

Review of “Best Practices” in ICDS

31 May 2007

Micronutrient Initiative

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List of Abbreviations

ANC	Antenatal care
ANM	Auxiliary Nurse Midwife
AP	Andhra Pradesh
AWC	Anganwadi Centre
AWH	Anganwadi Helper
AWW	Anganwadi Worker
ASAT	Anchal Se Angan Tak (Strategy being implemented in Rajasthan)
BSPM	Bal Swasthya Poshan Mah
DPEP	District Primary Education Program
ECCE	Early Childhood Care and Education
ECE	Early Childhood Education
IFA	Iron folic acid
ICDS	Integrated Child Development Services
IYCF	Infant and Young Child Feeding
MCHN	Mother Child Health and Nutrition
MDG	Millennium Development Goals
MP	Madhya Pradesh
NGO	Non Governmental Organization
PD	Positive Deviance
PRI	Panchayati Raj Institution
PSE	Pre-school Education
SSK	Shishu Shiksha Kendra
TINP	Tamil Nadu Integrated Nutrition Program
TN	Tamil Nadu
UP	Uttar Pradesh
VAS	Vitamin A Supplementation
VCD	Village Contact Drive
VEC	Village Education Committee
VLMC	Village Level Monitoring Committee
WCD	Women and Child Development

Summary

Prior to the next phase of the World Bank's support to ICDS, an identification mission in 2006 recommended a review of the best practices/innovations in ICDS with a view to scaling up a few of these successful experiments.

For the purposes of this exercise a total of 47 organizations/government departments /institutes at the national and state levels were contacted and asked to provide relevant materials. In addition an online literature review was conducted. Over 135 documents/ cds were reviewed. A framework to assess effectiveness and transferability was developed and used as a basis for determining whether an activity/program was considered a 'best practice'. Effectiveness was determined by demonstrating impact using a control, transferability was determined by expansion of the innovation, and the innovation needed to be implemented on relatively large scale (at least 1 million beneficiaries).

The review focussed on integrated packages, improvements to the supplementary food component of ICDS and pre-school education. Based on this review the following are the recommended best practices:

Integrated packages: The integrated programmes Dular, Anchal Se Angan Tak, Positive Deviance and RACHNA are considered best practices as they have demonstrated impact on nutritional status against a control and target at least 1 million beneficiaries. Although the packages cannot be unravelled to assess which specific component led to the impact, the common factors that make them successful include:

- continuous and in-depth counselling at the household level by additional workers/volunteers and/or the AWW/ANM
- systematic training and supportive supervision
- improved planning, monitoring systems and tools
- community support
- supportive structures at all levels – state, district, block, village
- community based monitoring tools
- convergence with health including joint planning and implementation of fixed health and nutrition days and twice yearly events

The estimated cost of these programs range from US \$85 to US \$240 per AWC per year, above the regular ICDS budget.

Foods in ICDS: For food distributed to children 24 months and older the following are considered best practices as they have demonstrated improvements in micronutrient status against a control and have been implemented in large scale:

- Ready to eat food
- Vita shakti
- Fortified blended foods
- Fortified candies

For children 6 to 24 months sprinkles/anuka is considered a best practice in other parts of the world, and is being tested in India currently. The estimated cost of the first 3 foods is similar (US 41 cents to 45 cents per beneficiary per year for the fortification). The estimated cost for anuka is about US \$1 per beneficiary per year and for the fortified candies it is estimated to be about US\$1.25.

Pre-school Education: Due to the criteria used for this review, unfortunately best practices could not be determined due to lack of controls in the assessments. However, the programs reviewed indicated that success is dependent on the following factors:

- One worker dedicated to pre-school education
- Appropriate training for these workers
- Environment conducive for learning – availability of learning toys, adequate and pleasant place to learn (indoor and outdoor space etc.
- Structured time table of activities
- Community involvement

Conclusions:

- There is vast information on innovations and practices but there are very few innovations/practices that have rigorously tested impact level outcomes (such as nutritional status) using a control.
- The innovations/practices that have used this rigour have found relatively modest reductions in malnutrition.
- The criteria used in this review have limitations. It excludes potential useful information as demonstrated by qualitative measures and useful studies that look at outcome level results.

Recommendations on immediate next steps:

- Review of outcome level quantitative results focussing on the components of ICDS.
- Review of qualitative results thereby broadening the methodology used in this review.
- Review of the information gathered through the routine ICDS MIS system to identify best practices.
- Unwrap the integrated packages to document details on the “HOW”.
- Organize a process to gather information on best practices from NGOs.
- Organize state visits for two purposes: 1) to present the findings of this report; and 2) to further gather information on best practices.

Recommendations on continuing to gather information on best practices:

- Encourage government/organizations to assess the impact of their intervention models with sufficiently robust research methods which will allow useful conclusions to be drawn.
- Encourage government/organizations to follow-up with assessing the innovations/practices identified to determine if they are best practices.
- Develop an information database to house best practices linked to ICDS that can be available on-line. USAID is planning on establishing a National Resource Centre and has offered to house a database for ICDS best practices including programmes, processes and tools.
- Initiate and maintain a web-based forum where new best practices can be identified through peer review. Meetings of the peer review committee every six months will enable better sharing of information.
- Organize an annual contest that would award innovative best practices linked to ICDS.
- Support NIPCCD in revitalizing the annual review process of ICDS.
- Capacity building in the areas of operations research methodology in order to be able to determine best practices.
- Make use of state level resource centres that are being established to gather best practices and disseminate information.

1. Background

India has one of the highest rates of under nutrition in the world. Despite the impressive rates of economic growth in the past decade, nearly a half of all Indian children (47%) are underweight –nearly double the rates in Sub-Saharan Africa, and nearly five times the underweight rates in China. Much of this under nutrition happens in the first two years of life of a child, and the damage to brain development and future productivity is essentially irreversible. Progress in reducing under nutrition has been much slower in India than in many other countries. Furthermore, a third of India's children are born with low birth weights condemning them to a lower growth trajectory for life, nearly 45 percent are stunted (short height for their age), 75 percent are anaemic, and 57 percent are Vitamin A deficient. Undernourished children have higher rates of mortality, lower cognitive performance, and are more likely to drop out of school. Less than 30 percent of Indian children get any kind of Early Childhood Care and Education (ECCE) and they fail to reach their human potential in adulthood in terms of health, educational attainment and income productivity, thereby perpetuating the vicious cycle of poverty, malnutrition and under-development. Evidence shows that the fast-paced economic growth in India is leaving behind many districts/states and that inequities in income as well as in human development indices are increasing. These concerns about equity are further reiterated with concerns about the efficiency of resource use, India's ability to reach its human development goals, and the sustainability of growth for economic and political stability.

Halving the prevalence of underweight among children is a key indicator of the progress towards MDG 1 (eradicating extreme poverty and hunger) – a MDG on which India is lagging behind, and one that impacts heavily on the other MDGs (child mortality, maternal health, education and gender) and on human capital formation. Until quite recently, food insecurity has been viewed as the primary or even sole cause of child malnutrition. By contrast, research indicates that high levels of exposure to infections, poor sanitation, and inappropriate child feeding and caring practices, especially in the first two years of life are the key contributors to malnutrition in India. This misperception has resulted in resources being skewed towards ineffective food-based interventions.

The Integrated Child Development Services (ICDS) Program is India's response to the challenge of breaking the vicious cycle of malnutrition, impaired development, morbidity and mortality among young children. It was launched as a Centrally Sponsored Scheme (CSS) in 1975 in 33 development blocks and currently covers 5,421 development blocks through over 700,000 village level *anganwadi* centres. The program reportedly covers 39 million children below 6 years of age and 8 million pregnant and lactating mothers. The overall objectives of the ICDS program are to:

- lay the foundation for proper psychological, physical and social development of the child;
- improve the nutritional and health status of children below the age of six years;
- reduce the incidence of mortality, morbidity, malnutrition and school dropouts;
- achieve effective coordination of policy and implementation among various departments to promote child development; and
- enhance the capability of the family and the mother to look after the health, nutritional and development needs of the child through community education.

The ICDS program provides an integrated package of health, nutrition and education services targeted to children aged below six years; pregnant and nursing mothers; and in some blocks, adolescent girls. Nutritional and health education services are also provided, in general, for all women in the age group 15 to 45. The program targets women and children with low socio-economic status as primary beneficiaries. Specific services provided through the program include:

- Immunization
- Health Check-up
- Referral Services
- Nutrition and Health Education
- Growth Monitoring & Supplementary Feeding
- Early Childhood Care and Pre-school Education

Some services are provided directly by ICDS functionaries with ICDS resources, and other services (like immunization and health check-up) are provided by the Family Welfare Department that uses the ICDS as a platform or site for services.

The long-term goal of the proposed IDA support is to improve nutrition outcomes for children under three years of age, and early childhood care education outcomes for children 3-6 years of age in selected “lagging” districts/states. In addition, the operation will aim to contribute to strengthening of the larger national policy and programmatic frameworks for India within which the nutrition and ECCE objectives and programs are positioned.

The specific objectives are to:

- Contribute to the national policy and programmatic frameworks for nutrition and ECCE (including the ICDS scheme, as well as relevant policy/program issues outside the ICDS).
- Expand the provision, quality and utilization of essential health and nutrition services for young children, and improve nutrition and health-seeking knowledge and behaviours for pregnant and lactating women and for children under-three years of age in selected districts/states. Over time, it is expected that these improvements will lead to better nutrition outcomes (including micronutrient deficiencies) for poor children under three years of age.
- Expand access, quality and utilization of ECCE services for 3-5 year old children and strengthen the linkages with primary education for the poor.

The project will, thereby, contribute to the achievement of the poverty MDG-1 (reduction of under-weight rates) and MDGs 3 and 4 (child mortality and maternal health) as well as MDG-6 (Gender), and the education MDG (primary school enrolment) especially in selected districts and among the worst-off in these areas. Improvements in the indicators in these high-burden/lagging districts will have a major impact on national indicators.

To start the preparations for the project, the Bank’s Identification Mission (September 2006) recommended a review of the “best practices” / innovations in ICDS for scaling up through the new project.

