutrition Day (VHND).
- **Preschool education** - Children between 3-6 years are provided non-formal preschool education using play-way methods, with the aim of ensuring adequate early stimulation for physical, emotional, social, and cognitive and language development. In addition the AWW also creates awareness among parents and public regarding the importance of early stimulation and pre-school education through monthly Early Childhood Care and Education (ECCE) Day camps conducted at the AWC (Kapil, 2002; MWCD, 2016).

In a span of 40 years since its inception, several studies have been conducted to ascertain the impact of the ICDS programme (a detailed review of some of this is given in the next chapter). Majority of the studies have been monitoring and programme evaluation studies that have studied the design and implementation of the programme. These studies have undertaken a review of

programme coverage, services offered under ICDS, benefits of the programme, issues with implementation and design, quality of services provided, and knowledge and skills of AWWs in relation children's health and nutrition. Some other studies have tried to understand the impact of the ICDS programme on child under-nutrition and morbidity (including one on Karnataka), and the impact of maternal education offered as part of the programme on infant feeding practices.

However, not many studies have focused on the programmatic components and its quality in relation to the budget and expenditure on the ICDS programme. In contrast with these studies, **the present project specifically focuses on an analysis of the fund flow pattern of the ICDS programme, while simultaneously examining this in relation to the quality of services offered under the scheme.** Particularly, an analysis of the resources and fund flow patterns for the ICDS programme in Karnataka is presented, along with data from an exploratory study on the quality of services offered under ICDS in Karnataka. Based on this, an attempt to present a modified approach for estimating unit cost for the scheme that could contribute to improving its efficiency and effectiveness, has also been made.

This is significant in the light of several observations. First, India houses the largest child populations (below six years) in the world. Despite the long span of operation of the ICDS programme, India as a whole, and Karnataka still fare poorly on several child related indicators. For example,

- infant mortality for India as a whole is 47, while it stands at 28 for Karnataka
- under-five mortality rate for India is 59 and 32 for Karnataka
- Only 44 per cent children at the all India level, and 62.6 per cent children in Karnataka have received full immunization

- 42.5 per cent of children below 5 years are under-weight at the all- India level, while 35.2 per cent of the children in the same group have been found to be underweight in Karnataka; and
- 75 per cent and 60.9 per cent children between 6-59 months are anaemic at the all-India level and in Karnataka, respectively.

The poor performance on several of these indicators has also prompted the government to make note of the need to restructure the ICDS programme. In the approach paper to the Twelfth Five Year Plan, it has been argued that there is a significant need to restructure and strengthen the ICDS “both programmatically and structurally, backed by adequate resource investment, thereby establishing and ensuring standards of quality, coverage as well as flexibility in operations.” Further, the broad framework for implementation of the ICDS Mission, developed by the MWCD also notes that several operational challenges have emerged post-universalisation of the scheme as a result of poor planning with respect to human and financial resources augmentation (MWCD, 2016). These observations spell the need to undertake further research to ensure better planning of the ICDS programme, keeping in mind the financial and human resources required for it. This needs to be further understood and analysed in relation to the recent cuts in subsequent budgets for children and specifically the ICDS programme by the union government, which is seen to likely effect the National Nutrition Mission as well as hikes in AWWs’ honorarium (Ghosh, 2015; Krishnan, 2016).

<sup>1</sup>Source: Compiled from Ministry of Women and Child Development (MWCD, n.d.) for all India; and NFHS4 fact sheet for Karnataka

Further, specifically in the case of Karnataka, prior work undertaken by the Centre for Budget and Policy Studies (CBPS), Bangalore, has shown that public expenditure in Karnataka on children between 0-6 years was the least (as when compared with expenditure for children between 6-14 years and 15-18 years), for the period between 2001-02 to 2012-13 (Jha, Krishnaswamy & Sharma, 2014). A subsequent updated version of the study has also showed similar findings (Jha, Nagaraj, Madhusudan & Sarbapriya, 2016). Children between 0-6 years comprise 32 per cent of the child population (i.e., from 0-18 years) in the state, but receive only 9 per cent of the budget share. Considering that the ICDS commands a major proportion of this budget, and more importantly, 50 per cent of this share is spent on feeding, it is important to understand how effective such budgetary allocations and expenditure flows are in relation to the programme objectives. This is particularly important also considering that not all programme objectives are equally being met currently. For example, even though maternal health may be a concern within the programme, Reproductive Maternal and Child Health indicators in Karnataka remain lower than for other states.

Placing this in relation to the child indicators mentioned above, the rationale for the study is informed by both findings and aims to examine the patterns in budgets, expenditure and fund utilisation, in order to present some suggestions for ensuring quality and efficacy of the programme through appropriate financial planning. The study is thus designed to cover the following objectives:

#### **1. Budget-tracking for the ICDS programme in Karnataka**

The specific objectives of the first part of the study include:

- To examine the trends and patterns in the ICDS budget and expenditure at the state level for at least five years

- To trace the fund flow and expenditure patterns at district, Taluk, Panchayat and AWC level

As part of the first goal, Public Expenditure Analysis (PEA) or fund flow exercise to study how resources are transferred through various strata of the government (i.e state, district, block, project and village, AWC and beneficiary) was undertaken primarily using state budget documents. Expenditure tracking was undertaken across four districts on a macro level and in one district in detail, up to the level of the anganwadi centre.

## **2. Assessment of the quality of delivery of services under the ICDS programme**

The specific objectives under this were to:

- Assess the facilities available in anganwadi centres
- Review the quality of services provided under the scheme

## **3. Assess the extent to which the expenditures are aligned to policies and objectives of the programme**

## **4. Estimate a rough revised unit cost for the scheme taking into account its objectives and inefficiencies**

The aim was to understand programme priorities, as well as aspects of the programme that were underfunded or that receive inadequate attention, through observations and interviews with key stakeholders that can help identify inefficiencies, discrepancies and areas for improvement.

The report is organised in the following manner: Chapter 2 presents a detailed review of literature on ECD and ECD programmes and the ICDS programme in particular, from which we can draw lessons for improving the delivery of services under ICDS. Chapter 3 presents the methodology adopted in the study. Chapter 4, 5, 6, 7 presents the findings from the survey undertaken on quality of services, and Chapter 8 presents a comparison of districts with respect to key quality indicators on ICDS. Chapters 9 and 10 present the Budget and Expenditure Analysis respectively. Finally, the last chapter presents some conclusions drawn from the study, and more importantly certain considerations for revising the scheme and associated unit costs.

## Chapter 2: Literature Review

Early childhood is a crucial phase of development. It has been identified that the 1000 days between conception and a child's second birthday are the most crucial, especially in terms of good nutrition and healthy growth (Black et al., 2013). Early childhood development (ECD) includes advances in multiple domains including social, emotional, language, cognitive and physical.

According to Jolly (2007), 200 million children world over fail to reach their potential in cognitive and socio-emotional development as a result of malnutrition, iodine and iron deficiency and inadequate stimulation. Early developmental deprivations in the first two years of life has been argued to be irreparable (World Bank, 2006). Early deprivations in nutrition and cognitive stimulation can have implications which span into one's adulthood. Children who experience early stress are known to develop a variety of cognitive, behavioural, and emotional difficulties later in life. Poor nutritional status, educational underachievement and reduced work capacity are some of the ways through which these deficits are reflected during adulthood. The chapter presents a review of scientific literature on ECD, as well as early childhood care and education (ECCE), examining the effects of early deprivations and the need for substantial investments in ECD programmes.

### 2.1 Early Childhood Care and Education - The Need

The importance of paying attention to ECCE cannot be underscored enough because although the human brain continues to adapt throughout life, neuro-scientific evidence points to the presence of 'sensitive periods', in the sequential development of the human brain. It is during these sensitive periods

that specific neurological circuitry that are associated with specific human abilities are laid down, upon which later circuits are built (Heckman, 2006; United Nations International Children's Education Fund [UNICEF], 2008

Thus, "Early Childhood Care and Education (ECCE) is more than a preparatory stage assisting the child's transition to formal schooling" (United Nations Educational, Scientific and Cultural Organization [UNESCO], n.d.). With its emphasis on the whole child and his/her social, emotional, cognitive and physical developments, ECCE programmes have the potential to establish a strong foundation for lifelong learning and wellbeing (UNESCO, n.d.).

Young (1996) has argued that good health, nutrition, intellectual and mental stimulation, and supportive human interaction have synergistic effects on human growth and development, and cannot be broken down. Further, neuro-scientific research has demonstrated the importance of loving, stable, secure and stimulating relationships with caregivers in the earliest months and years of life for children's holistic development (UNICEF, 2008). Thus, ECCE stresses the importance of paying attention to a combination of factors that contribute to holistic development including nutrition, health, education as well as close emotional and social interaction with caregivers

The concept of ECCE has also come to represent institutional efforts to ensure early interventions in children's health and development, through centre-based or institutional care as opposed to parental care or informal care by relatives, nannies, or babysitters (Burger, 2010). These forms of early institutional interventions have

come to be seen as a means of “...preventing or ameliorating problems in families with young children and in later childhood...” (Dahlberg, Moss & Pence, 1999). Thus, world over ECCE programmes have come to be seen as a fundamental moral responsibility of states, as it is seen as particularly offering children deemed to be ‘at-risk’ equitable opportunities for development starting during the earliest years of life (UNICEF, 2008).

This is supported by research from a wide range of countries that has shown that early interventions especially with children from poor and low income families contributes significantly towards putting them onto a path of development and later success in school and has much higher returns than interventions introduced later such as reduced pupil-teacher ratios, public job training, convict rehabilitation programs, tuition subsidies or expenditure on police (UNICEF, 2008). ECCE programmes have also been argued to be more cost-effective compared to current patterns of public expenditure, wherein more resources are spent at later ages on remedial skills training in order to compensate for these early deficits (UNICEF, 2008). Further, it has also been argued that early interventions in children’s development can contribute to raising mothers’ status in the home and community, help reduce gender inequity, increase women’s participation in the labour force and increase community participation in development efforts (Young, 1996) as well as significantly contribute to national development (UNICEF, 2008).

In the following sections, we closely examine research evidence on the nature of early deprivations and forms of interventions that can benefit children’s nutritional, health, cognitive and psychological development.

## 2.2 Research on Nutrition and Children’s Development

“Nutritional adequacy is one of the key determinants of health and well-being of the children” (Ramani et al., 2010). Globally, more than one third of child deaths are attributable to under nutrition (Kumar et al., 2010) and under nutrition continues to be a major cause of ill-health and premature mortality among children in developing countries like India (Nandy et al., 2005; Ramani, 2010). India currently still records the highest number of undernourished and under-weight children in the world, higher than even sub-Saharan Africa (Kumar et al., 2010; Ramachandran, 2014).

Under nutrition is measured using three indicators that have been internationally accepted: a. number of children that are stunted (i.e., have lower height-for-age); b. are wasted (i.e., have lower weight-for-height); and c. are underweight (i.e., have lower weight-for-age, which may be influenced by both, a child’s height and weight). Of these three indicators, stunting is considered to represent a situation of chronic under-nutrition, resulting from prolonged food deprivation and/or disease or illness; wasting is considered to represent acute under-nutrition, which results from more recent food deprivation or illness; and underweight is considered to be a composite indicator of both acute and chronic under-nutrition (without necessarily being able to distinguish between them) (World Health Organization [WHO], 1995; as cited in Bose et al., 2007). In the Indian context, 38 percent of the child population is considered to be stunted, 19 percent wasted and 46 percent of children are under-weight (National Family Health Survey [NFHS] 3, International Institute for Population Sciences [IIPS], 2007). Further, the problem of under nutrition appears to be disproportionately higher in rural areas, with percentage of stunting, wasting and underweight in children below three years being 40.7%, 19.8% and 49% respectively.

(Corresponding figures for urban areas is 31.1%, 16.9% and 36.4% respectively).

Even in the case of anaemia, there is a disproportionately higher representation of rural children with 81.2% of rural children falling victims to the condition while the incidence in urban areas is 72.7% (IIPS and Macro International, 2007).

Research suggests that the worst damages due to malnutrition register in the first two years of life (World Bank, 2006). Poor nutrition in children has been linked to both infections, as well as poor cognitive development in children from developing countries (Jukes, 2005). Some studies in India on stunted children have shown that they tend to attain a lower grade, have poor cognitive ability and achievement scores compared to their non-stunted peers (S. Grantham-mcgregor et al., 2007).

Early interventions for nutrition thus become critical, specifically for children from disadvantaged circumstances as much research has presented the direct links between poverty and nutritional deficits in young children. Malnutrition (or under-nutrition, specifically) registers a two to three times higher presence among the lowest income quintile than in the highest quintile and at the individual level this places a heavy burden on the individual, with him/her having to shell out more than 10% of his/her lifetime earnings in addressing challenges that result from malnutrition (World Bank, 2006). With malnutrition having cumulative effects into adulthood, in terms of public expenditure, the loss in terms of reduced contributions by adult malnourished population are estimated to be about \$ 302831.6 million (Ramachandran, 2014). These observations make it imperative to pay attention to early nutritional deficits; and in fact, this goal has also been indirectly adopted as part of the Millennium Development Goals (MDGs) on poverty eradication with halving the number of underweight children by 2015 forming a key

indicator of achieving this MDG (Gragmolati et al., 2006).

Further, in addressing nutritional concerns of young children, it is also important to recognise the multi-dimensional nature of under nutrition, as well as its intergenerational impact (Gragmolati et al., 2006). As studies show, food intake is one and not often the main indicator of under-nutrition. Bose et al. (2007) point out that “under-nutrition is a function of both food deprivation and disease which are in turn the consequences of poverty.” Poor nutrition along with poor conditions of hygiene and sanitation is also linked with infection (Jukes, 2005), which in turn contributes to malnutrition. Thus, in addition to paying attention to nutrition, it is also important to pay attention to other factors such as environmental cleanliness, sanitation, access to clean drinking water, etc.

In addition, addressing nutritional requirements also entail ensuring micronutrient supplementation as studies have pointed to the important role of micronutrients in ensuring healthy growth and cognitive development in children (Behrman et al 2004; as cited in Gragnolati et al., 2006). For example, Engle et al (2007) has pointed out that “efficacy trials and programmes of iodine interventions provide conclusive evidence of a significant effect on cognition and behaviour.” Micro-nutrient supplementation programme such as salt iodisation have also been found to be cost-effective measures of improving child health (Engle et al., 2007; Gragnolati et al., 2006).

Other studies, such as by Roy (1997; as cited in Gragnolati et al., 2006), and Kilaru et al (2005) have also pointed to the lack of appropriate knowledge on the type of food, quantity of food and good feeding practices, as a significant factors contributing to malnutrition. For example, it has been noted that a “Failure to exclusively breastfeed children during the first six months of life, along with delayed

introduction of semi-solid foods, is an important trigger of malnutrition” (Gragnotati et al., 2006). In India, studies show that less than 40 per cent of infants are exclusively breast-fed for the first six months (Breast Feeding Promotion Network of India [BPNI] 2003) and additionally that other foods are introduced during this period which are often poor based on local customs and beliefs ([Roy, 1997]; as cited in Gragnolati, 2006). Thus, lack of appropriate information on nutrition itself is a significant factor that needs to be addressed

Further, in planning to address nutritional concerns, it is also important to bear in mind the way that nutritional deficits play out inter-generationally as many studies show. For example, research has shown that post-natal cognitive developments and problem solving skills in seven month olds were linked to maternal nutritional status with children of undernourished mothers performing poorer on these skills (Walker et al., 2011).

Taken together, all of these studies point to the need to develop a composite index of services required to address the problem of malnutrition. This service index may range in a spectrum from ensuring food security at one end to providing adequate health services and education at the other end. Further, while poverty, which on one hand affects the ability to access food and nutrition directly impacts nutritional status of poor children, other factors such as low status of women, the greater dependence of the socially and economically vulnerable section on public healthcare, poor public policies and programmes that reduce ability of poor people in procuring sufficient and quality food also contribute directly or indirectly to under nutrition is also an issue that need to be addressed (Jain et al., 2013).

---

<sup>2</sup>These figures have been reported for India for the year 2007.

## 2.3 Deficits in Early Cognitive and Intellectual Stimulation

Cognitive developments have been considered to be important indicators of successful child development. Studies have reported that the cognitive abilities developed through early preschool participation carry over through later childhood, influencing school competence and educational attainment (Goodman & Sianesi, 2005; Niles, Reynolds, & Roe-Sepowitz, 2008; Reynolds et al., 2007; Reynolds, Mann, Miedel, & Smokowski, 1997; as cited in Burger, 2010). Similar benefits have also been noted in the Indian context. effects Studies by Kaul et al. (1993), National Institute of Public Cooperation and Child Development (NIPCCD) and National Council for Educational Research and Training (NCERT) have shown that enrolment rates of children from ICDS programme into primary schools was higher; and that children with pre-school experience were mostly likely to stay in primary education. The drop-out rate for children with pre-school education was 31.8 percent compared to 48.2 percent for those without pre-school education [PSE] (as cited in Kapoor, 2006).

Studies have also pointed to a positive relation between pre-school quality and language and early literary skills (Isabel, Pessanha, & Aguiar, 2013). It has also been argued that these effects also influence other long-term social developments (Reynolds, Mann, Miedel & Smokowski, 1997; as cited in Burger, 2010). Other studies show that children who were devoid of early education opportunities and positive care giver interaction such as positive emotionality, sensitivity, avoidance of harsh punishment and responsiveness of the care giver towards the child were at a loss in terms of attaining their developmental potential (Jolly, 2007).

Socio-economic status has been found to be a key determinant of children’s ability to achieve

optimum development even with regards to early education. It has been estimated that due to factors such as poverty, about 200 million children below five years of age have not reached their potential in terms of cognition (S. Grantham-mcgregor et al., 2007). Only one in three children are able to access opportunities for early learning in India. Studies suggest that children from disadvantaged families have fewer academic skills when they enter school than children from more advantaged families and thus continue to lag behind through later school years (Stipek & Ryan, 1997; Burger, 2010). In India, children from the poorest families, on an average, have found to remain ten grade-points lower than children from richer families due to losses in cognitive development (S. Grantham-Mcgregor et al., 2007). The likelihood of repeating grades, developing special educational needs in the later part of school and possibility of leaving schools without having completed the course remains higher for children from lower socio-economic backgrounds (as cited in Burger, 2010), as a result of poor cognitive as well as nutritional inputs.

Research points to the critical role of early interventions in reducing the gaps in school readiness and school achievements between children from lower and higher socio-economic strata. Early intervention programmes can not only contribute by improving diet and physical activity which have been found to be important determiners of cognitive development in children between 6 months and 6 years (Brownell et al., 2016); but also by countering what are identified to be adverse learning conditions in poor homes and low educational aspirations of these parents (Burger, 2010).

## 2.4 Designing Programmes for Early Childhood Care and Education

In the previous sections, we have sought to summarise research evidence that strongly suggests the need for ECCE programmes. In this section we now review studies that point to certain good practices with respect to ECCE programmes, and then review the performance of India's ECCE programme (i.e., ICDS) on these parameters.

Perhaps what is most essential to keep in mind while designing early childhood programmes are principles of development that can increase the impact and efficacy of the programmes exponentially. Four key principles of development have been identified by Heckman (2006), based on research in economics, neuroscience, and developmental psychology, namely:

- a. that brain architecture is shaped by the interactional effects of the genetic environment as well as individual experience;
- b. developmental processes are sequentially and hierarchically organised;
- c. development of cognitive, linguistic, social, and emotional competencies are interdependent;
- d. and that there are critical 'sensitive periods' in brain development, which represent the periods during which specific neural circuits and the behaviours they mediate are the most plastic and receptive to environmental influences

Based on this knowledge of brain and child development, it is important for programmes to pay attention to the critical periods of development as well as to pay attention to the interdependent nature of these developments and their interaction with environmental conditions. This means that interventions

must be early in life and must also be holistic, integrating the domains of health, nutritional, educational, social, and economic development (Engle et al., 2007). Other studies have suggested that multiple entry points are needed to successfully situate and intervene into a child's social ecology and a uni-dimensional approach will only narrow down the extent of the intervention (Patel, Corter, Pelletier, & Bertrand, 2016). Research thus suggests that for children younger than three years, programmes must combine stimulation along with interventions in nutrition and health and must also include family and centre-based components (Love et al., 2005; Sweet and Appelbaum, 2004). Further, it has been noted that options such as public kindergarten, child care, family literacy, parenting support and other early childhood services play a domineering role in creating conducive conditions for early childhood development (Cortier, Pelletier, & Bertrand, 2016).

It has been shown that younger children (between 2-3 years) benefit more than older children (5-6 years) even after adjusting for duration and that longer exposure has more consistent results and better effects (Behrman, Cheng & Todd, 2004). Thus, duration and intensity of early childhood programmes also make a difference.

Considering that these early sensitive periods of development may be more likely to be missed in disadvantaged children, it is also important for early childhood programmes to focus on the disadvantaged. Disadvantaged children have been found in studies to benefit more than advantaged children from these programmes and the rate of return for programmes that were started early in childhood for disadvantaged children have been found to be better than programmes that were started later in childhood.

It has also been pointed out that interventions provided directly with children rather than

information provided to parents have better outcomes. Childhood programmes must provide with opportunities to initiate and instigate their own learning and exploration of their surroundings with age-appropriate activities. Parents and families have also found to play an important role and should be included as partners with teachers or caregivers in supporting children's development. Including parents and other members of the family through home visits has been found to improve child development with frequency of home visits having a linear relationship with child development outcomes. In Jamaica and Turkey, this was through improved adult-child interactions that resulted from home visits through which parenting practices were improved by encouraging parents to actively engage with their children. In Bolivia, home visits have positively influenced child outcomes by improving parents knowledge and skills related to health, hygiene, nutrition, and development through a literacy programme for indigenous women.

In addition to these efforts at improving nutritional, health and socio-emotional outcomes for children through improving home and parenting practices, the importance of having Centre-based programmes also cannot be ignored. In a meta-analytic review of eight centre-based programmes, Engle (n.d.) noted that all eight programmes have recorded a substantial effect on children's cognitive development. Aspects that were most impacted through centre-based programmes were non-cognitive skills such as sociability, self-confidence, willingness to talk to adults and motivation. Longitudinal assessments of the same have also showed improvements in number of children entering school, age of entry, retention and performance.

However, there are some critical factors that must be given attention in developing centre-based programmes. These include programme structure with attention given to children-to-

staff ratio, group size, training, and physical environment. Similarly, processes such as warmth and responsiveness of caregiver, emotional tone of the setting, variety of activities available, have also been found to be critical in determining the quality of centre-based programmes. Thus, systematic in-service training of staff, continuous, supportive supervision, observational methods to monitor children's development, and good theoretical and learning material for staff has all been identified to be essential.

Apart from parent information and skill building programmes and centre-based approaches, conditional cash transfer (CCTs) has been an additional method that has been attempted to improve early child development outcomes. Engle et al. (n.d.) define CCTs as transfer of funds dependent on behaviour such as participation in nutrition monitoring and supplementation programmes. Evidence suggests that in the short term CCT improve health and nutritional outcomes for young children and that this results partly from increased use of preventive services mandated by programme participation. This has thus impacted the rate of stunting and overweight, increased height for age, decreased Body Mass Index (BMI) for age percentile increased performance on one scale of motor development, all cognitive function subscales and language development. Specifically, two domains of mental development that have been found to benefit from CCT are short term memory and language which are also found to be most sensitive to differences in socioeconomic status. Additionally, these findings have been found to be robust even when family structures and socioeconomic status was controlled for. Further, studies have also identified two pathways by which CCTs improved child outcomes: first, additional income to the family was found to provide parents with greater purchasing power which allowed them to invest in better quality food, medicines or other household items such as

refrigerators, improved construction material etc that could improve health outcomes. Second, it was found to improve the psychological wellbeing of family members, which thereby allowed them to be more caring, supportive, and nurturing with respect to children in the household (Fernald, Gertler, & Neufeld, 2008).

Based on the evidence of good practices presented above, in the next section we undertake a critical review of India's ICDS programme.

## 2.5 Review of studies on ICDS

According to Swaminathan (1993; 1998), India's early childhood services can be categorised as falling into a "dual track mode" (as cited in Rao, 2005). The dual tracks include private, paid services for children middle-to-upper classes, that largely focus on academic preparation or the 'three Rs' of reading, writing and arithmetic, on the one hand; and state-run comprehensive programmes that address health, nutrition and education for children from disadvantaged backgrounds on the other hand (Rao, 2005). Kapoor (2006) notes that "state childcare programmes only provide for 22 percent of children aged 0–6, and private-sector programmes provide for the remaining 18–23 per cent." Thus, it is a very small proportion of children between 0-6 years that are covered by any form of early child intervention. Further, she argues that with no standards or norms in country for early childhood programmes, private sector programmes remain unchecked and unmonitored.

Specifically examining the state-based ICDS programme, what can be said to be its strongest feature is perhaps its integrated nature, focusing on the holistic development of the child, through services that cover early stimulation and learning, health, nutrition, water and environmental sanitation as well as through an inter-generational approach

covering young children, expectant and lactating mothers, and other women and adolescent girls in a community. As indicated by much research, the ICDS programme pays attention to both the multiple dimensions of childhood development as well as the inter-generational effects of deprivation, thus also adopting a lifecycle approach.

Planned holistically in this manner, ICDS has been found to particularly improve nutrition and health outcomes, and increase school enrolments and decrease school drop-out (Kaul et al., 1993; NIPCCD, 1992; Sriram, 1998; as cited in Kapoor, 2006). Other studies have also shown psycho-social impacts of the programme (Kapoor, 2006).

However, despite these positive features of the ICDS programme studies have also pointed out to several lacunae in relation to programme structure, implementation and quality. Programmatically, it has been found that although the government has stepped up efforts to universalize ICDS on the directives of the Supreme Court to cover all children, women and girls eligible under the scheme, full fruition has not been achieved in this regard (Citizens Initiative for Rights of Children under Six, 2006). The timeframe for achieving universalization was set for the end of 2008 as per a government order dated 13th December, 2006 but this cherished goal remains unfulfilled until 2016. Only 62 percent of the child population was covered by the ICDS programme in the early 1990s (Kapoor, 2006) and currently this amounts to about 73 percent of the child population. Coverage of ICDS in villages of Karnataka in the year 1992 was about 63% and it increased to 86% in the year 1998 according to NFHS 1 and 2 (as cited in Lokshin et al., 2005). Further, it has been found that despite research evidence that points to the importance of intervening early as well as the government's own plan to prioritise younger children Kapoor (2006) and Venugopal (2012) have argued that children under three

years are not prioritised adequately in the delivery of services.

Additionally, states which perform the poorest on child indicators are the ones in which ICDS coverage is the least. Lokshin et al. (2005) have pointed out that poor states that have high levels of malnutrition, are deprived of adequate budget allocations and have poor programme coverage, creating an incongruous association between need and allocations. Gragnolati et al. (2006) have also observed that the affluent groups are benefitting from the programme while the target poor states which are majorly affected by undernutrition still suffer from inadequate funding and poor coverage. Another area of concern in the program structure and planning has been the routing of funds for construction of buildings through the Zilla Panchayat (ZP), which in most cases fails to consider the requirements of the AWC, a consequence of not consulting the Deputy Director (DD) or Child Development Project Officer [CDPO] (Somaiah & Vijayalakshmi, 2007).

Programmatically, ICDS suffer also from problems such as lack of coordination between departments responsible for the different services, distribution and management of finances. With respect to the first issue, Somaiah and Vijayalakshmi (2007) have noted that there is a lack of departmental coordination between the functionaries of the Health and Family Welfare and the Women and Child Development department functionaries, which often results in delays in immunization. Similarly, they have also noted that the division of responsibility between the ZP (through which funds are routed for infrastructure development) and implementation of infrastructural projects through the ICDS functionaries results in poor planning and implementation as ICDS project functionaries themselves are not consulted in this process.

Further, it has been found that the multi-dimensional framework of ICDS which was conceived to essentially approach child development through a continuum of services and a life cycle approach, has been less efficient in practice. With a disproportionate emphasis being paid to SNP, the other components of the programme which can be implemented with low cost are sidelined. Services such as immunization, advice on feeding practices, health monitoring, referrals and antenatal services suffer negligence (Economic and Political Weekly [EPW], 2006).

Growth monitoring is instrumental in customizing further interventions as per the nutritional and health status of a child. This activity detects any anomalies in terms of stunting, underweight, wasting etc based on which a prescriptive course is planned. It has however come to light through studies that equipment such as weighing scales, growth cards and charts are lacking or are out of order/bad quality. But even in Centres where there is no paucity of equipments, it has been observed that weighing is not conducted as per norms (Gragnotati et al., 2006).

Another area of neglect has been adequate provision of nutrition and health education, which suffers due to inadequate funding. While the initial design of ICDS advocated creating awareness about the ways to improve nutrition through the available budget, micro-nutrient supplementation, disease control and prevention, these aspects have been neglected in the recent times. As a result of neglecting important components of the programme such as nutrition education, studies have shown that mothers fail to adopt healthy child care behavior such as exclusive breastfeeding and introducing semi-solid food after six months (Gragnotati et al., 2006). The above inconsistencies in the programme provide evidence of mismatch in priorities and highlight the need for reforms, especially in the financial and structural arenas.

What is perhaps even more of concern is that fact that despite the large focus given to SNP, implementation of the SNP component of the programme has not been completely without problems. For example, a study conducted by Gragnolati et al. (2006) showed that in about 27% of AWCs food distribution had ceased for over 90 days a year. As per a NIPCCD study, an average AWC was without food for about 20% of the time and more than half of the AWCs were similarly out of food for 30% of the time (as cited in Lokshin et al., 2005). Other studies have observed that the SNP was interrupted during the months of April-June every year due to delays in sanctioning of budgets, which in turn resulted in a delay in the tendering process of food items (Somaiah & Vijayalakshmi, 2007). In addition to this, it was found in the same study that the Amylase Rich Food powder was not stored hygienically and was sometimes infected.

Other aspects of the programme, where they are functional have also been reported to have certain problems. For example, with respect to PSE, resources available are inadequate and the programme has been unable to affect school readiness among children as they do not cater to skills such as pre-reading, pre-writing, pre-number etc. (Centre for Early Childhood Education and Development [CECED, Ambedkar University, 2013]). Further, it has also been felt that early childhood education provided in this manner has not taken into account important factors such as age, socio-cultural and linguistic disparities of children. A study conducted by Indian Institute of Management, Bangalore (IIMB) noted that PSE suffered as AWWs were burdened by activities such as assisting Auxiliary Nurses and Midwives (ANMs) in administering polio drops and in Stree Shakti activities (Somaiah & Vijayalakshmi, 2007). The latter programme was considered important due to the political support associated with it. The other findings in this regard point that most AWCs studied

did not comply with the norms of conducting PSE for two hours a day (Somaiah & Vijayalakshmi, 2007).

It has also been argued that AWW's are poorly trained for their roles (Lokshi et al., 2005), and should be introduced to a broad based training, which includes an introduction to principles of program planning and developmental stages in children so as to enable the worker to formulate a 'balanced and developmentally appropriate program'(CECED, 2013).

Other operational aspects of the programme that have also led to poor outcomes is with respect to lack of clarity on policy of transfer of pregnant women from one AWC to another. It is a well known practice for women in India to move to their parents place during pregnancy but the ICDS program displays incongruity on this front in that it fails to take into account and provide for such a transfer. This compounds the situation for pregnant women who are refused services, especially SNP during critical phases of pregnancy.

Put together, these studies point to the need for both structural changes as well as changes in relation to budget allocations and implementation to be brought about in order to improve the ICDS services.

---

<sup>3</sup>Estimates calculated for 2010-2011, based on census data on child population between 0-6 years and Press Information Bureau data on number of Anganwadi centres available in 2010-2011.

## Chapter 3: Methodology

As mentioned earlier, considering the dearth of studies on the ICDS programme that simultaneously examine fund flow patterns and expenditures on the ICDS in relation to the quality of services offered, this study was designed to be an exploratory one. Exploratory research studies are undertaken with the following aims in mind (Lynn University, 2016):

- To gain familiarity with basic details, settings and concerns and to develop a more grounded understanding of the phenomena observed
- To stimulate the generation of new ideas, tentative theories or hypotheses
- To determine whether a more comprehensive study on the topic is feasible in the future, based on the refinement of ideas and methods that become possible through the exploratory research

Exploratory research is undertaken when either a new topic or new angle is explored (Kowalczyk, 2016) and in this case, the aim being the latter in order to examine how allocations for, and expenditures on the ICDS programme in relation to its different components has implications for the delivery of the programme and its specific components. Undertaking an exploratory approach. While the quality of services survey was exploratory in nature, we combined this with a detailed budget and expenditure analysis, covering all the necessary and relevant budget heads and documents. This allowed us to explore a new angle to understanding the efficacy of the ICDS programme - examining whether the unit cost needs to be revised or not is based on having actual knowledge of current budgets and expenditures, and using the data from the exploratory study of quality of services to

see if we can see how the current budgets and expenditures may have to be realigned.

Considering the tentative nature of the phenomena studies and claims being made, exploratory studies also generally use small sample sizes; and it is more commonly recognised that their claims are not generalisable but often lead to further, better-designed research. Thus, it is understood that the design of exploratory studies may also be inadequate, since one of the aims of the research would be to develop better methods or methodologies that could best fit the research problem (Lynn University, 2016). Methods that are therefore used to explore the phenomena could include secondary data analysis, informal discussions with relevant stakeholders, in-depth interviews, focus groups, projective methods, case studies or pilot studies (Wikipedia, 2016 ).

The present study has been undertaken similarly with some of these limitations and a combination of some of the methods listed above.

### 3.1 Sample

The sample comprised a total of 100 AWCs (25 per district) selected from across four districts of Karnataka. The four districts covered each of the four revenue units of Karnataka, i.e. Gulbarga, Belgaum, Mysore and Bangalore Urban. Within each revenue unit (with the exception of Bangalore Urban), the district that provided the best distribution of SC/ST and general populations was selected. Thus, the final four districts selected were Bellary, Haveri, Chamrajnagar, and Bangalore Urban, from the four revenue units presented above, respectively.

Bangalore Urban was selected as an illustration of an urban district, and further breakdown of AWC's into social categories was not carried out for this district.<sup>4</sup> For this, the entire Bangalore Urban district, including Anekal was considered as part of the sample. (Thus, AWCs that have been classified as 'rural' as per the ICDS scheme have been included in our sample. This was done as it was felt that it would be important to examine the effects of being classified as a 'rural AWC', when located within urban district limits). A list of AWCs within Bangalore Urban limits was requested from the CDPO office, and twenty-five AWCs were randomly selected from the list.

The remaining three districts of Bellary, Haveri, and Chamrajnagar were taken as illustrations of rural sample. Thus, only AWCs that are classified as rural were selected from the three districts.<sup>5</sup>

**Table 1: Distribution of AWCs into rural/urban type**

District	Rural	Urban	Total
Bellary	25	0	25
Chamrajnagar	24	1	25
Haveri	25	0	25
Bangalore Urban	0	25	25
Total	74	26	100

Further, for the three districts (i.e., Bellary, Haveri and Chamrajnagar) a single block was selected in order to undertake fieldwork efficiently within the given constraints of time and manpower. The three blocks in each of the districts were again selected based on the number of AWCs available in each block, as well as based on the consideration of availability of Scheduled Caste / Scheduled Tribe (SC/ST) AWCs within these blocks. The three blocks are Sandur, Rannebennur, and Kollegal.

From the three blocks, twenty-five AWCs were randomly selected from the list of total AWCs present in each of the blocks. In addition, a list of five buffer AWCs were also selected for each block. Following this, the list was discussed with the respective CDPOs and supervisors in each district. Some of the AWCs in each of the districts were then replaced from the AWCs in the buffer list, due to reasons such as extreme inaccessibility, to replace with any randomly selected urban AWC or due to other reasons (e.g., refusal to grant permission to visit the AWC by the CDPO).

**Table 2: Classification of AWCs by social category**

District	Others	Minority	SC	ST	Total
Bellary	15	2	2	6	25
Chamrajnagar	3	2	16	4	25
Haveri	19	1	4	1	25
Total	37	5	22	11	75
Percent	49.3	6.7	29.3	14.7	100

<sup>4</sup>It is important to note that classification of anganwadis based on social categories does not indicate that the entire population registered with the anganwadi centre belong to that social category alone (e.g., SC / ST). Rather, anganwadi centres are classified as 'SC', 'ST' or other, if 60 per cent of the beneficiaries served by the anganwadi centre belong to a particular social category. In this case, effort is also made to appoint an anganwadi worker of the same category to the anganwadi.

<sup>5</sup>One exception to this was Chamrajnagar, where one urban anganwadi had to be included in the list due to huge constraints of accessibility in the district. With a large number of anganwadis located in hilly or forest areas that are not accessible by road, many anganwadis had to be replaced in this district. In this process, one randomly selected urban anganwadi had to be included in order to reach the total number of 25 anganwadis for the district.

### 3.2 Data Collection

Data collection mainly comprised of two parts:

- a) **Data on Budget and Expenditures on the ICDS scheme, at the state, district, and block levels:** Budgets at the state, for five years, were analyzed in order to understand the nature of expenditures in the ICDS programme. We also tried to make sense of the nature of expenditures and the fund-flow pattern from the state level to the districts and finally, the taluks for one year i.e. 2014-2015. Especially heads 2235, 2236, 4235 were looked at for this project. This was done to gauge an understanding with regards to what kind of expenses were handled at the anganwadi levels. This exercise would also help us when it came to tracking public expenditures across 5 AWCs in one district.

A point to note here was the difficulty in availing disaggregated data at taluk and district levels especially when it came to examining fund flow and expenditure patterns. At taluk level, scheme wise data was not maintained. Further, data for districts are available only for district sector schemes in the link documents. Data for districts levels of state schemes were also difficult to obtain.

- b) **Quality of Services survey:** Data related to the quality of services was collected using a combination of methods which includes surveys, interviews, observations and focused group discussions (FGDs). A total of 14 interviews were completed per AWC- covering the anganwadi worker (AWW), anganwadi helper (AWH), 5 parents of children registered with the AWC, 5 pregnant and lactating (P&L) women registered with the AWC, and 2 adolescent girls who are currently receiving services or had been receiving services from the AWC in the last six months. An attempt was made to ensure

all the beneficiaries surveyed were randomly selected from the anganwadi register.<sup>6</sup> With respect to parents, care was taken to select at least one parent representing different age groups of children - that is 0-2 years; 2-3 years; and 3-6 years, as listed in the beneficiary register present in the AWC. Thus, a total of 1380 respondents were covered as part of the survey.

**Table 3: Distribution of respondents<sup>7</sup>**

	Bellary	Chamraj-nagar	Haveri	Ban-galore	Total
Worker	25	25	25	25	100
Helper	24	24	23	20	91
Parents	125	125	125	125	500
Pregnant and Lactating women	122	125	122	125	494
Adolescents	50	50	48	47	195
Total	371	374	368	709	1380

**A semi-quantitative interview schedule was prepared for the survey,<sup>8</sup> covering the following details:**

1. **General characteristics** - Age, education, experience, training, place of residence
2. **Supplementary Nutrition (SNP)** - Questions covering sufficiency & regularity of SNP, problems and suggestions to improve this service
3. **Immunization** - Questions regarding which vaccinations were received, and questions about problems faced with this service and suggestions for improvement
4. **Health check-ups and referrals** - Similar questions regarding frequency of health check-ups, improvements in children's health post-identification through health check-ups, problems with the service and suggestions for improvement
5. **Pre School Education (PSE)** - Regularity of classes, what is taught as part of this, improvements in children's abilities and further suggestions to improve this service

6. **Home visits** - Regularity of home visits by AWWs, topics discussed and suggestions for improving the service
7. **Nutrition Education and Village Health and Nutrition Days (VHND)** - Questions regarding frequency of meetings conducted, topics discussed and suggestions for improvement
8. **Additional information** - Regarding AWW's and AWH's salaries, benefits, workload, and other information about contingency and flexi-funds available at the anganwadi level, to analyse the day-to-day functioning of the scheme

In addition to this an observation checklist was used to examine the facilities available at the AWC, and the functioning of the AWC through observations of timings, activities undertaken at the AWC, presence of AWW/AWH, presence of children, and so on.