The review and documentation of the ‘Good Practices’ in ICDS will identify initiatives and implementation innovations in ICDS with a view to scaling up a select number of these successful experiments.

The overall purpose of the review is to:

- Provide a summary review and documentation of ICDS evaluations that have had an impact on nutrition and early childhood education outcomes
- In addition, the consultancy will also compile “best practice” models implemented in several states

The objectives of this review are to:

1. Identify best practices and innovations that have been implemented to-date within ICDS in different states and with different partners, and document their impact.
2. Assess these practices with a view to the opportunities, feasibility and costs for scaling up (not a full-scale cost effectiveness analysis but a simple documentation of scaled-up costs based on existing literature and estimates).
3. Make recommendations on how the new Bank support for ICDS can scale-up some/all of these practices, and under what circumstances.

2. Methodology

The methodology for this review included 5 steps which are described below.

1. Literature review (with annotated bibliography) of evaluations of ICDS including those that include innovations in design, management, or implementation.
 - The ICDS models reviewed were drawn from any state or setting (urban, rural, tribal, private, public, NGO, government, etc.), and any aspect of service delivery (outreach, service delivery, quality, management, etc.).
 - Particular attention was paid to practices that have been rigorously field tested, can be adopted widely, and are sustainable.
 - Pre-existing best practice compilations were a starting point for this effort.
 - Particular attention was paid to practices that are novel and represent “out of the box” thinking.

For the purposes of this exercise a total of 47 organizations/government departments /institutes at the national and state levels were contacted and asked to provide relevant materials. In addition an online literature review was conducted using the internet. Over 135 documents/cds were reviewed. A list of organizations contacted for documents is attached in Annex A. The list of documents reviewed is attached in Annex B.

2. For each model/best practice, *evidence-based* analysis of the effectiveness of the practice was carried out and the enabling factors and constraints were identified.

The framework developed by David Pelletier was used as a basis for analysis, however, there were very few rigorous assessments. Therefore the framework as developed could not be used in its entirety. This limitation was discussed with David Pelletier and his team. Instead, the principles behind the framework were used - proven effectiveness and transferability. Generally, effectiveness was determined by impact demonstrated using a control, and transferability, by expansion. The criteria used for effectiveness - impact demonstrated using a control - has its limitations including omissions of practices that have demonstrated impact level results through a time series of evaluations and/or pre and post evaluations. The other criteria used was that the practice had to be implemented at large scale (at least 1 million beneficiaries).

The framework used is presented below.

Table1: Criteria for Promising and Best Practices
(from Advance Africa: 2005)

Type → Criteria ↓	Promising practice	Best Practice
Evidence of Success	Anecdotal or preliminary evidence	Quantitative/qualitative evidence (proven effectiveness)
Transferability	Shows promise for replication	Replicated or has potential for replication

To analyze the innovations systematically, a template to capture information was first developed. The information gathered includes objectives, activities, impacts, outcomes, evaluation design, cost estimate etc. These templates are attached in Annex C, D and E.

Table 2: Template used to capture information on innovations.

Title:		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary)	(quantitative/qualitative evidence - proven effectiveness)
Transferability	(shows promise for replication)	(replicated or has potential for replication)
Background:		
Objective:		
Coverage:		
Target:		
Additional to ICDS Supportive structure: Tools: Activities: Training: Monitoring:		
Impact:		
Outcomes:		
Design of Evaluation:		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved:		

3. The suitability (relevance, feasibility, etc.) of the practices for implementation in the larger framework of ICDS was examined, and recommendations were made for implementation, including local adaptations, scale, etc.
4. Mechanisms for the continued sharing and dissemination of best practices across states/districts were suggested.
5. Consultations and peer reviews were carried out at various stages.

3. Review of Integrated Packages

3.1 Impact of Programs

Of the 6 specific services provided through ICDS, the review of integrated packages primarily includes: immunization, health check-up, referral services, growth monitoring and, nutrition and health education. The foods used for supplementary feeding and pre-school education components are individually discussed in the next two sections.

Nine programs that have implemented as integrated packages to tackle malnutrition are reviewed. (Refer to Annex C for details on the each of the programs reviewed). Four of these programs have been able to demonstrate positive impacts on nutritional status compared to a control: Anchal Se Angan Tak (ASAT), Dular, Positive Deviance (PD) and RACHNA. ASAT, Dular and PD demonstrated impact on stunting. Only Dular was able to demonstrate decrease in underweight of children overall. PD demonstrated decrease in underweight in children between the ages of 12 and 17 months. RACHNA demonstrated a protective effect against wasting compared to a control after 18 months. However a pre and post evaluation for the program that spans 8 years, shows a reduction in underweight by 8 percentage points.

Although TINP 1 and 2 did not have a control for comparison, much research has been undertaken to assess if the decrease in malnutrition reported is attributable to TINP, especially TINP 1. The conclusion made was that TINP 1 can claim about 50% to 75%

of the decrease in malnutrition in the state.¹ ICDS III (WCD) also through a pre and post design, has shown a decrease in malnutrition rates by 8.5 percentage points. APERP showed a very modest decrease in severe and moderate malnutrition rates using a pre and post design.

Table 3: Details regarding effectiveness and transferability of integrated packages

Program	Effectiveness as demonstrated by impact on nutritional status compared to control	Transferability as demonstrated by scope and expansion	Best Practice or Promising Practice?	Location & Support
Andhra Pradesh Economic Restructuring Project (APERP)	Decrease in severe malnutrition from 2.9% to 2.1% and moderate malnutrition from 13.3% to 12.9%. - pre and post but different classifications were used	11 million		Andhra Pradesh – World Bank
Anchal Se Angan Tak (ASAT)	Decrease in stunting compared to control (45% vs. 35%) -cross sectional survey	6.6 million	Best Practice	Rajasthan - UNICEF
Community Based Mother and Child Health and Nutrition (MCHN) Project	Decrease in severely malnourished children from 25% to 14% (significance not tested) IAP classification method) - pre and post with no control	1.3 million		Uttar Pradesh – UNICEF
Dular	Decrease in underweight (55.5% vs. 65.4%) & decrease in stunting (61.8% vs. 72.0%) compared to control - time series (pre and post with control)	8 million	Best Practice	Bihar/Jharkhand – UNICEF
ICDS III (WCD)	1. Overall decrease in underweight from 44.5% to 36.0% on average over 5 states – no control. 2. A few ICDS general blocks was used to compare endline results in each of the states resulting in mixed findings – no true control	18.5 million with additional 6.6 million added in 2003		5 states at start then an additional 6 states added in 2003. World Bank
Positive Deviance (PD)*	Decrease in stunting (26.5% vs. 32%) and underweight for children 12-17 months compared to control. - cross sectional survey	2.4 million	Best Practice	Several states but initiated in West Bengal. UNICEF
RACHNA	1. protective effect on wasting in UP compared to control (intervention area wasting increased from 4.9% to 8.5% but in control area wasting increased from 6.7% to 13.8% - $p < 0.05$) – pre and post design with control 2. Pre-post without control evaluation reported 8% point decrease in underweight (61% to 53%)	102 million	Best Practice	8 States. CARE
Tamil Nadu Integrated Nutrition Program (TINP) 1	Decrease in malnutrition rates between 1.5 and 2.4 percentage points annually per year. Routine data no control.	9 million		Tamil Nadu. World Bank
Tamil Nadu Integrated Nutrition Program (TINP) 2	Decrease in malnutrition by 44% after 5 years - no control	11 million additional		Tamil Nadu. World Bank

*The analysis is based on the UNICEF PD program. CINI and CCF also have implemented PD programs with success in reducing malnutrition in the villages where it has been implemented (details provided in Annex C)

3.2 Common Processes/Components

The programs have all been implemented and evaluated as a package of interventions that enhances several aspects of ICDS. It is not possible to assess the components

¹ Heaver, Richard. India's Tamil Nadu Nutrition Program – Lessons and Issues in Management and Capacity Development. HPN Discussion Paper. World Bank. November 2002

individually in order to determine the best practices. However, the following are common components that were highlighted in the reports as being important for success: (Refer to Annex C for details regarding the components that were additional to ICDS for each of the programs.):

Household Counselling

Focus on continuous and in-depth counselling of households by additional volunteers or AWW and/or ANM was deemed necessary to change behaviour at the household level at the critical period of pregnancy until the child is at least 2 years of age. The integrated programs focussed on this aspect by mainly recruiting additional trained volunteers, additional training to the AWW/ANM and by developing tools to be used to plan the sessions and by developing pamphlets/cards etc. to be used during the counselling sessions.

- ASAT – extra helper at village level, ASHA-Sahyogini
- Dular – local resource persons who focus on home visits
- MCHN – community volunteers who focus on the vulnerable beneficiaries
- PD – intensive sessions with mothers
- RACHNA – community volunteers as change agents were trained to counsel at house level but found not effective and dropped in 2nd phase. Focus was on training AWW.
- TINP - extra worker for 3-6 year olds so the Community Nutrition Worker could focus on the younger children and counselling of their caregivers.

Capacity building of functionaries and supportive supervision.

Capacity building takes on many forms including systematic training, skills development and supportive supervision. The integrated programs reviewed all enhanced the existing systems and supervisory roles.

Examples of effective training include:

- TINP - the institutional training of village workers is provided at the Block level as opposed to a more central level and an instructress is placed at the block level to provide on the job training to workers on a regular basis. Community Nutrition Instructress - responsible for entire block (80 centres) to provide on-spot training.
- ICDS III (WCD) TN -Study tours for AWWs were organized to improve skill sets (61% felt it improved their skills). Also conducted in Uttar Pradesh, Rajasthan, Maharashtra and Kerala.
- ICDS III – FREQI - Free expression for quality improvement (FREQI) - formation of quality circles to encourage better interaction among AWCs so that they could exchange notes freely, bring them to the notice of the supervisory staff and with their support achieve higher quality of service delivery. Provided opportunity to exchange ideas and thoughts and enhance knowledge on key nutrition and health issues.

Development of improved monitoring systems and tools.

An enhanced system to monitor process and progress has been developed and implemented in all programs. Some specific examples include:

- Annual Rapid Assessments used in the RACHNA program to understand status of key processes and outcomes for initiating necessary corrective actions and mini-RAPS conducted by service providers.
- Continuous social assessments conducted in the ICDS III (WCD) program
- The Dular Cell that operates at State level developed a monitoring system for the program

- Improvement of the MIS systems in all program areas

Development of community based monitoring tools was evident in all programs and include community growth charts, flower theme, simple stick drawing, the Dular card and the Mumta card used in Rajasthan.

Enhanced planning at all levels

Planning and/or micro-planning has been an important feature in the programs. Planning systems and tools were developed to support the programs. This included micro-planning with the health department.

Enhanced community participation

Community participation is one of the pillars of ICDS. Involvement of women's groups, local volunteers acting as change agents etc. has been instrumental.

- Village contact days have been implemented in Dular and ASAT at the start of the program in the village to mobilize the community.
- Community level volunteers have been an integral part of all programs. The regular individual counselling is time consuming and requires skills. Whether they are local resource groups, women's groups or an extra worker as in the case of TINP and the Sahyogini in ASAT, this is an essential component to bring about behaviour change. Currently ICDS with the AWW and AWH do not seem to have the time or skills to effectively provide this service.
- APERP successfully formed formalized mother's committees who have bank accounts for community funds.

Supportive structures at all levels – state, district, block, sector & village

The integrated programs all established additional supportive structures at all levels to enhance effectiveness and efficiency. Examples include:

- Dular has a task force at state level comprised of individuals with varying backgrounds with skills in the field of health, nutrition, media, monitoring, etc. This seems to have created momentum and commitment of the government as well as provided clear guidance to the program. There are also supportive structures at District and Block levels to ensure implementation and monitoring.
- RACHNA - CARE District Teams support and guide NGOs and ICDS/RCH staff on technical and operational aspects. CARE state and national teams, support District Teams in terms of technical and operational guidance.
- ASAT at the Block level has just initiated a Block Support Team. Their role is to assist the staff at the block and village level to implement the program. At the district level there is a District Mobile Monitoring Training Team to monitor progress and provide on the job guidance to village teams. A District Support Team (DST) has also been constituted to improve coordination between sectors, review overall progress, and ensure effective implementation across the district. A State Level Training and Monitoring Unit has been formed.
- APERP established a State project management unit to support the program.

Convergence with health – combined planning, training and use of fixed day strategy

This is an important feature in the integrated programs and is essential in effectively delivering services such as immunization, vitamin A supplementation, referrals, etc. This involves a whole range of activities including joint training, joint micro-planning, compatible messages and development of joint tools.

A practise that has improved performance is the establishment of regular occurring focused events. These are being implemented in many states and goes beyond just the integrated programmes reviewed in this section. There are two separate events: twice yearly and monthly fixed day strategies.

1) Twice yearly events Twice yearly events have been very successful in improving the delivery of services to ICDS beneficiaries. These events can include weighing of children, immunization, and vitamin A supplementation. States are now considering or have included the provision of deworming tablets which when delivered with vitamin A has shown to reduce child mortality in India.² Deworming tablets have demonstrated a reduction in diarrhoea episodes and there is some evidence to show positive impact on growth in India.³ In Nepal due to the nationwide outreach of the biannual deworming of preschool children linked with the vitamin A capsule distribution, there has been a drastic reduction in the overall prevalence of anaemia, from 78% in 1998 to 48% in 2006.⁴

Twelve states are now conducting these types of events. Data is available for 6 states comparing VAS coverage data from 2003/04 when most states were using routine delivery against coverage data from 2005/06 when the twice annual events were implemented. In 2003/04 the coverage ranged from 7% to 26% and after implementation of the twice annual events the coverage rate increased ranging from 44% to 75%, for two doses.

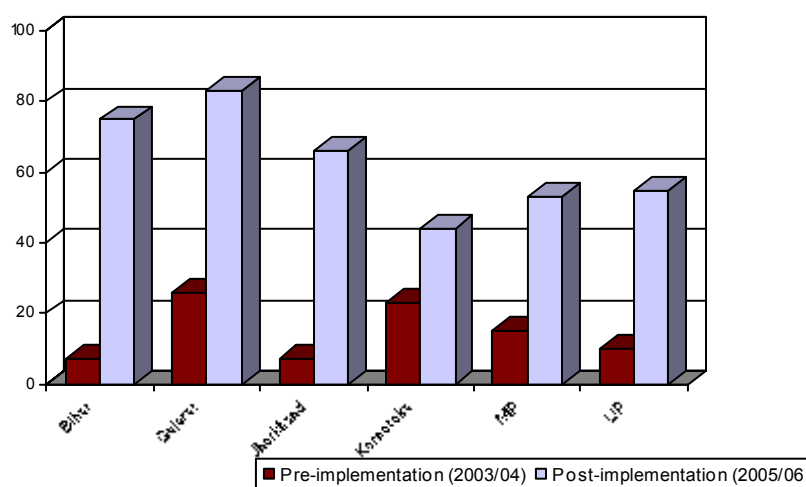


Figure 1: Change in VAS coverage (%) after implementation of twice annual events

These events require coordination between ICDS and Health. The joint training sessions have improved cooperation and skills development (Rajasthan is the exception where the VAS twice annual event is implemented through ICDS). In many states, extenders have been put in place by organizations such as MI and UNICEF, to assist with the coordination, implementation and monitoring of these events. An assessment regarding the impact of these extenders is to be conducted in the next year by MI.

² Awasthi S, Peto R, Bundy DAP, Read S, Kourivilla K and DEVTA Team, King George's Medical University, Lucknow, India and CTSU, University of Oxford, UK, Human Development Network, World Bank. Effect of deworming and enhanced vitamin A (DEVTA) administration on child mortality in north India.

³ Sur D, Saha DR, Manna B, Rajendran K, Bhattacharya SK. Periodic deworming with albendazole and its impact on growth status and diarrhoeal incidence among children in an urban slum of India. Transactions of the Royal Society of Tropical Medicine and Hygiene. Volume (Issue 4) P 261-7. April 2005.

⁴ UNICEF Nepal Report. 2006

Twice annual events have increased immunization coverage, iodized salt consumption and decreased malnutrition rates. Examples from UP and MP are described below.

Table 4: Examples of twice yearly events	
Description	Impact
Uttar Pradesh – In May and November implement Bal Swasthya Poshan Mah (BSPM). Special event focusing on vitamin A supplementation, appropriate infant and young child feeding practices, use of iodized salt etc. Initially launched in 18 districts by ICDS/Health and UNICEF in 2004.	<ul style="list-style-type: none"> ▪ The BSPM - there is a clear defined role between AWW and ANM, there are joint training sessions and there is a referral card system. ▪ This effort has resulted in positive change in coordination and cooperation between health and ICDS. UNICEF joint training in UP for vitamin A has been successful. ▪ Increase of vitamin coverage from 39% in 2004 to 64% in 2005 (4 rounds in the 18 districts). Immunization also increased from 60% to 82% (Medical College monitoring). Micro-plans for routine immunization also increased from 65% to 94.4%. Iodized salt consumption (promoted in the twice annual events) also increased from 6% in 2002/03 (RCH 2) to 43.5% (CES 2005/06).
Madhya Pradesh – Balsanjeevani. To reduce and prevent malnutrition amongst children under 5 years of age and improve vitamin A coverage. This was initiated in 2001 with support from UNICEF and MI (for VAS). It is a state-wide program implemented twice annually. Includes vitamin A, immunization, medical attention and counselling to parents of severely malnourished children.	<ul style="list-style-type: none"> ▪ Severe malnutrition decreased from 5.9% to 1.2%. Total prevalence of malnourished children decreased from 57.6% (2001) to 50.4% (2005). ▪ Strengths identified - extensive mapping of nutrition and health status, medical camps and follow-up of severely malnourished, state-wide adoption of IYCF guidelines, committed group of volunteers, strong inter-sectoral coordination.

2) Monthly fixed day health and nutrition strategy ICDS services are provided on a daily basis. However, to improve accessibility of services, ICDS and Health have implemented a monthly fixed day strategy when specific health and nutrition activities take place. This strategy has been implemented successfully in several states. An example from Rajasthan is presented below.

Table 5: Example of fixed day per month strategy	
Rajasthan - Mother and child health and nutrition days (MCHN) Days were formalized in 2004. Monday or Thursday in a month has been fixed as for MCHN day at AWC. Organized jointly by DWCD and Health. ANM provides immunization, conducts ANC and other activities. A four fold Jachha Bachha Raksha Card has been introduced.	<p>MCHN has improved complete immunization from 23% in 2003 to 49% in 2005 (Coverage Evaluation survey 2005).</p> <p>Results evident in MCHN days where ANM is present in 80% of the days (earlier it was 30%). Complete immunization has increased from 17% (NFHS 2) to 36% (field study findings); children receiving vitamin A has increased to 35%, % institutional delivery has increased from 25% (baseline) to 35% and complication during delivery is reported in 2% of cases instead of 6% at baseline. Child care and feeding practices have significantly improved, regular IFA consumption is up to 52%. (based on end line survey by IHMR).</p>

Figure 2: TINP I – Lessons Learned

- **Selectivity and Targeting** - limited range of interventions targeted to limited number of beneficiaries with clear entry and exit criteria. Supplementary nutrition was provided to children in Grade 3 and 4 malnutrition and those children faltering after 3 consecutive months. For 6-12 month olds feeding was initiated if a child failed to gain 300 g per month for 2 months. For children 12-36 months 4 months of failure to meet this criteria were required. All children in Grade 3 and 4 were fed double ration. Once begun feeding continued once per day for a minimum of 3 months or until age 36 months. If a child gained 500 g or more by that time feeding ceased other wise child was referred to a health sub centre.
- **Staffing and clearly defined job activities** – the CNW needed a minimum of grade 8 education level and she had a limited number of activities to perform.
- **Training and supervision** – Along with pre-service training, supervision and in-service training was a high priority. At the block level a Community Instructress was placed to provide on the job training. Also important was the ratio of supervisor to CNW which was 1:10 as opposed to the current ICDS norm of 1:20/25.
- **Monitoring** – timely, accurate data that was used by the CNWs and made available to the community and managers. However too much unnecessary information was collected.