Finally, a set of interviews were also conducted with other relevant stakeholders who are important to the effective functioning of the AWC's. Interviews were conducted with the CDPOs of each of the four districts.

Discussions with the CDPOs focused on their qualifications, functions, financial planning and coordination with other departments.

FGDs were undertaken with supervisors, ASHA workers and Auxillary Nurses and Midwives (ANMs), and panchayat members and other village elders. The FGD discussions focused on the functioning of the ICDS programme and utilisation of services by the community, as well as the role of the community in the functioning of the ICDS scheme, challenges and suggestions for improvement.

### 3.3 Data Analysis

The data gathered from these various sources was analysed according to the objectives and plan given below:

1. *To examine trends and patterns in the ICDS budget and expenditures in the state from 2009-10 till 2015-16.*

Budget documents at the state level were examined to identify:

- a. Total share of department of women and child development (WCD), in Karnataka budget for the years
  - b. Central and state share in WCD expenditure for 5 years (trends and patterns)
  - c. Proportion of expenditure on ICDS within WCD for 5 years
  - d. State and central share in ICDS expenditure and its trends and patterns
  - e. Expenditure within ICDS programme on services provided
    - i. Supplementary Nutrition
    - ii. Immunization
    - iii. Pre-School Education
    - iv. Other components
  - f. Expenditure in ICDS for programme costs staff salaries and honorarium, repairs and maintenance, transport and other similar heads.
  - g. Comparison of the costs incurred on services provided vs. programme costs
  - h. See trends in the state in terms of nutritional (malnutrition) and health status (immunization) of children under six years (2007-2015).
2. **To trace fund flows at district, taluk, gram panchayath and AWC**  
To trace the fund flow from state treasury to level of AWC  
To examine expenditure documents at each level
    - i. State
    - ii. District
    - iii. Taluk
    - iv. Gram Panchayat (GP)
    - v. AWC

Questions on the expenditures at each level

    - a. What is the amount received?
    - b. What is the amount spent?
    - c. Timelines of receipt and expenditure

- d. Whether the amount received is in excess/short
- e. What are the main expenditures at each level
- f. How estimation of budgets for the following years are planned
- g. Differences in funds received in between each district/taluk/ etc.
- h. Other sources of funds i.e. other than WCD department.
- i. Other considerations

**3. Assess the facilities available at the AWC's**

Data gathered from the observation checklist (Facility checklist) was used to ascertain:

- 1. Available infrastructure against norms
- 2. Available SNP against norms
- 3. Available immunization against norms
- 4. Available PSE against norms
- 5. Available health check-ups and health referrals against norms
- 6. Available nutrition education against norms
- 7. Are 2 adolescents being adopted at each AWC?
- 8. Are pregnant and lactating women receiving SNP and education
- 9. Others

**4. Review quality of services under the scheme**

**Data gathered from the beneficiaries, anganwadi worker and helper surveys were used to determine:**

- 1. Knowledge about the ICDS scheme and all its components among beneficiaries.
- 2. Functioning of the ICDS scheme with respect to all its components, in terms of the regularity, quality and sufficiency of services provided.
- 3. Data was further analysed to see if there was consistency in reporting about the services at the AWC level-by examining if there

was a correlation in the responses given by the various groups of beneficiaries as well as anganwadi staff to particular questions.

- 4. An attempt has also been made to see if functioning of the services differ based on districts, or based on the type of AWC (e.g., rural/urban; SC/ST or General).
- 5. An alternative method for estimating the unit cost. The need and possible methods to revise the unit cost for the scheme was deliberated upon through a consultation with experts in the field of ECCE and nutrition. The consultation helped to gain a nuanced understanding of the relevant items to be considered while proposing a revised cost per AWC. A proposal to revise the scheme and associated costs was developed through this consultation.

<sup>6</sup>Attempts were made to ensure beneficiaries to be interviewed were randomly sampled from the anganwadi register unless the beneficiaries who were selected were unavailable- for example, when there were only limited number of beneficiaries registered with the anganwadi, or if they had migrated to different parts of the district or state for work. In that case, anganwadi workers would suggest a beneficiary to be interviewed or another name from the register was selected.

<sup>7</sup>Since 9 of the anganwadis surveyed were mini-anganwadis, there was no helper present.. With regard to pregnant and lactating women, and adolescent girls, the total number sampled is reflective of the numbers that were available in the respective villages during the time of survey.

<sup>8</sup>The questionnaires are given in annexure 2

## Chapter 4: Analysis of Quality of Services

### (Overall Functioning of the Anganwadi Centres)

The Integrated Child Development Scheme (ICDS) is the largest government multi-sectoral intervention undertaken for children under six years in the country. The five targeted interventions undertaken as part of the ICDS programme ensuring children's nutrition, health and education involve not only the coordination of various departments, but also involve massive public investments in infrastructure, human resources and training, food grains and other health and education related material. Studies evaluating the impact of the ICDS programme have repeatedly pointed out that one major lacuna in programme implementation has been the enormous attention given to the supply of food while other aspects of the programme, such as nutrition education, preschool education, addressing field worker's training needs and service conditions etc. have been relatively ignored.

This chapter makes an exploratory analysis of the relatively neglected aspects of the ICDS programme which includes a) condition of infrastructure b) functioning of anganwadi centres (AWCs) and c) working conditions and support available to field level workers. The comparisons have been made across districts, location (rural-urban) and social categories. Statistical tests have been used to assess the significance of the differences.

#### 4.1 Status of Anganwadi Infrastructure

In order to understand variations in infrastructure status across the sampled districts, We analyzed status of these

anganwadi centres across various criteria including whether angaewadi building is located in a rented space or a government owned building, the size or space available, presence of toilets, availability of water and availability of other equipment and facilities that they are supposed to have.

##### 4.1.1 Status of building ownership

A total of 100 AWCs were assessed as part of the quality of services survey. Among the 100 AWC's covered across the four districts, **74 centres were housed in own buildings, 16 were located in rented buildings and the remaining 10 were on leased government premises.** (At the state level, the annual programme implementation plan (APIP) 2015-16 reports that 61 percent of the AWC's in Karnataka are located in their own building, 17.7% are located in other community buildings as a temporary arrangement).

Table 4 shows a district-wise distribution of rented vs. own or leased spaces for AWCs. Within our sample, **Bellary appears to be the best performing district with no rented buildings. Chamrajnagar and Bangalore have the highest number of rented buildings in our sample with 6 (24 per cent or almost a quarter of the sample housed in rented buildings).**

A Fisher's exact test of significance shows that there is a significant difference between the districts with respect to AWC's located in rented or owned/government leased buildings (Fisher's exact value=0.031, which is significant at  $p < 0.05$ ). There was no significant difference, however, between the availability of rented or own/leased buildings across urban or rural

centers, and across the different AWC types (SC/ST; General).

**Table 4: Number of AWCs that are rented/ owned /leased across districts**

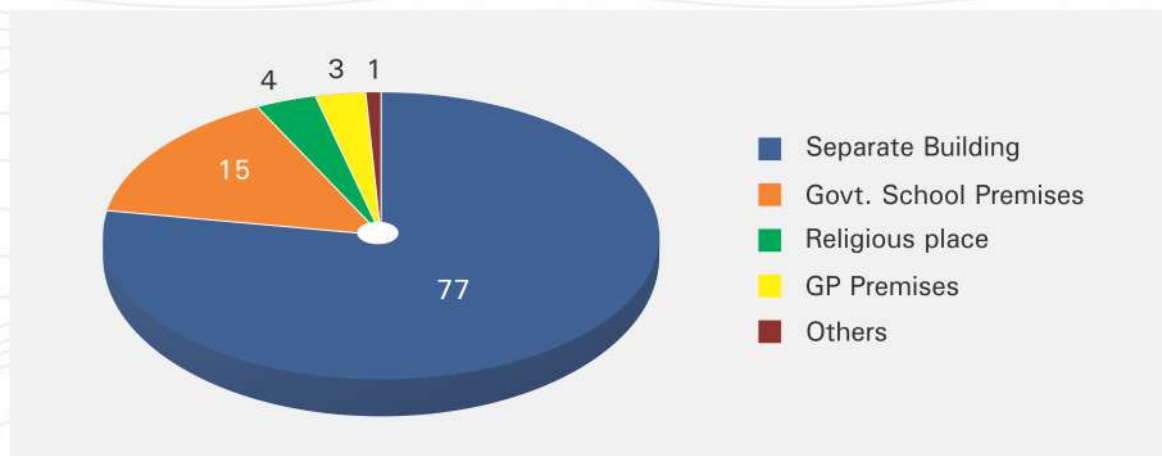
Type of building	Bellary	Chamraj-nagar	Haveri	Ban-galore	Total
Rented	0	6	4	6	16
Own building	21	17	18	18	74
Leased	4	2	3	1	10
Total	25	25	25	25	100

**Table 5: Fisher’s exact test of significance for rented /owned and leased AWCs by district**

District		Rented	Own/ leased	Total
Bellari	Actual	0	25	25
	Expected	4.0	21.0	
	Chi value	4.0	0.8	
Chamrajnagar	Actual	6	19	25
	Expected	4.0	21.0	
	Chi value	1.0	0.2	
Haveri	Actual	4	21	25
	Expected	4.0	21.0	
	Chi value	0.0	0.0	
Bangalore	Actual	6	19	25
	Expected	4.0	21.0	
	Chi value	1.0	0.2	
Total		16	84	100

Further, seventy seven AWCs had a separate building. 15 were located in a government school premises, 4 were in religious place, 3 were in gram panchayat premises and 1 was in other place.

**Figure 1: Distribution of centres by type of building**



#### 4.1.2 Space available at AWCs

The survey incorporated details about the total size of the centre. Out of 100 AWC’s, 17 centres met the minimum requirement of 600 sq ft space, while 23 centres exceeded the norm of 600 sq ft. A large majority of 60 AWCs had less than the minimum designated space of 600 sq ft. Table 6 shows the distribution of the centres according to size across the four districts.

**Table 6: Distribution of AWCs according to the space available by district**

District	Less than 600 sq ft	600sq ft	More than 600 sq ft	Total
Bellari	15	5	5	25
Chamrajnagar	12	6	7	25
Haveri	12	4	9	25
Bangalore	21	2	2	25
Total	60	17	23	100

A Fisher's exact test shows that there is a significant difference between the districts with respect to size of AWC (Fisher's exact statistic=0.029, which is significant at  $p < 0.05$ ).

**Bangalore has far fewer AWCs that meet the size norm than expected, when compared with the other districts.** This could largely be because of the high real estate prices in Bangalore. Discussions with the various ICDS officers of Bangalore Urban revealed that infrastructure and space were the biggest problems that they faced in managing the programme. Problems such as insufficient rent norms, lack of financial resources to pay advance (that is demanded for renting property in Bangalore), high cost of even other government-leased property such as by Bruhut Bangalore Mahanagar Palike (BBMP), and difficulty in even getting 20X30 sites in urban slums were reported by the officers.

**Table 7: Fishers exact test of significance comparing the size of AWCs across districts**

District		Less than 600 sq ft	600 sq ft and more	Total
Bellari	Actual Expected Chi value	15 15.0 0.0	10 10.0 0.0	25
Chamrajnagar	Actual Expected Chi value	12 15.0 0.6	13 10.0 0.9	25
Haveri	Actual Expected Chi value	12 15.0 0.6	13 10.0 0.9	25
Bangalore	Actual Expected Chi value	21 15.0 2.4	4 10.0 3.6	25
Total		60	40	100

Similarly, a chi square test of significance comparing the size of centres across urban and rural areas also shows that there is a significant difference in size of AWCs between urban and rural areas (chi square test statistic =8.8704;  $p=0.003$ , which is significant at  $p < 0.05$ ). This could also be because the majority of our urban sample comes from Bangalore, which as seen above, has much lower number of AWCs that meet the size norms.

**Table 8: Fishers test of significance comparing size of AWCs across locations**

Urban / Rural		Less than 600 sq ft	600 sq ft and more	Total
Urban	Actual Expected Chi value	22 15.6 2.6	4 10.4 3.9	26
Rural	Actual Expected Chi value	38 44.4 0.9	36 29.6 1.4	74
Total		60	40	100

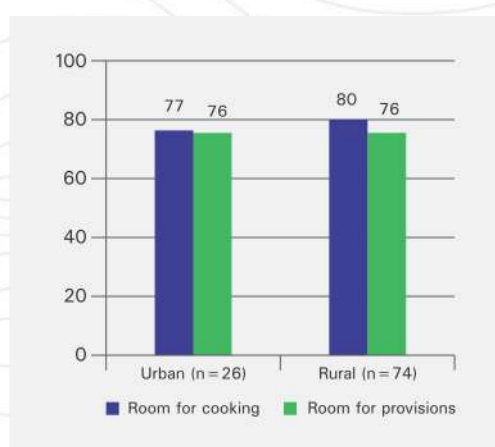
However, size of AWCs does not differ by anganwadi type (i.e., SC/ST or others). Further, 79 (of the 100) centres had a separate room for cooking and 76 had a separate room to store the provisions. The space being used for teaching or feeding children was not being used for any other purpose such as storage or cooking in 87 (of the 100) centres.

**Table 9: Number of centres with separate space for cooking, storing provisions and teaching children across districts**

District	Have a separate room for cooking (n = 100)	Have separate room to store provisions (n = 100)	Have a separate space for teaching (n = 100)
Bellari	21	20	23
Chamrajnagar	16	18	20
Haveri	23	19	24
Bangalore	19	19	20
Total	79	76	87

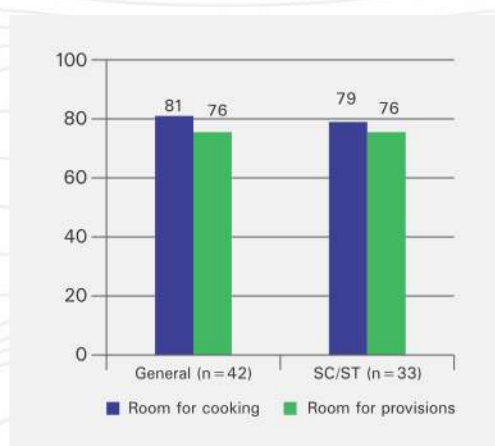
There are no significant differences between the districts in terms of availability of separate rooms for cooking, storing provisions and teaching. The urban-rural gap was not high, as 77 percent of AWCs in urban areas had a separate space for cooking while 80 percent of AWCs in rural areas had the same. Similarly, 76 percent of urban centres, and 77 percent of rural central had a separate room for provisions.

**Figure 2: AWCs with separate room for cooking and provisions by location**



81 percent of AWCs classified as 'general' had a separate room for cooking compared to 79 percent AWCs that were classified as SC/ST. Similarly, 76 percent of AWCs classified as 'general' and SC/ST respectively had a separate room for provisions.

**Figure 3: AWCs with separate room for cooking and provisions by AWC type**



### 4.1.3 Availability of water facilities

With regards to the water source, of the 100 AWCs, 46 had a water source inside the premise while a majority of 54 did not have a water source inside the premise. Bellary district had the highest number of anganwadis without a water source (even though most AWCs in Bellary were located in their own or government leased premises). Chamrajnagar had the highest proportion of AWCs with a water source inside the premise.

**Table 10: Number of AWCs with a water source within the premise across districts**

District (n=100)	Have a water source inside the premises	Do not have a water source inside the premises	Total
Bellari	8	17	25
Chamrajnagar	17	8	25
Haveri	9	16	25
Bangalore	12	13	25
Total	46	54	100

A chi square test of significance shows that there is a significant difference between the districts in terms of AWCs having water facilities within the premise (chi square statistic=7.8905; p=0.048, which is significant at <0.05). Among the four districts a larger proportion of AWCs in Chamrajnagar have a water source within the premise, suggesting that Chamrajnagar is perhaps doing well in terms of water facilities. The availability of more number of AWCs with water provisions within the premise is higher in districts which have more rented buildings; this could indicate that water facilities in own and other government leased premises may not be adequate. A correlation test was used to check this hypothesis. However, the correlation value is not significant (r=0.16), which suggests that availability of water facility is not related to whether the AWC is on a rented or own/ government leased premise.

**Table 11: Chi square test of significance comparing availability of water facilities within AWCs across districts**

District (n= 100)		Have a water source inside the premises	Do not have a water source inside the premises	Total
Bellary	Actual Expected Chi value	8 11.5 1.1	17 13.5 0.9	25
Chamrajnagar	Actual Expected Chi value	17 11.5 2.6	8 13.5 2.2	25
Haveri	Actual Expected Chi value	9 11.5 0.5	16 13.5 0.5	25
Bangalore	Actual Expected Chi value	12 11.5 0.0	13 13.5 0.0	25
Total		46	54	100

Further, while there was no difference between urban or rural centres in terms of having water facilities within the premise, a significant difference is seen between centres classified as SC/ST and general, with respect to availability of water facilities within the premise (chi square statistic=5.5465; p=0.019, which is significant at <0.05). From the chi square test table given below, it appears that AWCs classified as SC/ST are perhaps doing somewhat better in terms of having water facilities, while less number of AWCs classified as general have no water facilities within the premise.

**Table 12: Chi square scores comparing AWCs with water facilities within the premise by AWC type**

AWC Type (Category)		Have a water source inside the premises	Do not have a water source inside the premises	Total
General	Actual Expected Chi value	14 19.0 1.3	28 23.0 1.1	42
SC/ST	Actual Expected Chi value	20 15.0 1.7	13 18.0 1.4	33
Total		34	41	75

Out of the 46 AWCs which had a water source within the premise of the centre, 27 had taps, 19 had a tank and 4 had borewells.

Among those who did not have a water source within the premise, 43 could source water from a distance of less than 0.5 kms, 3 had to source water from a distance of 0.5 to 2 kms, and 8 from a distance of more than 2 kms. A chi-square test was done to check if there were significant differences in terms of distance of access to drinking water across the four districts, based on whether they were located in urban or rural areas, and based on classification of AWC as SC/ST or general. No significant differences were observed with respect to all three of these variables.<sup>9</sup>

As for drinking water, only 52 of the 100 centres surveyed had a water filter in the centre. The district with the highest number of water filters was Bangalore (16 out of 25) and least was Bellary (9 out of 25). During field visits and discussions with AWWs in many centres it was pointed out that the water filters had been donated by the community. Thus, the difference across districts with respect to water filters may also be a reflection of the economic strength or/and mobilisation of the community in contributing to the effective functioning of the AWC. However, since this is highly variable from district to district, and even within districts locally, it is important that basic provisions for supplying clean drinking water to children be made mandatorily available across all AWC on an urgent basis. With lack of clean drinking water being an important cause of childhood infections and malnutrition, it is important that adequate budget and effort be made to provide filters in all AWCs.

**Table 13: Number of centres with water filters across the four districts.**

District (n = 100)	Have a water filter	Do not have a water filter	Total
Bellary	9	16	25
Chamrajnagar	14	11	25
Haveri	13	12	25
Bangalore	16	9	25
Total	52	48	100

Chi square tests of significance conducted shows that there is no significant difference in terms of access to water filters across districts, based on urban-rural areas or based on classification of AWCs as SC/ST or general.

#### 4.1.4 Availability of electricity

With respect to electricity, 70 of 100 centres have provisions of electricity. Among the 70, more centres in Chamrajnagar (21 out of 25) have electricity, compared to Bellary (19), Haveri (16) and Bangalore (14). There was no significant difference with respect to centres with electricity when compared across districts or based on AWC type (i.e., SC/ST or general). However, there is a significant difference with respect to centres with electricity across urban and rural areas (chi square statistic=4.3659;  $p=0.037$ , which is significant at  $p<0.05$ ). A larger number of urban centres did not have electricity. Again, this needs to be seen in relation to rent norms and other infrastructure funds provided to AWCs in urban area. Cost of water and electricity is built into rent costs as per the ICDS programme. During field visits and in discussion with several functionaries at all levels, it was found that for a city like Bangalore (which mainly comprised our urban sample), with a high real estate costs and high cost of living, it was difficult to find premises that satisfied all these conditions within the given rent norms. Though Bangalore is a special case, other urban locations could also face this problem to varying extent.

**Table 14: Chi square scores comparing AWCs with electricity across locations**

Urban / Rural		Have a provision of electricity	Do not have a provision of electricity	Total
Urban	Actual	14	12	26
	Expected Chi value	18.2 1.0	7.8 2.3	
Rural	Actual	56	18	74
	Expected Chi value	51.8 0.3	22.2 0.8	
Total		70	30	100

#### 4.1.5 Availability of toilets facilities

Approximately half of the centres (53) have toilet facilities inside the premises, but only 29 of these centres (i.e., 54.7%) were in a usable condition.

**Table 15: Number of centres with toilets across the four districts**

District (n = 100)	Have toilet facilities inside the premises	Have a usable toilet facility inside the premises
Bellary	15	9
Chamrajnagar	11	8
Haveri	12	2
Bangalore	15	10
Total	53	29

<sup>9</sup>Note: The chi square tests presented in the report show the independence of variables compared based on our sample, and can be used with small samples, making no assumptions of normal distribution.

There was no significant difference in availability of toilets at AWCs across the district, but there was a district-wise difference with respect to AWCs with usable toilets (chi square statistic=9.4854; p=0.023, which is significant at p <0.05 level). From the chi square test table given below, Haveri has more centres which do not have a usable toilet. During field visits in Haveri it was observed that many centres did have constructed toilets, but these were not functional because construction was not fully complete, and children continued to urinate in open drains near the AWC.

**Table 16: Chi square test showing differences in number of centres with usable toilets across the districts**

District (n=53)		Have a usable toilet	Do not have a usable toilet	Total
Bellary	Actual	9	6	15
	Expected	8.2	6.8	
	Chi value	0.1	0.1	
Chamrajnagar	Actual	8	3	11
	Expected	6.0	5.0	
	Chi value	0.7	0.8	
Haveri	Actual	2	10	12
	Expected	6.6	5.4	
	Chi value	3.2	3.8	
Bangalore	Actual	10	5	15
	Expected	8.2	6.8	
	Chi value	0.4	0.5	
Total		29	24	53

A total of 47 centres did not have a toilet. The total centres with no toilets or unusable toilets are 71. Among them, 65 centres (91.5 percent) were able to access a toilet at a distance of less than 0.5 kms.

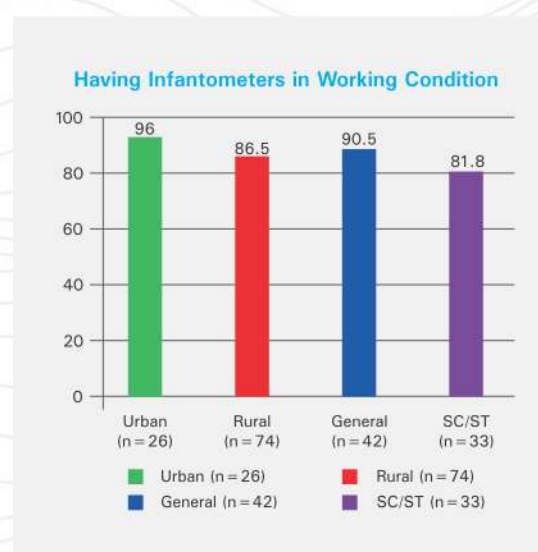
#### 4.1.7 Availability of infantometers, adult weighing scales, growth charts and medications

Ninety five (of the 100) centres had an Infantometer, of which 89 (i.e., 93.7%) were in working condition. All centres sampled in Bellary and Bangalore had an Infantometer, with most of them were in working conditions.

**Table 17: Number of centres having infantometers across the districts**

District (n= 100)	Have an Infantometer	Have an Infantometer in working condition
Bellary	25	24
Chamrajnagar	21	18
Haveri	24	13
Bangalore	25	24
Total	95	89

**Figure 4: Distribution of working infantometers by location and by AWC type**



About adult weighing scale, 55 centres had weighing scale but only 47 were in a working condition.

**Table 18: Number of AWCs with an adult working scale across the four districts**

District (n= 100)	Have an adult weighing scale	Centres with working adult weighing scales
Bellary	22	17
Chamrajnagar	10	7
Haveri	1	1
Bangalore	22	22
Total	55	47

**Table 19: Chi square scores comparing availability of adult weighing scales across districts**

		Weighing Scale	No Weighing Scale	Total
Bellary	Actual	22	3	25
	Expected	13.75	11.25	
	Chi value	4.95	6.05	
Chamrajnagar	Actual	10	15	25
	Expected	13.75	11.25	
	Chi value	1.02	1.25	
Haveri	Actual	1	24	25
	Expected	13.75	11.25	
	Chi value	11.82	14.45	
Bangalore Urban	Actual	22	3	25
	Expected	13.75	11.25	
	Chi value	4.95	6.05	
Total		55	45	100

There is a significant difference between the districts in terms of centres with a working adult weighing scale (chi-square statistic=50.5455,  $p < 0.00001$ ). The result is significant at  $p < .05$ ). From the chi square test table given below it appears Haveri has much fewer centres with adult weighing scales than expected. There is also significantly less number of centres in Bellary and Bangalore with adult weighing scales.

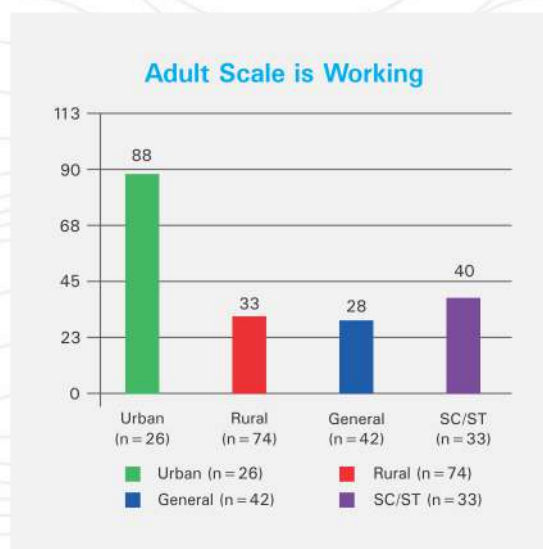
Similarly, among the centres with adult weighing scales in working condition, there is a significant difference when compared across districts (Fisher's exact statistic=0.024, which is significant at  $p < 0.05$  level). From the chi square table given below, again Haveri has a much lesser number of centres which do not have a working scale as expected, while Bangalore has a much higher number of centres with a working scale than expected.

**Table 20: Chi square scores comparing AWCs with working adult weighing scales across the districts.**

District		Adult scale is working	Not working	Total
Bellary	Actual	17	5	22
	Expected	18.8	3.2	
	Chi value	0.2	1.0	
Chamrajnagar	Actual	7	3	10
	Expected	8.5	1.5	
	Chi value	0.3	1.6	
Haveri	Actual	1	0	01
	Expected	0.9	0.1	
	Chi value	0.0	0.1	
Bangalore	Actual	22	0	22
	Expected	18.8	3.2	
	Chi value	0.5	3.2	
District (n=53)		47	8	55

Lack of weighing scales affects health monitoring of pregnant women and adolescents and therefore requires attention.

**Figure 5: Distribution of working adult weighing scales by location and AWC type**



There is also a significant difference in terms of availability of working adult scales when compared across urban and rural centres (Fisher's exact=0.015485, which is significant at  $p < 0.05$ ). A much larger proportion of urban centres (than expected) had working adult scales.

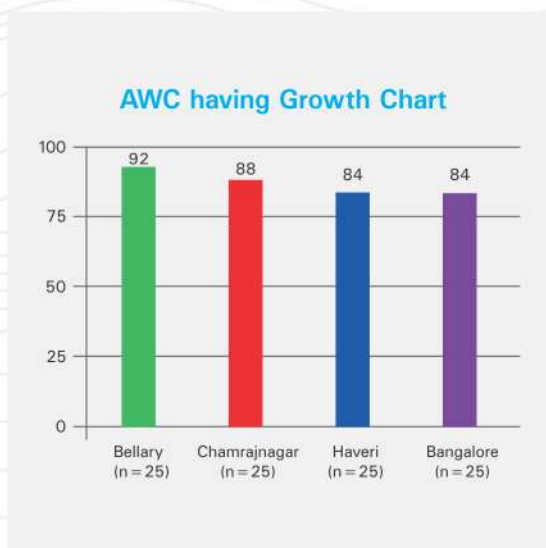
**Table 21: Chi square test of significance comparing AWCs with adult weighing scales across locations**

Urban / Rural		Adult scale is working	Adult scale not working	Total
Urban	Actual	23	0	23
	Expected	19.65	3.35	
Rural	Actual	24	8	32
	Expected	27.35	4.65	
Chi value		0.57	2.4	
Total		47	8	55

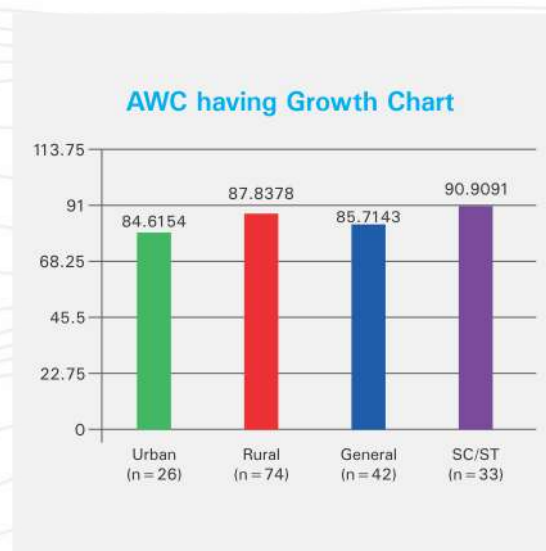
Availability of growth chart & display of growth chart

With respect to AWCs with a growth chart, 87 AWCs had a growth chart and 77 AWCs (88.5 percent), displayed it in the centre.

**Figure 6: Number of AWCs that have a growth chart across the districts**

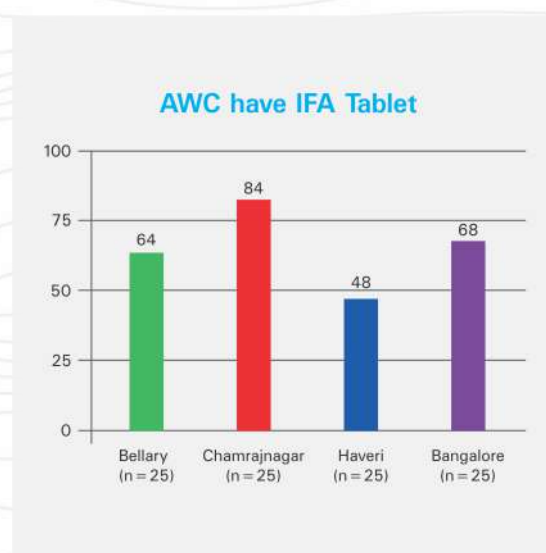


**Figure 7: Number of AWCs with growth chart by location and by type**

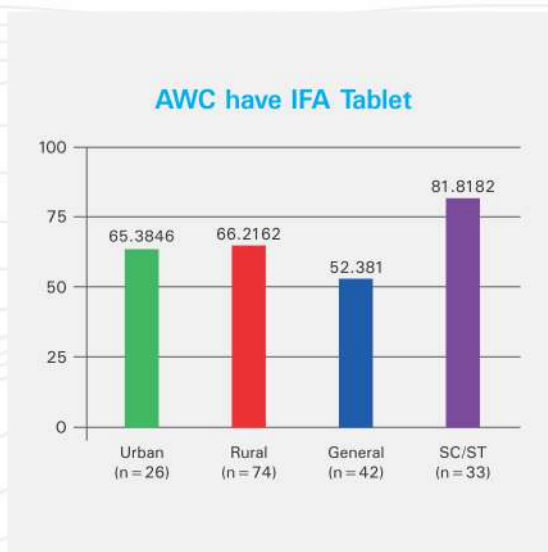


Finally, a stock of iron and folic acid tablets was available in 66 (of the 100) AWCs. There were no significant differences with respect to stock of IFA tablets available in AWCs across districts, or based on rural or urban centres.

**Figure 8: Percentage of AWCs with IFA tablets district-wise**



**Figure 9: Distribution of IFA tablets by location and AWC type**



However, there was a significant difference with respect to availability of IFA tablets by type of AWC (i.e., General or SC/ST) (Chi square value=7.0705; p value=0.008, which is significant at  $p < 0.05$ ). Only about half the 'general' AWCs had IFA tablets, compared to 82 percent of centres classified as SC/ST. The chi square table also shows that less than expected number of AWCs classified as 'general' had an adequate stock of IFA tablets.

**Table 22: Chi square test of significance comparing AWCs with IFA tablets by type of AWC**

AWC Category		Have IFA tablet storage	Don't have IFA tablet storage	Total
General	Actual	22	20	42
	Expected	27.4	14.6	
	Chi value	1.1	2.0	
SC / ST	Actual	27	6	33
	Expected	21.6	11.4	
	Chi value	1.4	2.6	
Total		49	26	75

## 4.2 Functioning of the centre

The AWCs were also observed/checked (based on beneficiary and anganwadi staff reports) with respect to their functioning and regularity. With respect to number of days and timing of the AWC, all beneficiaries unequivocally reported that the AWCs were open 6 days a

week, but only less than half (47.29 percent) reported that the AWC was open for the prescribed number of hours (i.e., 6.5 hours). Table 22 give the summation of response from three groups of beneficiaries with respect to the timings of the AWC. There is no significant difference between the three groups of beneficiaries in terms of AWC timing across district, urban-rural AWCs or by anganwadi type.

**Table 23: Beneficiary responses about the duration of AWC remaining open every day**

Beneficiaries	6.5hours or more	Less than 6.5hours	Total
Parents	251	249	500
Pregnant and Lactating	219	275	494
Adolescents	99	96	195
Total	569	620	1189

Further, in terms of the time spent on different activities, AWWs on an average reported the following number of hours on the following activities:

**Table 24: Average time spent on different activities across the districts**

Activity	Districts (hours and minutes)				Average (hrs & mins)
	Bellary	Cham-rajnagar	Haveri	Bangalore	
SNP Distribution*	1 hr 40 mins	1 hr 35 mins	2 hrs 3 mins	1hr 25 mins	1 hr 40 mins
Immunization*	1 hr 16 mins	1 hr 18 mins	1 hr 32 mins	1 hr 37 mins	1 hr 25 mins
Health check ups and referrals*	1hr 18 mins	1 hr	1 hr 16 mins	1 hr 13 mins	1 hr 12 mins
Health and Nutrition Education	1 hr 12 mins	1. 35 mins	1 hr 12 mins	1 hr 13 mins	1 hr 18 mins
Pre-school Education	1 hr 11 mins	1 hr 22 mins	2 hrs 17 mins	1 hr 5 mins	1 hr 40 mins
Updating records	42 mins	1 hr 11 mins	50 mins	50 mins	50 mins
Meetings*	1hr 39 mins	1 hr 45min	2 hrs 4min	1 hr 29 mins	1 hr 45 mins

\* Activities marked with an asterisk are not undertaken daily, and the time reported is for when these activities are undertaken.

**Table 25: Chi square scores comparing time spent on various activities across the districts**

Activity		Districts (Minutes)				Average (Minutes)
		Bellary	Chamrajnagar	Haveri	Bangalore Urban	
SNP Distribution*	Actual	100.8	94.4	123.6	85.2	101
	Expected	91.65	100.60	114.62	97.13	
	Chi Value	0.91	0.38	0.70	1.46	
Immunization*	Actual	76.4	77.9	92.4	97.2	85.975
	Expected	78.00	85.65	97.57	82.68	
	Chi Value	0.03	0.69	0.27	2.54	
Health check ups and referrals*	Actual	78	59.6	76.8	73.2	71.9
	Expected	65.23	71.61	81.60	69.14	
	Chi Value	2.49	2.01	0.28	0.23	
Health and Nutrition Education	Actual	72.4	94.8	72.4	73.2	78.2
	Expected	70.94	77.89	88.75	75.20	
	Chi Value	0.02	3.66	3.01	0.05	
Pre-school Education	Actual	71.6	88.8	136.8	104.8	100.5
	Expected	91.18	100.10	114.06	96.64	
	Chi Value	4.20	1.27	4.53	0.68	
Updating records	Actual	41.8	72.6	50	50.4	53.7
	Expected	48.72	53.49	60.94	51.64	
	Chi Value	0.98	6.82	1.96	0.02	
Meetings*	Actual	99.4	105.2	124	88.8	104.35
	Expected	94.4	103.94	118.43	100.35	
	Chi Value	0.23	0.01	0.26	1.32	
<b>Total</b>		<b>77.2</b>	<b>84.75714</b>	<b>96.57143</b>	<b>81.82857143</b>	<b>85.0892857</b>

\* Activities marked with an asterisk are not undertaken daily, and the time reported is for when these activities are undertaken.

There was a significant difference with respect to the average time spent by workers on different activities across the districts (chi square statistic=41.1758;  $p=0.00144$ , which is significant at  $p<0.05$  level). From the chi-square table presented above, it appears that the difference may be related to the time spent on updating records in Chamrajnagar (with AWWs spending a much greater quantum of time than expected). The significant difference in time spent across the districts also seems to be related to time spent on pre-school education (PSE), with AWWs spending in more time in Haveri in PSE, and AWWs in Bellary spending least time on PSE.

### 4.3 Recordkeeping

With respect to maintenance of records, 52 centres have been maintaining records. Forty-three centres are also using the new registers,

of which a majority of 24 have started using it from December, 2015. Among the centres that maintained the register, almost all the columns have been filled in the registers. There was a significant differences with respect to updating and maintenance of records when compared across districts (chi square statistic=53.2051;  $p=0.000$ , which is highly significant at  $p<0.05$  level), across urban-rural centres (chi square statistic=18.7140,  $p=0.000$ , which is significant at  $p<0.05$  level) and by anganwadi type (i.e., SC/ST and General; chi square statistic=7.5848;  $p=0.006$ , which is significant at  $p<0.05$  level). A large number of AWCs have not maintained records in Haveri district, and to a lesser extent in Bellary district, while Chamrajnagar and Bangalore Urban have more number of AWCs that have maintained records.

**Table 26: Chi square test scores for maintenance of records across the districts**

District (n= 100)		Records are maintained	Not maintained	Total
Bellary	Actual Expected Chi value	6 13.0 3.8	19 12.0 4.1	25
Chamrajnagar	Actual Expected Chi value	22 13.0 6.2	3 12.0 6.8	25
Haveri	Actual Expected Chi value	2 13.0 9.3	23 12.0 10.1	25
Bangalore	Actual Expected Chi value	22 13.0 6.2	3 12.0 6.8	25
Total		52	48	100

**Table 27: Chi square test of significance comparing maintenance of records across urban-rural centre types**

Urban / Rural		Records are maintained	Not maintained	Total
Urban	Actual Expected Chi value	23 13.5 6.6	3 12.5 7.2	26
Rural	Actual Expected Chi value	29 38.5 2.3	45 35.5 2.5	74
Total		52	48	100

**Table 28: Chi square scores comparing maintenance of records across AWC type**

AWC Category		Records are maintained	Not maintained	Total
General	Actual Expected Chi value	11 16.8 2.0	31 25.2 1.3	42
SC / ST	Actual Expected Chi value	19 13.2 2.5	14 19.8 1.7	33
Total		30	45	75

Seventy-three workers reported receiving training to update the records according to the new MIS.