Source: Heaver, Richard. HNP Discussion Paper – India's Tamil Nadu Nutrition Program: Lessons and Issues in Management and Capacity Development. November 2002.

3.3 Cost Estimates

The cost to provide a package of services for a year ranges from \$85 to \$287 per AWC per year above the regular ICDS budget.

Table 6: Cost estimates for integrated packages

Program	Cost Estimate (above regular ICDS budget)	Coverage
Positive Deviance (PD)	US \$85 per AWC per year	2.4 million
RACHNA	US \$148 per AWC per year	102 million
Dular	US \$273 to initiate and run AWC for 1 st year, US \$197 for recurring years.	8 million
Anchal Se Angan Tak (ASAT)	US \$295 to initiate and run AWC for 1 st year, US \$240 for recurring years.	6.6 million
ICDS III (WCD)	US \$287 million credit (estimate) - difficult to breakdown the cost per AWC per year	18.5 million with additional 6.6 million added in 2003
APERP	US \$74.5 million credit- difficult to breakdown the cost per AWC per year	11 million
Community Based Mother and Child Health and Nutrition (MCHN) Project	NA	1.3 million
Tamil Nadu Integrated Nutrition Program (TINP) 1	\$ 9.50 per beneficiary per year. Assumption that this includes all costs associated with the delivery of services (1988/89 figures)	9 million
Tamil Nadu Integrated Nutrition Program (TINP) 2	NA	11 million additional

Best Practices

With the information available, using the framework as a basis, we can conclude that four of the integrated packages can be considered best practices: ASAT, Dular, PD and RACHNA. These programs have been able to demonstrate effectiveness in reducing malnutrition with rigour (compared to control) and transferability, as expansion of the programs are already taking place.

In the MCHN program, significance was not tested. However, if the raw data is analysed it would probably show significant improvement in nutritional status. This program is being expanded within the state.

The APERP and ICDS III (WCD) programs were able to demonstrate reductions in malnutrition but not compared to a control group.

TINP's evaluations did not have controls. However, analysis has determined that at least half the reduction in malnutrition seen in the state in the 1990's was due to TINP. TINP has been carried on as ICDS in the state of Tamil Nadu.

4. Review of Improved ‘Supplementary Nutrition’ through ICDS

4.1 Impact of Improved Foods

ICDS generally provides cooked food for children 3-6 years of age at the AWC and take home rations for children under 3 years of age and for pregnant and lactating women. In the past, the system used mainly centrally processed foods. Increasingly, states have decentralized the procurement of foods to have it procured locally.

This review covers 6 innovations regarding foods used in ICDS. BP5 biscuits, used mainly during emergencies, did reduce severe malnutrition in children. The other fortification interventions have reported decreases in anaemia levels. All but Vita Shakti reported decreases in vitamin A deficiency (report indicated that concurrent supplementation was ongoing so impact was not found). Fortification of blended foods, as a centrally processed food, may not be an option as states are now decentralizing procurement to local level. However, some small initiatives have produced blended foods locally by SHGs.

Sprinkles™ has been able to demonstrate a 40 percentage point decrease in anaemia prevalence in children⁵. In India a pilot using Anuka in ICDS is being conducted in Rajasthan through ICDS with support from UNICEF and MI. This has potential in not only decreasing anemia prevalence in young children but decreasing malnutrition through appropriate age of introduction of complementary foods.

Table 7: Details regarding effectiveness of supplementary foods

Food	Impact on nutritional status	Target	Best Practice or Promising Practice?	Location and support
BP5 biscuits (Pilot)	Reduction in severely malnourished children by 47.7%	6-36 months		Orissa - WFP/DANIDA
Fortified Candies	Efficacy study reported a 50% reduction in anaemia (from 50% down to 23.5%) and VAD was reduced from 26.5% to 15.5%. Effectiveness study found decrease in anaemia prevalence (66.6% to 51.1%) and VAD from 26.5% to 15.5%.	24 – 72 months, PLW, adolescent girls	Best Practice	West Bengal, Bihar, Gujarat, Andhra Pradesh – MI
Fortification of blended foods	Decrease in VAD by 50% compared to 38% in control. >20% decline in anaemia prevalence compared to 15% decline in control	24 – 72 months	Best practice	4 states - WFP
Ready to eat food (extruded puffed rice)	In children VAD decreased from 33% to 9% in intervention district compared to decrease from 35% to 18% in control (significant difference). Night blindness in children decreased from 2.0% to 0.1% in intervention area compared to a decrease from 0.9% to 0.7% in control. Anaemia in women decreased from 83% to 73.5% in intervention area and in control the decrease was slight - 80.9% to 80.5%. No significant change in anaemia prevalence in children.	24 – 72 months	Best practice	Gujarat - MI
Vita Shakti (local fortification of khichdi)	Decrease in anaemia prevalence (19.1% to 4.1% vs. control 32.6 to 20.7%) and increase in iron stores (25.12 to 35.48 vs. control 25.7 to 22.9)	24-72 months	Best Practice	West Bengal - MI
Sprinkles/Anuka	Decreased anaemia prevalence from 72% to 30% in children 6-24 months.	6-24 months	Best Practice	West Bengal and also Anuka Pilot in Rajasthan

⁵ Anuka, a product similar to Sprinkles™ developed in India by the Micronutrient Initiative, has demonstrated operational feasibility in ICDS and acceptability. Its effectiveness is currently being tested in India.

4.2 Cost Estimates

The cost to provide improved foods to beneficiaries, for age 24 months and above, ranges from US 41 cents to US \$1.25 per beneficiary per year. The cost of Sprinkles is estimated to be US 89 cents to US \$1.14 per beneficiary per year (60 sachets every 6 months).

Table 8: Estimated cost of supplementary foods

Program	Cost Estimate (exchange rate - US\$ 1= Rs 44)	Coverage
Ready to eat food	Rs 18 per beneficiary per year (\$0.41) – cost of fortification only	350,000 (to be scaled up state wide for under 3's)
Vita Shakti (local fortification of khichdi)	Rs 20 per beneficiary per year (\$0.45)	1.2 million to be scaled up state-wide
Fortified blended foods	Rs 21 per beneficiary per year (for fortification) (\$0.47)	7.2 million
<i>Sprinkles/Anuka</i>	<i>Rs 40- 50 per beneficiary per year (\$0.91 – 1.14)</i>	<i>Pilot study</i>
Fortified Candies	Rs 55 per beneficiary per year (\$1.25) 20 Paise per candy with packaging	5 million
BP5 biscuits (pilot)	Rs 10.5 per child per day (\$0.24) – cost of biscuit only provided to severely malnourished children only	1,837

Cooked food vs. take home rations

The FOCUS study conducted in 2006 found that the probability of regular attendance at the centres was associated with 2 factors – whether cooked food is provided and the location of the centre.⁶ The probability of regular attendance is around 80% if cooked food is available and the centre is close. Cooked food instead of the ready to eat foods provided at the centre also decreases the chances of sharing and provides an opportunity to add local flavours and vegetables. Take home rations for children under three should clearly be referred to as baby food to try and prevent intra-household household sharing, such as the case in Rajasthan where it is called Babymix.

Preparation of food

The ICDS norm is for the AWH and/or the AWW to prepare the food at the AWC. In some instances community members participate in the process by either preparing and/or managing the process. For example, mother's committees/self help groups take an active role in the process of preparing the food so that the AWW/AWH can focus on other activities with the children. This has proven to be a valuable contribution to the ICDS program in many states. For example SHGs in Rajasthan also process and package Babymix as an income generating initiative.

Decentralizing procurement of food for ICDS

The 2006 published study by IFPRI⁷ found that the transition from imported procured supplementary food for ICDS to local domestic procurement has been successful. The report found that four models were being implemented. Procurement through: 1) local vendors, 2) self-help groups, 3) the Food Corporation of India and the state civil supply corporation, and 4) the Essential Commodity Supply Corporation. It was found that the most dominant model is procurement through local vendors. Procurement through self-help groups—consisting of 15 to 20 women—is a small pilot program that exists in some states. The groups purchase local food, process and package it, and distribute it to the AWCs to be given to beneficiaries. They receive payments from state government for supplying the food. In the third model, the Food Corporation of India and the state

⁶ FOCUS Report, Citizen's Initiative for the Rights of Children Under 6. New Delhi. 2006

⁷ Akhter U. Ahmed, Michelle Adato, and Shahidur Rashid. Food Aid Transition in India's ICDS Program in CARE-Supported Areas. International Food Policy Research Institute. Washington, D.C. 2006

Civil Supplies Corporation sells rice to ICDS at a subsidized price. The fourth model, also a pilot program is through the Essential Commodity Supply Corporation, a West Bengal public corporation, which procures rice and *dal* on the open market.

Best Practices

Of the improved 'supplementary nutrition' (foods) targeted to children 24 – 72 months, we can conclude that Vita Shakti, fortified candies, ready to eat foods and fortified blended foods are effective in reducing anaemia levels and VAD. The ready to eat food, vita shakti and blended fortified foods are the cheapest. All of these products have been adopted into ICDS programs in at least one or more states. These are deemed best practices.

Fortified blended foods and ready to eat foods have been successful and their effectiveness and transferability have been proven. The main issue is that as procurement of foods becomes decentralized, the scope for continuing them may be limited. However, there are programs where SHGs are producing, packaging and selling fortified blended foods, albeit at small scale. The successful expansion of these pilot programs has yet to be assessed.

It should be noted that the fortified candies can not replace the food provided at the AWC. It is an additional component that can be given to children over 24 months of age to improve micronutrient status and to increase attendance.

The age range of 6 to 24 months is critical as growth faltering begins at about 6 months of age when complementary foods should be provided to infants. Sprinkles and Anuka are products that focus on children 6-24 months and have the potential to become a best practice in the context of ICDS.

In terms of preparation of food, hot cooked meals at the AWC are preferable and involvement of local groups in the preparation leave the AWW to focus on other activities and can provide income generating opportunities for local women.