**Table 29: Number of AWWs who have received training for new MIS by district**

District	Have received training	Have not received training	Total
Bellary	8	17	25
Chamrajnagar	24	1	25
Haveri	24	1	25
Bangalore Urban	17	8	25
Total	73	27	100

There is a significant difference with respect to training received to update the new MIS when compared across districts (chi square =35.0583; p=0.00001, which is significant at p<0.05 level). The number of workers in Bellary who have not received training to update the new Management Information System (MIS) is more than in other districts.

**Table 30: Chi square test of significance comparing workers who received training to maintain the new registers across districts**

District		Have received training	Have not received training	Total
Bellary	Actual Expected Chi value	8 18.25 5.76	17 6.75 15.56	25
Chamrajnagar	Actual Expected Chi value	24 18.25 1.81	1 6.75 4.90	25
Haveri	Actual Expected Chi value	24 18.25 1.81	1 6.75 4.90	25
Bangalore Urban	Actual Expected Chi value	17 18.25 0.09	8 6.75 0.23	25
Total		73	27	100

Similarly, there is a significant difference between workers who have received training with respect to the new registers based on AWC type (SC/ST and General; chi square statistic=5.4382; p=0.019, which is significant at p<0.05 level). Many workers in AWCs classified as SC/ST have received training to update the new MIS. However there was no difference in training received by workers based on whether the centres were in rural or urban areas.

**Table 31: Workers trained to use the new registers by AWC type**

AWC type	Have received training to update register	Have not received training to update registers	Total
SC / ST	29	4	33
General	27	15	42
Total	56	19	75

**Table 32: Chi square test of significance comparing workers who received training to use the new registers AWC type**

AWC type	Received Training	Did not Receive Training	Total
SC / ST	29 (24.64) [0.77]	4 (8.36) [2.27]	33
General	27 (31.36) [0.61]	15 (10.64) [1.79]	42
Total	56	19	75 (GT)

#### 4.4 Working Conditions of Anganwadi Workers (AWW)

About 49 workers reported feeling overworked, but only 16 reported that they did not have time to carry out their duties. Sixty-nine workers also reported having to carry out other duties in addition to ICDS (such as work on Bhagyalakshmi registrations, census duty or election duty). There was no significant difference in with respect to these additional duties that workers had to undertake when compared across districts, urban-rural centres, or based on category (SC/ST/General).

With respect to training to carry out their functions, it was found that 98 workers had received training on joining service, and 81 had

also received refresher training. Eighty-seven workers also reported receiving training to undertake pre-school education.

With regards to monitoring and support, 79 (of 100) workers also reported that the supervisor visited their centres once a month, but only 15 (of 100) workers reported receiving help from their supervisors. There was significant difference between the districts with respect to regularity of supervisors' visits (chi square statistic=13.6658; Fisher's exact statistic=0.005, which is significant at p<0.05 level). From the chi square table given below, it appears that Chamrajnagar is the poorest performing district with respect to supervisor visits, while Haveri is the best performing district with respect to supervisor visits. During FGDs, we found that three districts faced a shortage of supervisors - Bangalore, Bellary and Chamrajnagar, making it difficult for supervisors in these districts to monitor all the AWCs. Further, during field visits, it was also found that the terrain of Chamrajnagar was difficult, with many centres located in inaccessible areas, and lacking transport facilities. Inadequate public transport and traffic was also an issue for Bangalore Urban district, which made monitoring difficult. Thus, during field visits some supervisors also pointed out to the need for the department to make provisions for transport. Earlier, it was stated by one programme official in Haveri that the department used to provide loans for supervisors to purchase a moped, but the scheme was discontinued since there were few takers among the women supervisors.

**Table 33: Regularity of supervisors' visits across districts**

District	Supervisor visits regularly-once a month	Visits irregularly	Never have visited	Total
Bellary	20	5	0	25
Chamrajnagar	16	9	0	25
Haveri	25	0	0	25
Bangalore	18	6	1	25
Total	79	20	1	100

**Table 34: Chi square test of significance comparing supervisor's visit across districts**

District		Supervisor visits regularly- once a month	Visits irregularly	Never have visited	Total
Bellary	Actual	20	5	0	25
	Expected	19.8	5.0	0.3	
	Chi value	0.0	0.0	0.3	
Chamrajnagar	Actual	16	9	0	25
	Expected	19.8	5.0	0.3	
	Chi value	0.7	3.2	0.3	
Haveri	Actual	25	0	0	25
	Expected	19.8	5.0	0.3	
	Chi value	1.4	5.0	0.3	
Bangalore Urban	Actual	18	6	1	25
	Expected	19.8	5.0	1.0	
	Chi value	0.2	0.2	2.3	
Total		79	20	1	100

There was also a significant difference with respect to supervisor's visits when compared across General and SC/ST centres, with many SC/ST centres having irregular visits by supervisors than general AWC centres (chi square statistic=12.1559; p=0.000, which is significant at p<0.05). But there was no difference between urban and rural centres in terms of regularity of supervisor's visits.

**Table 35: Chi square test of significance for supervisor's visit across AWC types**

		Supervisors visit regularly	Supervisors visit irregularly	Marginal Row Totals
General	Actual	40	2	42
	Expected	34.16	7.84	
	Chi value	1	4.35	
SC / ST	Actual	21	12	33
	Expected	26.84	6.16	
	Chi value	1.27	5.54	
Total		61	14	75

About 78 workers reported that the CDPO visits their centre once a month, but only 10 reported receiving support from the CDPO.

#### 4.5 Summary of Findings on Overall Functions of AWCs

In terms of infrastructure, a large number of AWCs were functioning with several constraints, ranging from lack of adequate space and lack of water facilities, to essential requirements such as having functioning toilets. During field visits, interviews and FGDs with several functionaries of the ICDS scheme, it was constantly reported that these problems resulted from a combination of lack of adequate rent norms, difficulties in finding the stipulated amount of space in urban and rural areas, and the lack of separate costs budgeted/built in for provisions such as water and electricity. Often electricity in centres was cut off because there was a tussle over who should bear the cost of electricity - whether it should be the WCD or the BBMP/Panchayat. Even government premises such as BBMP buildings were reported to be difficult to find, and other considerations such as advance asked by landlords was also not built into the cost.

Similarly, we also observed that service conditions for AWWs, who form the backbone of the ICDS programme are poor. While AWWs are burdened with a high workload and while they also receive some training, they appear to receive little support from above. Improving service conditions for workers also needs to be seen in relation to shortages faced with personnel at the supervisory level (i.e., supervisors), and in relation to the kinds of training that supervisors and CDPOs receive in order to undertake their roles as mentors and support systems to AWWs.

## Chapter 5: Quality of Services Analysis (Supplementary Nutrition)

In a country where 38.7% of children are stunted and 29.4% of children are underweight,<sup>10</sup> it comes as no surprise that, in 2012, former Prime Minister Dr. Manmohan Singh called malnutrition in India a national shame while stressing that ICDS still remains one of the most important tools to fight it. It is perhaps not astonishing then that amongst the six components of the ICDS, it is the Supplementary Nutrition Programme (SNP) that is most well known and utilized.

Envisaged as a service to bridge the gap between the Recommended Dietary Allowance (RDA) and the Average Daily Intake (ADI), different forms of supplementary foods are given to different target groups. Children aged between 3 and 6 years are provided hot cooked meals within the Anganwadi centers. Additionally, they are given milk 3 days a week and a snack every day. Pregnant women, lactating mothers, adolescent girls and children aged between 6 months and 3 years are provided with ration which they can take home. These include dense fortified foods, rice, wheat, green grams and milk powder depending on the target group.

As per the central government norms, supplementary nutrition is provided to all beneficiaries for 300 days a year. Depending on the target group, different nutritional standards are provided as well. For example, children are supposed to be provided with

foods which contain 500 calories along with 12-15 grams of protein. Pregnant women, lactating mothers and adolescent girls are supposed to be provided with 600 calories along with 18-20 grams of protein. Severely malnourished or underweight children need special attention. As per the norms, they are to be provided with 800 calories along with 20-25 grams of protein.

Looking more closely at Karnataka, it appears that the state has not done much in terms of reduction of nutrition indicators. As per NFHS 4 (2015-16) results, 32.6 percent of children under the age of five are stunted, 24.8 percent are wasted while 31.5 percent are underweight. These numbers, even though slightly lower from NFHS 3 survey results,<sup>11</sup> are still quite high for an economically well to do state like Karnataka and the reasons for this need to be further investigated. A question that perhaps may need to be asked is whether the state is investing enough for children. Another probable reason why malnutrition might be so high in the state could be attributed to a lack of awareness amongst beneficiaries. Rise of malnutrition cannot just be attributed to a lack of nutritional resources but also to lack of knowledge on type of food, quantity of food and good feeding practices (Kilaru et al., 2005).

<sup>10</sup>Rapid Survey on Children (2013-2014)- India Fact Sheet, Ministry of Women and Child Development, Government of India [http://wcd.nic.in/issnip/National\\_Fact%20sheet\\_RSOC%20\\_02-07-2015.pdf](http://wcd.nic.in/issnip/National_Fact%20sheet_RSOC%20_02-07-2015.pdf)

<sup>11</sup>Percentage of children who are wasted has gone up from 17.6% to 24.8%, while children who are stunted and underweight has come down from 43.7% and 37.6% respectively.

In the following sections we examine the performance of the SNP in four districts in Karnataka, and try to analyse the strengths and gaps in its performance. This is undertaken by examining the functioning of the SNP service in terms of its regularity and quality. Specifically the survey attempted to examine beneficiaries knowledge and satisfaction with the SNP service.

## 5.1 Findings

### 5.1.1 Provisions for SNP

In terms of functioning of the SNP service, it was found that 63 AWCs had displayed the food menu, and of those who had displayed the menu, 55 were serving food according to the menu. There was no difference across districts, urban-rural areas or type of AWC with respect to display of food menu. The fact that only approximately half the number of centres surveyed was serving food according to the menu displayed does raise questions about accountability. The absence of food menu displayed at the AWC also disallows the community to monitor the effectiveness of the functioning of the service as envisaged within the scheme.

A further analysis was done to check whether the food reported by the AWW matched the food reported by the beneficiaries. With respect to children receiving THR, we found that Eighty-six per cent of parents in Bangalore, 61 percent of parents in Chamrajnagar and 92 percent of parents in Haveri reported receiving food according to the menu mentioned by the Anganwadi worker. For Bellary, the food menu could not be determined because there was no consensus across workers or parents with respect to the food items being provided. A tentative menu has been described below taking into account the items that were reported by most workers.

**Table 36: Display food menu and matching with what is served/distributed across the districts**

District	Food Menu	AWW who reported this menu	Parents who reported this menu
Bangalore	Green Gram, Milk Powder Jaggery and Nutrimix	80% (20 out of 25)	85.71% (66 out of 77)
Chamrajnagar	Green gram, Milk powder, Wheat and Sugar	60% (15 out of 25)	61.72% (50 out of 81)
Haveri	Green gram, Milk powder, Wheat and Sugar	64% (16 out of 25)	92% (81 out of 88)
Bellary	Green gram, Milk powder, Jaggery and Sugar	40% (10 out of 25)	23.37 (18 out of 77)

In the case of pregnant and lactating (P&L) women, we found that 90.24 percent of the beneficiaries in Bangalore, 87.8 percent in Chamrajnagar, 86.7 percent of the beneficiaries in Bellary and 86 percent beneficiaries in Haveri have agreed with the menu provided by the AWW. Once again, there seemed to be a lower percentage of AWWs in Bellary who agreed upon the menu.

**Table 37: Food menu across the districts based on reports of AWWs and Pregnant and Lactating (P&L) women**

District	Food Menu	% of AWW who reported this food menu	% of P & L women agreed
Bangalore	Green Gram, Rice, Wheat and Jaggery	100% (25 out of 25)	90.24% (111 out of 123)
Chamrajnagar	Green gram, Wheat, Jaggery and Ragi	92% (23 out of 25)	87.80% (108 out of 123)
Haveri	Green gram, Rice, Wheat, Jaggery, Ground nut and Channa Dal	52% (13 out of 25)	86.77% (105 out of 121)
Bellary	Rice, Wheat, Jaggery and Salt	72% (18 out of 25)	86% (105 out of 122)

No clear pattern for each of the districts could be discerned for adolescents, based on the reports provided by the AWW and adolescents.

With respect to Hot Cooked Meals (HCM) three main items were reported by parents and were observed to be served at the centre-namely, mid-day meal, snack and milk. However, there seems to be a significant variation in what was observed in terms of food served at the centre and parents report about HCM. While approximately all parents reported that mid-day meal was served, field level observations across the AWCs showed that mid-day meals were served in accordance with the displayed menu in only about 60 percent of the centres.

Further, a majority of the centres (98 percent and 93 percent) also had a cooking cylinder and enough utensils to cook, store and serve the meals. While this is a positive sign, during field visits, AWWs reported difficulties in ensuring steady supply of cooking gas as an issue. Many pointed out that they incurred out-of-pocket expenses in having the cylinder delivered on time or in arranging transport to bring the cylinder to their centres. These additional costs are not included within the budget provided for fuel expenses under ICDS.

### 5.1.2 Beneficiaries responses on SNP

In addition to examining the provisions for SNP at the AWC, beneficiaries were asked to report about the functioning of the service.

**Knowledge of receiving SNP:** We explored whether beneficiaries are aware about the food ration, timing of the food supply as this can be potentially related to more efficient functioning of the service. From our survey, we found that 71.4 percent of parents, 85.8 percent of pregnant and lactating women (P&Ls) have knowledge about SNP and the frequency of its reception. A chi-square test was conducted in order to ascertain whether there was a significant difference between

parents and pregnant and lactating women with respect to knowledge about SNP. The chi-square value of 30.7314, was significant at  $p < .05$  ( $p=0.000$ ). Significantly more proportion of P&L women, compared to parents had knowledge about SNP.

**Table 38: Knowledge of SNP among beneficiaries**

Beneficiaries	Have knowledge of SNP	Don't have knowledge of SNP	Total
Parent	357	143	500
P&L women	424	70	494
Total	781	213	994

Further analysis were undertaken to see if there were significant differences among the two beneficiary groups with respect to age, education, occupation, income, religion, caste, district and so on.

With respect to age, it was observed that both groups have similar mean ages (mean age for parents=25.6 years, SD=3.6, while mean age for pregnant and lactating women=24.1 years, SD=3.8). Thus, age may not be a significant predictor of the difference in knowledge between parents and pregnant and lactating women.

A chi square test was conducted to examine whether there were significant differences between the two groups with respect to their education levels. There was a significant difference between the two groups with respect to education level attained (chi square statistic=17.2415;  $p=0.00018$ , which is significant at  $p < 0.5$  level).

**Table 39: Chi square test of significance comparing beneficiaries education levels**

Beneficiary group		Illiterate	Literate without formal schooling	Matriculate and above	Total
Parent*	Actual	60	99	341	500
	Expected	46.78	84.00	369.22	
	Chi Value	3.74	2.68	2.16	
P&L women*	Actual	33	68	393	494
	Expected	46.22	83.00	364.78	
	Chi Value	3.78	2.71	2.18	
Total		93	167	734	994

**Table 40: Regression coefficients for factors affecting knowledge of SNP in Pregnant and Lactating women and Parents**

P&L	Coefficient	Std.	z	P > z	95%	Conf.
Urban-rural	0	(omitted)				
District	1.317673	0.2517244	5.23	0	0.8243026	1.811044
Age	0.101228	0.0593566	1.71	0.088	-0.0151089	0.2175648
Income	-0.0000832	0.0000594	-1.4	0.161	-0.0001997	0.0000332
AWC type	0.849427	0.4283029	1.98	0.047	0.0099687	1.688885
Religion	-0.040514	0.5326453	-0.08	0.939	-1.08448	1.003452
Caste	-0.2854774	0.2190411	-1.3	0.192	-0.7147901	0.1438354
Education	-0.4360671	0.3764055	-1.16	0.247	-1.173808	0.3016741
Occupation	-0.2597777	0.4001406	-0.65	0.516	-1.044039	0.5244836
Home visit regularity	-1.065552	0.7642424	-1.39	0.163	-2.56344	0.4
cons	0.0889685	2.214056	0.04	0.968	-4.250501	4.428438
Parent	Coefficient	Std.	z	P > z	95%	Conf.
Urban-rural	-0.736111	1.243438	-0.59	0.554	-3.173205	1.700983
District	0.0539485	0.1773037	0.3	0.761	-0.2935603	0.4014574
Age	-0.0610576	0.0362086	-1.69	0.092	-0.1320251	0.0099099
Income	0.0000948	0.0000552	1.72	0.086	-0.0000135	
AWC type	0.6165949	0.3346391	1.84	0.065	-0.0392858	1.272475
Religion	0.3248243	0.4443446	0.73	0.465	-0.5460751	1.195724
Caste	-0.1951637	0.1666761	-1.17	0.242	-0.5218428	0.1315154
Education	-0.3089977	0.2332469	-1.32	0.185	-0.7661532	0.1481578
Occupation	-0.464566	0.3140757	-1.48	0.139	-1.080143	0.151011
Home visit regularity	-0.6582267	0.7653517	-0.86	0.39	-2.158288	
cons	4.777522	2.259275	2.11	0.034	0.3494242	9.20562

However, education levels (for the two groups taken together) also significantly vary across the districts (chi-square statistic=35.481; p-value is < 0.00001, which is significant at p<.05), and thus, difference in education alone may not be a significant predictor of the difference in knowledge about SNP between parents and pregnant and lactating women. Further, a regression analysis conducted also shows that when controlled for district, education level is not a significant predictor of knowledge about SNP across both groups. However, from the regression table given above, it appears that district and AWC type may be a significant predictor of knowledge about SNP among pregnant and lactating women alone. (Other factors such as religion, caste, income, occupation have also not been found to be significant predictors of knowledge about SNP among the two beneficiary groups). A chi-square test showed that more number of pregnant and lactating women in Chamrajnagar and Haveri are aware of SNP, while less number of pregnant and lactating women in Bellary had knowledge about SNP. Thus, this perhaps indicate a need to further explore district level strategies or approaches that may be used with different beneficiary groups which may be associated with better knowledge among pregnant and lactating women with respect to SNP.

There was no significant difference in knowledge about SNP based on district, urban-rural type of anganwadi or based on type of anganwadi (i.e., SC/ST or general).

Regularity of SNP reported by beneficiaries: With respect to the question of frequency or regularity of receiving SNP, 99 percent of parents, 97.77 percent pregnant and lactating women, and 100 percent adolescents reported receiving SNP on time (i.e., once in 30 days). Of the remaining, a small proportion of the beneficiaries reported receiving SNPs more infrequently, while another small proportion reported receiving more frequently than as

per the norm of once in 30 days (see table 39 below). Thus, it largely appears that overall provision of SNP is regular.

**Table 41: Beneficiaries responses on regularity of SNP**

Beneficiaries	SNP as Per norm	SNP received infrequently	SNP received infrequently	No response	Total
Parents	495	01	01	03	500
P&L women	483	03	03	5	494
Adolescent girls	195	00	00	0	195
Total	1169	04	08	08	1189

However, in contrast with this 36 (of 100) workers reported that there were delays in food distribution. Ten workers (with a majority of 6 being from Haveri) reported that there were delays in receiving provision, 26 workers reported that parents did not come to collect provisions on time. During FGDs, supervisors in Bellary also reported delays experienced in distribution of THR.

**Table 42: AWW responses on delay in food distribution**

AWW responses on SNP delays	Bellary	Chamrajnagar	Haveri	Bangalore	Total
AWW who said delay in receiving provision	01	06	01	02	10
AWW worker who said parents don't come on time to collect provision	09	09	03	05	26
Total	10	15	04	07	36

Sufficiency of quantity of SNP reported by beneficiaries: Beneficiaries and the worker were asked questions about the sufficiency of the food provided through the AWC. Table 39 below shows the responses of the various beneficiary groups regarding sufficiency of food provided through the AWC.

**Table 43: Beneficiaries and AWWs responses on sufficiency of food**

Beneficiaries	Sufficient	Insufficient	No responses	Total
Parents of children receiving THR	208	115	00	323
Parents of children receiving HCM	274	21	01	296
P&L women	270	219	05	494
Adolescent	109	58	28	195
Worker	97	3	00	100
Total	958	416	34	1408

From the table, it can be seen that a vast majority of only parents whose children received HCM have reported that the food provided is sufficient (92.56 percent). Compared to this only 64.39 percent of parents whose children receive THR, 54.65 percent of pregnant and lactating women and 55.89 percent of adolescents have reported that the food provided is sufficient. Chi-square tests conducted to understand whether there are significant differences in beneficiary responses to the question of sufficiency shows that there is a significant difference between both parents whose children receive HCM and whose children receive THR (chi-square value 72.8889; p-value=0.000, which is significant at  $p < .05$ ), as well as across the three groups of beneficiaries (parents, pregnant and lactating women and adolescents) were compared (chi-square value =122.2262; p-value is  $< 0.00001$ , and the result is significant at  $p < .05$ ).

**Table 44: Chi-Square test of significance for comparing difference in sufficiency of food reported by parents of children receiving THR and HCM**

Beneficiaries		Sufficient	Insufficient	Total
Parents of children receiving THR	Actual	208	115	323
	Expected	251.92	71.08	
	Chi value	7.66	27.14	
Parents of children receiving HCM	Actual	274	21	295
	Expected	230.08	64.92	
	Chi value	8.38	29.71	
Total		482	136	618

**Table 45: Chi-Square test of significance comparing sufficiency of food received reported by all groups of beneficiaries**

Food quantity		Parent (THR)	Parents (HCM)	P&L women	Adolescents	Total
Sufficient	Actual	208	274	270	109	861
	Expec.	218.29	199.37	330.48	112.86	
	Chi value	0.49	27.94	11.07	0.13	
Insufficient	Actual	115	21	219	58	413
	Expec.	104.71	95.63	158.52	54.14	
	Chi value	1.01	58.24	23.07	0.28	
Total		323	295	489	167	1274

What this perhaps suggests is that the perception of sufficiency of quantity of food may not be independent of the type of food received (i.e., HCM or THR), and the type of beneficiary (for a large number of pregnant and lactating women have reported about the insufficiency of the food).

One reason for this could be because of the erroneous understanding of what the supplementary nutrition programme (SNP) is meant to provide and for whom the THR are given. During field visits, many beneficiaries who received the THR reported that this was not sufficient for the whole family. Thus, perhaps beneficiaries who received THR were more unsatisfied with the quantity of food compared to parents of beneficiaries who

received HCM at the anganwadi because of their misunderstanding that it is meant for the entire family (since in this case the provision of food, given at the AWC makes it clear that it is meant only for the children). Further, perhaps the perception of sufficiency is also related to the age of the beneficiary and their developmental stage, with more pregnant and lactating women reporting insufficiency than expected. Thus, it may be necessary to re-evaluate the food norms considering the requirements of sufficiency for specific beneficiary groups. Even during fieldwork, when it was explained that the THR were meant to be consumed by the beneficiary alone, many reported that the rations given was not sufficient for a full meal for a whole month even for the beneficiary alone. Again the idea of 'supplementary' nutrition was

then explained to them, but in most cases beneficiaries were not convinced by this reasoning. They still felt that the amount of food supplied remains inadequate even though it is supplementary. This may be suggestive of the need to increase the quantity of supplementary nutrition provided taking into account other factors such as economic conditions of beneficiaries.

Satisfaction with quality of SNP reported by beneficiaries: Beneficiaries were also asked to report about their satisfaction with the quality of the food provided. 94.7 percent of all parents, 92.3 percent of pregnant and lactating women and 91.8 per cent of adolescents reported that they were satisfied with the quality of the SNP.

**Table 46: Beneficiaries satisfaction with quality of SNP**

District	Parents (3m-2yr)			Parents (3yr-6 yr)			Pregnant & Lactating			Adolescent girls		
	Satis- fied	Un- satisfied	No response	Satis- fied	Un- satisfied	No response	Satis- fied	Un- satisfied	No response	Satis- fied	Un- satisfied	No response
Bellary	70	7	0	58	2	0	108	13	1	44	6	0
Chamraj nagar	72	9	0	95	3	0	113	10	2	42	7	1
Haveri	87	1	0	57	0	0	121	1	0	48	0	0
Bangalore	70	7	0	77	4	0	114	9	2	45	2	0
Total	299	24	0	287	9	0	456	33	5	179	15	1
Total	323			296			494			195		

Further, among the parent group, a proportion of parents (92.6 percent) whose children received THR reported satisfaction with the food provided, compared to 97 percent of parents whose children received a HCM at the anganwadi. A chi-square test was undertaken in order to examine if there was a significant difference between the two parent groups with respect to satisfaction with the food received. The chi-square test showed that there was a significant difference, with more parents of children receiving THR being unsatisfied with the food (chi-square value=5.8974; p-value=015163, which is significant at  $p < .05$ )

**Table 47: Chi square test of significance between parents of children receiving THR and HCM**

Beneficiaries		Satisfied	Unsatisfied	Total
Parents (THR)	Actual	299	24	323
	Expected	305.78	17.22	
	Chi value	0.15	2.67	
Parents (HCM)	Actual	287	9	296
	Expected	280.22	15.78	
	Chi value	0.16	2.91	
Total		586	33	619

A further analysis was made to see if there was a significant difference in the satisfaction with quality of food received by the various groups of beneficiaries. A chi-square test was again undertaken to compare responses of parents who children received HCM, whose children received THR, and pregnant and lactating women and adolescent girls taken together (since they both receive the same take home rations). The chi-square test revealed that there was a significant difference among beneficiary groups with respect to their satisfaction with the quality of SNP (The chi-square statistic is 6.7038. The p-value is .035017. The result is significant at  $p < .05$ ) The result largely showed that the difference seemed to be the result of more number of parents whose children received THR being unsatisfied with the food received, compared to parents whose children received HCM, and pregnant and lactating women and adolescents, who also received

THR. This perhaps also suggests the need to examine the quality of food given to children between 2m-3yr.

**Table 48: Chi square test of significance for quality of SNP reported by beneficiaries**

Beneficiaries		Satisfied	Unsatisfied	Total
Parents (THR)	Actual	299	24	323
	Expected	302.91	20.09	
	Chi value	0.05	0.76	
Parents (HCM)	Actual	287	9	296
	Expected	277.59	18.41	
	Chi value	0.32	4.81	
P&L women and Adolescent girls <sup>11</sup>	Actual	635	48	683
	Expected	640.51	42.49	
	Chi value	0.05	0.71	
Total		1221	81	1302

There was no significant difference with respect to beneficiary satisfaction with regards to SNP based on urban-rural type of AWC, but there was a significant difference based on the AWC type. (The chi-square statistic= 6.8442. The p-value is .008893. This result is significant at  $p < .05$ ). From the chi square table it appears that more parents whose children received hot cooked meals from AWCs classified as SC/ST were satisfied with it; while more number of parents from AWCs classified as general were satisfied with the Take Home Ration.

**Table 49: Chi square test of significance for quality of SNP reported by beneficiaries by AWC type**

Beneficiaries		General	SC/ST	Total
Parents satisfied with THR	Actual	137	91	228
	Expected	123.37	104.63	
	Chi value	1.51	1.78	
Parents satisfied with HCM	Actual	100	110	210
	Expected	113.63	96.37	
	Chi value	1.63	1.93	
Total		237	201	438

<sup>11</sup>P&L women and adolescent girls have been combined here as they receive the same ration

However, the chi-square test did show a significant difference in beneficiaries satisfaction with food based on district (chi-square value=23.8355; p-value=0.000027, which is significant at  $p < .05$ ). From the chi-square table, it seems that less number of beneficiaries in Haveri district appear to be unsatisfied with the food received (than expected). It also appears that more number of beneficiaries in Bellary and Chamrajnagar are dissatisfied with the food, which perhaps suggests a need to examine the quality of food being provided in these two districts.

**Table 50: Chi square test of significance showing beneficiaries satisfaction with quality of food across districts.**

Food quantity		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Satisfied	Actual	280	322	313	306	1221
	Expec. Chi value	288.84	329.16	295.40	307.59	
Unsatisfied	Actual	28	29	2	22	81
	Expec. Chi value	19.16	21.84	19.60	20.41	
Total		308	351	315	328	1302

Independent regression analysis was conducted for each beneficiary group in order to examine which factors have contributed to beneficiaries perceptions regarding satisfaction/dissatisfaction with the quality of food provided. Regression analysis showed no significant factors with respect to the parent groups. In the case of pregnant and lactating women, district, AWC type, and regularity of home visits undertaken by AWW have had an effect on their satisfaction with the quality of food provided. With respect to district it appears that satisfaction with the quality of SNP has increased in the following order: Bellary (least satisfaction), Chamrajnagar, Haveri and Bangalore. Further, it shows that satisfaction with quality of SNP is higher among those who belong to General AWCs rather than AWCs classified as SC/ST.<sup>12</sup> Further, the regression analysis also shows that beneficiaries dissatisfaction with SNP increases with increase in irregularity of home visits by AWWs.

**Table 51: Regression analysis for factors influencing satisfaction with quality of SNP for pregnant and lactating women**

SNP quality	Coefficient	Std.	z	P > z	Conf.	Interval]
District	0.6710968	0.188537	3.56	0	0.301571	1.040623
Age	0.0275962	0.0405265	0.68	0.496	-0.0518343	0.1070268
Income	0.0000104	0.0000494	0.21	0.833	-0.0000864	0.0001072
AWC type	-1.351657	0.3172222	-4.26	0	-1.973402	-0.7299133
Religion	-0.4342557	0.3834763	-1.13	0.257	-1.185855	0.3173441
Caste	-0.0625055	0.1576664	-0.4	0.692	-0.371526	0.2465149
Education	0.024889	0.2207908	0.11	0.91	-0.407853	0.4576309
Occupation	-0.2830929	0.2815327	-1.01	0.315	-0.8348868	0.2687011
Home visit regularity	-2.292888	0.6262998	-3.66	0	-3.520413	-1.065363

<sup>12</sup>This is based on the codes 1 and 2 given respectively to General and SC/ST AWCs

In lieu of this, the interviews conducted in Bangalore Urban with the Gram Sabha members and FGDs with Accredited Social Health Activist (ASHAs) and ANMs of Yelahanka pointed that the Supplementary Nutrition Provisions were not up to the mark. This was true even in Bellary where respondents complained of the poor quality of rations. In Haveri and Chamarajnagar, the respondents felt that changes need to be instituted in the SNPs as to include nutritious food, vegetables, eggs, ragi mudde etc.

As many studies have already pointed out, SNP is the biggest component of the ICDS programme, and often ICDS is understood as to be synonymous with SNP. While overall it appears that the SNP component of the

ICDS programme seems to be functioning well, or at least better than other areas, there are some areas that need further attention. Thirty-six workers have reported delays in the functioning of the SNP component. For example, food quality and incidental costs incurred in efficiently ensuring the delivery of the SNP (e.g., on gas cylinders) needs attention. Public consultations to determine menu and a review of the quality of food distributed in each district and at different types of Anganwadis are needed. Further, education about the SNP service and its purpose is also very important for improving beneficiary awareness and satisfaction with the programme.

## Chapter 7: Analysis Quality of Services (Health Services)

As part of the ICDS, there are currently three health related services are undertaken viz. Immunization, health checkups and referrals as well as health and nutrition education.

### 7.1 Immunization

Immunization services, as per the state Annual Programme Implementation Report (APIP) for 2015-16 is supposed to be held every Thursday<sup>13</sup> at the anganwadi center. Yet, coverage of full immunization in the state is quite low. NFHS 4 (2015-16) estimates that full immunization coverage among children in Karnataka is currently only 62.6 percent. Full immunization refers to children aged between 12-23 months who have received BCG, measles, 3 doses of polio and DPT vaccines. Looking specifically at the four sampled districts, NFHS estimates that Bengaluru Urban has 62.1 percent of children who are fully immunized. Bellari, the highest among the four stands at 71.1 percent, while Haveri and Chamrajnagar have 69.3 percent and 59.5 percent children fully immunized respectively.

Organised in coordination with the health department, immunization is provided to all children as well as the pregnant women. We sought to examine parents' and pregnant women's knowledge about immunization. All parents surveyed had knowledge of immunization that had to be received by their children. Except 0.83 percent pregnant women, all pregnant women were aware about immunization.<sup>14</sup>

<sup>13</sup>In practice, there are multiple ANCs in many villages the immunization day camps tend to be held in any one of the centers every week on a rotational basis. Thus, immunization day camps per center are conducted on a monthly basis.

**Table 52: Knowledge of immunization among beneficiaries**

Beneficiaries	Know Immunization	Don't Know	Total
Parents	500	00	500
Pregnant women	240	02	242
Total	740	02	742

Parents and pregnant women sampled in our study were asked whether there was a pre-fixed immunization day at their AWC. 74.4% parents said there was a pre-fixed day. Compared with this 76.03 percent pregnant women reported that there was a pre-fixed immunization day.

**Table 53: Knowledge of prefixed immunization between beneficiaries**

Beneficiaries	Yes	No	Don't know	Total
Parents	372	68	60	500
Pregnant women	184	35	23	242
Total	556	103	83	742

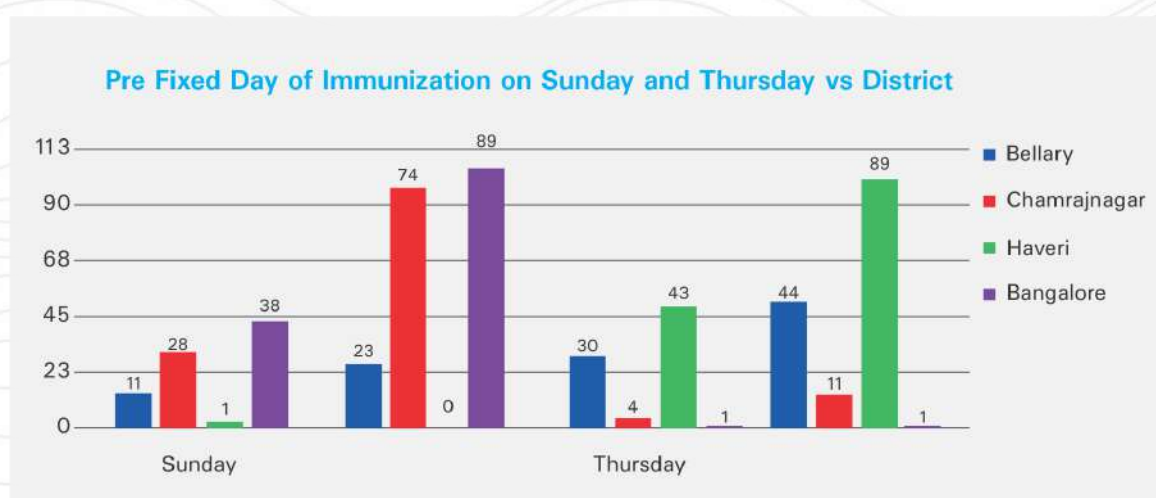
There was no significant difference between the different beneficiary groups in terms of knowledge of pre-fixed immunization day. Beneficiaries were also asked to indicate which day the immunization programme was held at the AWC. While parents and pregnant women indicated different days, most parents reported that immunization was held at the AWC on Sunday (37.2 percent) followed by Thursday (29 percent), which is supposed to be the norm.

<sup>14</sup>Questions on immunization have not been analysed for lactating women and adolescents as they do not receive immunization. Pregnant women were asked questions on immunization based on what they received.

Among pregnant women, equal number of women (32.2 per cent of the total) said it was Sunday and Thursday.

Further, there were also differences in pre-fixed immunization day reported across districts. It appears that more beneficiaries in Bellary and Haveri have reported the pre-fixed immunization day to be Thursday, while more beneficiaries in Chamrajnagar and Bangalore have reported that it is held on Sunday.

**Figure 10: Pre-fixed immunization day by district**



AWW were also asked how frequently immunization days were held at their AWC. A majority of 71 workers reported that immunization camps are conducted at least once a month (a few have reported that it also occurs as frequently as weekly or bi-weekly). There was no significant difference with respect to regularity of immunization camps held across districts, urban-rural centres or based on AWC type.

**Table 54: AWW responses on immunization regularity across District**

District	At least once in a month	More than one month	Not conducted	Total
Bellary	15	8	2	25
Chamrajnagar	19	5	1	25
Haveri	21	2	2	25
Bangalore	16	5	4	25
Total	71	20	9	100

## 7.2 Health Check-Ups

The second major activity undertaken as part of the ICDS health initiative is regular health check-ups for all the major beneficiary groups - that is children, P&L women and adolescents.

Knowledge of health check-ups among beneficiaries: Ninety eight percent parents, 94.5 percent P&L women were aware of health check-ups. There was a significant difference across the beneficiary groups in terms of knowledge of health checkups (chi square statistic=8.3277; p-value is 0.003905, which is significant at  $p < .05$ ). A regression analysis was undertaken to examine whether there were specific factors that influenced this difference in knowledge. However no factor seems to significantly differentiate knowledge of health check-ups between the two groups.

**Table 55: Knowledge of Health check up between beneficiaries**

Beneficiaries		Have knowledge of health check-ups	Don't have knowledge of health check-ups	Total
Parents	Actual	490	10	500
	Expected	481.39	18.61	
	Chi value	0.15	3.98	
P&L women	Actual	467	27	494
	Expected	475.61	18.39	
	Chi value	0.16	4.03	
Total		957	37	994

Most of those who had knowledge about health check-ups were also able to indicate that it was to be conducted once in 60 days, which is as per the norm reported in APIP. As part of health checkups more than 70% reported that height and weight check for children (growth chart) and P&L women revealed blood pressure (BP) check-ups, weight check-up and information about nutritious food will be given.

Regularity of health check-ups reported by beneficiaries: In terms of regularity of health checkups, majority of the beneficiaries have reported that it is undertaken between 1-2 months (84.6 percent parents; 91.1 percent pregnant and lactating women, and 86.7 percent adolescents). Thus, largely health check-ups appear to be conducted in most cases according to the norm. However, there is a significant difference with respect to the groups in reporting of regularity of health check-ups (chi square statistic=7.4198. The p-value is .02448. The result is significant at  $p < .05$ ). From the chi square table given below, it appears that fewer P&L women have reported health check-ups to be regular.

**Table 56: Beneficiaries responses on conducting health check up**

Beneficiaries	Once in 60 days	Once in more than 60 days	No response	Total
Parents	423	55	12	500
P&L women	450	32	37	494
Adolescent	169	21	73	195
Total	1042	108	122	1189

**Table 57: Chi square test of significance with respect to regularity of health check-ups reported by beneficiaries**

Beneficiaries		Once in 60 days	Once in more than 60 days	Total
Parents	Actual	423	55	478
	Expected	433.11	44.89	
	Chi value	0.24	2.28	
P&L women	Actual	450	32	482
	Expected	436.73	45.27	
	Chi value	0.40	3.89	
Adolescent	Actual	169	21	190
	Expected	172.16	17.84	
	Chi value	0.06	0.56	
Total		1042	108	1150

Compared to the SNP component, the health component of the ICDS programme appears to be functioning more unevenly. Programmes such as immunization appear to be conducted less frequently than prescribed and have more variability (going by beneficiary responses to pre-fixed immunization day). Further, our discussions in the field suggests that knowledge and regularity in receiving immunization may be related to beneficiaries own efforts and visits to the public health centres (PHCs) and government hospitals, rather than from the AWW. Limited discussions with beneficiaries revealed that there was a confusion regarding who (i.e., which government institutions and functionaries) were responsible for these health-related services and how this was to be availed. A technique used to ascertain the regularity of immunization received by the field investigators was to request for the 'thayi cards' (Mother's card), in which immunization details for the child would be filled. Beyond this, it was not possible to ascertain the actual functioning of the immunization component on the field. Health-related infrastructure such as weighing scales and medicine kits are also found in few centres and there is high inter-district variability. Thus, there is a need to pay more attention to financial planning and administration of the health-related services, and even perhaps consider whether health-related functions need to be included within the ICDS programme itself, considering that there are alternative government institutions and infrastructure at the village level to undertake health related functions.