5. Review of Programs that Improve Pre-school Education (PSE)

Early Childhood Care and Education (ECCE) in India was initiated at large scale with the launch of ICDS in 1975. The Early Childhood Education (ECE) component was meant to be a significant input for the development of the child, focusing on ages 3-6. It was to contribute to the universalization of primary education by providing the child the necessary preparations for primary school. ECCE has been regarded the least preferred activity of the AWC due to various reasons, including: lack of training, lack of materials, lack of space and lack of time.

There is ample evidence of ECCE having a very positive impact on developmental indicators of children. The issue is how to most effectively implement the strategy within ICDS.

One of the main initiatives launched to improve ECCE has been convergence of the District Primary Education Program (DPEP) with ICDS, which was launched in 1994 as a pilot in 42 districts across seven states. DPEP is an initiative that encompasses both preschool education and primary school education.

One of the main objectives is to ensure school readiness of young children and increase enrolment of girls in primary school (often older siblings of young children cannot attend school due to caregiver responsibilities).

The initiative carries out the following activities:

- Locating AWC in premises of primary schools or in close proximity
- Extended timing of the AWC to coincide with timings of primary schools
- Opening of ECE centres in non-ICDS areas
- Provision of extra honorarium to AWW/AWH
- Training of AWW/AWH using training modules along NCERT model
- Provision of pre-school kits/teaching-learning material
- Provision of one time grant towards operational costs and annual grants to replenish materials
- Academic support and monitoring through DPEP
- Strengthening linkage of AWC with primary school
- Involvement of Village Education Committees (VEC) which include adolescent girls, especially in ECE centres through supply of materials, construction of centres etc.

5.1 Impact of Pre-school Education Programs

Five programs under DPEP III were reviewed to identify best practices. As these assessments did not include controls, best practices using the criteria followed for this review could not be identified.

The assessment for impact of the programs was based on qualitative measures focussing on the child's positive change in attitude and skills as perceived by the AWW, parents and teachers once they enrol in primary school. In all cases the DPEP programs achieved this objective. Another objective was to increase the enrolment of older siblings in the primary school - program reports indicate that this did occur. Two programs previous to the DPEP III (both based in UP) were also reviewed revealing that

moving AWC closer to schools benefits the older siblings going to schools and play materials enhance the learning of the child.

As with integrated nutrition packages to improve nutritional status, it is impossible to determine which aspects of the DPEP initiative were effective to bring about change. However, the following components can be highlighted:

- Movement of AWC close to the primary school seemed to improve attendance of older girl siblings and motivate the younger children. However a negative aspect was identified in one study: PLW and very young children were not availing AWC services as the schools are often located some distance away from the centre of the village. This may have had a negative impact on the nutritional objective of ICDS.
- Effective supervision, training on structured PSE activities and additional honorarium to AWWs seemed to motivate the worker to provide the service.
- Engagement of the Village Education Committee was effective in solving problems.
- Materials provided to the centres enhanced learning.
- One study highlighted a negative aspect – due to the structured times and efforts required, AWWs had little time to conduct their other tasks.

Table 9: Details regarding effectiveness of ECCE programs			
Program	Impact on child	Enabling Outcomes	Coverage
Bihar	There was an increase in numbers of children transitioning from preschool to school - increases from 17% in 2001 in respect to 22% in 2005; Improvement in cognitive skills. Reduction in the presence of sibling care on the girl child, presence of more girls in the centre.	All had received the induction training, half had received quarterly training and about two-thirds or more received the monthly one day training.	NA
Maharashtra	Positive changes in child	98% AWWs have received training on pre-school education with last training received about 3 months prior to review (71%).	NA
Rajasthan	70% of children from PSE go to primary school. 57% of teachers report that enrolment and retention in primary school has increased. Mothers of beneficiaries feel that the children are able to learn and gain knowledge; there is a change in personality. Teachers see a difference between those children who come from PSE and those who do not.	95% AWWs reported training through regular ICDS training. 73% felt needed more training.	NA
Uttar Pradesh	94% of children who went to AWC PSE are in primary school but 10% of the minorities dropped out. AWC did have a positive impact on the children	92% of AWWs have not received any PSE training specifically. Only half the AWCs had teaching aids	NA
Uttarkhand	Improvement in transition to 1st grade, increase in girls that go to school and stay. More structured planning and activities	Deemed to be high quality as reflected in the high competence of workers.	NA
Earlier Programs			
DPEP II – UP	<ul style="list-style-type: none"> ▪ Qualitative assessment on child development - children were randomly selected and asked to perform certain tasks. Children performed well on physical development, socio-motor development and cognitive development but aged 3 or more were poor in language, reading and writing while older children did better (no control). ▪ Increased attendance of girls in primary school as they can check on younger siblings as they are close by. ▪ Children cope better and perform better if come from ECCE as reported by teachers. Negative impact is that there is not enough food for children at the AWC due to increased attendance (even of older children) and the hours are too long for the younger kids.		
Shishu Shiksha Kendras (SSK) Scheme under the UP Basic Education Project	The play material had positive impact on children but there was minimal developmental learning, and no school readiness activities. In children that went to the NGO-focussed PSE the children readiness for school improved compared to children who did not go to PSE but not significantly (based on school readiness test). It was reported by teachers that children with PSE are better groomed, disciplined and participate more.		

Innovations regarding pre-school education were noted in other programs:

- Karnataka had implemented pre-schools before ICDS was envisioned. When ICDS was implemented in the state, an NGO trained a third worker (additional worker to the AWW in place) in joyful learning and placed these additional workers in the AWC. This additional worker's job was to focus on the children 3-6 years of age. Specific and structured weekly activities were organized which included using creative low cost materials.
- An NGO (SEWA) has opened crèches for young children and also found that placing them near schools had positive impact on older siblings going to school and the younger children feeling comfortable about going to school.
- The Toy Bank Initiative in Gujarat is an example of how the community engages in pre-schools by providing toys for the children.
- There have been strong advocates for delinking ECE from AWC as taken up by some NGOs in UP and as seen in a scheme in MP. This allows the AWW to concentrate on other tasks. The older child benefits from the ECE component with a noon meal provided to them from the school program.
- The NGO Mobile Creches uses *Prakalp*, an innovative, theme-based education methodology, perfected over the years. Under *Prakalp*, a common theme is chosen and everything, be it language, math, science or hygiene - is taught by touching upon this topic. Festivals, environment, birds, fruits, marine life, post office and the earth are some of the themes that have enriched the learning process of our children. For quality, teachers are trained and teaching aids are generated across centres on planned themes, which are later compiled into teaching kits. A colourful example of this is Phulvari, the culmination of the "Plants and Trees" theme. A recent study confirmed that developmental skills improved.
- An NGO Pratham in Pune trained members in slum communities to teach basic skills of reading and number recognition to children 4.5 to 5 years for one hour a day in the local AWC for 9 months. The aim was to introduce formal education in an informal manner to prepare them for school. Learning materials were provided to the AWC. 4,400 children participated. Attendance increased due to this initiative and parents became involved. Pre intervention 96% of children could not read at all and post intervention 93% were reading simple sentences.⁸

Best Practices

The DPEP III program has been effective in increasing the enrolment of children into schools, enabling older girl siblings to go to school and preparing children to go to school. The program has also been successful in improving the skills of the workers and the environment of the centre. However, full statistical sampling and study design rigour using a control when assessing the impacts has not been shown.

The programs reviewed indicated that success is dependent on the following factors:

- One worker dedicated to pre-school education
- Appropriate training for these workers
- Environment conducive for learning – availability of learning toys, adequate and pleasant place to learn (indoor and outdoor space, etc)
- Structured time table of activities
- Community involvement

⁸ FOCUS Report, Citizen's Initiative for the Rights of Children Under 6. New Delhi. 2006

6. Potentially Relevant Practices/Processes

During the process of reviewing documents, some relevant innovations and/or processes were identified. These innovations had not been rigorously assessed as per the criteria for this review, however they are noteworthy.

6.1 Training of Functionaries

Training of functionaries is a fundamental element of program performance. Training is an integral part of ICDS. ICDS has over 400 AW Training Centres (AWTCs) in the country. AWWs are trained in a phase wise manner, initially receiving 2 months basic job training, followed by 4 months field training and 1 month training at the AWTC. Refresher training is provided after 1.5 years. Systematic training is provided for the AWH and higher level functionaries as well. Joint training sessions between ICDS and Health are also organized.

UDISHA was a component of ICDS III which aimed to improve the quality of ICDS services in the country by providing improved training of ICDS functionaries; strengthening training centres; developing of training materials. The main focus was to eliminate the backlog of job and refresher training. By the end of the project the backlog was cleared. Under UDISHA several innovations were made in states including training through mobile teams and short duration induction trainings.

There have been various examples of innovations to improve the training provided to ICDS functionaries, in particular the AWW and AWH. In Rajasthan, a systematic training program, model AWCs and mobile training teams conducted by trainers at the job site have improved the skills and knowledge of functionaries. In Karnataka training was conducted at the Block level to reduce the backlog of refresher trainings. Satellite-based training has been conducted to improve efficiency. In MP, a resource centre for functionaries has recently been opened to improve the skills and knowledge of workers.

Table 10: Examples of innovations in training

Initiative	Purpose	Impact
Overall system improvement		
Systematic training method in Rajasthan.	To Improve skills a training strategy was developed. Use of master trainers, training of all functionaries, training on the job, demonstration at actual workplace - systematic and detailed.	Clarity by AWW and AWH about their job. learned social mapping and filling out registers has improved, learned about PSE activities and are using the skills, more confident about IYCF, immunization and vitamin A and can coordinate successfully with ANM and PRI especially during MCHN days.
Model AWC – Rajasthan	To improve skills of AWWs that had a all items required and functioned with a trained AWW, had adequate space, etc.	Other AWCs in the area have been influenced. Now the AWC has become the centre of community activities and other meetings are taking place. Preliminary data indicates that in terms of immunization, ANC and nutritional status, model AWC (records at centres) have been able to improve results compared to non-MAWC (records at centres) and baseline (state averages).
Rajasthan - Training at AWCs - a new approach. Mobile training teams. 2005	Training of AWW/AWH through mobile training teams. Teams of master trainers were formed and trainings organized at AWCs. The trainees stayed at AWC for 3 days. 1st day they observed the AWW, the 2nd day they demonstrated how each activity can be improved and 3rd day the AWW performs the activities as per guidance.	Perception is that there has been an increase in the skills of AWW and brought new activities. 500 AWWs have been provided with training.
Karnataka training	To provide training quickly in order to clear backlog of refresher training for AWWs. Refresher training was provided at their own districts (usually done at AWTC -	Backlog was eliminated

Initiative	Purpose	Impact
Overall system improvement		
	600 around the country) by District Core Training Teams (Assistant Director, MO, CDPO and an instructor of an AW training centre and one supervisor)	
Satellite based training (SABICOM) 1997	To provide training without bringing everyone to one centre - training using satellite.	Decrease in backlog
Madhya Pradesh - District-level model resource centre. WFP, NIPCCD, DWCD, Government. 2005	To improve quality of nutrition and health education in the field. By opening a resource centre of AWW and other functionaries. To date a coordinator for the centre has been put in place.	Assessment not conducted yet. Has been operationalized recently.

6.2 Monitoring Tools

Household monitoring of the services received and the outcomes of those services is a necessary aspect of ICDS. This helps the AWW to focus on those that need assistance and creates a sense of ownership by the beneficiaries. There have been many innovative ways of monitoring services at the individual level. These include the Flower theme used in MP, the stick figure used in Orissa, the Dular card used in Bihar and the Mamta Card used in Rajasthan (the last two examples have been integrated into the new ICDS mother child protection card that is being rolled out for all states).

Community level monitoring tools have also been adopted in many states. The use of community growth charts on the walls of AWCs and community/resource maps have been felt to be effective in raising awareness and monitoring of children.

Table 11: Examples of Individual Monitoring Tools		
Innovation	Description	Impact
Madhya Pradesh - Flower theme in Panna District. To effectively monitor malnutrition and vitamin A. For use by AWW targeting children under 5 years of age	Before the twice annual weighing and vitamin A rounds (Bal Sanjeevani) a house to house survey is conducted by the AWW in preparation. During that time she draws a flower with 4 petals on each and every house in the village. Each petal of the flower indicates a specific age group. The centre of the flower is the house number. At the time of the survey she will mark a dot in the petal as per sex and age of the child. Each dot will depict the number of children. On the Bal Sanjeevani day every child under 5 is weighed and graded, accordingly, she will draw the grade on the flower. Vitamin A supplementation will also be marked on the flower as a checkmark.	Impact study based on FGDs in 2006 - each family gets at least 2 contacts with health and nutrition teams, ensured delivery of services, involvement of community and analysis by them, easy and accurate and can be used by other departments, cost effective as locally available geru is used for painting which costs Rs 3-4 per kg, scheme has been adopted by 6 other districts. Limitations - whitewashing of houses prevents use for long period of time.
Other example: Orissa uses colour coding data to visually assess malnutrition by functionaries, uses mascot (stick figure) for household monitoring and uses community level resource mapping and community level growth chart		

6.3 Community Participation

The success of ICDS has always been dependent on effective community participation. Community participation can take various forms: private sector, women's groups, adolescent groups, elected local body (PRI), and beneficiaries themselves.

There have been many examples where community partnerships have been successful in raising awareness and effective in providing services.

- Contributions by beneficiaries: In Maharashtra, beneficiaries themselves contributed fixed amount of funds monthly for the upkeep of the AWC. This has resulted in materials being made available for cooking purposes play materials.

- Women's groups: In Rajasthan, the Mata Samitis have assisted the AWW by supervising the making of food, allowing the AWW to focus on other activities. In AP, the mothers' committees became formalized and were effective as change agents in health and nutrition issues.
- Village level monitoring committees in TN are active in overseeing the centres which has resulted in problems being solved.
- Private sector partnership in TN was used to promote centres through a company adopting a centre.

Table 12: Examples of Community Participation

<p>Tamil Nadu Involvement of the private sector in adopting villages for creating model villages. For example, have the private sector promote a "Child welfare centre" as was done in Ramanathapuram District. Also participation of parents can be helpful - parents contribute Rs 25 per month per child to improve the centre. This has resulted in the child willingness to play and learn in the centre.</p> <p>Village Level Monitoring Committee (VLMC) was set up by ICDS to help in the effective functioning of the ICDS. The committee comprises of the AWW and the community. The study was composed of 630 samples from two districts consisting of 300 VLMC members, 300 beneficiaries and 30 AWWs. They were randomly selected from 15 villages in each district. The study revealed that the VLMC was helpful to solve problems, they are committed, monthly meetings were conducted, the committee had on average 13-15 members and the majority helped weigh children.</p>
<p>Maharashtra Local initiative by Zilla Parishad. Local contributions from village committee. One ZP collects 3 Rs/month per child from parents. To date have collected Rs 65.3 lakhs from 2000 to 2004 spent on registers, pressure cookers, furniture, toys, growth charts. Scheme for adopting malnourished children by government employees.</p>
<p>Rajasthan Hot cooked food - Mothers' Samitis - started in 2005 - the Mothers' samitis are constituted to supervise meal preparation and distribution - also may help AWH in preparation. This allows for AWW to focus on other issues and increases community participation. Dalia and khichdi are given on alternate days. This new food has increased attendance. Food is given in the morning and then at noon. Self Help Groups - microfinance - started in 2005 is to have SHG become partners in ICDS activities.</p>
<p>Andhra Pradesh To build community participation - in 1998 AP started establishing mothers' committees in villages with ICDS. Group of 8 women. These are part of ICDS guidelines but these committees in AP are registered to enhance legitimacy and accountability. Training is provided in week long 3 sessions on health, nutrition, economic development etc. They have now been trained as change agents in the promotion of HIV awareness and healthy sexual attitudes and behaviours.</p>

6.4 Motivating Workers

Motivation of ground level staff maintains their commitment to their work. Motivation can be brought about in various ways: training, supportive supervision, and incentives.

Based on the reports reviewed, the following innovations were suggested:

- Provide tokens to mothers of eligible children and to PLW and adolescent girls - one token for each unit of service to be delivered. When service is obtained a token is handed over to the AWW. The AWW could be paid in accordance to the number of tokens. This could also be used for higher level worker (George Kent. ICDS and Right to Food. Economic and Political Weekly. November 11, 2006)
- Kerala - Grading AWW to improve performance and grading of AWC by prescribed criteria. Creation of citizens' charter for Anganwadi - transparent, improves service delivery, accountability, maintaining standards.

7. Conclusions

This quantitative review used very strict criteria in determining best practices: effectiveness at impact level (change in nutritional status) demonstrated using a control; transferability demonstrated by expansion of the practice/innovation; and, relatively large scale implementation. The conclusions are the following:

- There is an overwhelming amount of information on innovations and practices regarding ICDS.
- There are very few innovations/practices that have rigorously tested impact level outcomes (such as nutritional status) using a control.
- The innovations/practices that have used this rigour have found relatively modest reductions in malnutrition.
- The criteria used in this review have limitations. They exclude potential useful information as demonstrated by qualitative measures and useful studies that look at outcome level results.

7.1 Recommended Immediate Next Steps

Through the review process, the following are recommended as immediate next steps:

- Review of outcome level quantitative results within the ICDS program framework.
- Review of qualitative results thereby broadening the methodology used in this review.
- Review of the information gathered through the routine ICDS MIS system to identify best practices.
- Support further operational research to unwrap the integrated packages to document details on the “HOW”.
- Organize a process to gather information on best practices from NGOs.
- Organize state visits for two purposes: 1) to present the findings of this report; and 2) to further gather information on best practices.

7.2 Recommendations on Documenting & Disseminating Information on ‘Best Practices’

Best practices were identified in the areas of integrated packages, ‘supplementary nutrition’ and in specific activities such as regularly occurring focussed events. In the process of conducting this review, it has become apparent that there are many innovations in ICDS that have not been documented, or have been documented but not assessed.

To continue with the process of gathering, assessing and disseminating information on best practices the following is recommended:

- Encourage government/organizations to assess the impact of their intervention models with sufficiently robust research methods which will allow useful conclusions to be drawn.
- Capacity building in the areas of operations research methodology is crucial to be able to determine best practices.
- Encourage government/organizations to follow-up with assessing the innovations/practices identified to determine if they are best practices.
- Develop an information database to house best practices linked to ICDS that can be available on-line. USAID is planning on establishing a National Resource Centre and has offered to house a database for ICDS best practices including programmes, processes and tools.

- Initiate and maintain a web-based forum where new best practices can be identified through peer review. Criteria will be set and a coding system will be established. Key partners/institutes along with government will review entries based on the criteria agreed upon.
- Organize an annual contest that would award innovative best practices linked to ICDS.
- An annual review of ICDS used to take place. This has not occurred in the past few years. This forum is now being revitalized and is headed by NIPCCD. The reviews will be conducted by a third party. There may be limited funds available for this important exercise and therefore it is suggested that the WB consider supporting this initiative.
- State level resource centres are also being established that can play an important role in gathering best practices and disseminating information.

7.3 Some Suggested Research Questions

Through the consultation process, research questions were formed that may be useful to investigate:

- The target of ICDS is to reach the poorest of the poor households. Is ICDS succeeding?
- How can accountability at all levels in ICDS be strengthened?
- How can leadership be instilled in ICDS?
- What does it take to make services predictable in ICDS?