## Chapter 8:

# Analysis of Quality of Services (Education)

Education is an important component of the ICDS programme. Here we define education in a broader sense to include all educational components of the programme, which includes health and nutrition education and pre-school education, as both these components are critical to holistic child development.

### 8.1 Health and Nutrition Education (HNE)

As several studies have argued, while ICDS has primarily been seen as a nutrition programme (Rao, 2005), actual improvements in children's health and nutrition is fundamentally linked to mother's and household's knowledge about appropriate and adequate nutrition and hygiene. As Venugopal (2012) argues simple information and knowledge about children's health and nutrition can save many children's lives and therefore, must become an integral part of health education. As Gagnolati et al (2006) have also suggested there has been way too much emphasis on providing supplementary nutrition at the cost of other aspects of the programme, including "... not enough attention ... to improving child-care behaviors and to educating parents on how to improve nutrition using the family food budget – both interventions that are highly cost-effective and part of the original design of ICDS." For example, they have shown that failure to breast-feed for the first six months of life and delayed introduction of semi-solid food has been a major cause of malnutrition. Thus, they also argue that "supplementary feeding should be used strategically, i e, as an incentive for poor and malnourished children to attend the AWC where they and their mothers, can receive health and nutrition education interventions."

Considering the importance of improving mothers' and community's knowledge of child nutrition and health, the survey also explored the regularity of HNE. Under the ICDS programme, women between 15-49 years are prime targets for education on nutrition and health, since it is argued that this helps promote antenatal care, maternal and child health, enhance child survival and development. This is undertaken through two events - a monthly event known as the 'Mother's Meeting', and a nutrition and health education camp organised by the Health department every third Saturday of the month, known as the Village Health and Nutrition Day (VHND, APIP 2015-16). According to the APIP (2015-16) "the Health department allocates Rs.100/- from the untied funds through NRHM [National Rural Health Mission] for NHE [Nutrition and Health Education] Camp/ meeting per village towards refreshment expenditures for any demonstrations to be held on the Village Health and Nutrition Day (VHND)". In addition to these two components organised at a community level, one additional component of the programme that also has the potential to develop health and nutrition related information among parents and pregnant and lactating women are home visits undertaken by the AWW/ jointly with Auxillary Nurse Midwife (ANM) and/ Lady Health Visitor (LHV).

In order to understand how the nutrition and health education component of the ICDS programme is functioning, AWWs and beneficiaries were asked about these public camps or meetings organised at the anganwadi or in the community and the home visits undertaken by the worker.

**Table 58: AWW responses on organizing VHND across district**

Respondents	Bellary	Chamrajnagar	Haveri	Bangalore	Total
Organize VHND	12	21	19	18	70
Don't organize VHND	5	4	3	7	19
Don't know VHND	7	0	3	0	10
No response	1	0	0	0	1
Total	25	25	25	25	100

With respect to VHND, 70 (of 100) AWWs reported that they organised these meetings. There is a significant difference across the districts in terms of organisation of VHND, with more number of AWCs in Bellary and Chamrajnagar not organising VHND (chi square statistic=8.5714; p=0.035567, which is significant at p<0.05 level).

**Table 59: Chi square test of significance on conducting VHND across district**

AWW response		Bellary	Chamrajnagar	Haveri	Bangalore	Total
VHND conducted	Actual	12	21	19	18	70
	Expected Chi value	17.50 1.73	17.50 0.70	17.50 0.13	17.50 0.01	
VHND not conducted	Actual	13	4	6	7	30
	Expected Chi value	7.50 4.03	7.50 1.63	7.50 0.30	7.50 0.03	
Total		25	25	25	25	100

Of those who organised VHND, only 53 workers reported organising it once a month, according to the norm given in the APIP (2015-2016). There were a significant difference in terms of the regularity with which VHND was organised across districts, with many centres in Bellary not organising VHND every month. (chi-square statistic=8.3133; p-value =0.039962, which is significant at p<.05 level).

**Table 60: Chi square test of significance with respect to regularity of VHND across district**

Regularity		Bellary	Chamrajnagar	Haveri	Bangalore	Total
As per norm	Actual	7	17	15	14	53
	Expected Chi value	12.85 2.66	13.38 0.98	13.38 0.20	13.38 0.03	
Not as per norm	Actual	17	8	10	11	46
	Expected Chi value	11.15 3.07	11.62 1.13	11.62 0.22	11.62 0.03	
Total		24	25	25	25	99

Similar question regarding knowledge and frequency of organisation of VHND was asked to beneficiaries. It was found that less than half of the beneficiaries (45 percent parents and 55.7 percent of the pregnant and lactating women) were aware of VHND. Further, only a proportion of this group with knowledge of VHND was able to indicate the correct time interval in which VHND was to be organised (167 parents and 157 pregnant and lactating women).

**Table 61: Knowledge of VHND among beneficiaries**

Beneficiaries	Know about VHND	Don't know about VHND	Total
Parents	225	275	500
P&L women	210	284	494
Total	435	559	994

In terms of frequency with which VHND was being conducted, 109 (21.8 percent) parents, 122 (24.7 percent) pregnant and lactating women and 159 (81.5 percent) adolescents have reported that VHND is conducted at least once a month.

Home visits: With respect to knowledge about home visits, it was found that 90.6 percent of parents and 89 percent of P&Ls had knowledge about home visits. There was no significant difference between the two beneficiary groups with respect to knowledge of home visits. While Haveri district had the maximum number of beneficiaries with knowledge of home visit, Bangalore had the least.

**Table 62: Knowledge of home visit between beneficiaries**

Beneficiaries	Knowledge of home visits	No knowledge of home visit	Total
Parents	453	47	500
P&L women	440	54	494
Total	893	101	994

With respect to the question on regularity of home visits, 87.7 percent of parents, 83.2 percent P&L and 68.2 percent adolescent girls reported that home visits were undertaken by the AWW at least once in 45 days. There was a significant difference among the beneficiary groups with respect to reporting on frequency of home visits, with many adolescents failing to report that home visits were undertaken by workers at least once in 45 days (chi-square statistic is 8.1045. The p-value is .017383. The result is significant at  $p < .05$ ).

**Table 63: Beneficiaries responses on regularity of Home visits**

Beneficiaries	Home visits reported once in 45 days	Home visits reported once in more than 45 days	No response	Total
Parents	427	11	62	500
P&L women	411	15	68	494
Adolescents	133	11	51	195
Total	971	37	181	1189

**Table 64: Chi square test of significance comparing regularity of home visit reported by beneficiaries**

Beneficiaries		Home visits once in 45 days	Home visits once in more than 45 days	Total
Parents	Actual	427	11	438
	Expected	421.92	16.08	
	Chi value	0.06	1.60	
P&L women	Actual	411	15	426
	Expected	410.36	15.64	
	Chi value	0.00	0.03	
Adolescents	Actual	133	11	144
	Expected	138.71	5.29	
	Chi value	0.24	6.18	
Total		971	37	1008

However, there was no significant difference in frequency of home visits reported by beneficiaries across districts, urban-rural AWCs or by type (i.e., SC/ST/General).

In contrast with the lower number of beneficiaries who have reported that workers undertake home visits at least once in 45 days, 99 percent of the AWW have reported they undertake home visits as envisaged, i.e., at least once in 45 days. Data was collected to check the average time spent by the AWW on home visits. It showed that 47 spent approx 15 minutes, 46 approx 30 minutes and 7 spent nearly an hour. There was no significant difference in time spent on home visits by workers across districts, urban-rural centres, or by AWC type.

**Table 65: AWW responses on time spent on home visits across district, urban/rural and AWC type**

Districts	Approx 15 mins	Approx 30 mins	Nearly an hour	Total
Bellary	16	8	1	25
Chamrajnagar	10	13	2	25
Haveri	10	11	4	25
Bangalore	11	14	0	25
Total	47	46	7	100
Urban / Rural				
Urban	11	15	0	26
Rural	36	31	7	74
Total	47	46	7	100
AWC category				
General	20	18	4	42
SC / ST	16	14	3	33
Total	36	32	7	75

Subsequently, the AWW's were also asked about their topics of discussion during the home visits. Topics commonly reported by AWWs were on SNP, children's health and nutrition, cleanliness and on general health.

**Table 66: AWW responses on topics discussed during home visit across district**

	Bellary	Chamrajnagar	Haveri	Bangalore
Signi-ficant Topics covered during such visits	Child health, nutrition, cleanliness (32%), General health and cleanliness (16%), P&L women-health & nutrition (20%), Sending children to AWC (20%), SNP for malnourished children, cleanliness (12%)	P&L-SNP, cleanliness, health (36%), child health, nutrition, cleanliness (28%), Gen. health, cleanliness (24%), sending children to AWC (12%), Malnourished child's-SNP, cleanliness (4%)	P&L-health, SNP (56%), Child health, cleanliness (28%), Gen. health (24%), info on Bhagyalakshmi (8%)	Gen health, Cleanliness (60%), Child health (36%), P&L care, and cleanliness (8%), info on Bhagyalakshmi (8%)

The AWW were also asked whether they faced any challenges during the home visits. To this, other than 21 AWW, the remaining (78 out of 100) had some challenges and 1 AWW did not respond to the query. More than half i.e 55.1 percent (43 out of 78) mentioned that unavailability of parents at the time of home visits as the biggest challenge they faced. The other challenges that they faced include accessibility to the homes (11 out of 78) and heavy work load (9 out of 78).

## 8.2 Pre-school education

Similarly, preschool education forms an important component of the ICDS programme. It is an important objective in relation to achieving equity in education and providing every child an equal opportunity for optimal development. However, as Kaul (2002) has noted, preschool education has been one of the weakest links in the ICDS programme, and Rao (2005) has noted that it is only in the last decade that it has received some attention. As she has further stated, while efforts to monitor nutritional status have been seriously underway, other milestones such as cognitive, social and motor have received little attention

(Rao, 2005). Further, preschool education provided by the ICDS programme may also not be in line with parent's aspirations This has created a major challenge for retention of children at AWCs (Somaiah & Vijayalakshmi, 2007). Parents particularly from poor and marginalised communities who seek English medium education and early training in literacy and numeracy and writing skills in the hope of providing an early competitive start to their children, often devalue the play-way techniques and other age-appropriate social and cognitive skills that is sought to be encouraged by the ICDS programme based on sound theories of child development. Thus, this also suggests the need for developing better awareness among parents regarding children's early cognitive developments and the importance of sound preschool education. The ICDS programme has therefore built in a component on creating awareness on Early Childhood Care and Education (ECCE) through the establishment of an ECCE Day. However, not much is known about its functioning or effectiveness.

PSE coverage for the state of Karnataka is reported to be 30.09 percent and PSE is

provided to 16.69 lakh children (APIP 2015-2016). AWWs are given training with respect to PSE and within our survey, 87 (of 100) AWWs reported having undergone PSE training. There was no significant difference in the number of workers who had received PSE training across districts, urban-rural centre types, or based on AWC type.

Out of the all AWC's observed, 87 had separate space available for teaching children. Seventy seven AWCs in our survey had also displayed the time-table for pre-school activities, and 75 of these AWCs followed it. At the two remaining AWCs, PSE activities were not being undertaken as per timetable as one of the workers had been newly appointed, and the other centre did not have a helper, which made it difficult for the worker to undertake PSE.

The AWW were also asked whether they utilize *Chilli Pili*<sup>15</sup> and majority of them claimed to be using it for teaching. There was no significant difference across districts, urban-rural centres or across the types of AWCs (i.e., General or SC/ST) with respect to AWCs that displayed the time-table, or that conducted pre-school activities according to it. Majority of the workers also reported using the *Chilli Pili* for teaching the children.

With respect to the time spent on PSE, the APIP (2015-16) states that a minimum of 3.5 hours per day must be spent on PSE. From our data, only 15 AWW have reported spending at least 3 hours or more on PSE activities. On an average workers reported spending about 1 hour 40 minutes on PSE. There was no significant difference in the time spent on PSE by AWWs across urban-rural centres. However, there was a significant difference in terms of time spent by AWW on PSE across the districts, with more number of workers in Haveri spending 3 hours or more on PSE (Fisher exact=0.001, which is significant at the 0.05 level).

**Table 67: AWW responses on time on PSE activities**

No. of hours of PSE	Number of AWW
Below norm (less than 3hrs)	85
Above norm (3 hrs and above)	15
Total	100

**Table 68: Chi square test of significance comparing AWWs responses on time spent on PSE a across district**

AWW response		Bellary	Chamraj-nagar	Haveri	Ban-galore	Total
Less than 3 hrs	Actual	24	24	15	22	85
	Expected	21.3	21.3	21.3	21.3	
	Chi value	0.4	0.4	1.8	0.0	
3 hrs or more	Actual	01	01	10	03	15
	Expected	3.8	3.8	3.8	3.8	
	Chi value	2.0	2.0	10.4	0.1	
Total		25	25	25	25	100

Similarly, there was also a significant difference with respect to time spent on PSE across anganwadi types (i.e., SC/ST and General) (chi square value=4.3316; p value=0.037, which is significant at  $p < 0.05$ ). From the chi square table given below, it can be seen that more than expected number of AWCs classified as 'SC/ST' appear to be spending 3 hours or more on PSE.

**Table 69: Chi square test of significance comparing AWWs responses on time spent on PSE across centres classified as 'SC/ST' and 'general'**

AWC Category		Less than 3 hours	3 hours & more	Total
General	Actual	32	10	42
	Expected	35.3	6.7	
	Chi value	0.3	1.6	
SC / ST	Actual	31	2	33
	Expected	27.7	5.3	
	Chi value	0.4	2.0	
Total		63	12	75

<sup>15</sup>Chilli Pili - an activity bank containing stories, songs, creative activities and games in the local language that is focused on children's overall development, and that can be used for ECCE.

Majority of the workers were unable to spend the designated amount of time because they were over loaded with duties like maintaining registers, attending meetings, and also due to the absence of the helper. More than 75 percent of the AWW were not aware of right to education.

With respect to PSE activities and material, an attempt was made to observe, list and classify all the different kinds of material available at the centres (as academic related or play material). Of the 100 centres observed, only 38 centres had at least five different kinds of PSE material. Further, among the 100 centres, 65 centres had some academic related material (such as flash cards to teach colours, numbers, alphabets, stories, simple puzzles, picture books on animals, vegetables, fruits, and parts of the body). Thirty-five had some play items (e.g., stuffed toys, building blocks, small drums and so on). Only 32 centres had at least 2-3 play items and at least 3-5 academic material. There was a significant difference in the availability of at least 5 or more PSE material by district, with many centres in Bellary having less than 5 PSE material (Fisher's exact statistic=0.011).

**Table 70: Chi square test of significance for availability of PSE materials across district**

District		PSE materials available		Total
		Less than 5 materials	5 and more materials	
Bellary	Actual	22	3	25
	Expected	15.5	9.5	
	Chi value	2.7	4.4	
Chamrajnagar	Actual	15	10	25
	Expected	15.5	9.5	
	Chi value	0	0	
Haveri	Actual	12	13	25
	Expected	15.5	9.5	
	Chi value	0.8	1.3	
Bangalore	Actual	13	12	25
	Expected	15.5	9.5	
	Chi value	0.4	0.7	
Total		62	38	100

There was also a significant difference in terms of centres which had both academic (at least 3-4) and play material (at least 2-3)

(chi square statistic=8.4559, p=0.037, which is significant at p<0.05). Many centres in Bellary and Bangalore did not have either adequate academic (at least 3-4) or adequate play material (at least 2-3).

**Table 71: Chi square test of significance comparing centres that possess both academic and play related materials across districts**

District	Centers that possess both academic and play related materials		Total
	Yes	No	
Bellary	3 (8) [3.1]	22 (17) [1.5]	25
Chamrajnagar	7 (8) [0.1]	18 (17) [0.1]	25
Haveri	10 (8) [0.5]	15 (17) [0.2]	25
Bangalore	12 (8) [2]	13 (17) [0.9]	25
Total	32	68	100

During field visits AWWs mentioned that they needed more pre-school toys and teaching materials. They also mentioned that providing uniform for the children will create a sense of belonging and will eventually improve the attendance. This was also seconded by the ASHA, supervisor and the gram panchayat members.

Regularity of PSE reported by beneficiaries: Beneficiaries were also asked about the PSE services. Around 70.6 percent had knowledge about PSE (that is with respect to what must be done as part of PSE activities). Out of 317 parents, whose children were between 3-6 years, only 275 responded to the question of regularity of PSE at the centre and 270 stated that their child received PSE daily.

**Table 72: Parents response on regularity of PSE across district**

District	Daily	Not conducted daily	Did not respond	Total
Bellary	65	0	11	76
Chamrajnagar	82	2	9	93
Haveri	53	2	6	61
Bangalore	70	1	16	87
Total	270	5	42	317

Parents' satisfaction with PSE: About 202 parents (63.72%) reported being satisfied with it. As part of PSE, parents reported that children were taught alphabets, songs, rhymes, colours, games, stories, numbers and words. Reasons given by parents regarding dissatisfaction with the PSE component included the overemphasis paid to nutrition alone at AWC. According to them, the children go the AWC, have meals and return home towards evening. They also mentioned that there is not enough play items available for the children. They also stated that in order to improve the overall functioning of the centre with respect to PSE, the number of play items should be increased and the availability of a playground is a must. Absence of English being taught did not emerge as a major reason for dissatisfaction, as has been reported by some earlier studies.

**Table 73: Parents' response on quality of PSE**

Quality of PSE	Number of respondents
Poor	02
Good	202
Don't know / not applicable	18
No response	95
Total	317

### 8.3 Early Childhood Care and Education (ECCE) Day

In addition to conducting pre-school education at the AWC, AWW are also responsible for generating awareness regarding ECCE among the community. The national Early Childhood Care and Education (ECCE) policy of India emphasises the importance of ECCE in the country to provide integrated services for holistic development of the child below 6 years, along the continuum. ECCE days are to be organised once a month by the AWW. In our sample, 77 of the 100 workers interviewed reported conducting ECCE days. Similarly, 323 (i.e., 64.6 percent) parents and 228 pregnant and lactating women (46.1 percent) in our sample reported that they knew about ECCE.

Of these 174 were aware that ECCE days were to be organised once a month. There was a significant difference in knowledge of ECCE day between parents and P&L women, with more number of parents having knowledge of ECCE days, and less number of P&L women having knowledge of ECCE days. (The chi-square statistic is 34.2247, the p-value is <0.00001. This result is significant at  $p < .05$ ). This suggests that a larger catchment of future beneficiaries of the service are not being adequately prepared or made aware about the importance of ECCE.

**Table 74: Chi square test significance on respondent knowledge about ECCE day between beneficiaries**

Beneficiaries		Knowledge of ECCE Day	No Knowledge of ECCE Day	Total
Parent	Actual	323	177	500
	Expected	277.16	222.84	
	Chi value	7.58	9.43	
P&L women	Actual	228	266	494
	Expected	273.84	220.16	
	Chi value	7.67	9.54	
Total		551	443	994

APIP has given annual plan for ECCE which contains subject like myself, my family, community, national days, food, health, hospital, fruits and vegetables, plants and trees, children day, mountain, forest and rivers, pet animals and wild animals, birds, insects, air and water, universe, season, local festivals, villages, my country, means of transport, communication and public institution.

From our survey it appears that the education component of the ICDS programme is perhaps the poorest performing feature. A significantly small proportion of our beneficiaries had knowledge of the different educational services such as VHND and ECCE Day. While knowledge of PSE is perhaps better among parent's, there are issues with respect to timing as well as the material available for PSE. Thus, there is a need to strengthen the overall PSE component.

## Chapter 9: Analysis of Quality of Services (Comparison of Districts on Key ICDS Indicators)

A final analysis on the quality of the ICDS programme in Karnataka was attempted with respect to analysing district-wise differences in the performance of the ICDS programme. As with all states, Karnataka too faces high regional imbalances, stemming from both the history of governance and administration in different parts of the state prior to Independence (Hanagodimath, 2014)<sup>16</sup>; as well as due to relative neglect of certain regions of the state during the post-Independence phase. Considering these differences, the Government of Karnataka had set up a committee to find solutions to address these relative imbalances between regions, known as the High Power Committee for Redressal of Regional Imbalances in Karnataka (popularly known as the Nanjundappa Committee). The findings of the committee pointed to continued backwardness of north Karnataka districts, and districts in the Hyderabad Karnataka region (i.e., Bidar, Yadgir, Raichur, Koppal, Bellary and Gulbarga), but it also pointed to pockets of poorly performing blocks even among better performing districts. While the recommendations of the Nanjundappa Committee were submitted in 2002, there have been delays in implementing its suggestions (Hanagodimath, 2014).

It is also against this background that we attempt to analyse the differences among districts in performance on ICDS.

### 9.1 Bellary

The district of Bellary in northern Karnataka belonging to the Gulbarga division, is one of the poorly performing districts of Karnataka on several social indicators. Bellary fares 25th (of 30 districts) on the Human Development Index

(HDI; Government of Karnataka [GoK], 2014). It similarly fares poorly on the health index (with rank 28), education index (with rank 26), and the child development index (ranks 17). According to NFHS-4, 53.3 percent of children under-five are under-weight, which is higher than the state average. Only 4.8 percent of children in the district received an adequate diet according to NFHS-4.

Against this data we sought to evaluate the performance of the ICDS scheme in the district. In relation to infrastructure, Bellary appears to perform poorly. A majority of the AWCs we surveyed in Bellary had own buildings - 84 percent which is higher than the state average is 61 percent. However, the sample anganwadis performed poorly on other infrastructure facility indicators. Only 40 percent of the sampled AWCs met the size norms, 32 percent AWCs had a water source within the premise and 36 percent of the sampled AWCs had a toilet. These findings are significant as they seem to suggest that even centres located in their own premise perform poorly on infrastructure facilities. There are issues with construction and maintenance of AWCs. The reasons for this need to be further examined.

In terms of functioning of the centres, while all centres were open for six days a week, time spent on activities such as PSE and home visits by AWWs in Bellary is lower than other districts. Further, with only 24 percent centres maintaining records regularly and only 32 percent workers had received training on MIS, Bellary is performing poor in terms of maintenance of registers.

Despite the shortage of staff in supervisor position at Bellary district, 80 percent AWCs

reported regular supervisor visits. While this on the one hand signals a positive trend, it questions about the increased workload for available supervisors, and the quality of monitoring and supervision, they could undertake. Thus, the findings on the poor functioning of the centres must be seen in relation to this.

With respect to the services of the ICDS scheme, SNP distribution appears to be fairly regular. However, there was no consistency in the food items reported by workers and beneficiaries. A significantly higher number of beneficiaries in Bellary also reported being dissatisfied with SNP (although the actual number who reported being dissatisfied is small). This could perhaps be also related to the inconsistency in menu reported indicating that either there is a high variability in food menu across the year or that there was perhaps a leakage in the food distribution system. However, this needs to be verified through further studies in order to identify the exact nature of dissatisfaction among beneficiaries with SNP.

The sampled AWCs in Bellary seem to be performing better in relation to health indicators with 60 percent AWCs holding regular immunization camps. NFHS-4 also shows that about 71 percent of children between 12-23 months have received full immunization in Bellary.

Bellary is performing poorly on PSE and HNE with just 12 percent of the sampled centres having adequate PSE material and just 28 percent centres conducting VHND regularly. Thus, overall Bellary fares poorly on most points of evaluation which includes infrastructure facilities, functioning of AWCs as well as services such as quality of SNP, PSE and HNE.

## 9.2 Chamrajnagar

Chamrajnagar is the southernmost district in Karnataka, belonging to the Mysore division. Chamrajnagar fares poorly on most social indicators and is considered as one of the

backward district. A part of the Mysore district until 1998, the relative backwardness of Chamrajnagar block remained unnoticeable for long as a result of the overall performance of Mysore as a district, which was ahead on several human development indicators. Chamrajnagar has a significant tribal population, and large tracts of hilly terrain and forest area, bordering neighbouring states of Tamil Nadu and Kerala, which makes administration of the district difficult.

Looking at the Human Development Index (HDI), Chamrajnagar ranks 22, while it ranks 17 and 27 in health and education indices respectively. With respect to the Child Development Index, Chamrajnagar ranks 18. (GoK, 2014) As per NFHS -4 report, 31 percent children under-5 years age are identified as underweight which is lower than the state average and 59.5 percent children between 12-23 months have received full immunization.

As per the study analysis, almost half the centres were housed in rented premises. Half of the centres (52 percent) also complied with the size norms. This is perhaps suggestive of the sufficient availability of space in Chamrajnagar in line with size and rent norms laid down.

There is a lacuna in construction of AWCs and this need to be seen in relation to the budget available for construction to Chamrajnagar district. Similarly, Chamrajnagar also appeared to be performing better than other districts on other infrastructure indicators such water facilities within the premise (68 percent centres had water facilities) and electricity (84 percent centres had electricity). However, it had a severe shortage of usable toilets (only 32 percent centres had usable toilets). Based on the budget availability, construction of toilets is perhaps another area that needs to be looked into.

In terms of functioning of the ICDS programme, again Chamrajnagar is doing well. With 96 percent of the workers reporting that they had received training, 88 percent updating records regularly and 64 percent

reporting regular visits from their supervisors. 68 percent also reported that VHND days were conducted regularly and 60 percent also reported being able to undertake regular home visits spanning the duration of 30 minutes or more. Despite recording a comparatively lower figure with respect to supervisor visits, which may be affected both due to the shortage of supervisors in the district as well as due to the difficult terrain and lack of transport to many centres, in terms of functioning, Chamrajnagar appears to be performing better than the other districts.

Further with respect to services offered, SNP was regularly served across all the AWCs and a greater proportion of pregnant and lactating women beneficiaries had knowledge of SNP when compared with other districts. This may be because a large number of AWCs in Chamrajnagar also conducts HNE regularly. Taken together, a high degree of efficiency among workers despite moderate rates of supervision is observed.

Like for Bellary, large number of beneficiaries in Chamrajnagar is dissatisfied with the food provided. Thus the quality of SNP in the district needs to be further examined.

In Chamrajnagar, 76 percent of AWCs conducted immunization camps regularly. However, the AWCs performed poorly in terms of PSE as only 1 centre followed the minimum number of hours for PSE and about 28 percent centres only had adequate PSE related material.

Overall, Chamrajnagar is performing much better than the other districts, but needs immediate attention with respect to buildings, toilets and PSE. It is also important to acknowledge the critical role of workers in ensuring efficiency in the functioning of the programme and provide them with incentives and recognition. Further studies can be undertaken to examine whether this has been the crucial factor for the better performance of Chamrajnagar on ICDS services compared to other districts.

### 9.3 Haveri

Haveri, the central-most district in Karnataka, located in the Belgaum division, is one of the districts with the lowest HDI and per capita income (Benakanakonda, 2015). Haveri ranks 21st in the HDI and health index, but fares comparatively well on the educational index with a rank of 11 (GoK, 2014). On CDI, Haveri performs poorly with a rank of 22. Haveri has a higher percentage of under-weight children compared to the state (36.9 %). However, with regard to full immunization for children between 12-2 months, Haveri stands above the state average at 69.3 percent.

With respect to functioning of the ICDS programme, Haveri performs positively on infrastructural indicators, except on availability of toilets. About 70 percent of the centres were located in own premises and about half of the centres fulfilled the size norms. However, only 2 AWCs had a usable toilet. Again, this suggests a need to examine the budgets for construction of AWCs, and more importantly to develop greater accountability with respect to spending. During field visits to Haveri, we also observed that many centres had a toilet, but construction had been left incomplete in many instances.

With respect to functioning of the centres, again Haveri shows a mixed record. Like all other districts, centres in Haveri are open for all six days. All AWWs reported that supervisors visited their centres regularly, and 96 percent of the workers also received training on using the new MIS. Despite this, among the districts, Haveri had the least number of centres that were maintaining and updating their records (only 2 of 25 centres). This could either suggest inefficiencies in training and monitoring or other activities prioritised by AWWs, such as PSE.

The data shows that the average duration spent on PSE in Haveri is much higher than the time spent on PSE in other districts. The average time spent on PSE in Haveri is 2 hours 17 minutes. However, only 40 percent of the AWCs complied with AWC timings and had

adequate pre-school material. However, 76 percent of the AWWs reported conducting VHND days and 60 percent AWWs reported spending at least 30 minutes or more on home visits.

In terms of SNP, Haveri is performing well with a larger proportion of beneficiaries reporting having knowledge of SNP and about 92 percent parents reporting that they received food according to menu. Satisfaction with SNP among beneficiaries in Haveri also seems to be greater than in other districts. However, large number of AWWs in Haveri reported delays in receiving food provisions.

In Haveri, 84 percent of the AWCs conducted immunization days regularly.

Overall, Haveri shows a mixed picture. It is performing well on certain indicators such as SNP while performing poorly on others such as PSE.

## 9.4 Bangalore Urban

Bangalore Urban was selected as a representation of an urban district with the understanding that constraints and challenges for an urban district would be different from that of a rural one. Considering the fact that Bangalore is the state capital, Bangalore Urban areas may be doing better in social infrastructure. According to the Karnataka Human Development Report (GoK, 2014), Bangalore urban ranks 2nd on the health index, 8th on the nutrition index and 9th on the child development index. However, the immunization and malnutrition rates in Bangalore Urban are not on the higher side. As per NFHS -4 report, only 62.1 percent of children have received full immunization while almost one in four children are either wasted or stunted. It is therefore important that the district pays attention to its young children and the major service provider ICDS.

With regard to infrastructure facilities, Bangalore Urban seems to be performing poorly. 72 percent AWCs were located in own building, but only 16 percent AWCs complied with the size norms. Only 48 percent of the

centres also had water facilities within the premise and only 40 percent had usable toilets. With high land value and real estate costs in Bangalore, a significant point raised by officials in Bangalore was about the inadequacy of budgets to meet the various infrastructural norms.

With respect to the functioning of the centres, again while all centres are open for six days a week, it was noticed that on an average, very little time was spent on PSE (1 hour 5 minutes), and only about half the number of centres conducted home visits for at least 30 minutes or more. However, 88 percent of AWWs in Bangalore were seen to be maintaining records and 96 percent reported having received training. A large number of AWWs also reported that supervisors visited the centre regularly.

Bangalore also appears to be performing relatively well on SNP, with over 80 percent of the beneficiaries reporting that food was served according to the menu. A large majority of beneficiaries also reported high regularity in receiving SNP and good satisfaction with it. 64 percent of the AWCs in Bangalore also conducted immunization camps regularly. However, only three out of 25 centres are conducting PSE, hence presents a poor performance for PSE. However, 48 percent of the centres had adequate PSE related material. This may be because of the fact there are a number of other civil society organisations and NGOs working on PSE in Bangalore.

Overall, an examination of the performance of the ICDS programme across districts shows that a few key features of the ICDS programme are missing in all districts. Most outstanding among them are the lack of proper infrastructural facilities such as water and toilets and poor imparting of PSE. The features which are functioning relatively well across the district are regularity of SNP and supervisory visits.

## 9.5 Overall performance of districts based on key ICDS indicators

A comparative analysis of district-wise performance on key ICDS indicators was conducted. For this, at least 70 percent compliance with the norms by the AWCs was looked into.. For each indicator, we calculated the number of AWCs in each district which failed to comply with the norms is calculated. If more than 70 percent of the AWCs in each district failed to comply with a particular norm, we have accorded it a score of -1. Based on this we have attempted to understand which districts perform poorly.

**Table 75: Comparison of districts based on facilities**

Variable	Bellary	Score	Chamrajnagar	Score	Haveri	Score	Bangalore	Score
Fail to meet size norms	15	-1	12	-1	12	-1	21	-1
Lack water facilities within premise	17	-1	8		16	-1	13	-1
Lack water filters	16	-1	11	-1	12	-1	9	-1
Do not have toilets/in usable condition	19	-1	17	-1	23	-1	15	-1
Fail to meet PSE timing norms	24	-1	24	-1	15	-1	22	-1
Fail to regularly update records	19	-1	3		23	-1	3	
Not serving food according to menu	9	-1	9	-1	8		12	-1
Do not have immunization camps weekly	25	-1	21	-1	21	-1	23	-1
Do not organise VHND once a month	18	-1	8		10	-1	11	-1
Total		-9		-6		-8		-8

As per the calculations as shown in table, Chamrajnagar performs better than the other districts, with fewer negative scores. This is in fact counter to normal expectations of Chamrajnagar district, which is considered as a poor and backward district. Being backward, the district is expected to perform poorly compared to other districts. Bellary performs the worst, with more variables on which it has received negative scores. Haveri and Bangalore scored equal and hence can be deemed performing similar.

In addition, a comparison of districts based on indicators to identify the whether there is any significant inter-district variations (ascertained through chi square test / Fishers' exact test of significance). This was done based on the assumption that districts are performing

relatively similar on all other variables. Based on chi-square tests, we analysed the districts for which significant differences emerged with respect to the specific variable. A score of -1 was given if a district had a large difference with respect to the observed and expected number of AWCs that failed to meet the norms. The expected value obtained from chi square tables suggests that the two variables tested for (e.g., district and size of AWC) are independent of each other; while the observed value is the actual number of AWCs that fit the criteria based on our survey. A score of +1 were given if a district had a large difference with respect to the observed and expected number of AWCs that met the norms. To provide an illustration of what we mean by this, below we compare the actual and expected values obtained from individual chi

square statistics calculated for two variables - size norms and water facilities. For example, from the table below, it can be seen that while it is expected that at least 10 AWCs from Bangalore would meet with the size norms of 600 sq ft or more, only 4 AWCs covered in our survey met with the size norms. Thus, Bangalore has received a score of -1 against size norms, as the chi square statistic suggests that there is a greater probability of centres in Bangalore not meeting the size norms.

**Table 76: Anganwadi sizes in Bangalore Urban**

District		Less than 600 sq ft	600 sq ft and more	Total
Bangalore	Actual	21	4	25
	Expected	15.0	10.0	
	Chi value	2.4	3.6	

Similarly, the table below shows that more than expected number of centres in Chamrajnagar has a water source inside the premise, again suggesting that there is a greater probability of centres in Chamrajnagar having water facilities inside the premise. Thus Chamrajnagar receives a score of 1 against availability of water facilities, for complying with the norms.

**Table 77: Anganwadi sizes in Chamrajnagar**

District (n = 100)		Have a water source inside the premises	Do not have a water source inside the premises	Total
Chamrajnagar	Actual	17	8	25
	Expected	11.5	13.5	
	Chi value	2.6	2.2	

Table 78 below presents the scores received by the district on variables that had significant inter-district variation.

**Table 78: Significant differences across districts on select variables**

Variable	Bellary	Chamrajnagar	Haveri	Bangalore
Own buildings	1			
Size norm				-1
Water facilities		1		
Usable toilets			-1	
Adult weighing scales			-1	
Food quality			1	
PSE timing			1	
Have at least 5 PSE material	-1			
Record maintenance			-1	
VHND	-1			
MIS Training	-1			
Supervisors' visit			1	
Total	-2	+1	0	-1

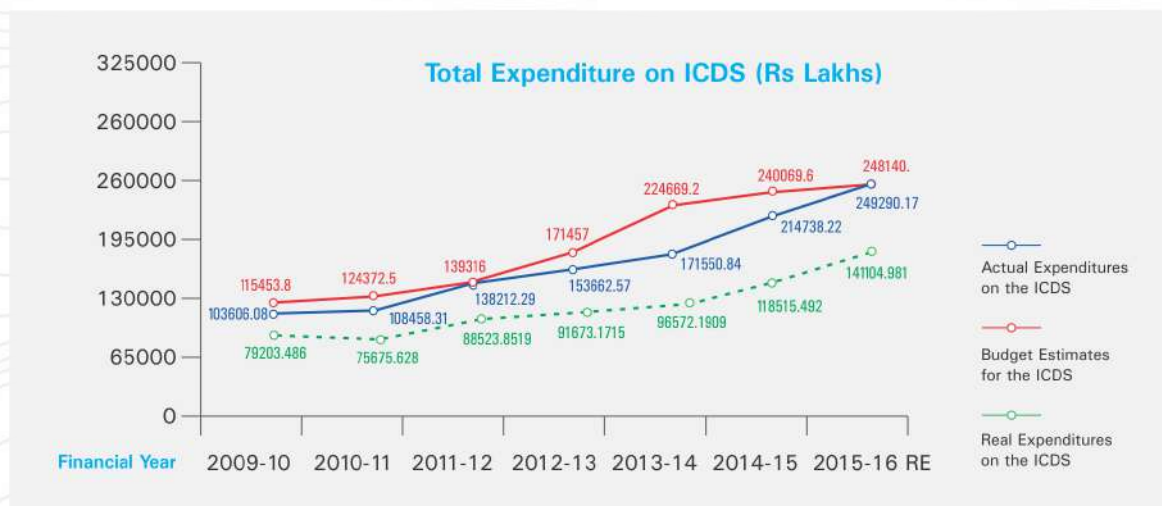
Again, from the table it appears that Chamrajnagar performs relatively better than the other districts, performing even better than expected in terms of water facilities, and performing no worse than expected on other variables. Bellary performs the worst with more than expected shortages in many areas, including PSE, VHND and training. Overall, therefore, it may be concluded that Bellary performs badly in terms of the education component of ICDS.

<sup>16</sup>Pre-Independence, Karnataka was divided into Mysore Karnataka, ruled by the Wodeyar kings and well-developed on several social indicators; Hyderabad Karnataka, ruled by the Nizams are relatively backward on several social indicators; and Bombay Karnataka, ruled by the Marathas are poorly developed in terms of social indicators (Hanagodimath, 2014).

## Chapter 10: Budget Analysis (Trends)

Within the state of Karnataka, children aged between zero and six years of age have received the lowest share in total state expenditure. This is particularly interesting since this age group constitutes approximately 32 percent of the population amongst children under the age of eighteen. It has been documented, by CBPS, that despite being 32 percent of the population, children under the age receive only 8 percent of the total state expenditure. ICDS is one of the largest schemes for children in this age bracket.<sup>17</sup>

**Figure 11: Total Expenditure on ICDS**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Expenditures in the scheme have seen a consistent rise when looking at nominal rates. The investment within the ICDS scheme has risen from approximately 1036 crores in 2009-10 to 2,147 crores in 2014-15. The revised estimates for 2015-16 tell us that the expenditure for the financial year would be 2,492 crores. During the years, components within the ICDS scheme have seen major

revisions including modifications of nutrition norms, addition of pension schemes for Anganwadi workers and increased salaries for Anganwadi workers and helpers. Expenditures also rose by approximately 430 crores during 2014-15 mainly due increased spending on infrastructure, administrative costs and on supplementary nutrition.

<sup>17</sup>Jha, J., Krishnaswamy, D., & Sharma, V. (2014). Public Expenditure on Children in Karnataka. Bangalore. Retrieved from [http://www.cbps.in/wpcontent/themes/cbps/pdf/CBPS\\_Final\\_PubExpOnChildren\\_28-Feb-2014.pdf](http://www.cbps.in/wpcontent/themes/cbps/pdf/CBPS_Final_PubExpOnChildren_28-Feb-2014.pdf)

**Table 79: ICDS Expenditures (Head of Accounts)**

Description	Head of Account	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Construction of Anganawadi Buildings	4235-02-102-0-01	945.55	4500.4	4338.84	0	0	292.85	3501
Anganawadi Buildings	4235-02-102-0-02	1995.6	3359.91	2483.81	2119.21	0	4704.22	400
CSS (100%) of Integrated Child Development Service	2235-02-102-0-04	293.47	617.07	700.2	1365.26	1538.41	1236.47	1674
CSS(100%) - Training of Anganawadi Workers & Helpers	2235-02-102-0-05	383.04	475.9	448.25	499.56	585.28	840.74	2143
Sneha Shivir	2235-02-102-0-38	0	0	0	0	0	106.00	106
New Pension System for Anganawadi Workers	2235-60-800-2-08	0	607.51	4104.33	1459.66	1293.65	1792.18	1257
Multisectoral Nutrition Programme	2235-02-102-0-39	0	0	0	0	0	0	39
Maintenance of Anganwadis	2235-02-102-0-40	0	0	0	0	0	512.25	800
Upgradation of Anganawadi Buildings	4235-02-102-1-03	0	0	0	0	0	0	1948.5
ICDS - District Cell	2235-02-196-6-01	619.5	645.95	721.02	828.6	1080.67	1207.43	1231
Centrally Sponsered Scheme of Integrated Child Development Service	2235-02-197-6-03	30764.82	25706.31	40479.15	51719.84	56016.03	68780.6	69441
Child Welfare (Hon to AWW/AWH)	2235-02-196-1-01	11338.41	12030.57	20150.04	18029.96	24370.13	25627.84	31043.67
Maintenance of Anganawadi Buildings	2235-02-197-1-01	578.98	578.95	587.97	1591.85	1591.85	1928.12	2053
Creches for Children of Working Women	2235-02-197-1-01	44.78	46.51	48.67	50.29	50.29	59.73	66
ICDS - National Nutrition Mission	2236-02-197-6-01	0	0	0	75998.34	85024.53	107649.8	133587
Preschool child feeding program	2236-02-197-1-01	56641.93	59889.23	64150.01	0	0	0	0

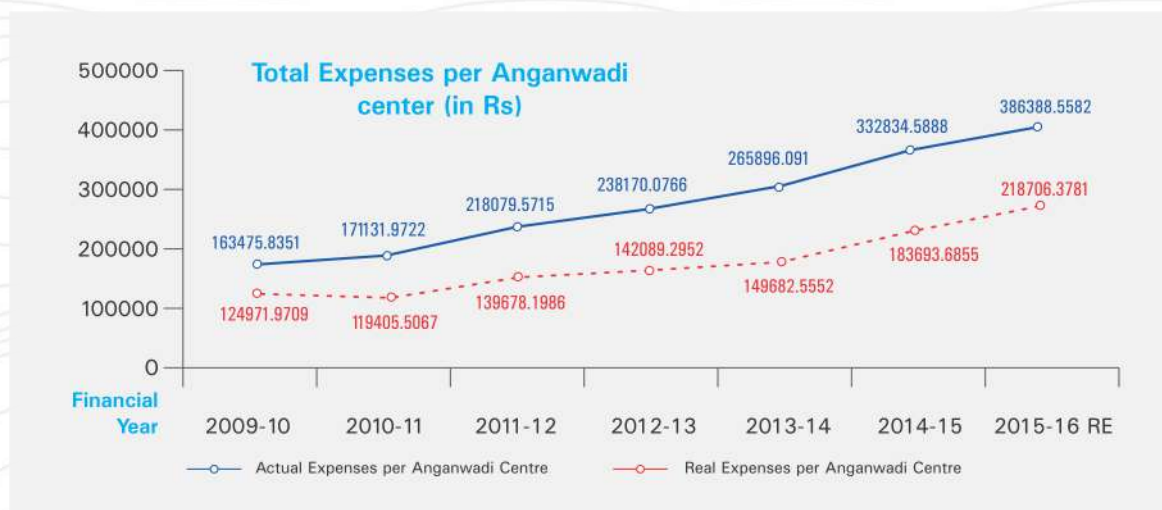
Source: Rural Development and Panchayati Raj Department, State Budget Documents

In terms of real expenditure, the rise in expenditure is not as steep as nominal rates. As per real rates, expenses in the ICDS scheme have risen from 792 crores during 2009-10 to 916.7 crores in 2012-13. Actual expenditures during 2014-15 tell us that expenses for the programme have risen to 1185 crores while looking at real expenses.

On an average, expenditures per Anganawadi centre also seem to be rising. From approximately 1.63 lakhs during 2009-10, expenses per Anganawadi centre have risen to 2.38 lakhs per center in 2012-13. During

2014-15, expenses per center rose to 3.32 lakhs while 2015-16 revised estimates reveal that expenses per Anganawadi center could rise to close to 3.86 lakhs. Real expenditures are less, however. Real expenditure per center has risen, gradually, from 1.24 lakhs during 2009-10 to 1.83 lakhs during 2014-15. It was almost stagnant between 2009-10 and 2013-14, after which it has witnessed some increase perhaps due to introduction of pension scheme and allocations for infrastructure among others.

**Figure 12: Total state expenses per Anganwadi center**

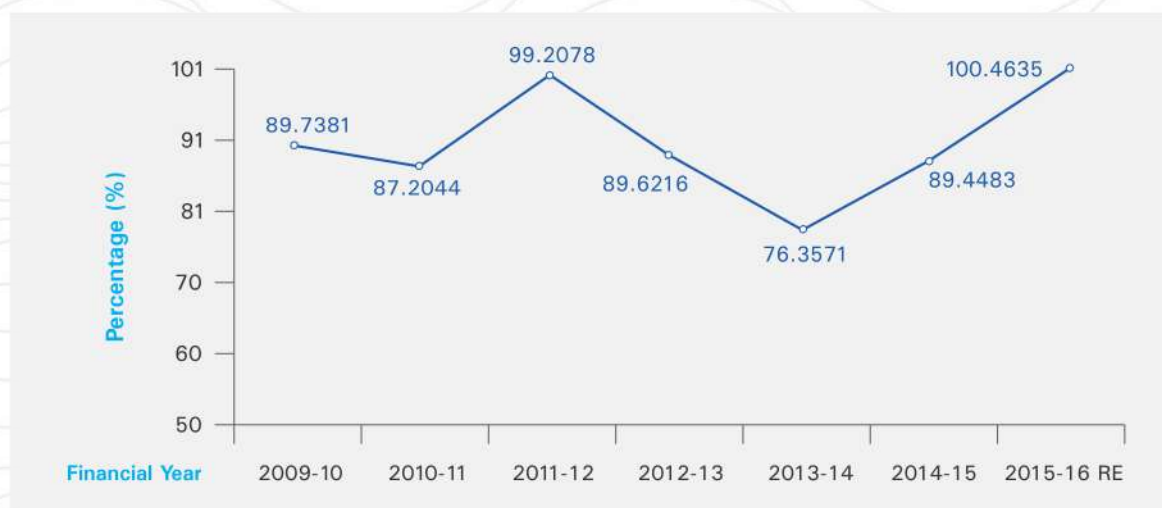


Source: Rural Development and Panchayati Raj Department, State Budget Documents

In terms of scheme implementation and financial planning, Karnataka does appear to be doing well if one takes the actual expenditure as a proportion of the budget as an indicator. Since 2009-10, only once has the actual expenditures dropped below 85 percent of the budgeted estimates. This was in 2013-14 when actual expenses were 76.36 percent

of the budgeted estimates. During 2011-12, actual expenditures were 99.21 percent of budgeted estimates but in no other years has the proportion been greater than 90 percent. 2015-16 revised estimates tell us that expenses may almost match budgeted estimates, but one would have to view that with scepticism as many times, revised estimates tend to match budget estimates and not actual expenses

**Figure 13: Ratio of actual expenses to budget estimates**

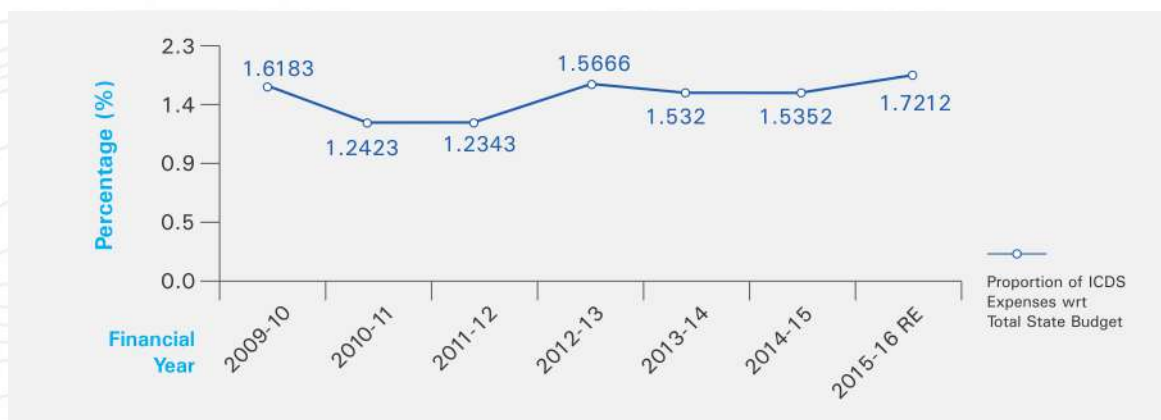


Source: Rural Development and Panchayati Raj Department, State Budget Documents

As a proportion of total state expenditures, ICDS constitutes a very minor percentage. Between 2010 and 2012, ICDS contributed to just more than 1 percent of the total state expenditure. This figure increased to 1.57 percent since 2012-13 and has maintained a roughly constant proportion since then. This is again due to the addition of the National

Nutrition Mission, increased administrative costs and enhanced pensions for Anganwadi workers. Further, since 2013, the supplementary nutrition norms have increased from Rs.4/- to Rs.6/- for children and by Rs.2/- for pregnant and lactating women, thereby increasing overall expenditures again.

**Figure 14: Proportion of ICDS expenses wrt Total state budget**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Total expenses of the Department of Women and Child Development constitute only a small proportion when comparing it with total state expenses. From 2.04 percent in 2009-10, total WCD expenditure has risen up to 2.23 percent as per 2015-16 Revised Estimates. However, it is no doubt that ICDS is

the biggest programme currently run through the department. With 79.23 percent of all WCD funds dedicated to the ICDS in 2009-10, this proportion has seen a gradual increase to approximately 80 percent as per 2014-15 actuals. Revised estimates for the following year also estimate similar numbers.

**Figure 15: Proportion of ICDS budgets wrt Total WCD Budget**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Since 2009-10, district sector schemes have taken a larger chunk of the expenditure for the scheme. Accounting for almost 90 percent of the expenses through the years, it is meant for enhanced devolution. District sector schemes include nutrition, salaries and administrative expenses of Taluk and District officers and staff, salaries of Anganwadi workers and maintenance of Anganwadi buildings. State sector schemes account for a smaller portion of the expenses, which include largely of state level salaries and pension schemes for Anganwadi workers and helpers.

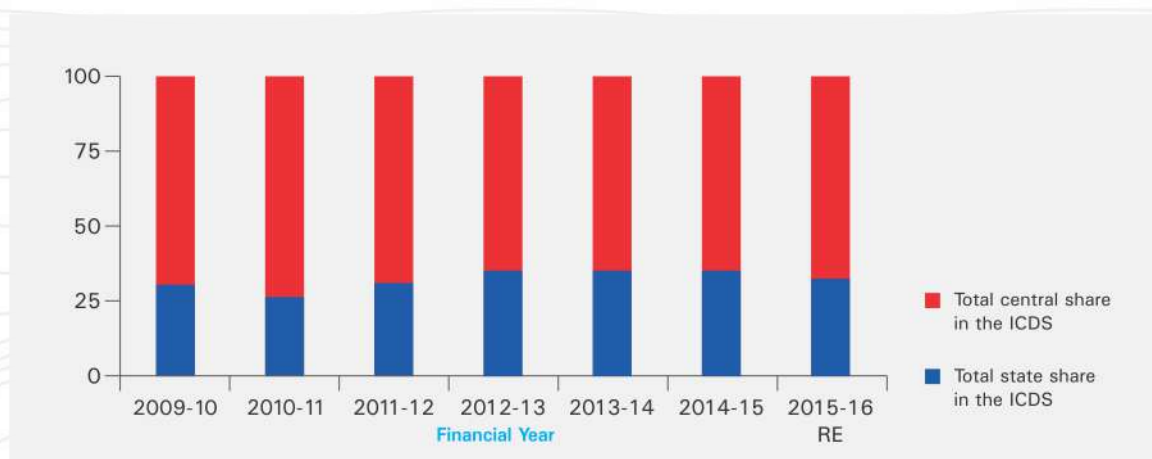
It is also interesting to note that the state is a larger contributor to the ICDS programme

as compared to the union government.

The government of Karnataka has been contributing approximately 70 percent of the total ICDS expenditures. Majority of the state's contributions include the supplementary nutrition programme, extra honoraria and pension to workers and helpers as well as significant infrastructure related costs.

Central share generally comes in the form of salaries to officers of state, district and block levels. It also includes a portion of the total salaries to anganwadi workers and helpers and other maintenance/ administrative related costs. The centre generally contributes 90 percent of the total in these cases.

**Figure 16: State and Central share in ICDS expenses**



Source: Rural Development and Panchayati Raj Department, State Budget Documents, DWCD Website (Budget section)

**Figure 17: District sector vs State sector schemes**

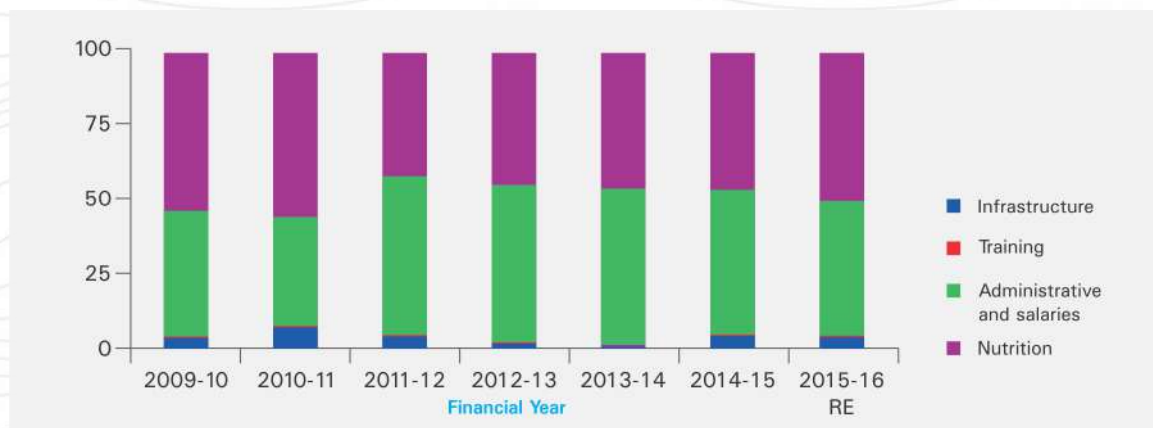


Source: Rural Development and Panchayati Raj Department, State Budget Documents

The major components budgeted in the ICDS scheme include infrastructure, training, administration, salaries and the supplementary nutrition programme. Nutrition and food based expenses have accounted for nearly 50 percent of all expenses in the ICDS.

Salaries and administrative costs account for nearly 40 percent during the previous six years now account for almost 45 percent of the ICDS expenses. The rest of the expenses are made up of building and maintenance of Anganwadi centres while training remains marginal.

**Figure 18: Expenses Based On Components of Scheme**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

The Eleventh Five Year Plan (2007-2012) emphasized expansion of the ICDS keeping in mind quality, improving infrastructure of Anganwadi centers while enhancing training and education of Anganwadi workers. For this study, expenses on infrastructure were considered to be all expenditure on construction and maintenance of Anganwadi buildings.

In terms of infrastructure, expenses have reduced significantly. From approximately 7.78 percent in 2010-11, expenses on construction and maintenance of Anganwadi centers contributed to 3.46 percent of the total ICDS expenses in 2014-15. While proportion of expenses with respect to total ICDS expenses have gone down, expenditure in absolute terms still show fluctuating numbers. From 35 crore in 2009-10 to 84 crore in 2010-11 and finally 87 crore as per 2015-16 estimates. One can also partly attribute these fluctuations in spending to the convergence of other schemes. For example, the Backward Region

Grants Fund (BRGF) has provided allocations to build Anganwadi centres in some districts of the state. As of March 2012, 2153 Anganwadi centers have been built using the BRGF (APIP, 2015). Moreover, districts which have the BRGF programme being implemented have seen the number of Anganwadi centres go up between 2009 to 2013 e.g. Gulbarga which had 6.1 Anganwadi centres per 1000 children in 2009 and by 2013, ended with 13.4 Anganwadis per 1000 children.

During the same period, Bidar saw the number of Anganwadi centres go up from 6.9 to 15.9 per 1000 children (CBPS, 2015). Funds have also been sought from other schemes including National Rural Employment Guarantee Act (NREGA) or other MP/MLA (Member of Parliament / Member of Legislative Assembly) funds. While the Department of Women and Child does keep track of Anganwadi centres being built, it becomes difficult to consolidate the expenses as they do not feature in the department's budget heads.

**Figure 19: Proportion of Infrastructure expenses w.r.t. total ICDS expenditure**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

**Figure 20: Expenses on infrastructure**

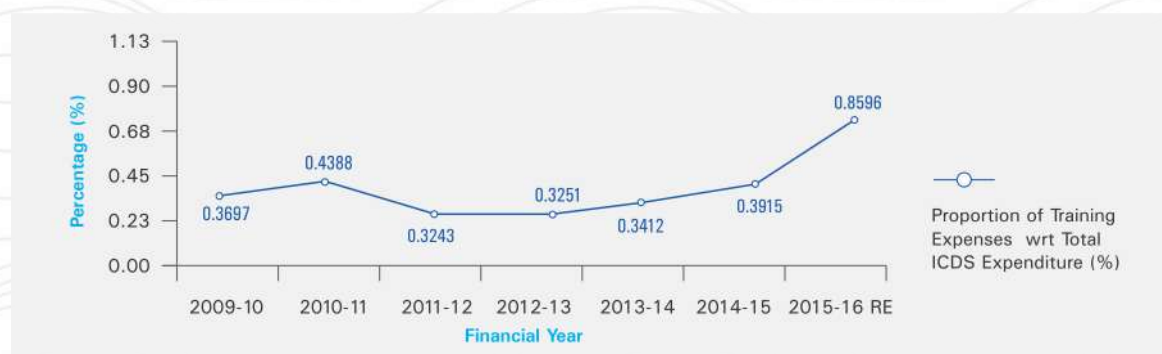


Source: Rural Development and Panchayati Raj Department, State Budget Documents

Since 2009-10, training related expenses have constituted less than 1 percent of the total ICDS related expenditure. 2015-16 revised estimates do indicate enhanced allocation for training related expenses but that remains to be confirmed only once actual expenses are produced. In terms of absolute expenses, amounts allocated for training have largely

remained constant. In the state, 3 crores were spent in 2009-10 and that figure has gradually increased to 5.85 crores in 2013-14 and to 8.4 crores in 2014-15. As per revised estimates, the department does plan to spend 21 crores in 2015-16. This is certainly a huge increase compared to all previous years, which constitutes 0.86 percent of total ICDS expenses.

**Figure 21: Proportion of training expenses wrt total ICDS expenditure**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

**Figure 22: Total expenses on training**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Administration and salaries are amongst the biggest components of the ICDS scheme. These include salaries of State/ District/ Taluk officers as well as Anganwadi workers. Further, these heads constitute of expenses toward vehicle expenses, travel allowances, rent of Anganwadi centres, PSE and medicine kits, flexi funds, ECCE day funds, uniforms to workers and helpers, contingency funds and stationary expenses among others.

Health components, other than medicine kits, are not budgeted with the WCD. Rather, they are separately budgeted by the health department. However, the main issue identified is that disaggregated data on these heads is not available making it difficult to carry any further analysis. Components like salaries and medicine kits are all budgeted under the same head.

**Figure 23: Total expenses on administration and salaries**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Expenses allocated towards administrative expenses and salaries, in terms of absolute numbers, there has always been a consistent increase. With pensions and increased salaries for Anganwadi workers, these figures have increased from 430 crores in 2009-10 to 661 crores in 2011-12 and to 986.44 crores in 2014-15. Revised estimates for the latest year estimate expenses in these heads to be over 100 crores at 1046.46 crores. Another

point to note is that in spite of salaries and administrative costs in absolute numbers going up, it is still not rising in proportion to the increase in workload. The National Nutrition Mission was introduced in 2012-13 which increased the workload of Anganwadi workers but did not lead to any increase in the salary; therefore their salaries are not commensurate with the increase in their workload.

**Figure 24: Admin and Salary Expenses per Anganwadi Center**

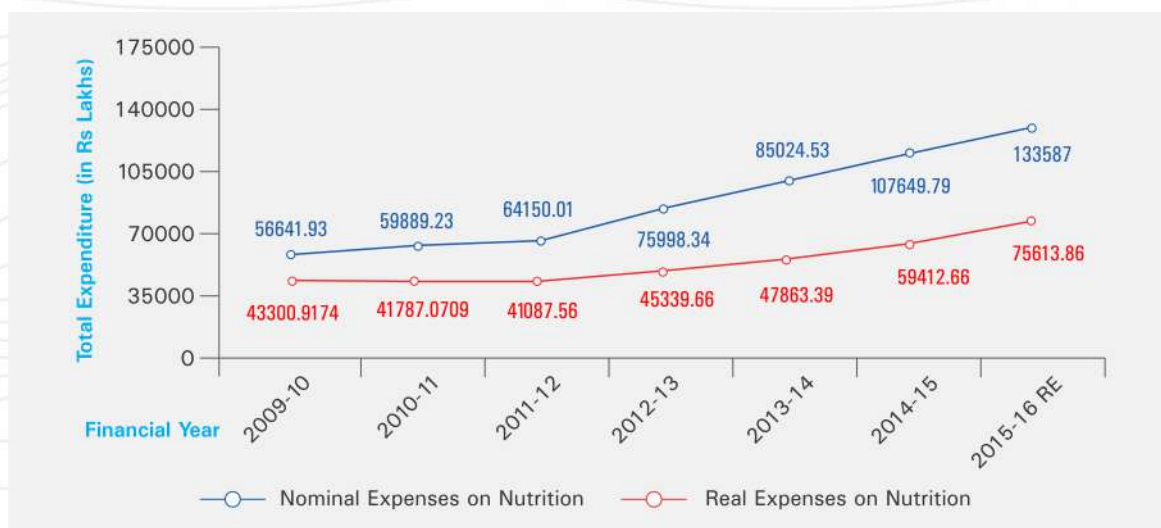


Source: Rural Development and Panchayati Raj Department, State Budget Documents

Looking at administrative costs and salaries per Anganwadi centre, we do see increase especially between 2011 and 2012. Expenses during these years rose from Rs.62,494 to over

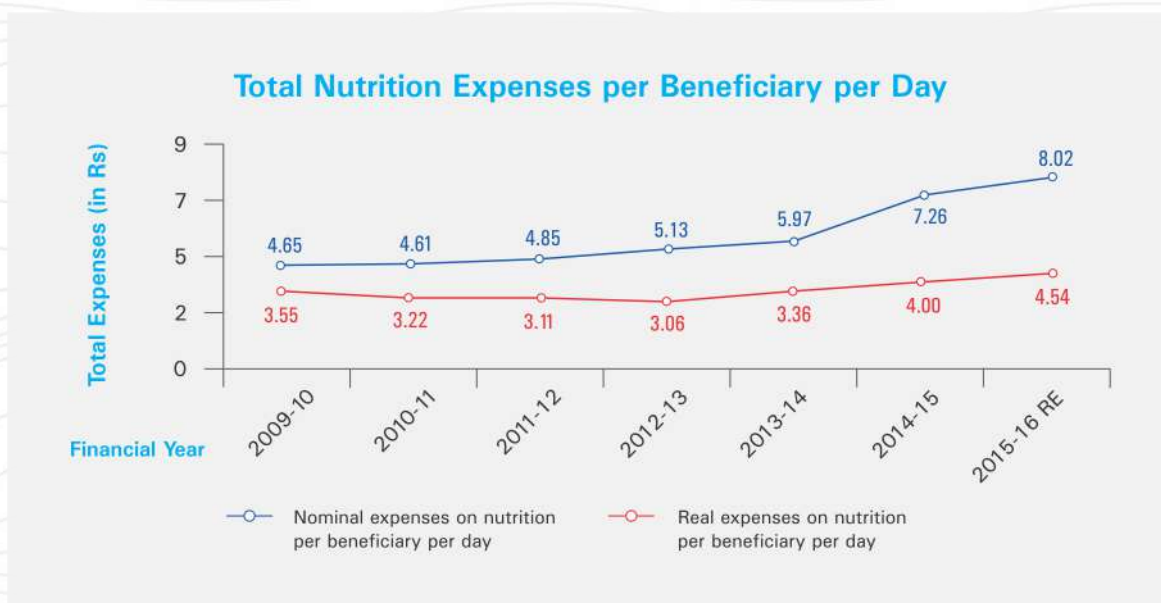
1,00,000 in the next year and has since seen a steep increasing slope. This occurs at nominal expenses level. However at real expenses, the increase is more gradual.

**Figure 25: Total expenditure on Nutrition**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

**Figure 26: Total nutrition expenses per beneficiary per day**



Source: Rural Development and Panchayati Raj Department, State Budget Documents

Overall, nutrition expenditure has seen a consistent rise in expenses since 2009-10. From 566 crores in 2009-10, expenses on nutrition have risen to approximately 1,100 crores in 2014-15. Again, when adjusted for inflation, the increase is not as dramatic.

CBPS did calculate per beneficiary cost for nutrition which in nominal terms, increased from Rs.4.65 to Rs.7.25 as per 2014-15 actuals. It is important to note that these figures are

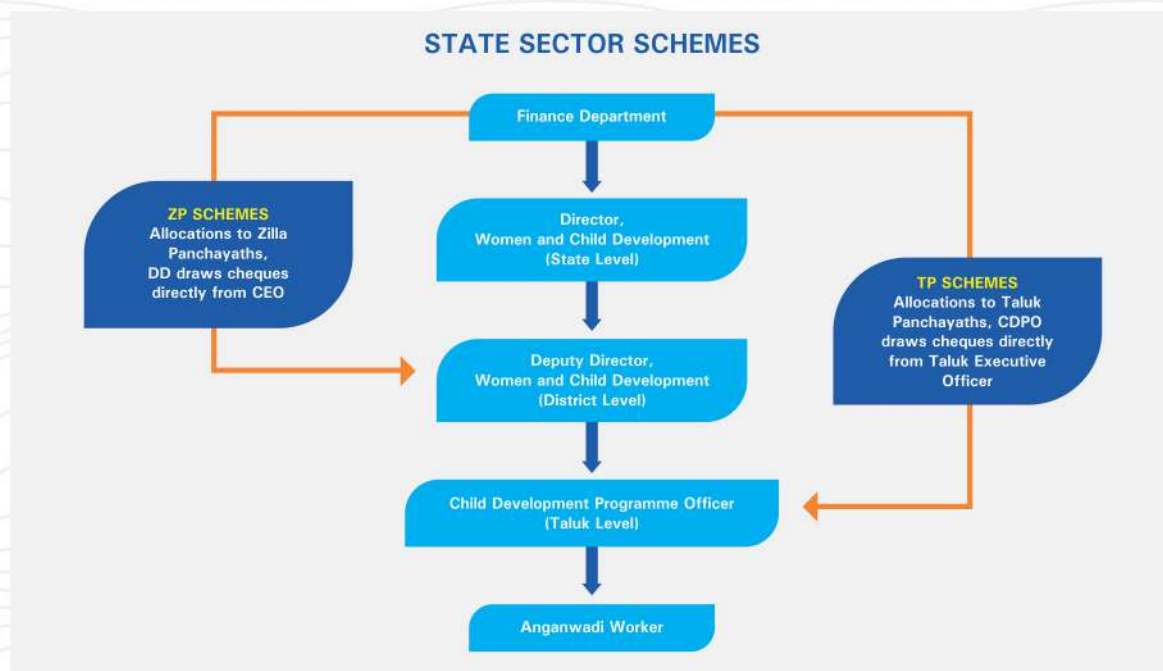
an average across all beneficiary groups and not any one group. In real terms, these figures are well below specified norms. From Rs.3.55 in 2010, the real expenses on nutrition have increased to Rs.4.00 per beneficiary. This is below the specified norm for any and all age groups.

## Chapter 11: Expenditure Flow

Funds in the ICDS scheme flow in two ways in Karnataka. The first is through 'State Sector Schemes' and the second route of flow is through 'allotments to the Panchayaths'. This is done in accordance with the state finance commission recommendations wherein 32 percent of all funds are routed through Panchayaths for increased devolution. For both the schemes, the drawing officers are different.

For state schemes, the Secretariat releases respective funds to the Director of the department. The director in turn releases it to the respective Deputy Directors of the Districts, who then release it to the CDPOs of their Taluks. For district schemes, the finance department would release the allotment directly to the Zilla/ Taluk or Gram Panchayath directly. The respective drawing officer would then draw the cheque. ICDS in particular is not a Gram Panchayath scheme hence, no expenditure is routed through the GPs.

Figure 27: Flow of expenses



CBPS attempted to track the flow of expenditures for one year (2014-15) from State level, down to districts, talukas and finally to Anganwadi level. The main difficulty is about the availability of data. Data particularly disaggregated budget data at taluk levels are not freely available. Especially for state sector schemes, one may find it very difficult to avail even district level budget data for the scheme.

This became apparent, when CBPS attempted to determine how much Bengaluru Urban district received and spent during the 2014-15 financial year. Some data was even missing at the district office.

**Administrative costs within the ICDS, are paid by 3 head of accounts:**

- I. **CSS (100 percent) of Integrated Child Development Service (2235-02-102-0-04)** which is a state sector schemes, used to pay staff salaries at state level, medical, travel and other general expenses. These expenses are all related to state level officers, staff and their general office up-keep.
- II. **ICDS District Cell (2235-02-196-6-01)** used to pay staff salaries, officers' salaries, vehicle maintenance, travel, telephone allowances and Rs.1,00,000/- per year for Information, Education and Communication. This is a district sector scheme, where the Deputy Director draws the expenses from the Zilla Panchayath.
- III. **Centrally Sponsored Scheme of Integrated Child Development Service (2235-02-197-6-03)** is a taluk scheme wherein the drawing officer is the Child Development Programme Officer (CDPO). Majority of the administrative expenditure is included in this head, including salaries of Taluk officers and staff, their office upkeep and their vehicle fuel and maintenance charges. Further, funds for the Anganwadi center including PSE kits, Medical kits, flexi-funds, uniforms for workers, badges, contingency funds, rents, weighing machines, funds for ECCE days and honorariums to Anganwadi Workers and Helpers all come from this head of account.

Further, additional honorariums (2235-02-196-1-01) of Rs.2500/- per anganwadi worker and Rs.1500/- for a helper are also accounted at the district level. An additional three components are accounted at the Taluk level by the Child Development Project Officer which include maintenance of Anganwadi buildings (2235-02-197-1-01), Creches for working women (2235-

02-197-1-01) and National Nutrition Mission (2236-02-197-6-01) which is the amongst the biggest components of the ICDS scheme. It is worth mentioning here that supplementary nutrition is the only component among the six budgeted by the Department of Women and Child Development. Immunizations and medicines are budgeted by the health department and the Anaganwadi centres just remain the centre point for delivery of these medicines. The four other components are not budgeted anywhere.

**Figure 28: ICDS expenditure accounted at different heads**

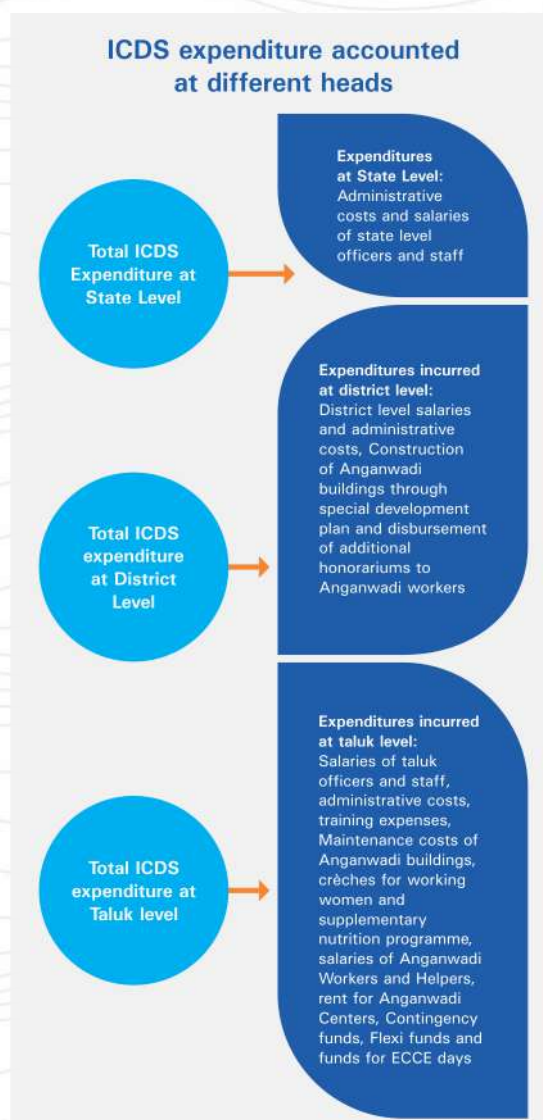
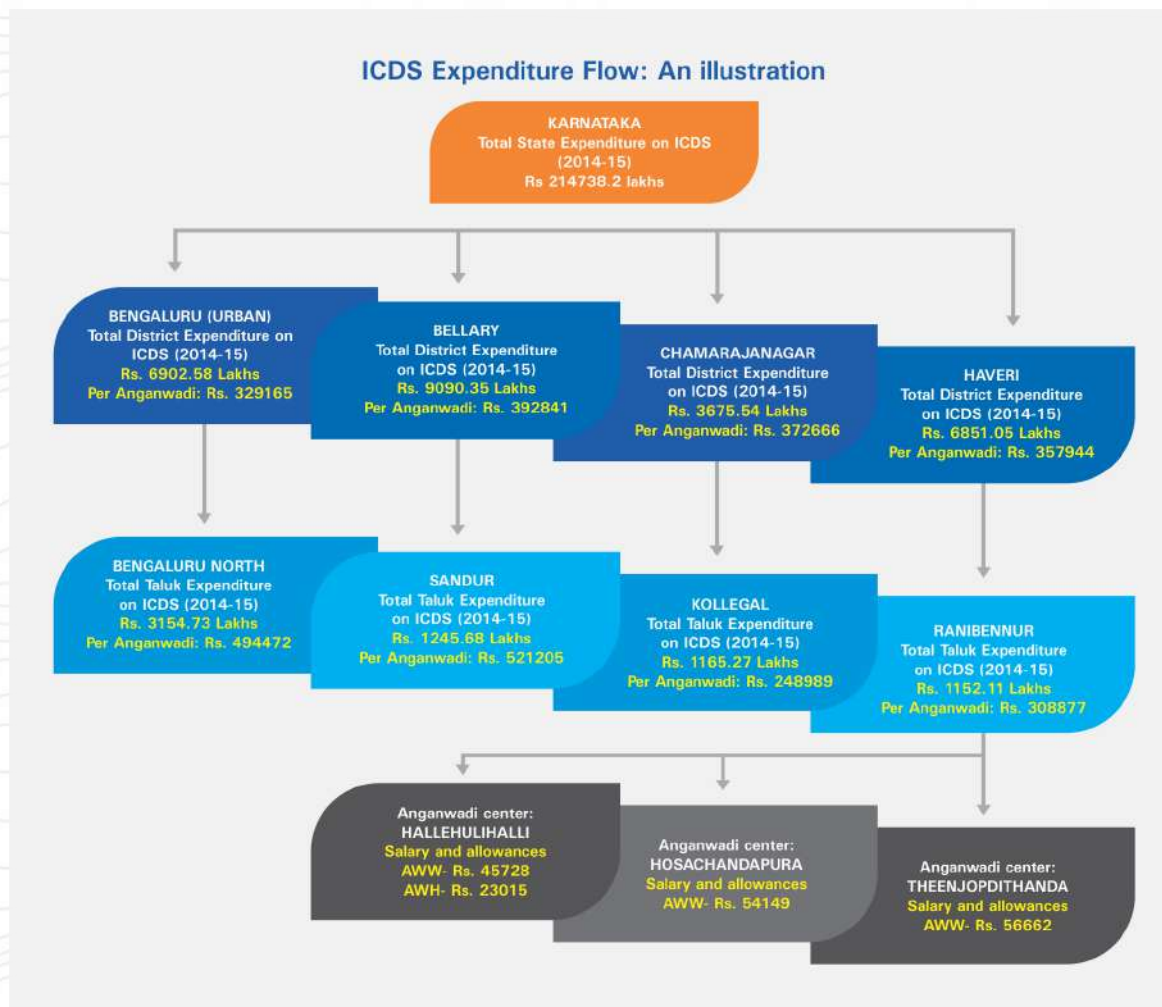


Figure 29: ICDS Expenditure Flow: An illustration



Almost entirely, the budgeting process in the ICDS is a routine approach where in CDPOs compile budgets based on the number of beneficiaries in the taluk. The number of beneficiaries in the taluk is given to the officers by the supervisors who in turn obtain these numbers from the Anganwadi Workers. The number of beneficiaries, salaries and other requirements are then multiplied by the unit cost or norms and sent to the district officers by the CDPOs. The district officers then compile the data by taluks while adding their salaries and administrative costs and further sent up to the state level where it is finally consolidated.

Karnataka during 2014-15 spent 2147.38 crores on the ICDS alone. Tracking these expenditures through the sampled districts revealed that Bellary at Rs.9090.35 Lakhs received the highest allocation among the four districts. While Chamaraj Nagar received close to 37 crores, Bengaluru (Urban) and Haveri both received close to 40 crores. At state level, a chunk of the salary is spent on administrative costs and salary costs of officers and staff of the state offices.

At district levels, bulk of the expenditures includes salaries, administrative costs, vehicle maintenance, buildings and infrastructure and paying off additional honorariums to Anganwadi workers.