Annex A: List of Organizations Contacted

All India Institute of Medical Sciences, New Delhi
Baroda Medical College, Gujarat
Bhavishya Alliance, Navi Mumbai
CARE India, New Delhi
Christian Children's Fund (CCF) – India, Program Office, New Delhi
Child in Need Institute, Kolkata
DFID India, British High Commission, New Delhi
Global Alliance for Improved Nutrition (GAIN), New Delhi
Government of Andhra Pradesh, Department of Women Development, Child Welfare, Hyderabad
Government of Bihar, DWCD, Patna
Government of Chhatisgarh, WCD, Raipur
Government of Delhi, Social Welfare, New Delhi
Government of Gujarat, Women & Child Development Department, Gandhinagar
Government of Haryana, Social Welfare Department, Chandigarh
Government of Himachal Pradesh, Directorate of Social Justice & Empowerment, Shimla
Government of India, Department of Women & Child Development, New Delhi
Government of Jharkhand, Deptt. of Social Welfare, Women & Child Devt., Ranchi
Government of Karnataka, Women and Child Development, Bangalore
Government of Kerala, Social Welfare Department, Government Secretariat, Kerala.
Government of Madhya Pradesh, DWCD, Bhopal
Government of Maharashtra, ICDS Scheme, Navi Mumbai
Government of Orissa, Women & Child Development Department, Bhubaneswar
Government of Rajasthan, DWCD, Jaipur
Government of Tamilnadu Social Welfare & Nutritious Meal Programme, , Chennai
Government of U.P., Women & Child Development, Lucknow.
Government of Uttarakhand, Women Empowerment & Child Development, Uttarakhand
Government of West Bengal, Department of Women & Child Development & Social Welfare, Kolkata
GTZ India & Bhutan, New Delhi
Indian Council for Control of Iodine Deficiency Disorders (ICCIDD), New Delhi
Indian Council of Medical Research, New Delhi
Japan International Cooperation Agency, New Delhi
Micronutrient Initiative
MS Swaminathan Research Foundation, Chennai
M. S. University of Baroda, Gujarat
National Institute of Nutrition, Hyderabad
National Institute of Public Cooperation & Child, New Delhi
National Social Science Documentation Centre (NASSDC), New Delhi
Nutrition Foundation of India, New Delhi
PATH India, New Delhi
UNDP, New Delhi
UNFPA, New Delhi
UNICEF, New Delhi
USAID, New Delhi
Voluntary Health Association of India, New Delhi
World Bank, New Delhi
World Food Programme, New Delhi
World Health Organization, New Delhi

Annex B: List of documents reviewed

LIST OF DOCUMENTS FOR BIBLIOGRAPHY					
SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
National Institute of Public Cooperation & Child Development (NIPCCD), New Delhi	1		Search results on Micronutrient		
	2		Meghalaya - convergence of services in ICDS projects with the different departments of the government and the community		
	3		ICDS implementation in Maharashtra		
	4	DWCD	ICDS, DWCD, Ministry of HRD, GOI	DWCD	
	5	The Pragma Corporation	USAID support to India, ICDS - Innovative approach to Enhance Services	USAID	2004
	6	EPW	EPW on ICDS (Aug25-Sept-1, 2006) Vol. XLI No. 34	EPW	2006
	7	NIPCCD	Research Abstracts on ICDS 1995-2002	NIPCCD	2005
	8	NIPCCD	Three Decades of ICDS - an appraisal (NIPCCD)	NIPCCD	2006
	9	Selina Chaubey	Catch Them Young- The Tamil Nadu Integrated Nutrition Project: Taking Nutrition and Health Services to the Villages	World Bank	1998
	10		Effectiveness of Health & Nutrition Education Through Home Visits as a Strategy: A Study		
	11		A Social Audit of ICDS in the State of Uttar Pradesh- A study by the FORCES		
	12		Factors Influencing Role Performance of Anganwadi Workers - A Study in Himachal Pradesh and Rajasthan		
	13		Process and outcome documentation study of the young child (0-6 years) of the urban disadvantaged in Patna		
	14		Strengthening Quality & Access to Services in ICDS Programme : A Social Assessment		
	15		ICDS in Meghalaya - An Evaluation - A Report - National Institute of Public Cooperation & Child Development, Guwahati		
	16		Developing and Testing Effectiveness of educational intervention on health and nutrition for promoting cognitive learning of anganwadi workers - by Variner Randhawa (Dissertation) - Deptt. Of Home Science Education & Extension, Ludhiana		
CARE INDIA, New Delhi	1	RACHNA - Care	RACHNA Program 2001-2006 - Summary of approaches and results, January 2007	Care & USAID	2007
	2	RACHNA - Care	Tools for strengthening program implementation, RACHNA Program, January, 2007	Care & USAID	2007
	3	CARE	Strengthening a package of Essential Nutrition Actions in ICDS and RCH Programs	Care & USAID	2005
	4	RACHNA - Care	Reflections on a journey RACHNA midway, November, 2004	Care & USAID	2004
	5	CARE	Reproductive and Child Health, Nutrition and HIV/AIDS Program (RACHNA) Final Evaluation, June 2006 and CARE's response	Care & USAID	2006
	6	RACHNA - Care	CARE India's Response to the RACHNA Final Evaluation Report 11 July, 2006	CARE	2006
	7	CARE	Working paper : Engaging communities and community volunteers for improved health and nutrition outcomes	CARE	2007
	8	RACHNA - Care	Working paper : Widening Coverage of primary immunization	CARE	
	9	RACHNA - Care	Evaluation Research of the Nutrition Interventions in the Integrated Nutrition and Health Program (INHP) II Area of CARE India, Draft Report 2006	CARE	2006
	10	CARE	Operational Guidebook - Baby Friendly Community Initiative (BFCI)	Care & USAID	
	11	CARE	A Movement Towards Hope	Care & USAID	2006
	12	CARE	Making it Happen	Care & USAID	2006
	13	RACHNA - Care	A Cost Analysis of CARE/India's Reproductive and Child Health, Nutrition and HIV/AIDS (Rachna) Program	CARE	2006

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SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
	14	RACHNA - Care	Working Paper : Enhancing New Born Care	CARE	
	15	RACHNA - Care	Are existing systems capable of delivering better nutritional outcomes in children? Lessons from the Reproductive and Child Health Nutrition and HIV/AIDS (RACHNA) Program, CARE India	CARE	
	16	RACHNA - Care	Rachna II Interventions and Improvements in Nutritional Status: An Analysis from Orissa Panel District for Infants 6-11 months of Age	CARE	
Child In Need Institute (CINI)	1	CINI	Early Childhood Stimulation Feb-2007	CINI	2007
	2	CINI	LBW & Positive Deviance - Final Report	CINI	2003
	3	CINI	Pilot Project : Community Based Early Childhood Stimulation (Rural and Urban Intervention)	CINI	
	4	CINI	Accelerating Reduction of Low Birth Weight and Malnutrition using a Life-Cycle and Community-Based Approach	CINI	2003
	5	CINI	Integrated Health and Nutrition Project Developing Demonstration Sites	CARE	
	6	CINI	Sastho O Pushti Sachetanata Shibir	CARE	2005
	7	CINI	Positive Deviance in early childhood care	CINI	
ICDS Dept., Gandhinagar, Govt. of Gujarat	1	ORG Center for Social Research	Conducting Baseline Survey to assess the acceptability of weaning food among children aged 6-36 months in selected five districts of Gujarat - A Final Report	ICDS, Gandhinagar	2005
ICDS Dept., Bihar	1		Overcoming Malnutrition with Dular		
	2		Presentation on ICDS, Bihar		
	3		Recent initiatives by ICDS, Bihar		
Deptt. of PSM, Government Medical College, Vadodara, Gujarat	1	K.D.Bhalani, P.V.Kotecha, GMC, Vadodara	Nutritional Status and Gender differences in the Children of Less than 5 years of age attending ICDS Anganwadis in Vadodara City, Gujarat	Indian Journal of Community Medicine Vol. XXVII, No.3	2002
	2	GMC Vadodara	How Anemic are ICDS Anganwadi Workers? And Socio - Demographic Factors Affecting Anemia in Rural Area		
	3	GMC Vadodara	Baseline Study Report 2002 on RTE with MI's support		
	4	GMC Vadodara	Baseline Study Report 2002 on RTE with MI's support		
	5	GMC Vadodara	Micronutrient Deficiency in Panchmahal and Vadodara Districts a Baseline Study	Deptt. Of Health & Family Welfare, GoG and MI	2002
	6	GMC Vadodara	Impact Evaluation of Intervention under Micronutrient Initiative Project Gujarat State	Deptt. Of Health & Family Welfare, GoG and MI	2004
UNICEF	1	Unicef	Aanchal Se Aangan Tak, Community Based Integrated Nutrition Strategy - Rajasthan	Unicef	2007
	2	ORG Center for Social Research	Community Based Maternal & Child Health Nutrition (MCHN) Project Evaluation Report - U.P.	Unicef	2006
	3	Unicef	Dular : Review - Bihar		
	4	Unicef	Positive Deviance - West Bengal		
	5	Unicef	National Consultation of Satte WCD Ministers & Secretaries on ICDS Universalisation with Quality - A Report	Unicef	2005
	6	Unicef	Dular : An Integrated Community Based Child Development and Nutrition Project Bihar & Jharkhand, India	Unicef	2007
Micronutrient Initiative	1		Impact Evaluation of Fortified RTE in Gujarat		
	2	AIIMS	Effect of consumption of iron and Vitamin-A fortified candies on the iron status of children aged 3-6 years in Rural Haryana, North India	MI	2005
	3	CINI	Distribution of Fortified Candy in ICDS - A Pilot Project, Howrah, West Bengal	MI	
	4	Jessica Blankenship, Friedman School of Nutrition Science and Policy, Tufts	Micronutrient Initiative Final Report - Local Fortification of Khichdi with Microencapsulated Ferrous Fumarate, Vitamin A, and Folic Acid in Children aged 3-5-1/2 years in West Bengal: A cluster Randomized, Double Blind, Controlled Trial	MI	2006