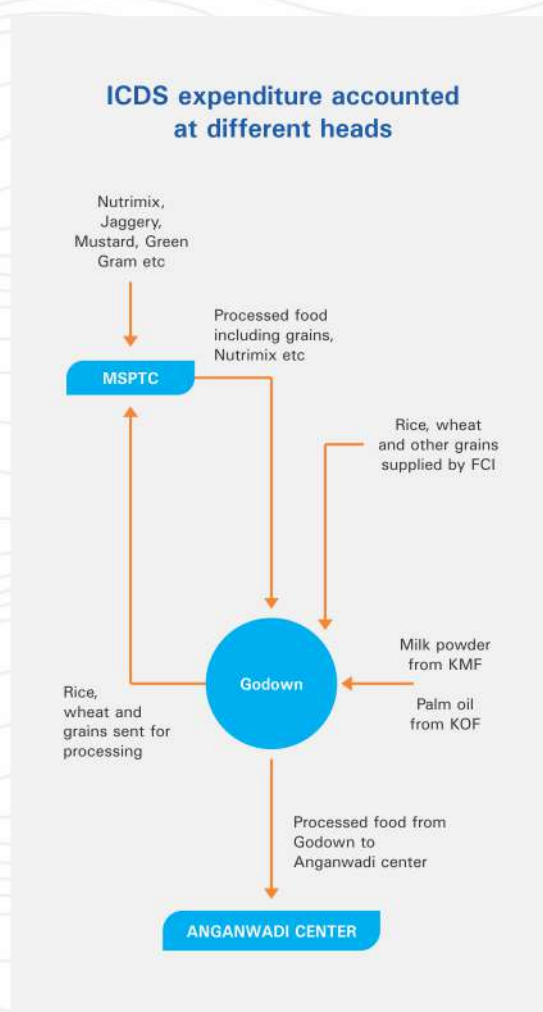
At Taluk level, the biggest component of the scheme accounted is the Supplementary Nutrition Programme. Bengaluru North Taluk accounted for nearly 19 crores in food related expenses, while Bellary accounted for 9 crores. Kollegal and Ranibennur accounted for nearly 7.5 crores each. While SNP does remain the largest component of the scheme accounted here, other components accounted here include salaries and administrative costs of taluk staff, procurement of medicine kits, preschool education kits, disbursement of contingency funds, salaries of workers, travel and dearness allowances, vehicle maintenance among others.

While majority of procurements and payments are facilitated here by the CDPOs not much of the expenditure in terms of cash, goes to the hands of Anganwadi Workers. A look through a sampled number of Anganwadi Workers' and Helpers' passbooks shows us that most of the money comes through bank transfers from the CDPOs. These transfers, made monthly are the worker's and helper's salaries, travel allowances, dearness allowances and contingency funds. The CDPO also deducts an amount of Rs.150/- for the Anganwadi workers and helpers pension scheme.

As mentioned earlier, most of the materials needed by the Anganwadi centre are procured by the CDPOs Taluk office through a tendering process. In case of nutrition, tenders are called in for the supply of certain food items like peanuts, lentils, green grams etc. Grains are supplied by the Food Corporation of India and milk powder from the Karnataka Milk Federation and palm oil from Karnataka Oil Federation. All the foods are then packed at the packaging center known as Mahila Supplementary Nutrition Production & Training Center's (MSPTC) and sent to the godown from where it is transported to the Anganwadi centers. Interestingly, transportation of food is also a tendering

process where the budget for food transport comes from the nutrition component. 10 paise from the unit cost of food is set aside for the purpose of transporting food. Hence in effect, unit cost per child is Rs.5.90/-, unit costs for severely malnourished children is Rs.8.90/- while the unit cost for pregnant and lactating women is Rs.6.90/-.

**Figure 30: Food procurement at Haveri district: An illustration**



Monthly, the CDPO draws cheques in the name of Food Corporation of India (FCI), Karnataka Milk Federation (KMF), Karnataka Oil Federation (KOF) and other suppliers to pay them off. Since the unit cost per child is fixed, officers meet once every 6 months to revise the menu depending on prevalent market rates. Rates for rice and grains are largely fixed since it comes from the FCI. Similarly, milk and oil prices are also fixed. However, rates for commodities like peanuts, mustard, green grams, etc. are subject to change. For this purpose, a committee headed by the District Magistrate and comprised of the Chief Executive Officer (CEO) of the Zilla Panchayath, Deputy Director, CDPOs and the District Marketing Officer meet every six months to revise the menu.

**Table 80: Quarterly release details for SNP (Haveri)**

	Date of release	Amount (in Rs lakhs)
Quarter I	04-06-2014	184.64
Quarter II	15-10-2014	184.64
Quarter III	11-02-2015	267.19
Quarter IV	20-03-2015	102.09

In order to prevent delays in food procurement, officers generally procure food for an extra fifteen days so as to prevent food shortages. But as seen above, funds allocated for SNP are rarely ever released on time. The same holds true when CBPS looked at details for Bengaluru Urban district as well. However, it was found that the most common component for delays included Anganwadi Workers and Helpers' salaries. As seen in the table below, state component of salaries (also known as additional honorarium) were not released on time during the year 2014-15. This continues to hold true even when one examines the passbooks of Anganwadi workers. Rarely do salaries come on time especially the state component of the salary.

**Table 81: Quarterly release details for Additional Honorarium to Anganwadi Workers/Helpers (Haveri)**

	Date of release	Amount (in Rs lakhs)
Quarter I	07-06-2014	45.12
Quarter II	16-08-2014	56.3
Quarter III	09-12-2014	33.96
Quarter IV	-	-

**Table 82: Quarterly release details for Additional Honorarium to Anganwadi Workers/Helpers (Bengaluru South)**

	Date of release	Amount (in Rs lakhs)
Quarter I	29-04-2014	47.55
Quarter II	02-09-2014	60.5
Quarter III	18-12-2014	36
Quarter IV	-	-

For Bengaluru South as well, delays in salaries is an unwritten norm. While the central component of salaries generally tends to come 'on time', which is in the middle of the next month), state components of the salary are much more erratic. Delays in the additional honorarium have been anywhere from 30 days to over two months. With salaries that are already inadequate and low compared to market standards, even slight delays in disbursement puts workers under severe constraints.

### Financial resources and norms

With regards to the financial structure of the programme, respondents advocated the need for reforms in some areas. Important among them include the demand for increment in the honorarium of the Anganwadi functionaries, a concern raised by many officers we interviewed. Also, the helper attrition rate is high in Bangalore Urban, as there is ample opportunity to earn more by working as a domestic help rather than as an Anganwadi helper.

With respect to contingency fund, 94 workers reported receiving the contingency fund. But

a majority of these workers (59.6 percent) have reported that the contingency fund is insufficient.

**Table 83: Chi square test of significance in perception about sufficiency of contingency across districts**

District (n=93)		Perceives the fund is sufficient	Insufficient	Total
Bellary	Actual	16	6	22
	Expected	8.8	13.2	
	Chi value	6.0	4.0	
Chamraj nagar	Actual	8	16	24
	Expected	9.5	14.5	
	Chi value	0.3	0.2	
Haveri	Actual	9	16	25
	Expected	9.9	15.1	
	Chi value	0.1	0.1	
Bangalore	Actual	4	18	22
	Expected	8.8	13.2	
	Chi value	2.6	1.7	
Total		37	56	93

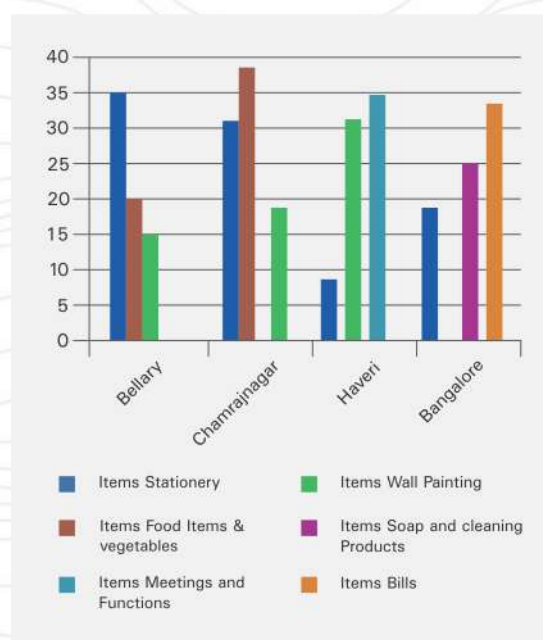
There is significant difference between workers' perception of sufficiency of fund across districts (chi square statistic=14.8180; p=0.002, which is significant at p<0.05 level), as well as across centres classified as urban or rural (chi square statistic=4.1538, p=0.042, which is significant at p<0.05 level). From the chi square table given above, it appears that more than expected number of workers have reported that the contingency fund is insufficient in Bellary. More number of workers in urban centres have perceived the fund to be insufficient.

**Table 84: Chi square test of significance in perception about sufficiency of contingency across anganwadi locations.**

Urban / Rural		Perceives the fund is sufficient	Insufficient	Total
Urban	Actual	5	18	23
	Expected	9.2	13.8	
	Chi value	1.9	1.2	
Rural	Actual	32	38	70
	Expected	27.8	42.2	
	Chi value	0.6	0.4	
Total		37	56	93

Seventy-one workers also reported using their own money for the Anganwadi. This included for purchasing food items, cleaning material and stationery for the Anganwadi, but in the case of Bangalore Urban, a majority have reported using own money pay water and power bills. This suggest the need to revisit budgets and norms related to infrastructure particularly in rent/lease norms. These findings may suggest that expectations of finding space with power and water within the stipulated amount of Rs.5000 for urban areas may be unrealistic. Quite often, AWWs are paying off the expenses and hence have to unfairly bear the burden of lack of proper allocation of money. Only 4 of the 71 workers have reported receiving reimbursed for the amount spent from their own pocket.

**Figure 31: Use of contingency fund across districts**



There was a significant difference in the number of workers who used their own money for the centres by district (chi square statistic =13.3560; p=0.004, which is significant at p<0.05 level) as well as based on urban-rural centres (chi square statistic=10.5343; p=0.001, which is significant at the p<0.05 level).

**Table 85: Chi square test of significance in perception about AWWs using own money across anganwadi locations**

District (n= 100)		Use own money	do not use own money	Total
Bellary	Actual	20	5	25
	Expected	17.8	7.3	
	Chi value	0.3	0.7	
Chamraj nagar	Actual	16	9	25
	Expected	17.8	7.3	
	Chi value	0.2	0.4	
Haveri	Actual	23	2	25
	Expected	17.8	7.3	
	Chi value	1.6	3.8	
Bangalore	Actual	12	13	25
	Expected	17.8	7.3	
	Chi value	1.9	4.6	
Total		71	29	100

Urban / Rural		Use own money	do not use own money	Total
Urban	Actual	12	14	26
	Expected	18.5	21.5	
	Chi value	2.3	1.9	
Rural	Actual	59	15	74
	Expected	52.5	21.5	
	Chi value	0.8	1.9	
Total		71	29	100

Most of the officers when asked about problems they face during budgeting did not report any problem. However, one officer did say that s/he found the fixed norms difficult to work with. S/he felt it acted like a ceiling. According to him/her, 10 paisa per beneficiary was simply not enough to find people who would transport food and rather this cost should be revised to at least 18 paisa per beneficiary.

Furthermore, according to many rent norms are difficult to work with as well. Firstly, the unit cost for renting out a space each month is simply not enough. Also, there is absolutely no provision for advances or security deposits which most tenants demand. Repair and maintenance costs also cannot exceed Rs.50,000 which is another hindrance to officers. According to them, most of the repairs requires amount above the specified and hence they aren't able to make any renovations to their centre.

## Chapter 12: Conclusion

### (Considerations for Revision of Programme and Associated Costs)

The Integrated Child Development Scheme - India's state-sponsored Early Childhood Development programme is close to completing half a century. In the forty-six years of its existence, it has been recognised as one of the fastest growing social sector programmes (Gupta, 2001). The integrated approach taken to early childhood survival and development as part of the programme has been considered to give India a significant advantage, while many other countries continue still too narrowly focus on singular parameters of child development. This holistic approach to children's development was in fact adopted by the government after experiments with several supplementary nutrition programmes failed to have desired effects (Gupta, 2001; Gupta, Gupta, & Baridalyne, 2013). In its place, a programme that combined the effects of nutrition, health provisioning, maternal care, and education was instituted.

Several studies on the ICDS have been undertaken in past four decades, with the aim of evaluating its efficiency in reaching specified objectives. In a slightly different vein, the present study has attempted to understand the effective utilisation of funds for the programme, undertaking a systematic budget and expenditure analysis in relation to the quality of services offered under the scheme. The main intention of this exercise has been to examine whether there is a need to revise costs on the scheme in order to improve service delivery.

As part of meeting this objective, an exploratory study of quality of services of the ICDS scheme was undertaken across 100 AWCs in four districts of Karnataka and an

attempt was made to understand and analyse the results in relation to the funds allocated, utilised and expenditures incurred as part of the ICDS programme from the state to the anganwadi level. In addition, several rounds of interviews with ICDS district and block level officials was also undertaken in order to understand the constraints and challenges faced in operationalising the programme, both with respect to budgets as well as other structural and administrative factors. Finally, a consultation meeting with experts in the field of child education, health and development was organised in order to present the findings of our study and invite suggestions on the need for and methods to revise unit costs.<sup>18</sup>

Rather than providing conclusive answers, the study and consultation point to certain important considerations that has to be made with respect to the structure and orientation of the ICDS programme which has more or less continued with the same rationale and goals for almost half a century now.

In the context of relative improvements in child mortality<sup>19</sup> and nutrition levels, improvements in household levels of poverty and a growing shift and demand among the poor for schooling<sup>20</sup>, the study and consultation highlight the need to revisit the programmatic structure of ICDS itself.<sup>21</sup> Key challenges/issues that have emerged from the study revolve around issues of better delineating key focus areas for the programme in order to improve the efficiency of its functioning; ensuring accountability, challenges of decentralisation and community participation, realistic planning to ensure feasibility of activities, efficient utilisation of

resources, addressing fund delays, and so on. Based on the key issues that have emerged we argue that there is a need to consider how the programme can be revised structurally, programmatically as well as financially. These issues are further discussed in some detail below.

## 12.1 Identifying key focal areas for the efficient functioning of the programme

The ICDS has been conceived as a multi-sectoral, multi-generational children's intervention, particularly targeting the age group between 0-6 years, with a special focus on children between 0-3 years. While research reiterates the benefits of having a multi-dimensional and multi-generational intervention such as this other studies on the ICDS and our own have clearly demonstrated the challenges in operationalising such a programme. Despite being holistically planned, our study and several others have shown that ICDS over the years has come to be seen as synonymous with 'supplementary nutrition'. Other components such as pre-school education, health and nutrition education and adolescent development have received little attention, and have even perhaps received lesser attention with the launch of the National Nutrition Mission in 2013-14.

A key factor that has contributed to the relative neglect of other aspects of the programme, leaving aside nutrition, despite available budgets is perhaps the conceptualisation of the role of the worker. As the single nodal state representative available more or less continuously in every village, the anganwadi worker has been made responsible for implementing several government schemes and is also expected to single-handedly cater to the multiple beneficiary groups.

This has led to little time for the worker to understand all aspects of the programme comprehensively and undertake those efficiently. With SNP being one of the components of ICDS for which impact can be concretely measured (e.g., through reduction in number of malnourished children, reduction in mortality rates, etc.), unlike certain other components such as PSE, HNE or adolescent empowerment, it receives highest priority by the state as well as workers.

In this context, therefore, it is important to consider whether there is a need to restructure the programme in specific ways. During the consultation with experts a key point that was raised was the need to focus more specifically on the needs of the age-group that the ICDS programme caters to - that is children between 0-6 years. It was argued that in catering to multiple beneficiary groups, the programme perhaps has stretched itself too thin in terms of financial and human resources.

Specifically, it was pointed out that the adolescent age group perhaps falls out of the ambit and scope of the ICDS programme and there were several alternative departments/programmes that could cater to this group more holistically (such as department of secondary education or the Adolescent Reproductive and Sexual Health [ARSH] programme). While adolescent girls have been included within the ICDS programme with the view of improving their health and educational status, in order to ensure improvements in their reproductive capacities this rationale for inclusion of adolescent girls was seen to be too narrow and instrumental by the group with no view towards their holistic development and empowerment.

Further, the present policy on adopting two adolescent girls on a rotational basis for six months per anganwadi centre was seen to be

inadequate to demonstrate any changes or real improvements in their health and educational status. Instead, the recommendation that emerged from the group was to conceive of a separate and more holistic programme for all adolescents, while ensuring better utilisation of resources and manpower within the ICDS programme by delinking the adolescent programme from ICDS.

A similar discussion about the delinking of the immunization and health components of the programme and the PSE component was also raised. In the case of the former, it was argued that with the availability of public health centres (PHCs), ANMs and special appointment of ASHA workers to address community health needs in every village, immunization services organised by the anganwadi worker, and other activities such as health check-ups have resulted in a duplication of services and wastage of resources. Further planning of the health component across the two departments of health and women and child, have also resulted in logistic and coordination issues and pose many challenges for monitoring and ensuring accountability. Thus, delinking this component from the ICDS programme may lead to better results, and more importantly, provide the anganwadi worker adequate time to focus on key activities related to children's development - such as stimulation, play, education and social interaction.

Further, with regard to PSE, it was considered whether this component could also be delinked from the ICDS scheme, since there has been a push to include pre-school education as also under the Right to Education Act (RTE, 2009) thus making it a probable programme under the education department. However, in the current scenario of uncertainty over the inclusion of PSE as part of RTE, it was felt that it is important not to dismantle the current provisions that already exist for particularly for

children from disadvantaged backgrounds.

Thus, the focal areas of the ICDS programme could be conceived as nutrition and education of children between 0-6 years including education on the importance of ECCE, which currently receives short shrift. In order to improve the efficiency of these two components, not only it is important to re-plan the programmatic structure of ICDS, but also to change with respect to the two services are also required.

For example, with respect to PSE, it has been reiterated in several studies and through our consultation that proper training and sufficient time must be made available to the anganwadi worker with adequate resources and budgets for PSE. This will enable to convert the anganwadi centre into a vibrant space with desks, chairs, pre-school learning material, posters, playgrounds and uniforms, as available within private preschool programmes which have begun attracting a large chunk of the pre-school age ICDS beneficiaries). Further, it is also important to evolve certain process-oriented measures or indicators for the PSE component that will allow it to be monitored more effectively.

Even with respect to SNP, need for improvements have been stressed by several studies. While unit costs for SNP are currently reported to be sufficient,<sup>22</sup> the utilisation of the budgets and the implementation of the programme have been critiqued. Allocation of budgets and considerations of sufficiency of unit costs for nutrition also do not take into account community needs and perceptions and this may be a critical gap in the programme.

As our survey clearly showed, one specific beneficiary group - that is, pregnant and lactating women - perceived the quantity of food to be insufficient. While this may be

related to the lack of understanding of food provided through ICDS as 'supplementary', it is also important to evaluate this finding in relation to the calorie norms that has been set as part of ICDS. While the calorie norm for children has been set at 500 calories with 12-15 gms of protein, the calorie norms for an adult pregnant or lactating women is 600 calories (with 18-20 gms of protein). It is important to re-evaluate this norm and the costs associated with it in order to understand whether this may be sufficient, particularly in the context of increasing economic insecurities for the poorest/rural sections of the population resulting from fragmentation of land and decline in agriculture increasing casualisation of jobs and growing urban poverty.

Another consideration to keep in mind in determining calorie and unit cost norms in SNP is with regard to moderately malnourished children. Moderately malnourished children are currently not budgeted for within the supplementary nutrition programme. They are subsumed under the category of non-severely malnourished children, except in the case of certain 'high burden' districts or districts with high incidence of child malnutrition and mortality. It was reiterated during the consultation that this groups formed the bulk of the beneficiary group and thus there was a need to adopt separate norms for this group

Thus, these additional costs of increasing quantity of food for specific groups and including new categories of beneficiaries can perhaps be met if the programme adopted a more focused approach by targeting only children from 0-6 years.

## 12.2 Decentralisation and Accountability

A second major factor that emerged through the study and consultation was the need to improve decentralisation and accountability in order to improve efficiency of the ICDS programme. This has implications for planning as well as budgeting for the ICDS programme.

Conceptually, it can be argued that the ICDS programme adopts a bottoms-up approach to planning. From budgets to procurements, selection (e.g., of food menu, vendors, appointment of workers and helpers etc), payments, and monitoring have all been devolved to the district and block levels, thereby offering opportunities for local participation.

However, a critical question raised by the study, and during the consultation was regarding the real extent to which decentralisation has been made possible. For example, it can be seen that almost entirely, the budgeting process in the ICDS is a bottom to top approach where in CDPOs compile budgets based on the number of beneficiaries in the block. The number of beneficiaries in the block is given to the officers by the supervisors who in turn obtain these numbers from the anganwadi workers. However, the inflexibility in unit costs, which are determined at the central level and further with pre-specifications regarding how budgets for different heads may be spent, there is little room for the community, block or district officials to address local needs.

In this context, experts argued that the block and district officials did not have real autonomy to budget for the needs of their community. They were rather just engaged in undertaking arithmetical calculations rather than budget-making. Thus, the need to bring in more flexibility to the budgeting process

was perceived, wherein it was pointed out that norms could be construed as a range rather than as a pre-specified number.

Similarly, the need to bring about more autonomy in planning and decentralisation of the food menu was also expressed by experts. This observation is also supported by our study. While planning the food menu and procurement of food has been decentralised to the district from the state level, there are still several concerns around the quality and choice of food. Despite the move to decentralise food menu, experts during the consultation noted that district level officials still resort to utilising the earlier or previously planned menu.

Even the current study attempt to analyse the food menu reported by anganwadi workers across the four districts showed similarities between the menu rather than differences that indicated preparation of menu taking into account local alternatives. Taking the case of Spirulina that has been recently planned to be introduced experts have pointed out that decision making continues to remain top-down privileging 'branded' alternatives over local options that have proven to be more nutritious and cost-effective such as drumstick leaves.<sup>23</sup>

It was further also clear from our study that participation of community was virtually absent in the preparation of the food menu. For example, one component of the Take Home Ration (THR) for children which was supposed to have been revised following poor feedback from parents is the nutri-mix. However, despite this revision, in the study it was found that high levels of dissatisfaction persist among parents who reported that they threw away the nutrimix or fed it to the cattle.

Together, these findings suggest the need to institute concrete mechanisms that will allow for community participation in the selection and management of the ICDS

programme, particularly with regards to SNP, as this will crucially determine the uptake. As experts from National Institute of Nutrition (NIN, Hyderabad) and MYRADA (Bangalore) pointed out uptake of food is also essentially tied to parent education and involvement. Making parents critical stakeholders in the process through education, training and empowerment, organising community events in which ways to use and prepare the nutrimix, recipes to cook the ingredients of the THR are shared etc. are essential to beat the monotony of food prepared and fed to children. Further such events are also important in order to enlist parental cooperation and participation.

Further, parents can also be key agents in ensuring the effective functioning of the service and greater accountability if trained effectively. While the practices to increase accountability are perhaps already in place, in the form of appointments to the Bal Vikas Samiti from the consultation in the study it was observed that these committees are largely non-functional. Parents and panchayat members interviewed during the study were largely unaware of their roles and the components of the ICDS programme. It was also noted by experts that wherever these committees were functioning, it was usually dominated by the anganwadi worker.

Further, from the study it was observed that other measures to ensure accountability, such as displaying the food menu was also absent in almost half of the anganwadis surveyed. Display of menu is critical in order for the community and parents to check if the food received is in accordance to the prescribed norms. Parental knowledge and training about the norms and functioning of the anganwadi centre and their role and rights vis-à-vis the programme is thus central to ensuring accountability.

Further, to bring about real accountability it is important to recognise the weaker position and lower status of parents and empower them adequately, with a greater understanding of their roles, rights and mechanisms for grievance redressal, etc. This requires separate budgets for training village level monitoring committees which is currently not available within the scheme of the programme.

Further, ensuring greater accountability also requires addressing some of the programmatic aspects of ICDS, particularly in relation to its budget. One of the biggest challenges for our study has been the difficulty in procuring disaggregated data at the block and district levels which thus makes it difficult to understand fund flows, expenditure patterns and delays. For example, several the ICDS budget consists of an opaque head called Centrally Sponsored Scheme of Integrated Child Development Service' which takes up the second largest share of the budget after SNP.

The 'Centrally Sponsored Scheme of Integrated Child Development Service' head includes expenses on a number of other critical components of ICDS such as flexi and contingency funds, pre-school and medicine kits, rent, honorariums to workers and helpers, etc. However, without the availability of disaggregated numbers of expenditure for each of the heads, it becomes impossible to examine whether the funds have been utilised in an efficient and timely manner or whether they are budgeted according to the norms.

Another issue is the fact that panchayats decide which Anganwadi centers are up for maintenance. This has created certain problems as contracts for construction are approved by the panchayat. ICDS officials have no authority to question the appointments and no say in the process. This has created problems of accountability, with

several toilets and water tanks having been left incomplete as observed during the field visits. Thus, from the study it is observed that even when a majority of 74 of the 100 centres surveyed were owned by the department, only a small proportion of them had water and toilet facilities.

In order to be able to audit the expenditures on the ICDS programme and to examine this in relation to the availability of infrastructure and services through the programme, it is thus important to have disaggregated budgets available in the public domain that makes it possible for communities, civil society and other agencies to monitor the functioning of the scheme.

### **12.3 Realistic Planning, Avoiding Delays in fund flow and Ensuring Feasibility**

One of the critical outcomes that can be assured through the disaggregation of budget is more realistic planning of the programme which in turn can improve its efficiency. Currently, what is observed from the study and consultation is that while the bigger components of the programme such as SNP and rent are budgeted for other smaller/in-built costs that may be required to ensure efficient functioning of the scheme are missing. For example, while costs for food is budgeted, there is no amount budgeted for procuring gas cylinders. Currently, the department has adopted the practice of accruing the amount that was set earlier for fuel (firewood), for three months to be able to make quarterly purchases of gas cylinders. The challenge here arises as there are no costs for transportation of cylinders budgeted, due to which anganwadi workers are often forced to make out-of-pocket expenditures to procure cylinders.

Again, SNP costs do not meet the costs required for transportation of food. While unit cost per beneficiary has an in-built cost for transportation of 10 paisa per beneficiary, several district officials pointed out that this unrealistic norm made it very difficult to get tenders for transportation. This has implications for delay in SNP. Though, this has not been a finding of the study but has been noted by several other studies). Further, if beneficiary numbers are very small, the challenge of finding transportation at a lower cost would be greater, and thus there is a need to plan costs for transportation independently, as exclusive from the unit cost for food. Again here a range could be set taking into account distance and location factors.

Similarly, rent norms currently set also appear to be unrealistic. While on one hand rent norms of - Rs.5000 for an urban anganwadi and Rs. 3000 for a rural anganwadi itself have been pointed out to be inadequate by district officials as well as experts, on the other hand other costs such as deposits for renting property, water and electricity charges have all been left out of the budget. It is argued that water and electricity costs have to be met within the rent norms which are realistically inadequate or have to be taken care of by the panchayat. However, in the tussle between the department and panchayat with respect to the payments, many centres suffer from lack of electricity and water.

What the above points suggest is that norms and costs planned as part of the ICDS programme do not reflect real costs or costs adjusted for inflation. This can perhaps be best illustrated taking the SNP unit cost norms. While some members of the expert group did opine that the per beneficiary unit cost for food available currently may be sufficient, our own analysis of budgets for ICDS shows that unit costs which are revised with long intervals in

between may be insufficient when adjusted for inflation. For example, when we examine the amount spent from 2009-10, the average unit cost per beneficiary, after having accounted for inflation, has risen only marginally from Rs. 3 to 4. This amount is less than the unit cost budgeted for any of the beneficiary groups of the ICDS. The critical point this raises is that with a revision of unit costs occurring in leaps with long intervals in between the costs planned on the ICDS programme do not reflect the actual changes in food or other prices, and may thus not be realistically sufficient. In fact, this is supported by accounts of CDPOs who have pointed out that the food menu has to be changed and managed in accordance with increase in costs of certain food items. While officials admit that the nutrition value is sought to be ensured even when a revision in menu is undertaken to meet costs, this does raise concerns around the compromise of quality and nutritional content in lieu of price. Similarly, honorariums budgeted for workers and helpers are also highly inadequate in relation to the current costs of living. For example, it has been pointed out by several experts and officials that helper salaries are lower than that of even domestic helps in urban cities such as Bangalore thus leading to high rates of attrition and turnover. In addition, huge delays in receiving salaries along with out-of-pocket expenditures that anganwadi staff undertake make it unfeasible for them to continue in these posts.

Thus, undertaking realistic planning would require that current prices and costs of living are taken into account and flexibility in norms is instituted appropriately. Further, in order to ensure realistic planning, it is also an important to pay attention to the delays in the fund flow process and bring about correction to this. Ensuring timely services requires timely release of funds. During field visits and

discussions with block officials, it was pointed out that fund flow delays occurred due to delays in submission of utilisation certificates (UCs) to the state. It was further pointed out that UCs were submitted during the first week of the next quarter. This resulted in delays in release of funds for the next quarter. Thus, in order to overcome this problem it was suggested that at least a quarters' difference must be maintained between submission of UCs and release of funds.

## 12.4 Investment in Personnel and Improvements in Worker Service Conditions

Finally, and perhaps more importantly the study and consultation has demonstrated that reconsidering the functioning and costs of the scheme requires a re-envisaging of the role and position of the functionaries of the ICDS scheme - particularly that of the worker. The anganwadi worker is the most critical feature of the ICDS programme. Yet, as was reflected in our study and in the discussions during the consultation, the anganwadi worker not only occupies a low status within the ICDS structure, but is also subject to several work-related constraints and challenges. These range in nature from heavy workload, which includes non-ICDS related tasks such as administering schemes such as Bhagyalakshmi and Stree Shakti; incurring out-of-pocket expenditures on activities such as procuring gas cylinders or other material required for the anganwadi; and undertaking her duties despite delays in receiving her honorarium, especially the State component of the honorarium in Karnataka.

Further, our study also shows that despite a consistent increase from 2009-10-2014-15 in salaries, there hasn't been a proportionate increase in honorarium for workers in relation to their increasing workload. For example, the

National Nutrition Mission was introduced in 2012-13 which increased the workload of Anganwadi workers, yet this did not bring about a change in their honorariums. Further, our study also showed that anganwadi workers receive poor support from supervisors and CDPOs to undertake their day-to-day activities

In contrast to the poor investments made in the worker's well-being and the delays observed in relation to remuneration for her services, training of workers appears to have been taken up consistently. This is inferred from the reports by a large majority of workers in the study. While the quality and content of the training requires further examination, what this largely demonstrates is the increased 'responsibilisation' of the worker by placing emphasis on factors that can ensure performance of her duties, while neglecting other aspects that can contribute to her well-being. This also includes the failure to award the worker a professional status, recognising her as a 'care giver' or 'teacher' instead, and instituting a salary which discursively represents a more secure income compared to an 'honorarium'.

All of this has contributed to the poor morale and well-being of workers, and certain concrete measures have been suggested in addressing these issues. First, the need to provide a better social standing for the worker by changing the nomenclature from 'worker' to 'teacher/caregiver', with adequate training and support to help her with her duties was stressed by the consultation of experts.

The latter point raises the need to reconsider budgetary allocations and planning as this implies not just creating quality professional development opportunities for the worker, but also appointment of additional worker and capacity building of the supervisor. With respect to the former, experts at the

consultation mentioned that the proposal to appoint a second worker who was in charge of all the administrative duties, freeing up the former to concentrate exclusively on children at the anganwadi had already been initiated two years ago in Karnataka by civil society organisations. Experiments with this model undertaken by some civil society organisations on a small scale were also reported to be successful by some of the experts on the panel. However, the state has not yet implemented the two-worker policy, except in certain high burden districts.

The appointment of two workers, one for child care and another for undertaking other schemes such as Bhagyalakshi, Stree Shakti, and maintaining records can go a long way in reducing worker burden improving her morale as well as improving the quality of services. The burden on the worker, as well as block level officials such as supervisors due to additional schemes implemented through the anganwadi centre such as Bhagyalakshmi was also noted by supervisors and CDPOs. Block and district level officials also stated that if a separate worker was appointed for the Bhagyalakshmi scheme, efficiency of work related to ICDS programme could be improved.

In addition to adequate budgets for the appointment of workers, another area that needs attention is training. Training currently receives the lowest allocation within the ICDS budget. The budget for training needs to take into account not just capacity building of the worker but also supervisors and CDPOs in order to prepare them adequately for their roles in supporting the worker. Currently, there seem to be a lack of provisions and attention to this crucial aspect of manpower management.

Thus, overall these various points suggest a need to restructure the ICDS programme. These revisions also entail bringing in changes in budgeting procedures, and more critically brings about flexibility in the norms.

Greater flexibility can be assured by conceiving norms as a range, rather than as a fixed number to allow for local contingencies. The flexibility in the use of budgets can be for allocation and use of contingency and flexi-funds. Further, considerations for revising costs on the ICDS scheme need to critically examine what are the focal areas of the programme and how these maybe strengthened, taking into account current prices, beneficiary feedback on requirements and through community participation in planning and monitoring the funds in relation to the services.

<sup>18</sup>A full list of the participants at the consultation is given in the appendix

<sup>19</sup>Under five mortality has reduced from 248 per 1000 live births in 1960s to 48 in 2015 (World Bank, 2016; <http://data.worldbank.org/indicator/SH.DYN.MORT>)

<sup>20</sup>Mary Punnose, Chief Functionary, Prajayatna, and an attendee at the consultation meeting on 'Expenditure tracking of Integrated Child Development Services (ICDS) Scheme and development of an alternative methodology to estimate unit cost in Karnataka', organised by CBPS on 5 August, 2016.

<sup>21</sup>The point about the need to revisit the original goals of the ICDS programme was raised by Dr. JVR Prasad Rao (Special Envoy to the United Nations Secretary General), and an attendee of the CBPS consultation meeting organised by CBPS on 5 August, 2016.

<sup>22</sup>This view is based on reports by some members of the consultation organised by CBPS who considered current revisions of unit cost for food to be sufficient.

<sup>23</sup>This point was reiterated by both Dr. Padmini of Child Rights Trust, as well as Dr. Sarawathy Ganapathy of Belaku Trust, as part of the consultation process.

## KEY SUGGESTIONS TO REVISE ICDS PROGRAMME AND UNIT COSTS

- Reduce the scope of the programme, and adopt a critical focus on 0-6 years
- Develop key focal areas for the programme (such as nutrition and education), and reduce duplication of services (e.g., related to health and immunization)
- Improve the quality of the revised programmatic areas through better budget allocations, training and monitoring
- Provide sufficient time to workers to undertake activities related to these key areas such as pre-school education
- Improve quality of services to greater decentralisation and involvement of community
- Adopt realistic budgeting practices to ensure feasibility of programme plans.
- Provide autonomy and flexibility to the districts and district level officials and staff (i.e., anganwadi workers) to undertake need-based budgeting by conceiving of norms as a range while making them accountable for efficient delivery simultaneously
- Ensure greater accountability through involvement of community, by improving their capacity to participate and knowledge of the scheme
- Address manpower related concerns such as shortages, salary delays and workload of district staff as well as anganwadi workers on a priority basis
- Examine the feasibility and effectiveness of appointing two workers per anganwadi centre, with clearly specified and differentiated roles
- Improve capacity of supervisors and CDPOs to better monitor, manage and support workers, and build morale and bring about improvements in performance.

## References

- Adamson, P. (2008). *The child care transition*. UNICEF.
- Akshara Foundation (2013). Impact Assessment of Akshara Foundation's Engagement with the ICDS system in Karnataka. Bangalore: Akshara Foundation
- Behrman, J. R., Cheng, Y., & Todd, P. E. (2004). Evaluating preschool programs when length of exposure to the program varies: A nonparametric approach. *Review of economics and statistics*, 86(1), 108-132.
- Benakanakonda, M. C. (2015). Spatial Analysis of Industrial Growth in Haveri District. Unpublished Dissertation. Retrieved from <http://shodhganga.inflibnet.ac.in/bitstream/10603/36275/4/chapter-ii.pdf>
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., ... & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427-451.
- Bose, K., Biswas, S., Bisai, S., Ganguli, S., Khatun, A., Mukhopadhyay, A., & Bhadra, M. (2007). Stunting, underweight and wasting among Integrated Child Development Services (ICDS) scheme children aged 3–5 years of Chapra, Nadia District, West Bengal, India. *Maternal & child nutrition*, 3(3), 216-221.
- Britto, P. R., Yoshikawa, H., and Boller, K. (2011). Quality of Early Childhood Development Programs in Global Contexts: Rationale for Investment, Conceptual Framework and Implications for Equity. Social Policy Report, 25, 2. Retrieved from <http://eric.ed.gov/?id=ED519240>
- Burger, K. (2010). How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Childhood Research Quarterly*, 25(2), 140-165.
- CECED. (2013). Impact Assessment of Akshara Foundation's Engagement with ICDS Scheme in Karnataka. New Delhi: CECED, Ambedkar University
- Dahlberg, G., Moss, P., & Pence, A. R. (1999). *Beyond quality in early childhood education and care: Postmodern perspectives*. Psychology Press.
- Drèze, J. (2006). Universalisation with quality: ICDS in a rights perspective. *Economic and Political Weekly*, 41, 34, 3706-3715.
- DWCD, GoK. (2015-16). *Annual Programme Implementation Plan*. Bangalore, DWCD.
- Engle, P. L., Black, M. M., Behrman, J. R., De Mello, M. C., Gertler, P. J., Kapiriri, L., & International Child Development Steering Group. (2007). Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world. *The Lancet*, 369(9557), 229-242.
- EPW. (2006). Child Malnutrition : Behind the Numbers. Editorials. *EPW*, 41,18, 1732.
- Fernald, L. C., Gertler, P. J., & Neufeld, L. M. (2008). Role of cash in conditional cash transfer programmes for child health, growth, and development: an analysis of Mexico's Oportunidades. *The Lancet*, 371(9615), 828-837.

- Ghosh, A. (March 1, 2015). Activists cry foul as WCD Ministry funds slashed by half. *The New Indian Express*. <http://indianexpress.com/article/business/budget/activists-cry-foul-as-wcd-ministry-funds-slashed-by-half/>
- Gragnotati, M., Bredenkamp, C., Gupta, M. D., Lee, Y. K., & Shekar, M. (2006). ICDS and persistent undernutrition: Strategies to enhance the impact. *Economic and Political Weekly*, 1193-1201.
- Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., Strupp, B., & International Child Development Steering Group. (2007). Developmental potential in the first 5 years for children in developing countries. *The Lancet*, 369(9555), 60-70.
- Goodman, A., & Sianesi, B. (2005). Early education and children's outcomes: how long do the impacts last?. *Fiscal Studies*, 26(4), 513-548.
- Gupta, A. (2001). Governing population: the integrated child development services program in India. In Thomas Blom Hansen and Finn Stepputat (Eds.) *States of Imagination: Ethnographic explorations of the postcolonial state* (pp. 65-96). Duke University Press.
- Gupta, A., Gupta, S. K., & Baridalyne, N. (2013). Integrated Child Development Services (ICDS) Scheme: A Journey of 37 years. *Indian Journal of Community Health*, 25(1), 77-81.
- Hanagodimath, S.V. (2014). *Critical Analysis Of Dr. D M Nanjundappa Committee Report And Its Implementation*. Dharwad: Centre for Multi Disciplinary Development Research. [http://cmdr.ac.in/editor\\_v51/assets/Mono-74.pdf](http://cmdr.ac.in/editor_v51/assets/Mono-74.pdf)
- IIPS. *National Family Health Survey 3 District wise report*. Mumbai: IIPS. Retrieved from <http://rchiips.org/nfhs/pdf/Karnataka.pdf>
- Jolly, R. (2007). Early childhood development: the global challenge. *The Lancet*, 369(9555), 8.
- Jukes, M. (2005). The long-term impact of preschool health and nutrition on education. *Food and nutrition Bulletin*, 26 (2 suppl2), S193-S201. Retrieved <http://www.ncbi.nlm.nih.gov/pubmed/16075569>
- Kapil, U. (2002). Integrated Child Development Services (ICDS) scheme: A program for holistic development of children in India. *The Indian Journal of Pediatrics*, 69(7), 597-601.
- Kapoor, S. (2006). Early childhood care and education. *Early Childhood Care & Education: International Perspectives*, 133.
- Kaul, V. (1993). Integrated child development services in India. *Childhood*, 1(4), 243-245.
- Kilaru, A., Griffiths, P. L., Ganapathy, S., & Shanti, G. (2005). Community-based nutrition education for improving infant growth in rural Karnataka. *Indian pediatrics*, 42(5), 425.
- Krishnan, V. (2016, March 3). Huge budget cuts for ICDS. *The Hindu*. Retrieved from <http://www.thehindu.com/news/national/huge-budget-cut-for-child-health-interventions/article8306051.ece>
- Lokshin, M., Das Gupta, M., Gragnolati, M., & Ivaschenko, O. (2005). Improving child nutrition? The integrated child development services in India. *Development and Change*, 36(4), 613-640.
- Nandy, S., Irving, M., Gordon, D., Subramanian, S. V., & Smith, G. D. (2005). Poverty, child undernutrition and morbidity: new evidence from India. *Bulletin of the World Health Organization*, 83(3), 210-216.

- Niles, M. D., Reynolds, A. J., & Roe-Sepowitz, D. (2008). Early childhood intervention and early adolescent social and emotional competence: Second-generation evaluation evidence from the Chicago Longitudinal Study. *Educational Research, 50*(1), 55-73.
- Odom, S.L., Bryant, D., and Maxwell, K. (2011). Food Insecurity Harmful to Children's Development. *Sharing Child and Youth Development Knowledge, 25*,3. [http://www.srcd.org/sites/default/files/documents/2011\\_3\\_sprbrief\\_fiese.pdf](http://www.srcd.org/sites/default/files/documents/2011_3_sprbrief_fiese.pdf)
- Patel, S., Corter, C., Pelletier, J., & Bertrand, J. (2016). 'Dose-response' relations between participation in integrated early childhood services and children's early development. *Early Childhood Research Quarterly, 35*, 49-62.
- Ramani, K. V., Mavalankar, D., Puwar, T., Joshi, S., Kumar, H., & Malek, I. (2010). *Why Should 5000 Children Die in India Every Day? Major Causes and Managerial Challenges* (Working Paper No. 2010-02-01). Ahmedabad: Indian Institute of Management.
- Ramachandran, N. (2014). *Persisting Undernutrition: Causes, Consequences and Possible Solutions*. New Delhi: Springer
- Rao, N. (2005). Children's rights to survival, development, and early education in India: The critical role of the Integrated Child Development Services program. *International Journal of Early Childhood, 37*(3), 15-31.
- Reynolds, D., & Nicolson, R. I. (2007). Follow-up of an exercise-based treatment for children with reading difficulties. *Dyslexia, 13*(2), 78-96.
- Somaiah, M., & Vijayalakshmi, V. Management Perspectives of ICDS Program. *Bhavan's Business Journal*. Retrieved from [http://mpbim.com/sites/default/files/2007V1IS1ART1\\_1.pdf](http://mpbim.com/sites/default/files/2007V1IS1ART1_1.pdf)
- Stipek, D. J., & Ryan, R. H. (1997). Economically disadvantaged preschoolers: ready to learn but further to go. *Developmental psychology, 33*(4), 711.
- UNESCO. (n.d.). *Early Childhood Care and Education*. Retrieved from <http://en.unesco.org/themes/early-childhood-care-and-education>
- UNICEF. (2008). *The Child Care Transition. A League Table of Early Childhood Education and Care in Economically Advanced Countries*. Florence: UNICEF Innocenti Research Centre.
- Walker, S. P., Wachs, T. D., Grantham-McGregor, S., Black, M. M., Nelson, C. A., Huffman, S. L., ... & Gardner, J. M. M. (2011). Inequality in early childhood: risk and protective factors for early child development. *The Lancet, 378*(9799), 1325-1338.
- World Bank. (2006). *Repositioning Nutrition as Central to Development. A Strategy for Large-Scale Action*. Washington D.C.: *The International Bank for Reconstruction and Development/The World Bank*
- Young, M. E. (1996). *Early Child Development: Investing in the future*. Washington, DC: World Bank.

# Annexure

## 1. District Demographics

	DISTRICT				Total
	Bellary	Chamrajnagar	Haveri	Bangalore	
Worker	25	25	25	25	100
Helper	24	24	23	20	91
Parents	125	125	125	125	500
P and L	122	125	122	125	494
Adolescents	50	50	48	47	195
Total				342	1380
Facilities survey	25	25	25	25	

	CASTE OF THE AWC				Total
	OBC	Minority	SC	ST	
Worker	37	5	22	11	75
Helper	36	5	20	10	71
Parents	185	25	110	55	375
P and L	181	25	109	54	369
Adolescents	73	10	43	22	148
Facilities survey	37	5	22	11	75

	CASTE OF THE RESPONDENTS				Total
	OBC	General	SC	ST	
Worker	54	5	29	12	100
Helper	48	4	33	6	91
Parents	177	38	176	109	500
P and L	232	26	150	86	494
Adolescents	88	8	65	34	195

## 2. Field Work Tools Anganwadi Workers

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes
1.	Name of the District:	<input type="checkbox"/> <input type="checkbox"/>
2.	Name of the Block:	<input type="checkbox"/> <input type="checkbox"/>
3.	Name of the Gram Panchayat / Ward:	<input type="checkbox"/> <input type="checkbox"/>
4.	Name of the Village:	<input type="checkbox"/> <input type="checkbox"/>

### INTERVIEW DETAILS:

Date of interview		d	d	m	m	y	y								
Name of the interviewer															
Anganwadi Worker's Name															
Back checked by (Name)	Date	d	d	m	m	y	y								
Total number of visits															
SUPERVISOR (to be filled by interviewer)				EDITOR (to be filled by editor)											
Name				Name											
Date	d	d	m	m	y	y		Date	d	d	m	m	y	y	

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 30 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: DEMOGRAPHIC PROFILE OF THE RESPONDENT

Q No	Question	Response	Codes	Skip
101	What is your name?			
102	What is your age?			
103	What is your religion?	Hindu	1	
		Muslim	2	
		Christian	3	
		Other: (Please specify)	9	
104	Can you tell us which caste you belong to?	General	1	
		SC	2	
		ST	3	
		OBC	4	
		Other: (Please specify)	9	
105	What is your educational qualification?	Illiterate	1	
		Literate but without formal schooling	2	
		Up to or below Middle school (9th)	3	
		High school /Matriculate (up to 10th)	4	
		Higher Secondary/ Intermediate (up to 12th)	5	
		Technical Education/ Diploma	6	
		General Graduate or above	7	
106	Can you tell us what your marital status is?	Married	1	
		Divorced / Separated	2	
		Deserted	3	
		Widow	4	
		Never married	5	

107	How long have you worked at this Anganwadi Center?	Less than one year	1	
		Between 1 - 2 years	2	
		Between 3 - 5 years	3	
		More than 5 years	4	
108	Have you worked at any other Anganwadi Center before?	Yes	1	If No, skip to Q110
		No	2	
109	What is the total number of years you have worked as an Angwanwadi Worker?	Less than one year	1	
		Between 1 - 2 years	2	
		Between 3 - 5 years	3	
		More than 5 years	4	
110	What is the distance of the Anganwadi Center from your house?	Less than 1 km	1	
		Between 1 - 5 kms	2	
		Between 5 - 10 kms	3	
		More than 10 kms	4	

## SECTION 2: HONORARIUM DETAILS

Q No	Question	Response	Codes	Skip
201	Are you aware as to how much honorarium an Anganwadi Worker must receive every month?	Yes	1	If No, skip to Q 205
		No	2	
		If Yes, can you specify how much?		
202	Do you receive your honorarium monthly?	Yes	1	
		No	2	
203	How much is the honorarium you receive every month?			
204	How do you receive your honorarium?	Cash	1	
		Cheque	2	
		Direct bank deposit	3	
		Other (Please specify):	4	
205	Are you regularly required to work on any other schemes or programmes other than ICDS?	Yes	1	If No, skip to Q 208
		No	2	
206	If Yes, what are the duties you are required to do?	Election Duty	1	
		Bhagyalakshmi Scheme	2	
		Rashtriya Swasthya Bima Yojana (RSBY)	3	
		Census duty	4	
		Other (Please specify):	5	
207	How often do you work on these schemes?	Monthly	1	
		Once in three months	2	
		Once in six months	3	
		Once a year	4	

208	Are you aware of the Anganwadi Workers contributory pension plan?	Yes	1	
		No	2	
		If Yes, how much do you contribute every month?		
209	Are you aware of the Anganwadi Karyakarta Janashree Bima Yojana?	Yes	1	
		No	2	
		If Yes, how much money is available?		
210	Are you aware of the contingency fund at the Anganwadi center?	Yes	1	
		No	2	
		If Yes, how much money is available?		
211	Have you received money as a contingency fund?	Yes	1	If No, skip to Q 214
		No	2	
		If Yes, how much did you receive?		
212	Have you ever used the contingency fund for the center?	Yes	1	
		No	2	
		If Yes, for what purpose did you use it?		
213	Do you feel the money you receive as a contingency is sufficient?	Yes	1	
		No	2	
		Kindly elaborate:		
214	Have you ever used your own money for the Anganwadi center?	Yes	1	If No, skip to Sec. 3
		No	2	
		If Yes, kindly elaborate:		
215	Were you reimbursed for what you spent?	Yes	1	
		No	2	
216	How often have you used your own money for the Angwanwadi center?	Monthly	1	
		Once in 3 months	2	
		Once in 6 months	3	
		Once a year	4	

### SECTION 3: TRAINING DETAILS

Q No	Question	Response	Codes	Skip
301	Did you receive training when you first joined as an Anganwadi Worker?	Yes	1	
		No	2	
302	Have you attended refresher training courses after becoming an Angwanwadi Worker?	Yes	1	
		No	2	
303	Have you attended any training with regards to updating the registers in the new format?	Yes	1	
		No	2	

Can you kindly provide us details of your trainings (including the first training you had)

Training topic	Number of days	Year	Department	Honorarium received (If any)

#### SECTION 4: MONITORING

Q No	Question	Response	Codes	Skip
401	How often does the supervisor visit the center?	At least once in two weeks	1	If Never visited, skip to Q 404
		Monthly	2	
		Quarterly	3	
		Half- yearly	4	
		Yearly	5	
		Never visited	6	
402	What does the supervisor do when he / she visits the center?			
403	Do you receive support from your supervisor?	Yes	1	
		No	2	
		If Yes, kindly elaborate:		
404	How often does the CDPO visit the center?	Monthly	1	If Never visited, skip to Sec. 5
		Quarterly	2	
		Half- yearly	3	
		Yearly	4	
		Never visited	5	
405	What does the CDPO do when he / she visits the center?			
406	Do you receive support from your CDPO?	Yes	1	
		No	2	
		If Yes, kindly elaborate:		

#### SECTION 5: ANGANWADI PROFILE

Q No	Question	Response	Codes	Skip
501	In your opinion, has the number of children attending the Anganwadi center increased or decreased?	Increased	1	If Same / Don't know, skip to Q 503
		Decreased	2	
		Same / Don't know	3	
502	What do you think is the reason for this?			
503	In your opinion, has the number of pregnant / lactating women beneficiaries in the center increased or decreased?	Increased	1	If Same / Don't know, skip to Q 505
		Decreased	2	
		Same / Don't know	3	
504	What do you think is the reason for this?			
505	In your opinion, has the number of malnourished children in the center increased or decreased?	Increased	1	If Same / Don't know, skip to Q 507
		Decreased	2	
		Same / Don't know	3	
506	What do you think is the reason for this?			
507	What other schemes are available at your center? (Multiple options to be marked, if necessary)	Bhagyalakshmi	1	
		Ksheera Bhagya scheme	2	
		Bala Sanjeevini scheme	3	
		Kishori Shakti	4	
		SABLA	5	
		Others (Please specify):	6	

SECTION 6: SUPPLEMENTARY NUTRITION

Q No	Question	Response	Codes	Skip
601	How regularly is food provided to children ages between 6 and 36 months?	Daily	1	
		Weekly	2	
		Bi- weekly	3	
		Monthly	4	
		Others (Please specify):	9	
602	How regularly is food provided to children ages between 3 and 6 years?	Daily	1	
		Weekly	2	
		Bi- weekly	3	
		Monthly	4	
		Others (Please specify):	9	
603	How regularly is food provided to pregnant and lactating women?	Daily	1	
		Weekly	2	
		Bi- weekly	3	
		Monthly	4	
		Others (Please specify):	9	
604	How regularly is food provided to adolescent girls?	Daily	1	
		Weekly	2	
		Bi- weekly	3	
		Monthly	4	
		Others (Please specify):	9	
605	How regularly is food provided to malnourished children?	Daily	1	
		Weekly	2	
		Bi- weekly	3	
		Monthly	4	
		Others (Please specify):	9	
606	Can you tell us what food is provided for children aged between 6 and 36 months (with quantities)?			
607	Can you tell us what food is provided for children aged between 3 and 6 years (with quantities)?			
608	Can you tell us what food is provided for pregnant and lactating women (with quantities)?			
609	Can you tell us what food is provided for adolescent girls (with quantities)?			
610	Can you tell us what food is provided for malnourished children (with quantities)?			
611	Do you feel that the food provided is adequate for all beneficiaries?	Yes	1	
		No	2	
		If No, kindly elaborate:		

612	What are the major issues you face when dealing with food for children aged between 3 and 6 years?	Not enough time to cook meals	1	
		No space to cook meals	2	
		Inadequate provision of gas cylinders	3	
		Inadequate supply of utensils	4	
		Shortage / lack of water and other facilities	5	
		Shortage / lack of food rations	6	
		No problems	7	
	Others (Please specify):	9		
613	What are the major issues you face when dealing with food for all other beneficiaries?	Delay in receiving provisions	1	
		Insufficient provisions	2	
		Sub standard provisions	3	
		Parents don't collect provisions on time	4	
		Inadequate storage space	5	
		No problems	6	
		Others (Please specify):	9	

#### SECTION 7: IMMUNIZATION AND HEALTH CHECK-UPS

Q No	Question	Response	Codes	Skip
701	How often is the immunization day held at your center?	Weekly	1	If Never held, skip Q707
		Bi- weekly	2	
		Monthly	3	
		Quarterly	4	
		Half- yearly	5	
		Never held	6	
		Other (Please specify):	9	
702	Where is the immunization day held? (Circle multiple options if required)	Anganwadi center	1	
		Sub-center	2	
		Primary Health Center	3	
		Other (Please specify):	9	
703	Who are the officials present on these days? (Circle multiple options if required)	ANMs	1	
		ASHA Workers	2	
		Doctors	3	
		Other (Please specify):	9	
704	What services are offered on these days?	Weight check / growth monitoring	1	
		Ante-natal checkup for women	2	
		Post-natal checkup	3	
		Immunization for children	4	
		Health checkups for adolescents and children	5	
		Camps for malnourished children	6	
		Nutrition and health education	7	
		Provision of Supplementary Nutrition Packets	8	
Other (Please specify):	9			

705	How do you publicize the immunization days	Go door to door	1	
		Distribute pamphlets	2	
		At a collective	3	
		Through Angwanwadi children	4	
		Other (Please specify):	9	
706	What problems do you face on immunization days?	Difficulty in co-ordinating with others	1	
		Difficulty in managing crowds	2	
		Insufficient vaccines / drugs	3	
		Other functionaries do not attend	4	
		Not publicized well	5	
		No problems	6	
		Other (Please specify):	9	
707	How do you identify malnourished or underweight children? (Circle multiple options if required)	By checking their weights	1	
		By the use of growth charts	2	
		Don't know	3	
		Other (Please specify):	9	
708	What do you do when you identify a malnourished child? (Circle multiple options if required)	Refer the child to a health center / hospital	1	
		Provide additional nutrition	2	
		Give nutrition and health education to the parent	3	
		Provide medicines	4	
		Other (Please specify):	9	
709	Does the center have a medicine kit?	Yes	1	
		No	2	
710	Do you organize Village Health and Nutrition Days (VHND)?	Yes	1	If No / Don't know, skip to Sec. 8
		No	2	
		Don't know	3	
		Other (Please specify):	9	
711	How often is the VHND held?	Monthly	1	
		Quarterly	2	
		Half-yearly	3	
		Yearly	4	
		Other (Please specify):	9	
712	Where is the VHND held? (Circle multiple options if required)	Anganwadi center	1	
		Sub-center	2	
		Primary Health Center	3	
		Other (Please specify):	9	
713	Which officials are present on these days? (Circle multiple options if required)	ANMs	1	
		ASHA Workers	2	
		Doctors	3	
		Other (Please specify):	9	

714	What services are offered on these days? (Circle multiple options if required)	Weight check / growth monitoring	1	
		Ante-natal checkup for women	2	
		Post-natal checkup	3	
		Immunization for children	4	
		Health checkups for adolescents and children	5	
		Camps for malnourished children	6	
		Nutrition and health education	7	
		Provision of Supplementary Nutrition Packets	8	
Other (Please specify):	9			

#### SECTION 8: NUTRITION EDUCATION

Q No	Question	Response	Codes	Skip
801	How often do you go on home visits?	Daily	1	If Do not conduct home visits, skip to Sec. 9
		Weekly	2	
		Bi-weekly	3	
		Monthly	4	
		Quarterly	5	
		Do not conduct home visits	6	
		Other (Please specify):	9	
802	On an average, how much time do you spend conducting home visits?	Approx. 15 minutes	1	
		Approx. 30 minutes	2	
		Nearly an hour	3	
		Other (Please specify):	9	
803	What do you talk about during home visits?			
804	What challenges do you face will going on home visits?	Heavy workload	1	
		Unavailability of parents	2	
		Distance / difficult to access	3	
		Other (Please specify):	9	
805	Do you conduct joint visits with ASHA workers, ANMs and other functionaries?	Yes	1	
		No	2	
		If No, kindly elaborate:		

#### SECTION 9: PRE-SCHOOL EDUCATION

Q No	Question	Response	Codes	Skip
901	Do you have pre- school kits at your center?	Yes	1	If No, skip to Q904
		No	2	
902	Do you find the kit to be useful?	Yes	1	
		No	2	
903	Can you specify what you teach using the kit?			
904	Do you use Chili Pili in your center?	Yes	1	If No / Don't know, skip to Q 906
		No	2	
		Don't know about Chili Pili	3	

905	Can you tell us what you teach as part of the Chili Pili curriculum?			
906	Do you organize ECCE days?	Yes	1	If No, skip to Q 908
		No	2	
907	How frequently do you organize ECCE days?	Monthly	1	
		Quarterly	2	
		Half-yearly	3	
		Yearly	4	
		Other (Please specify):	9	
908	Do parents talk to you about pre- school education?	Yes	1	
		No	2	
		If Yes, what do they talk about?		
909	Do you have any suggestions for imparting pre- school education?	Yes	1	
		No	2	
		If Yes, what?		

#### SECTION 10: TIME SPENT ON EACH COMPONENT

Q No	Question	Response	Codes	Skip
1001	How much time do you spend on distributing supplementary food packets?			
1002	How much time do you spend on cooking hot meals?			
1003	How much time do you spend on immunization?			
1004	How much time do you spend on pre- school education?			
1005	How much time do you spend on health chekups and referrals			
1006	How much time do you spend on health and nutrition education?			
1007	How much time do you spend on updating records?			
1008	How much time do you spend on meetings?			
1009	Do you feel you have adequate time to carry out your duties as an Anganwadi worker?	Yes	1	
		No	2	
		If No, kindly elaborate:		
1010	Do you feel you are over worked?	Yes	1	
		No	2	
		If Yes, kindly elaborate:		

## Anganwadi Helpers

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes
1.	Name of the District:	<input type="text"/> <input type="text"/>
2.	Name of the Block:	<input type="text"/> <input type="text"/>
3.	Name of the Gram Panchayat / Ward:	<input type="text"/> <input type="text"/>
4.	Name of the Village:	<input type="text"/> <input type="text"/>
5.	Name of the Anganwadi Centre:	<input type="text"/> <input type="text"/>

### INTERVIEW DETAILS:

Date of interview	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Name of the interviewer	<input type="text"/>						
Anganwadi Worker's Name	<input type="text"/>						
Back checked by (Name)	Date	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total number of visits	<input type="text"/>						
SUPERVISOR (to be filled by interviewer)				EDITOR (to be filled by editor)			
Name	<input type="text"/>			Name	<input type="text"/>		
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 30 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: DEMOGRAPHIC PROFILE OF THE RESPONDENT

Q No	Question	Response	Codes	Skip
101	What is your name?			
102	What is your age?			
103	What is your religion?	Hindu	1	
		Muslim	2	
		Christian	3	
		Other: (Please specify)	9	
104	Can you tell us which caste you belong to?	General	1	
		SC	2	
		ST	3	
		OBC	4	
		Other: (Please specify)	9	
105	What is your educational qualification?	Illiterate	1	
		Literate but without formal schooling	2	
		Up to or below Middle school (9th)	3	
		High school /Matriculate (up to 10th)	4	
		Higher Secondary/ Intermediate (up to 12th)	5	
		Technical Education/ Diploma	6	
		General Graduate or above	7	
106	Can you tell us what your marital status is?	Married	1	
		Divorced / Separated	2	
		Deserted	3	
		Widow	4	
		Never married	5	

107	How long have you worked at this Anganwadi Center?	Less than one year	1	
		Between 1 - 2 years	2	
		Between 3 - 5 years	3	
		More than 5 years	4	
108	Have you worked at any other Anganwadi Center before?	Yes	1	If No, skip to Q 110
		No	2	
109	What is the total number of years you have worked as an Angwanwadi Helper?	Less than one year	1	
		Between 1 - 2 years	2	
		Between 3 - 5 years	3	
		More than 5 years	4	
110	What is the distance of the Anganwadi Center from your house?	Less than 1 km	1	
		Between 1 - 4 kms	2	
		Between 5 - 10 kms	3	
		More than 10 kms	4	

## SECTION 2: HONORARIUM DETAILS

Q No	Question	Response	Codes	Skip
201	Are you aware as to how much honorarium an Anganwadi Worker must receive every month?	Yes	1	
		No	2	
		If Yes, can you specify how much?		
202	Do you receive your honorarium monthly?	Yes	1	
		No	2	
203	How much is the honorarium you receive every month?			
204	How do you receive your honorarium? (Circle multiple options if required)	Cash	1	
		Cheque	2	
		Direct bank deposit	3	
		Other (Please specify):	9	
205	Are you regularly required to work on any other schemes or programmes other than ICDS?	Yes	1	If No, skip to Q 208
		No	2	
206	If Yes, what are the duties you are required to do? (Circle multiple options if required)	Election Duty	1	
		Bhagyalakshmi Scheme	2	
		Rashtriya Swasthya Bima Yojana (RSBY)	3	
		Census duty	4	
		Other (Please specify):	9	
207	How often do you work on these schemes?	Once in a month	1	
		Once in three months	2	
		Once in six months	3	
		Once a year	4	
		Can't Say	5	

208	Are you aware of the Anganwadi Workers/ Anganwadi Helpers contributory pension plan?	Yes	1	
		No	2	
		If Yes, how much do you contribute every month?		
209	Are you aware of the Anganwadi Karyakarta Janashree Bima Yojana?	Yes	1	
		No	2	
210	Are you aware of the contingency fund at the Anganwadi center?	Yes	1	If No, skip to Q 214
		No	2	
		If Yes, how much money is available?		
211	Have you received money as a contingency fund?	Yes	1	If No, skip to Q 214
		No	2	
212	Have you ever used the contingency fund for the center?	Yes	1	
		No	2	
		If Yes, for what purpose did you use it?		
213	Do you feel the money you receive as a contingency is sufficient?	Yes	1	
		No	2	
		Kindly elaborate:		
214	Have you ever used your own money for the Anganwadi center?	Yes	1	If No, skip to Sec. 3
		No	2	
		If Yes, kindly elaborate the purpose for which it was used:		
215	Were you reimbursed for what you spent?	Yes	1	
		No	2	
216	How often have you used your own money for the Angwanwadi center?	Once in a month	1	
		Once in 3 months	2	
		Once in 6 months	3	
		Once a year	4	
		Can't say	5	

### SECTION 3: TRAINING DETAILS

Q No	Question	Response	Codes	Skip
301	Did you receive training when you first joined as an Anganwadi Helper?	Yes	1	
		No	2	
302	Have you attended refresher training courses after becoming an Anganwadi Helper?	Yes	1	If No, Skip to Sec. 4
		No	2	

Can you kindly provide us details of your trainings (First training and trainings held in the past 5 years)

Training topic	Number of days	Year	Department/Organisation providing training	Honorarium received (If any)

#### SECTION 4: MONITORING

Q No	Question	Response	Codes	Skip
401	How often does the supervisor visit the center?	At least once in two weeks	1	If Never visited, skip to Q 404
		Monthly	2	
		Quarterly	3	
		Half- yearly	4	
		Yearly	5	
		Never visited during my tenure	6	
402	What does the supervisor do when he / she visits the center?			
403	Do you receive support from your supervisor?	Yes	1	
		No	2	
		If Yes, kindly elaborate:		
404	How often does the CDPO visit the center?	Monthly	1	If Never visited, skip to Sec. 5
		Quarterly	2	
		Half- yearly	3	
		Yearly	4	
		Never visited during my tenure	5	
405	What does the CDPO do when he / she visits the center?			

#### SECTION 5: ANGANWADI PROFILE

Q No	Question	Response	Codes	Skip
501	What are your responsibilities at the Anganwadi Centre? (Circle multiple options if required)	Cook a hot meal daily	1	
		Clean the Anganwadi daily	2	
		Maintain cleanliness of children	3	
		Manage the Anganwadi Centre in the Anganwadi Worker's absence	4	
		Others, specify	9	
502	Are you able to cook meals for children daily?	Yes	1	If no, skip to Q504
		No	2	
		If not, why?		
503	If not, what is done during such a situation? Specify.			
504	Have you received sufficient rations to cook meals everyday for all children in the Anganwadi Centre in the last six months?	Yes	1	If no, skip to Q506
		No	2	
505	If no, what is done when ration is insufficient? Explain			
506	Do you find sufficient time to clean the Anganwadi centre daily?	Yes	1	
		No	2	
		If not, why?		
507	What special steps do you take to maintain the cleanliness of the Anganwadi Centre?			

508	Do you manage the Anganwadi centre on your own?	Yes	1	If no, skip to Q 511
		No	2	
509	How often do you have to manage the Anganwadi Centre on your own?	Once or twice a week	1	
		Once in two weeks	2	
		Once in a month	3	
		Once in 2-3 months	4	
		Others, specify	9	
510	What are the reasons for you having to manage the Centre on your own?	Please Elaborate		
511	Do you have a role to play in SNP distribution?	Yes	1	
		No	2	
		If yes, how do you contribute to it?		
512	Do you have a role to play in immunization?	Yes	1	
		No	2	
		If yes, how do you contribute to it?		
513	Do you have a role to play in conducting health check-ups?	Yes	1	
		No	2	
		If yes, how do you contribute to it?		
514	Do you contribute to Pre-school education?	Yes	1	
		No	2	
		If yes, how?		
515	What challenges do you face working at the Anganwadi Centre?	Low pay	1	
		No infrastructure	2	
		Over work	3	
		Others, specify	9	
516	According to you, what is the biggest problem faced by the Anganwadi Centre?	Not enough SNP	1	
		Not enough beneficiaries registered	2	
		No community participation	3	
		No support from Supervisor and other staff	4	
		No proper infrastructure	5	
		Frequent absence or late arrival of Anganwadi Worker	6	
		Others, specify	9	
517	Is there a grievance redressal mechanism available to address these problems?	Yes	1	
		No	2	
		If Yes, explain how it functions?		
518	Are you a member of a Union?	Yes	1	
		No	2	
519	If yes, what benefits do you get by being a union member?	Please Elaborate		
520	Would you like to make any general comments?	Please Elaborate		

## Parents

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes
1.	Name of the District:	<input type="checkbox"/> <input type="checkbox"/>
2.	Name of the Block:	<input type="checkbox"/> <input type="checkbox"/>
3.	Name of the Gram Panchayat / Ward:	<input type="checkbox"/> <input type="checkbox"/>
4.	Name of the Village:	<input type="checkbox"/> <input type="checkbox"/>
5.	Name of the Anganwadi Centre:	<input type="checkbox"/> <input type="checkbox"/>

### INTERVIEW DETAILS:

Date of interview		d	d	m	m	y	y						
Name of the interviewer													
Anganwadi Worker's Name													
Back checked by (Name)	Date	d	d	m	m	y	y						
Total number of visits													
SUPERVISOR (to be filled by interviewer)				EDITOR (to be filled by editor)									
Name				Name									
Date	d	d	m	m	y	y	Date	d	d	m	m	y	y

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 20 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: DEMOGRAPHIC PROFILE OF THE RESPONDENT

Q No	Question	Response	Codes	Skip
101	What is your / spouse's name?			
102	What is your age?			
103	<b>Details of children</b>			
S No	Age	Gender 1. Male 2. Female	Registered at anganwadi? 1. Yes 2. No 3. Not applicable (if child above 6 yrs)	If No, why not availing services at anganwadi?
104	What is your religion?	Hindu	1	
		Muslim	2	
		Christian	3	
		Other: (Please specify)	9	
105	Can you tell us which caste you belong to?	General	1	
		SC	2	
		ST	3	
		OBC	4	
		Other: (Please specify)	9	
106	What is your educational qualification?	Illiterate	1	
		Literate but without formal schooling	2	
		Upto or below Middle school (9th)	3	
		High school /Matriculate (up to 10th)	4	
		Higher Secondary/ Intermediate (up to 12th)	5	

		Technical Education/ Diploma	6	
		General Graduate or above	7	
107	What is your occupation?	Unemployed / housewife	1	
		Agriculture (land owning)	2	
		Wage labourer	3	
		Self employed	4	
		Salaried govt. worker	5	
		Salaried private worker	6	
		Retired	7	
108	What is your monthly household income?			
109	From when have you been coming to this anganwadi?	____ / ____ mm yy		
110	Is the anganwadi centre conveniently located?	Yes	1	
		No	2	
111	Is this the closest anganwadi centre from your house?	Yes	1	If Yes, skip to 113
		No	2	
		Don't know	3	
112	If not, why did you choose this Anganwadi Centre? Specify.			
113	What is the mode of commuting to the Anganwadi Centre?	Public transport	1	
		Private vehicle	2	
		Walk	3	
		Other: (Please specify)	9	
114	How did you come to know about this anganwadi centre?	Anganwadi functionaries	1	
		ASHA / ANM / PHC / School / NGO	2	
		Friends or relatives	3	
		Other: (Please specify)	9	

## SECTION 2: KNOWLEDGE OF SERVICES PROVIDED / ACTIVITIES CONDUCTED BY ANGANWADI

Q No	Question	Response	Codes	Skip
201	What are the timings of the anganwadi centre? Specify			
202	How many days in a week does the Anganwadi normally function?			
S No	Services /Activities	Knowledge (Y/N)	How did you know about this? 1. Through AWW 2. ANMs/ASHA/ PHC 3. Friends & relatives 4. Other (specify)	How often is this supposed to provided / undertaken
1.	SNP			
2.	Immunization camps			
3.	Health checkups and referrals			
4.	PSE			
5.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation			

6.	Meetings / public functions organised by anganwadi worker on			
a.	Village health and nutrition days			
b.	Early Childhood Care and Education			
203	What are the services offered by the anganwadi centre?			
204	Is there a pre-fixed immunization day at anganwadi centres?	Yes	1	If No / Don't know, skip to Section 3
		No	2	
		Don't know	3	
205	If yes, specify on which day is it held at your anganwadi centre?			

### SECTION 3: SERVICES AVAILED

301 What services have you received/availed through the anganwadi?				
S No	Services / Activities	Applicable 1. Yes 2. No	Availed through this anganwadi centre? 1. Yes 2. No	If Applicable and Not availed, then why?
1.	SNP			
2.	Hot cooked meals			
3.	Immunization			
4.	Health checkups and referrals			
5.	Information received about health, nutrition and sanitation through			
a.	Home visits by anganwadi worker			
b.	Meetings / public functions and village days conducted by the anganwadi worker			
6.	Pre-school education			
a.	Classes conducted at anganwadi centre			
b.	Awareness programmes on early childhood care and education for parents			
7.	Parents meeting held at the anganwadi centre			

302 Immunizations received at the Anganwadi centre					
S No	Immunization details (as age at which it was received)	Name of immunization (if known)	For which child registered at anganwadi? (in age, if more than one)	If immunization availed elsewhere, specify why?	Other comments (Specify reason if only one of all children eligible have received it)
1.					
2.					
3.					
4.					
5.					

303 Frequency of services received / availed (If applicable).				
S No	Services / Activities	Frequency of receiving this (in days)	1. Irregular 2. Regular 3. Don't know	Other comments
1.	SNP			
2.	Hot cooked meals			
3.	Immunization (if received as per schedule indicate this in the frequency column)			
4.	Health checkups			
5.	Home visits by anganwadi worker to discuss nutrition and health issues			
6.	PSE			
a.	Classes conducted at anganwadi centre			
b.	Awareness programmes on early childhood care and education for parents			
6.	Meetings / public functions and village days organised by anganwadi worker about health, nutrition, sanitation			
7.	Parents meeting held at the anganwadi centre			

304 Quality of Services received / availed					
S No	Services / Activities	Quantity 1. Sufficient / Satisfactory 2. Insufficient for beneficiary / Not satisfactory 3. Don't Know 5. Not Applicable	Quality 1. Poor 2. Average 3. Good 4. Don't know 5. Not Applicable	Suggestions for improvement	Other comments
1.	SNP Specify provisions received				
2.	Hot cooked meals Specify provisions received				
3.	Immunization				
4.	Health checkups and referrals Specify what is done as part of this				
5.	Home visits Specify what is done/discussed as part of this				
6.	PSE				
a.	Specify what is taught as part of this				
b.	Specify what is discussed as part of this				
7.	Meetings / public functions Specify what is done/discussed as part of this				
8.	Parents meeting held at the anganwadi centre Specify what is done/discussed as part of this				

Q No	Question	Response	Codes	Skip
304	Does your child receive milk?	Yes	1	
		No	2	
		NA	3	
305	If yes, how often does your child receive milk?	Daily	1	
		Thrice a week	2	
		Once in a week	3	
		Once in two weeks	4	
		Other (Please specify)	9	
306	Do you know how much milk your child receives?	Yes		
		No		
		If Yes, how much?		
304	Does your child receive eggs?	Yes	1	
		No	2	
		NA	3	
305	If yes, how often does your child receive eggs?	Daily	1	
		Thrice a week	2	
		Once in a week	3	
		Once in two weeks	4	
		Other (Please specify)	9	
306	Do you know how many eggs your child receives?	Yes		
		No		
		If Yes, how much?		
305	Have you been told that your child / children is / are underweight?	Yes	1	If No, skip to 308
		No	2	
306	What was done in such a situation?	More Supplementary Nutrition provided	1	
		Sneha Shivar organised	2	
		Referred to PHC / Government hospital	3	
		Others, specify	9	
307	Has there been any improvement in your child / children's weight after accessing the services of the anganwadi?	Yes	1	
		No	2	
		Don't know	3	
308	Have you noticed any changes in your child after he/she enrolled at the Anganwadi Centre?			

309	Any problems faced with respect to the services (if yes, specify; else skip)					
S No	Services / Activities	Quality	Quantity	Timings	Administration / Distribution by AWW	Other comments
1.	SNP					
2.	Immunization					
3.	Health checkups and referrals					
4.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation					
5.	Meetings / public functions organised on health, nutrition and sanitation					
310	What are the grievance redressal mechanisms available to you in case of problems encountered?					
311	What can be done to improve anganwadi centre / services overall?					
312	Any other comments					

## Pregnant and Lactating Women

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes	
1.	Name of the District:	<input type="checkbox"/>	<input type="checkbox"/>
2.	Name of the Block:	<input type="checkbox"/>	<input type="checkbox"/>
3.	Name of the Gram Panchayat / Ward:	<input type="checkbox"/>	<input type="checkbox"/>
4.	Name of the Village:	<input type="checkbox"/>	<input type="checkbox"/>

### INTERVIEW DETAILS:

Date of interview		d	d	m	m	y	y	
Name of the interviewer								
Anganwadi Worker's Name								
Back checked by (Name)	Date	d	d	m	m	y	y	
Total number of visits								
SUPERVISOR (to be filled by interviewer)	EDITOR (to be filled by editor)							
Name	Name							
Date		d	d	m	m	y	y	

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 20 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: DEMOGRAPHIC PROFILE OF THE RESPONDENT

Q No	Question	Response	Codes	Skip
101	What is your / spouse's name?			
102	What is your age?			
103	What is your religion?	Hindu	1	
		Muslim	2	
		Christian	3	
		Other: (Please specify)	9	
104	Can you tell us which caste you belong to?	General	1	
		SC	2	
		ST	3	
		OBC	4	
		Other: (Please specify)	9	
105	What is your educational qualification?	Illiterate	1	
		Literate but without formal schooling	2	
		Upto or below Middle school (9th)	3	
		High school /Matriculate (up to 10th)	4	
		Higher Secondary/ Intermediate (up to 12th)	5	
		Technical Education/ Diploma	6	
		General Graduate or above	7	

106	What is your occupation?	Unemployed / housewife	1	
		Agriculture (land owning)	2	
		Wage labourer	3	
		Self employed	4	
		Salaried govt. worker	5	
		Salaried private worker	6	
		Retired	7	
107	What is your monthly household income?			
108	From when have you been coming to this anganwadi?	_____ / _____ mm                      yy		
109	(If pregnant) Which month of pregnancy is this?			
110	Till what age do you plan to feed your baby?			
111	Is the anganwadi centre conveniently located?	Yes	1	
		No	2	
112	Is this the closest anganwadi centre from your house?	Yes	1	If Yes, skip to 114
		No	2	
		Don't know	3	
113	If not, why did you choose this Anganwadi Centre? Specify.			
114	What is the mode of commuting to the Anganwadi Centre?	Public transport	1	
		Private vehicle	2	
		Walk	3	
		Other: (Please specify)	9	
115	How did you come to know about this anganwadi centre?	Anganwadi functionaries	1	
		ASHA / ANM / PHC / School / NGO	2	
		Friends or relatives	3	
		Other: (Please specify)	9	

**SECTION 2: KNOWLEDGE OF SERVICES PROVIDED / ACTIVITIES CONDUCTED BY ANGANWADI**

201	What are the timings of the anganwadi centre? Specify			
202	How many days in a week does the Anganwadi normally function?			
203	<b>What are the services offered by the anganwadi centre?</b>			
S No	Services / Activities	Knowledge (Y/N)	How did you know about this? 1. Through AWW 2. ANMs/ASHA/ PHC 3. Friends & relatives 4. Other (specify)	How often is this supposed to provided / undertaken
1.	SNP			
2.	Immunization camps			
3.	Health checkups and referrals			
4.	PSE			
5.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation			
6.	Meetings / public functions organised by anganwadi worker on			
a.	Village health and nutrition days			
b.	Early Childhood Care and Education			
204	Is there a pre-fixed immunization day at anganwadi centres?	Yes	1	If No / Don't know, skip to Section 3
		No	2	
		Don't know	3	
205	If yes, specify on which day is it held at your anganwadi centre?			

**SECTION 3: SERVICES AVAILED**

301	<b>What services have you received / availed through the anganwadi?</b>			
S No	Services / Activities	Applicable 1. Yes 2. No	Availed through AWC (this or other)	If Applicable and Not availed, then why?
1.	SNP			
2.	Immunization			
3.	Health checkups and referrals			
4.	Information received about health, nutrition and sanitation through			
a.	Home visits by anganwadi worker			
b.	Meetings / public functions and village days conducted by the anganwadi worker			

302	<b>Immunizations received at the Anganwadi (if pregnant)</b>		
S No	Which month?	Name of immunization (if known)	Other comments
1.			
2.			
3.			
4.			
5.			

303 Frequency of services received / availed				
S No	Services / Activities	Frequency of receiving this	1. Irregular 2. Regular 3. Don't know	Other comments
1.	SNP			
2.	Immunization			
3.	Health checkups			
4.	Home visits by anganwadi worker to discuss nutrition and health issues			
5.	Meetings / public functions and village days organised by anganwadi worker about health, nutrition, sanitation			

304 Quality of Services received / availed					
S No	Services / Activities	Quantity 1. Sufficient 2. Insufficient for beneficiary 3. Don't Know 5. Not Applicable	Quality 1. Poor 2. Average 3. Good 4. Don't know 5. Not Applicable	Suggestions for improvement	Other comments
1.	SNP				
	Specify provisions received				
2.	Immunization				
3.	Health checkups and referrals				
	Specify what is done as part of this				
4.	Home visits				
	Specify what is done/discussed as part of this				
5.	Meetings / public functions				
	Specify what is done/discussed as part of this				
305	Have you been told that you are underweight?	Yes		1	If No, skip to 308
		No		2	
306	What was done in such a situation?	More Supplementary Nutrition provided		1	
		Sneha Shivar organised		2	
		Referred to PHC / Government hospital		3	
		Others, specify		9	
307	Has there been any improvement in your weight after accessing the services of the anganwadi?	Yes		1	
		No		2	
		Don't know		3	

308	Any problems faced with respect to the services (if yes, specify; else skip)					
S No	Services / Activities	Quality	Quantity	Timings	Administration / Distribution by AWW	Other comments
1.	SNP					
2.	Immunization					
3.	Health checkups and referrals					
4.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation					
5.	Meetings / public functions organised on health, nutrition and sanitation					
309	What can be done to improve AWC overall?					
310	Any other comments					

## Anganwadi Adolescent Girls (11-18 Years)

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes	
1.	Name of the District:	<input type="checkbox"/>	<input type="checkbox"/>
2.	Name of the Block:	<input type="checkbox"/>	<input type="checkbox"/>
3.	Name of the Gram Panchayat / Ward:	<input type="checkbox"/>	<input type="checkbox"/>
4.	Name of the Village:	<input type="checkbox"/>	<input type="checkbox"/>
5.	Name of the Anganwadi Centre	<input type="checkbox"/>	<input type="checkbox"/>

### INTERVIEW DETAILS:

Date of interview		d	d	m	m	y	y						
Name of the interviewer													
Anganwadi Worker's Name													
Back checked by (Name)	Date	d	d	m	m	y	y						
Total number of visits													
SUPERVISOR (to be filled by interviewer)				EDITOR (to be filled by editor)									
Name				Name									
Date	d	d	m	m	y	y	Date	d	d	m	m	y	y

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 20 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: DEMOGRAPHIC PROFILE OF THE RESPONDENT

Q No	Question	Response	Codes	Skip
101	What is your name?			
102	What is your age? (In years)			
103	What is your religion?	Hindu	1	
		Muslim	2	
		Christian	3	
		Other: (Please specify)	9	
104	Can you tell us which caste you belong to?	General	1	
		SC	2	
		ST	3	
		OBC	4	
		Other: (Please specify)	9	
105	What is your educational qualification?	Illiterate	1	
		Literate but without formal schooling	2	
		Upto or below Middle school (9th)	3	
		High school /Matriculate (up to 10th)	4	
		Higher Secondary/ Intermediate (up to 12th)	5	
		Technical Education/ Diploma	6	
		General Graduate or above	7	

106	Can you tell us what your marital status is?	Married	1	
		Divorced	2	
		Separated / deserted	3	
		Widow / widower	4	
		Never married	5	
107	What is your monthly household income?			
108	From when have you been coming to the Anganwadi Centre? Specify. ( Months, Year)	_____ / _____ mm yy		
109	Is the Anganwadi conveniently located?	Yes	1	
		No	2	
		Don't know	3	
		Can't say	5	
110	Is this the closest anganwadi centre from your house?	Yes	1	If Yes, skip to 112
		No	2	
		Don't know	3	
		Can't say	5	
111	If not, why did you choose this Anganwadi Centre? Specify.			
S No	Services / Activities	Knowledge (Y/N)	How did you know about this? 1. Through AWW 2. ANMs/ASHA/ PHC 3. Friends & relatives 4. Other (specify)	How often is this supposed to provided / undertaken
112	What is the mode of commuting to the Anganwadi Centre?	Public transport	1	
		Private vehicle	2	
		Walk	3	
		Other: (Please specify)	9	
113	How did you come to know about this anganwadi centre?	Anganwadi functionaries	1	
		ASHA / ANM / PHC / School / NGO	2	
		Friends or relatives	3	
		Other: (Please specify)	9	

## SECTION 2: KNOWLEDGE OF SERVICES PROVIDED / ACTIVITIES CONDUCTED BY ANGANWADI

201	What are the timings of the Anganwadi centre? Specify			
202	How many days in a week does the Anganwadi normally function?			
203	What are the services offered by the Anganwadi centre?			
S No	Services / Activities	Knowledge (Y/N)	How did you know about this? 1. Through AWW 2. ANMs/ASHA/ PHC 3. Friends & relatives 4. Other (specify)	How often is this supposed to be provided / undertaken
1.	SNP			
2.	Immunization camps			
3.	Health checkups and referrals			
4.	PSE			
5.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation			
6.	Meetings / public functions organised by anganwadi worker on			
a.	Village health and nutrition days			
b.	Early Childhood Care and Education			
204	Is there a pre-fixed immunization day at anganwadi centres?	Yes	1	If No / Don't know, skip to Section 3
		No	2	
		Don't know	3	
205	If yes, specify on which day is it held at your anganwadi centre?			

## SECTION 3: SERVICES AVAILED

301	What services have you received/availed through the anganwadi?			
S No	Services / Activities	Applicable 1. Yes 2. No	Availed through AWC (this or other)	If Applicable and Not availed, then why?
1.	SNP			
2.	Immunization			
3.	Health checkups and referrals			
4.	Information received about health, nutrition and sanitation through			
a.	Home visits by anganwadi worker			
b.	Meetings / public functions and village days conducted by the anganwadi worker			
c.	Meetings for adolescent girls organised at the Anganwadi Centre			

302 Immunizations received at the Anganwadi			
S No	Which month?	Name of immunization (if known)	Other comments
1.			
2.			
3.			
4.			
5.			

303 What services have you received / availed through the anganwadi?				
S No	Services / Activities	Frequency of receiving this ( in days )	1. Irregular 2. Regular 3. Don't know	Other comments
1.	SNP			
2.	Immunization			
3.	Health checkups			
4.	Home visits by anganwadi worker to discuss nutrition and health issues			
5.	Meetings / public functions and village days organised by anganwadi worker about health, nutrition, sanitation			
6.	Meetings for adolescent girls organised at the Anganwadi Centre			

304 Quality of Services received / availed					
S No	Services / Activities	Quantity 1. Sufficient 2. Insufficient for beneficiary 3. Don't Know 5. Not Applicable	Quality 1. Poor 2. Average 3. Good 4. Don't know 5. Not Applicable	Suggestions for improvement	Other comments
1.	SNP Specify provisions received				
2.	Immunization				
3.	Health checkups and referrals Specify what is done as part of this				
4.	Home visits Specify what is done/discussed as part of this				
5.	Meetings / public functions Specify what is done/discussed as part of this				
6.	Meetings for adolescent girls organised at the Anganwadi Centre Specify what is done/discussed as part of this				

305	Have you been told that you are underweight?	Yes	1	If No, skip to 307
		No	2	
306	What was done in such a situation?	More Supplementary Nutrition provided	1	
		Sneha Shivir organised	2	
		Referred to PHC / Government hospital	3	
		Others, specify	9	
307	Has there been any improvement in your weight after accessing the services of the anganwadi?	Yes	1	
		No	2	
		Don't know	3	

308 Any problems faced with respect to the services (if yes, specify; else skip)						
S No	Services / Activities	Quality	Quantity	Timings	Administration / Distribution by AWW	Other comments
1.	SNP					
2.	Immunization					
3.	Health checkups and referrals					
4.	Home visits by anganwadi worker to generate awareness about health, nutrition and sanitation					
5.	Meetings / public functions organised on health, nutrition and sanitation					

309	What can be done to improve AWC overall?
310	Any other comments

## Facilities Checklist

### IDENTIFICATION SECTION:

Sr. No.	Coding Category	Codes	
1.	Name of the District:	<input type="checkbox"/>	<input type="checkbox"/>
2.	Name of the Block:	<input type="checkbox"/>	<input type="checkbox"/>
3.	Name of the Gram Panchayat / Ward:	<input type="checkbox"/>	<input type="checkbox"/>
4.	Name of the Village:	<input type="checkbox"/>	<input type="checkbox"/>
5.	Name of the Anganwadi Centre	<input type="checkbox"/>	<input type="checkbox"/>

### INTERVIEW DETAILS:

Date of interview		d	d	m	m	y	y
Name of the interviewer							
Anganwadi Worker's Name							
Back checked by (Name)	Date	d	d	m	m	y	y
Total number of visits							
SUPERVISOR (to be filled by interviewer)	EDITOR (to be filled by editor)						
Name	Name						
Date	Date	d	d	m	m	y	y

## Introduction and informed consent

Namaste. My name is \_\_\_\_\_ and I am working with [Survey Firm Name], which is a well known consultancy research organization. We are conducting a survey in selected villages/ cities to understand the functioning of Anganwadi centers and the ICDS. For this purpose, we would like to speak to you and ask you certain questions. The Questionnaire will take about 20 minutes to complete. The information given by you will be kept confidential. Can I request you to please spare some time and give us an interview? I may also add that you may discontinue the interview in the middle, if you do not like to give the interview further.

### INSTRUCTIONS

1. Please read the question to the respondent. Based on the response given choose the correct option from the alternatives given for each question.
2. Circle the correct option number based on the response given by the respondent.. Please do not use tick marks to indicate the answer. For some questions the option number has to be entered or the comments made by the respondent noted.
3. Please use a pencil to mark the answers.

### SECTION 1: SUPPLEMENTARY NUTRITION

Q No	Question	Response	Codes	Skip
101	Is there a cooking gas cylinder at the anganwadi centre?	Yes	1	
		No	2	
		If No what is the medium of cooking		
102	Are the enough utensils present enough to cook, store and serve food for the total number of beneficiaries receiving hot cooked meals?	Yes	1	
		No	2	
103	Is there a separate room to cook in the anganwadi centre?	Yes	1	
		No	2	
104	Is there a room to store supplementary nutrition provisions / amylase rich food in the centre	Yes	1	
		No	2	
		If No where it is stored		
105	Is the weekly menu for the food publicly displayed? (Note down the details of the menu)	Yes	1	
		No	2	
		Days	Menu	
106	Whether food being served matches menu?	Yes	1	
		No	2	

## SECTION 2: IMMUNIZATION, HEALTH CHECK-UPS AND REFERRAL SERVICES

Q No	Question	Response	Codes	Skip
201	Does the anganwadi centre have a stock of Iron and Folic Acid ( IFA) tablets?	Yes	1	
		No	2	
202	Does the anganwadi centre have a infantometer	Yes	1	
		No	2	
203	Is the infantometer working	Yes	1	
		No	2	
		NA	3	
204	Does the anganwadi centre have an adult weighing scale	Yes	1	
		No	2	
205	Is the adult weighing scale working	Yes	1	
		No	2	
		NA	3	
206	Does the anganwadi centre have a growth chart	Yes	1	
		No	2	
		NA	3	
207	Is it displayed	Yes	1	
		No	2	
		NA	3	

## SECTION 3: PRE-SCHOOL EDUCATION

301	What are the materials present in the Pre-school kits? (Multiple options can be ticked)	Stuffed toys	1	
		Building blocks	2	
		Flash cards for story telling	3	
		Colour, number, alphabet cards	4	
		Dhapli / small drums	5	
		Simple puzzles	6	
		Picture books of animals, vegetables, fruits, parts of body	7	
		Others specify	9	
302	Does the anganwadi have a separate room for teaching children?	Yes	1	
		No	2	
303	Has the timetable chart been displayed in the anganwadi centre	Yes	1	
		No	2	
		NA	3	
304	Is the anganwadi worker teaching children as per the time table for the day? (Record observations based on both the days of the visit )	Yes	1	
		No	2	
		If No,why ? (Specify if it is because the worker has been assisting the data collection process for the study		

#### SECTION 4: RECORDS

401	Have the records been updated as per the Management Information system (MIS)	Yes	1	
		No	2	
402	Whether the anganwadi is using the new registers?	Yes	1	
		No	2	
403	If yes from when is the new register being used? (Month and Year)	_____ / _____ mm yy		
404	What are the registers maintained at the anganwadi centre? When was the last update made in the records?	S No	Registers maintained	Last updated
		1	Family details	
		2	Supplementary food stock	
		3	Pregnancy and delivery	
		4	Immunization and VHND	
		5	Home visits	
		6	Referral	
		7	Supplementary food distribution	
		8	Pre-school education	
		9	Weight records	
		10	Summaries (Monthly and Annually)	
405	Are all columns filled in the registers	Yes	1	
		No	2	
406	Are there discrepancies noted with relation to the entries? Specify			

## SECTION 5: BUILDING AND FACILITIES

501	Is the Anganwadi building owned property or rented / leased?	Rented	1	
		Own Property	2	
		Leased	3	
502	What is the rough size of the building / space being used for angawadi?	____ sq. mts		
503	Where is the anganwadi located?	Separate building	1	
		Government school premises	2	
		Religious place	3	
		Gram panchayat premises	4	
		Others , specify	9	
504	Does the anganwadi centre have a water source inside the premises?	Yes	1	
		No	2	
505	If yes, (specify)	Tap	1	
		Borewell	2	
		Tank	3	
		Filled in buckets	4	
		Other, specify:	9	
506	If not, from how far is the water sourced?	Under 0.5 kms	1	
		0.5 - 2 kms	2	
		More than 2 kms	3	
507	Does the anganwadi have a toilet inside the premises?	Yes	1	
		No	2	
508	Is it usable? (E.g. has water; urinal is not blocked; is clean)	Yes	1	
		No	2	
509	If not, how far is the nearest toilet? specify	Under 0.5 kms	1	
		0.5 - 2 kms	2	
		More than 2 kms	3	
510	Is there a water filter in the anganwadi centre	Yes	1	
		No	2	
511	Is there a separate place for the kids to play within the anganwadi premises?	Yes	1	
		No	2	
512	Is there provision of electricity in the anganwadi centre	Yes	1	
		No	2	

Record your observations about the Anganwadi and its functioning

### 3. Chi Square Tables

**Table 1: Showing chi square test of significance between rented or own/leased buildings across urban and rural areas (Chi square value 3.1191 and p value 0.077 fisher value 0.117)**

Urban/Rural		Rented buildings	Own/leased buildings	Total
Urban	Actual	7	19	26
	Expected	4.2	21.8	
	Chi value	1.9	0.4	
Rural	Actual	9	19	84
	Expected	11.8	21.8	
	Chi value	0.7	0.4	
Total		16	84	100

**Table 2: Showing chi square test of significance between rented or own/leased buildings across centres classified as 'SC/ST' and 'general'. (Chi square value 0.0749 and p value 0.784 and fisher value 1.000)**

AWC Category		Rented buildings	Own/leased buildings	Total
General	Actual	6	36	42
	Expected	5.6	36.4	
	Chi value	0.0	0.0	
SC/ST	Actual	4	29	33
	Expected	4.4	28.6	
	Chi value	0.0	0.0	
Total		10	65	75

**Table 3: showing chi square test of significance of AWC having separate room for kitchen across districts (Chi value 6.4497 and p value 0.092)**

Separate Room for Kitchen		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Yes	Actual	21	16	23	19	79
	Expected	19.8	19.8	19.8	19.8	
	Chi value	0.1	0.7	0.5	0.0	
No	Actual	4	9	2	6	21
	Expected	5.3	5.3	5.3	5.3	
	Chi value	0.3	2.7	2.0	0.1	
Total		25	25	25	25	100

**Table 4: showing chi square test of significance of AWC having separate room for provision across districts (Chi value 0.4386 and p value 0.932)**

Separate Room for Provision		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Yes	Actual	20	18	19	19	76
	Expected	19.0	19.0	19.0	19.0	
	Chi value	0.1	0.1	0.0	0.0	
No	Actual	5	7	6	6	24
	Expected	6.0	6.0	6.0	6.0	
	Chi value	0.2	0.2	0.0	0.0	
Total		25	25	25	25	100

**Table 5: showing chi square test of significance of AWC having separate room for teaching across districts (Chi value 4.5093 and p value 0.211 and fisher value 0.222)**

Separate Room for Teaching		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Yes	Actual	23	20	24	20	87
	Expected	21.8	21.8	21.8	21.8	
	Chi value	0.1	0.1	0.2	0.1	
No	Actual	2	5	1	5	13
	Expected	3.3	3.3	3.3	3.3	
	Chi value	0.5	0.9	1.6	0.9	
Total		25	25	25	25	100

**Table 6: Showing chi square test of significance in terms of having water facilities within premises across urban and rural areas (Chi square value 0.2263 and p value 0.634)**

Urban/Rural		Have a water source inside the premises	Do not have a water source inside the premises	Total
Urban	Actual	13	13	26
	Expected	12.0	14.0	
	Chi value	0.1	0.1	
Rural	Actual	33	41	74
	Expected	34.0	40.0	
	Chi value	0.0	0.0	
Total		46	54	100

**Table 7: showing chi square test of significance of AWC which have to source water from a distance across districts (Chi square value 9.8320 and p value 0.132 and fisher value 0.114)**

Distance of water source		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Less than 0.5 km	Actual	12	8	11	12	43
	Expected	13.5	6.4	12.7	10.4	
	Chi value	0.2	0.4	0.2	0.3	
0.5-2 km	Actual	2	0	0	1	3
	Expected	0.9	0.4	0.9	0.7	
	Chi value	1.2	0.4	0.9	0.7	
More than 2 km	Actual	3	0	5	0	8
	Expected	2.5	1.2	2.4	1.9	
	Chi value	0.1	1.2	2.9	1.9	
Total		17	8	16	13	54

**Table 8: showing chi square test of significance of AWC which have to source water from a distance across urban and rural areas (Chi square value 3.0229 and p value 0.221 and fisher value 0.249)**

Urban/Rural		Less than 0.5 km	0.5 to 2 km	More than 2 km	Total
Urban	Actual	8	11	12	13
	Expected	6.4	12.7	10.4	
	Chi value	0.4	0.2	0.3	
Rural	Actual	0	0	1	41
	Expected	0.4	0.9	0.7	
	Chi value	0.4	0.9	0.7	
Total		43	3	8	54

**Table 9: showing chi square test of significance of AWC which have to source water from a distance across centres classified as 'SC/ST' and 'general'. (Chi square value 0.6782 and p value 0.712 and fisher value 0.850)**

AWC category		Less than 0.5 km	0.5 to 2 km	More than 2 km	Total
General	Actual	19	1	6	26
	Expected	19.7	1.3	5.1	
	Chi value	0.0	0.1	0.2	
SC/ST	Actual	12	1	2	15
	Expected	11.3	0.7	2.9	
	Chi value	0.0	0.1	0.3	
Total		31	2	8	41

**Table 10: showing chi square test of significance of AWC having water filters across districts (Chi value 4.1667 and p value 0.244)**

Water filters		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Have water filters	Actual	9	14	13	16	52
	Expected	13.0	13.0	13.0	13.0	
	Chi value	1.2	0.1	0.0	0.7	
Don't have water filter	Actual	16	11	12	9	48
	Expected	12.0	12.0	12.0	12.0	
	Chi value	1.3	0.1	0.0	0.8	
Total		25	25	25	25	100

**Table 11: showing chi square test of significance of AWC having water filter across urban and rural areas (Chi value 1.2807 and p value 0.258)**

Urban/Rural		Have water filter	Don't have water filter	Total
Urban	Actual	16	10	26
	Expected	13.5	12.5	
	Chi value	0.5	0.5	
Rural	Actual	36	38	74
	Expected	38.5	35.5	
	Chi value	0.2	0.2	
Total		52	48	100

**Table 12: showing chi square test of significance of AWC having water filter across centres classified as 'SC/ST' and 'general'. (Chi square value 0.1374 and p value 0.711)**

AWC Category		Have water filter	Don't have water filter	Total
General	Actual	20	20	40
	Expected	19.2	20.8	
	Chi value	0.0	0.0	
SC/ST	Actual	16	19	35
	Expected	16.8	18.2	
	Chi value	0.0	0.0	
Total		36	39	75

**Table 13: showing chi square test of significance of AWC having electricity across districts (Chi square value 5.5238 and p value 0.137)**

Electricity		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Have a provision of electricity	Actual	19	21	16	14	70
	Expected	17.5	17.5	17.5	17.5	
	Chi value	0.1	0.7	0.1	0.7	
Don't have a provision of electricity	Actual	6	4	9	11	30
	Expected	7.5	7.5	7.5	7.5	
	Chi value	0.3	1.6	0.3	1.6	
Total		25	25	25	25	100

**Table 14: Showing chi square test of significance of AWC having electricity across centres classified as 'SC/ST' and 'general'. (Chi square value 2.3274 and p value 0.127)**

AWC Category		Have a provision of electricity	Don't have a provision of electricity	Total
General	Actual	27	13	40
	Expected	29.9	10.1	
	Chi value	0.3	0.8	
SC/ST	Actual	29	6	35
	Expected	26.1	8.9	
	Chi value	0.3	0.9	
Total		56	19	75

**Table 15: showing chi square test of significance of AWC having toilet facility within premise across districts (Chi value 2.0474 and p value 0.563)**

Toilet facility		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Have toilet facility inside the premise	Actual	15	11	12	15	53
	Expected	13.3	13.3	13.3	13.3	
	Chi value	0.2	0.4	0.1	0.2	
Don't have a toilet facility inside the premise	Actual	10	14	13	10	47
	Expected	11.8	11.8	11.8	11.8	
	Chi value	0.3	0.4	0.1	0.3	
Total		25	25	25	25	100

**Table 16: Showing chi square test of significance on AWC timings between beneficiaries (Chi square value 04.2225 and p value 0.121084)**

Beneficiaries		6.5 hours or more	Less than 6.5 hours	Total
Parents	Actual	251	249	500
	Expected	239.28	260.72	
	Chi value	0.57	0.53	
P&L women	Actual	219	275	494
	Expected	236.41	257.59	
	Chi value	1.28	1.18	
Adolescents	Actual	99	96	195
	Expected	93.32	101.68	
	Chi value	0.35	0.32	
Total		569	620	1189

**Table 17: showing chi square test of significance for response of beneficiaries for functional hours of AWC across districts (Chi square value 2.1815 and p value 0.902272 )**

Beneficiaries		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Parents	Actual	91	47	81	32	251
	Expected	89.99	48.08	80.28	32.64	
	Chi value	0.01	0.02	0.01	0.01	
P&L women	Actual	81	45	67	26	219
	Expected	78.52	41.95	70.25	28.48	
	Chi value	0.08	0.22	0.13	0.22	
Adolescents	Actual	32	17	34	16	99
	Expected	35.49	18.96	31.67	12.88	
	Chi value	0.34	0.20	0.17	0.76	
Total		204	109	182	74	569

**Table 18: Showing chi square test of significance for response of beneficiaries for functional hours of AWC across urban and rural areas (Chi square value 1.0967 and p value .577915)**

Urban/Rural		Parents	P&L women	Adolescents	Total
Urban	Actual	33	26	16	75
	Expected	33.08	28.87	13.05	
	Chi value	0.00	0.28	0.67	
Rural	Actual	218	193	83	494
	Expected	217.92	190.13	85.95	
	Chi value	0.00	0.04	0.10	
Total		251	219	99	569

**Table 19: Showing chi square test of significance for response of beneficiaries for functional hours of AWC across centres classified as 'SC/ST' and 'general'. (Chi square value 0.6103 and p value 0.737026)**

AWC Category		Parents	P&L women	Adolescents	Total
General	Actual	134	116	54	304
	Expected	134.50	118.53	50.97	
	Chi value	0.00	0.05	0.18	
SC/ST	Actual	85	77	29	191
	Expected	84.50	74.47	32.03	
	Chi value	0.00	0.09	0.29	
Total		219	193	83	494

**Table 20: Showing chi square test of significance with respect to MIS training received by workers across urban and rural areas (Chi square value 1.0338 and p value 0.309)**

Urban/Rural		Received training	Did not receive training	Total
Urban	Actual	17	9	26
	Expected	19.0	7.0	
	Chi value	0.2	0.6	
Rural	Actual	56	18	74
	Expected	54.0	20.0	
	Chi value	0.1	0.2	
Total		73	27	100

**Table 21: showing chi square test of significance of AWC with respect to additional work that worker has to take across districts (Chi square value 5.3763 and p value 0.146)**

Additional work other than ICDS		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Yes	Actual	19	13	17	20	69
	Expected	17.3	17.3	17.3	17.3	
	Chi value	0.2	1.0	0.0	0.4	
No	Actual	6	12	8	5	31
	Expected	7.8	7.8	7.8	7.8	
	Chi value	0.4	2.3	0.0	1.0	
Total		25	25	25	25	100

**Table 22: showing chi square test of significance of AWC with respect to additional work that worker has to take across urban and rural areas (Chi value 1.0311 and p value 0.310)**

Urban/Rural		Have additional work other than ICDS	Don't have additional work other than ICDS	Total
Urban	Actual	20	6	26
	Expected	17.9	8.1	
	Chi value	0.2	0.5	
Rural	Actual	49	25	74
	Expected	51.1	22.9	
	Chi value	0.1	0.2	
Total		69	31	100

**Table 23: Showing chi square test of significance of AWC with respect to additional work that worker has to take across centres classified as 'SC/ST' and 'general'. (Chi square value 0.0042 and p value 0.948)**

AWC Category		Have additional work other than ICDS	Don't have additional work other than ICDS	Total
General	Actual	26	14	40
	Expected	26.1	13.9	
	Chi value	0.0	0.0	
SC/ST	Actual	23	12	35
	Expected	22.9	12.1	
	Chi value	0.0	0.0	
Total		49	26	75

**Table 24: showing chi square test of significance of AWC with respect to supervisor visit across urban and rural areas (Chi square value 0.7430 and p value 0.389)**

Urban/Rural		Supervisors visit regularly	Supervisors visit irregularly	Total
Urban	Actual	19	7	26
	Expected	20.5	5.5	
	Chi value	0.1	0.4	
Rural	Actual	60	14	74
	Expected	58.5	15.5	
	Chi value	0.0	0.2	
Total		79	21	100

**Table 25: showing chi square test of significance showing beneficiaries knowledge on SNP across districts (Chi square value 5.875 and p value 0.11785)**

SNP Knowledge		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Parent	Actual	74	80	121	82	357
	Expected	71.31	91.42	108.33	85.94	
	Chi value	0.10	1.43	1.48	0.18	
P&L women	Actual	82	120	116	106	424
	Expected	84.69	108.58	128.67	102.06	
	Chi value	0.09	1.20	1.25	0.15	
Total		156	200	237	188	781

**Table 26: Showing chi square table of beneficiaries knowledge on SNP across centres classified as 'SC/ST' and 'general'. (Chi square value 3.4529 and p value 0.063142)**

AWC Category		Parent	P&L women	Total
General	Actual	167	169	336
	Expected	155.82	180.18	
	Chi value	0.8	0.69	
SC/ST	Actual	108	149	257
	Expected	119.18	137.82	
	Chi value	1.05	0.91	
Total		275	318	593

**Table 27: Showing chi square test comparing beneficiaries knowledge on SNP across urban and rural areas (Chi square value 0.4487 and p value 0.502963)**

Urban/Rural		Parent	P&L women	Total
Urban	Actual	86	111	197
	Expected	90.05	106.95	
	Chi value	0.18	0.15	
Rural	Actual	271	313	584
	Expected	266.95	317.05	
	Chi value	0.06	0.05	
Total		357	424	781

**Table 28: Showing chi square test of significance with respect to beneficiary satisfaction on SNP across urban and rural areas (Chi square value 0.2019 and p value 0.653183)**

Urban/Rural		Beneficiaries satisfied on SNP quality	Beneficiaries dissatisfied on SNP quality	Total
Urban	Actual	319	23	342
	Expected	320.72	21.28	
	Chi value	0.01	0.14	
Rural	Actual	902	58	960
	Expected	900.28	59.72	
	Chi value	0	0.05	
Total		1221	81	1302

**Table 29: Showing chi square test of significance on knowledge of pre fixed immunization day between beneficiaries (Chi square value 0.0308 and p value 0.860647)**

Beneficiaries		Have knowledge of pre fixed immunization day	Don't have knowledge of pre fixed immunization day	Total
Parents	Actual	372	68	440
	Expected	371.23	68.77	
	Chi value	0	0.01	
Pregnant Women	Actual	184	35	219
	Expected	184.77	34.23	
	Chi value	0	0.02	
Total		556	103	659

**Table 30: showing chi square test of significance of regularity of immunization across districts (Chi square value 4.4196 and p value 0.220)**

Immunization regularity		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Regular	Actual	15	19	21	16	71
	Expected	17.8	17.0	17.8	17.8	
	Chi value	0.4	0.1	0.6	0.2	
Irregular	Actual	10	6	4	9	29
	Expected	7.3	7.3	7.3	7.3	
	Chi value	1.8	0.2	1.5	0.4	
Total		25	25	25	25	100

**Table 31: Showing chi square test of significance of immunization regularity across centres classified as 'SC/ST' and 'general'. (Chi square value 2.1694 and p value 0.140779)**

AWC Category		Immunization Regular	Immunization irregular	Total
General	Actual	28	14	42
	Expected	30.8	11.2	
	Chi value	0.25	0.7	
SC/ST	Actual	27	6	33
	Expected	24.2	8.8	
	Chi value	0.32	0.89	
Total		55	20	75

**Table 32: Showing chi square test comparing immunization regularity across urban and rural areas (Chi square value 1.5276 and p value 0.216473)**

Urban/Rural		Immunization Regular	Immunization irregular	Total
Urban	Actual	16	10	26
	Expected	18.46	7.54	
	Chi value	0.33	0.8	
Rural	Actual	55	19	74
	Expected	52.54	21.46	
	Chi value	0.12	0.28	
Total		71	29	100

**Table 33: Showing chi square test of significance on knowledge of home visit between beneficiaries (Chi square value .6382 and p value .424632)**

Beneficiaries		Have knowledge of home visit	Don't have knowledge of home visit	Total
Parents	Actual	453	47	500
	Expected	449.2	50.8	
	Chi value	0.03	0.28	
P&L women	Actual	440	54	494
	Expected	443.8	50.2	
	Chi value	0.03	0.29	
Total		893	101	994

**Table 34: showing fisher test of significance with respect to beneficiaries response on frequency of home visit (once in 45 days) across district (chi square value 10.2631 and p value 0.114001)**

Beneficiaries		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Parent	Actual Expected Chi value	102 95.43 0.45	112 114.34 0.05	105 111.70 0.40	108 105.54 0.06	427
P&L women	Actual Expected Chi value	99 91.85 0.56	107 110.05 0.08	110 107.51 0.06	95 101.59 0.43	411
Adolescent	Actual Expected Chi value	16 29.72 6.34	41 35.61 0.81	39 34.79 0.51	37 32.87 0.52	133
Total		217	260	254	240	971

**Table 35: Showing chi square test of significance with respect to beneficiaries response on frequency of home visit (once in 45 days) across urban and rural areas (Chi square value 2.0057 and p value 0.366839)**

Urban/Rural		Parents	P&L women	Adolescents	Total
Urban	Actual Expected Chi value	113 110.38 0.06	99 106.24 0.49	39 34.38 0.62	251
Rural	Actual Expected Chi value	314 316.62 0.02	312 304.76 0.17	94 98.62 0.22	720
Total		427	411	133	971

**Table 36: Showing chi square test of significance with respect to beneficiaries response on frequency of home visit (once in 45 days) across centres classified as 'SC/ST' and 'general'. (Chi square value 0.3152 and p value 0.854212)**

AWC Category		Parents	P&L women	Adolescents	Total
General	Actual Expected Chi value	176 172.81 0.06	170 171.92 0.01	50 52.01 0.08	396
SC/ST	Actual Expected Chi value	143 146.19 0.07	146 144.82 0.01	46 43.99 0.09	335
Total		319	316	96	731

**Table 37: showing fisher test of significance of average time spent on home visit by AWW across districts (chi square value 8.9325 and p value 0.177 and fisher value 0.198)**

Time spent on home visit		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Approx 15 min.	Actual Expected Chi value	16 11.8 1.5	10 11.8 1.5	10 11.8 0.3	11 11.8 0.0	47
Approx 30 min.	Actual Expected Chi value	8 11.5 1.1	13 11.5 0.2	11 11.5 0.0	14 11.5 0.5	46
Approx one hour	Actual Expected Chi value	1 1.8 0.3	2 1.8 0.0	4 1.8 2.9	0 1.8 1.8	7
Total		25	25	25	25	100

**Table 38: Showing chi square test of significance of time spent on home visit by AWW across urban and rural areas (Chi square value 3.6683 and p value 0.159753 fisher value 0.676)**

Urban/Rural		Approx 15 min.	Approx 30 min.	Approx 1 hour	Total
Urban	Actual	11	15	0	26
	Expected	12.22	11.96	1.82	
	Chi value	0.12	0.77	1.82	
Rural	Actual	36	31	7	74
	Expected	34.78	34.04	5.18	
	Chi value	0.04	0.27	.64	
Total		47	46	7	100

**Table 39: Showing chi square test of significance of time spent on home visit by AWW across centres classified as 'SC/ST' and 'general'. (Chi square value 0.0074 and p value .996303 fisher value 0.886)**

AWC Category		Approx 15 min.	Approx 30 min.	Approx 1 hour	Total
General	Actual	20	18	4	42
	Expected	20.16	17.92	3.92	
	Chi value	0.00	0.00	0.00	
SC/ST	Actual	16	14	3	33
	Expected	15.84	14.08	3.08	
	Chi value	0.00	0.00	0.00	
Total		36	32	7	75

**Table 40: showing chi square test of significance with respect to number of workers who received PSE training across districts (Chi value 7.3386 and p value 0.062 fisher value 0.069)**

PSE training		Bellary	Chamrajnagar	Haveri	Bangalore	Total
Received PSE training	Actual	24	20	24	19	87
	Expected	21.8	21.8	21.8	21.8	
	Chi value	0.2	0.1	0.2	0.3	
Did not receive PSE training	Actual	1	5	1	6	13
	Expected	3.3	3.3	3.3	3.3	
	Chi value	1.6	0.9	1.6	2.3	
Total		25	25	25	25	100

**Table 41: Showing chi square test of significance with respect to number of workers who received PSE training across urban and rural areas (Chi square value 3.1545 and p value 0.076 fisher value 0.094)**

Urban/Rural		Received PSE training	Did not receive PSE training	Total
Urban	Actual	20	6	26
	Expected	22.6	3.4	
	Chi value	0.3	2.0	
Rural	Actual	67	7	74
	Expected	64.4	9.6	
	Chi value	0.1	0.7	
Total		87	13	100

**Table 42: Showing chi square test of significance with respect to number of workers who received PSE training across centres classified as 'SC/ST' and 'general'. (Chi square value 0.3404 and p value 0.560 and fisher value 0.699)**

AWC Category		Received PSE training	Did not receive PSE training	Total
General	Actual	37	3	40
	Expected	36.3	3.7	
	Chi value	0.0	0.1	
SC/ST	Actual	31	4	35
	Expected	31.7	3.3	
	Chi value	0.0	0.2	
Total		68	7	75

**Table 43: Showing chi square test comparing AWWs responses on time spent on PSE across urban and rural areas (Chi square value 0.3302 and p value 0.566 fisher test .753)**

Urban/Rural		Less than 3 hours	3 hours and more	Total
Urban	Actual	23	3	26
	Expected	22.1	3.9	
	Chi value	0.0	0.2	
Rural	Actual	62	12	74
	Expected	62.9	11.1	
	Chi value	0.0	0.0	
Total		85	15	100

**Table 44: Showing chi square test of significance comparing AWWs responses on time spent on PSE across centres classified as 'SC/ST' and 'general'. (Chi square value 4.3316 and p value 0.037)**

AWC Category		Less than 3 hours	3 hours and more	Total
General	Actual	32	10	42
	Expected	35.3	6.7	
	Chi value	0.3	1.6	
SC/ST	Actual	31	2	33
	Expected	27.7	5.3	
	Chi value	0.4	2.0	
Total		63	12	75

#### 4. Advisory Committee Participants

S No	Name	Designation, Organisation
1	Deepak Dey	UNICEF
2	Saraswathy Ganapathy	Belaku Trust
3	K. Vijayanti	Head – R&E, Akshara Foundation
4	Abid Ahmed	DWCD – UNICEF Consultant
5	R. Prakash Kumar	CDPO Bangalore South
6	Ms. Revathy,	Joint Director ICDS
7	Ms. Rathna B Kalamdani	Deputy Director of ICDS Bangalore Urban
8	Eadara Srikanth	DWCD – UNICEF Consultant
9	Prof. Vinod Vyasulu	Adviser, CBPS
10	Dr Jyotsna Jha	Director, CBPS

## 5. Consultation Meeting Participants

S No	Names	Organization name
1.	Dr. Laxmaiah, Senior Director	National Institute of Nutrition- NIN, Hyderabad
2.	Ms. Sylvia Fernandez	National Institute of Nutrition- NIN, Hyderabad
3.	Mr. Ajita. R	APU, Bangalore
4.	Kinnari Pandya	APU, Bangalore
5.	S.J. Chander	SOCHARA
6.	Maya Mascrenhas	MYRADA
7.	Sumathi Swaminathan	S.J.R.I
8.	J.V.R Prasad Rao	Special envoy of UN Secretary General
9.	Vasudeva Sharma	CRT, Bangalore
10.	Tessa Babu	BREADS, Bangalore
11.	Mary	Prajayatna
12.	Anuratha Mondal	Akshara foundation
13.	K.M Basavanga	BOSCO
14.	Gayatri Kiran	Akshara foundation
15.	Dr. Naveeda Khutan	NIPCCD, Bangalore
16.	Dr. Bharat Kumar	Regional officer, NIPCCD, BANGALORE
17.	Kathyayini chamaraj	Exec trustee, CIVIC Bangalore
18.	Kavya	Save the children
19.	Shwetha.S	Save the children

## 6. Delay In Anganwadi Salaries (State Component): An Illustration From One Taluks

Bengaluru South Taluk (Bengaluru Urban District)

Date of Deposit	Salary month	Delay (in days)
10.06.2014	April	40
23.06.2014	May	23
25.07.2014	June	25
26.08.2014	July	26
20.10.2014	August	50
27.10.2014	September	27
27.11.2014	October	27
16.01.2015	November	47
22.01.2015	December	22
19.02.2015	January	19
30.05.2014	February	90
30.05.2014	March	60

## 7. Photos from the Field







**UNICEF State Office for  
Telangana, Andhra Pradesh & Karnataka**  
Plot No.: 317/A, Road No. 12, MLA Colony,  
Banjara Hills, Hyderabad - 500034,  
Telangana, India.