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SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
		University			
	5	CINI	Wheat Flour Fortification - A Pilot Project, Darjiling, West Bengal	MI	
	6		Review of Micronutrient Initiative - Adolescent Girls Anemia Project		
USAID	1	Vikas Bharti Bishunpur	Draft Final Report Phase 1 Of The Anemia Programme For Five Blocks Of Gumla District, Jharkhand By Vikas Bharti Bishunpur, Government Of Jharkhand	Vikas Bharti Bishunpur	2005
WORLD FOOD PROGRAMME	1	WFP	An initiative for adolescent girls development : WFP initiative for building life skills and understanding reproductive health and HIV issues.	WFP	
	2	WFP	Improving nutritional status of severely malnourished children in Orissa : WFP support through comprehensive nutrition and health care	WFP	
	3	WFP	Improving nutritional status through enriched supplementary nutrition : WFP support for fortification	WFP	
	4	WFP	District Level Model Resource Centre : WFP support for strengthening the NHED capacity building initiative	WFP	
	5	WFP	Community Entrepreneurship for production and complementary food - Jhabua final success story	WFP	
Govt. of M.P.	1	Govt. of M.P.	Community involvement for Household monitoring and follow up of Nutritional Status of children along with Vit-A Supplementation during BalSanjeevni.	Govt. of MP	
Ministry of Women and Child Development. Government of India	1	World Bank	India's Undernourished Children- A Call for Reform & Action-2005	World Bank	2005
	2	World Bank	Reaching out to the Child - An integrated approach to child development	Oxford	2004
	3	World Bank	India's Undernourished Children - A Call for Reform & Action	World Bank	2006
	4		Early Childhood Development - Programmes in Karnataka (Executive Summary)		
	5	DWCD, Govt. of Maharashtra	National Workshop on State Specific IEC & Innovative Activities under the World Bank Assisted ICDS-III/Udhisha Projects - Maharashtra	World Bank	2005
	6	YASHADA, Pune	State Level Consultation cum Workshop on ICDS - RCH Convergence - Maharashtra	RCH, DWCD, Mission & Unicef	2005
	7	Indian Institute of Health Management Research	Study on Efficacy of Preschool Activity in Anganwadi Centres and its Relevance in view of DPEP at Rajiv Gandhi Sawarn Jayanty Pathshala etc. - IIHMR, Jaipur	Indian Institute of Health Management Research	
	8	Indian Institute of Health Management Research	A Study on Assessment of Local Child bearing and Child Care Practices Under World Bank Supported ICDS-III Project - IIHMR, Jaipur	Indian Institute of Health Management Research	2004
	9	Indian Institute of Health Management Research	Concurrent Social Assessment under ICDS III Project, Rajasthan, IIHMR, Jaipur	Indian Institute of Health Management Research	
	10	Academy of Management Studies	Continuous Social Assessment (CSA) of Various Interventions under the ICDS Programme in U.P. - AMS	Academy of Management Studies	
	11	Academy of Management Studies	Study on Distribution of Supplementary Nutrition under the ICDS Programme - AMS	Academy of Management Studies	
	12	Academy of Management Studies	Evaluation Study of Pre-School Activity of AWCs under Convergence Mode with the District Primary Education Programme - AMS	Academy of Management Studies	
	13	Academy of Management Studies	Strengthening the Health Service Delivery System at the Anganwadi Centres under the ICDS Programme in U.P. - AMS	Academy of Management Studies	

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SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
	14	Academy of Management Studies	Communication Need Assessment (CAN) under the ICDS III Project in U.P. - AMS	Academy of Management Studies	
	15	Institute of Management in Government Thiruvananthapuram	Social Assessment of Integrated Child Development Services (ICDS) Projects in Kerala, DSW, GoKerala, June 2005	Institute of Management in Government Thiruvananthapuram	2005
	16	ORG Center for Social Research	Consultancy for "Continuous Social Assessment" (CSA) Final Report - ORG Marg	ORG Center for Social Research	2005
	17	Vimarsh	Study on Prevalence of Anaemia among Adolescent Girls with Focus on Food Habits and availability of Iron Rich Dietary Sources in Tribal Blocks of Maharashtra - Vimarsh	Vimarsh	
	18	Vimarsh	A Study on Acceptance and needs assessment study of ICDS III project for under three children by the community in tribal, rural and urban blocks of Maharashtra - Vimarsh	Vimarsh	
	19	Vimarsh	Study on Existing System of Distribution of supplementary nutrition its quality, acceptability and need for alternative cost effective system in World Bank assisted ICDS - III Project in Maharashtra – Vimarsh	Vimarsh	
	20	Vimarsh	Study on Knowledge, Attitude and Practice of child Rearing and Development among parents of 0-3 years old children for a communications strategy – Vimarsh		
	21	Vimarsh	Study on Malnutrition Deaths in Tribal Districts under the WB assisted ICDS-III Project in Maharashtra - Vimarsh		
	22		Study on An Evaluation of Pre School Activity of AWCs under convergence mode with primary education programme in WB assisted ICDS-III Project in Maharashtra - Vimarsh		
	23	Vimarsh	Study on Strengthening the existing health service delivery system under the WB assisted ICDS - III Project in Maharashtra - Vimarsh		
	24		Need Assessment study of under 3 children - CSES, Kochi		
	25		Assessment of efficacy of IFA supplementation - Final Report of CNEFS		
	26		Supplementary Feeding in ICDS - Final Report - Loyola College, Trivandrum		
	27	Society for Action Vision and Enterprise	Evaluation of the ECCE Programme in DPEP Districts of Uttaranchal	Society for Action Vision and Enterprise	2004
	28	Health, Environment, Agriculture and Village Education Network (HEAVEN)	A comparison of Primary School Performance between Anganwadi and Non-Anganwadi children and potential for convergence between ICDS and School Education (Primary School) Department	Health, Environment, Agriculture and Village Education Network (HEAVEN)	2005
	29	Taylor Nelson Sofres Mode	IEC & Communication Activities & Community Perception of ICDS Programme	Taylor Nelson Sofres Mode	2003
	30	Population Research Centre, The Gandhigram Institute of Rural Health & Family Welfare Trust, Tamil Nadu	Local versus Non-local Anganwadi Personnel Assessment of Status and Potential Promotion of Localisation	Population Research Centre, The Gandhigram Institute of Rural Health & Family Welfare Trust, Tamil Nadu	2004-05
	31	Ramana Research Group, Chennai	Motivational Analysis of Service Providers and Functionaries- Aspirations, Strengths, Future Vision and Potential	Ramana Research Group, Chennai	2005
	32	Tata Economic Consultancy Services, Chennai	Study: Assessment of Health Services under ICDS - Identifying areas for strengthening and better convergence	Tata Economic Consultancy Services, Chennai	2004

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SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
	33	Faculty of Home Science, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	Study on Evaluation of Village Level Management Committees	Faculty of Home Science, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	
	34	Centre for Population Studies, Annamalaiagar, Tamilnadu	Study on Convergence of Anganwadi Centres with Women's Group - Present Status and Potentials in Tamil Nadu	Centre for Population Studies, Annamalaiagar, Tamilnadu	
	35	Department of Human Development, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	Adolescent Girls Training - Impact on self-development, Nutritional Status and Behavioural Changes - Influences, Their Aims, Aspirations and Potential with Reference to Orientation Training on Health and Nutrition and Workshop on Family Life Education	Department of Human Development, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	
	36	Indian Institute of Health Management Research	Continuous Social Assessment Study in Five Districts of Tamilnadu	Indian Institute of Health Management Research	2004-05
	37	Richard Heaver	Improving Nutrition - Issues in Management and Capacity Development		2002
	38	World Bank	Improving Child Nutrition Outcomes in India	World Bank	2005
	39	World Bank	Impact Evaluation Report India - Tamil Nadu Integrated Nutrition Project (Credit 1003-IN)	World Bank	1994
	40	World Bank	Tamil Nadu and Child Nutrition - A New Assessment	World Bank	1995
	41	Richard Heaver	India's Tamil Nadu Nutrition Program - Lessons and Issues in Management and Capacity Development	World Bank	2002
	42	Richard Heaver	Improving Family Planning Health, and Nutrition Outreach in India	World Bank	1989
	43	World Bank	Implementation completion report on a credit in the amount of SDR 52.4 (US\$ 74.5 million equivalent) to the Government of Andhra Pradesh for the Nutrition/ICDS component of the Andhra Pradesh Economic Restructuring Project	World Bank	October 2006
	44		Implementation Completion Report of World Bank assisted ICDS-III/WCD Project – Borrower's (Government of India) Evaluation Report		December 2006
	45	World Bank	Kerala ELS Report - Chapter 11 Impact of ICDS on Malnutrition		
	46	World Bank	UP ELS Report - Chapter 11 Impact of ICDS on Malnutrition		
	47	Agricultural Finance Corporation Ltd., Mumbai	Endline Survey of World Bank Assisted ICDS III, Maharashtra. Chapter 11 – Impact of ICDS III		
	48	World Bank	Rajasthan ELS Survey – Chapter 11 The Impact of ICDS on Malnutrition		
	49	RRG	Endline Survey in Tamil Nadu – Final Report - Chapter 11: The Impact of ICDS on Malnutrition		
	50	World Bank, Human Development Sector, South Asia	Implementation Completion and Results Report on a credit in the amount of SDR 205.92 million (US\$ 305.70 million equivalent) to India for a Women and Child Development Project	World Bank	November 2006
	51	ORG – Centre for Social Research, New Delhi	Evaluation of Project UDISHA - Final Report submitted to NIPCCD	ORG, New Delhi	July 2005
	52	Subramaniyam, P.	Qualitative Assessment of WCD/ICDS III Project	Subramaniyam, P.	June 2006
Govt. of U.P.	1	DWCD, U.P.	Mission Poshan - U.P. State Strategy for 11th Five Year Plan - Accelerating efforts for reduction in under nutrient in Children - 2006	DWCD, U.P.	2006
Govt. of Rajasthan	1	DWCD, Govt. of Rajasthan	Brief Note on Best Practices in Rajasthan to improve health and nutritional status of women and children and to empower women	DWCD, Govt. of Rajasthan	

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SOURCE	S.No.	Author	Title of the document	Publisher/Place of publication	Year of publication
	2	Concerned Citizens for Community Health & Development, Jaipur	ICDS III : Best Practices - concerned Citizens for Community Health and Development Jaipur, April 2006	Concerned Citizens for Community Health & Development, Jaipur	2006
EPW	1	George Kent	ICDS and Right to Food	Economic & Political Weekly	2006
	2	EPW	Right to Food Campaign - ICDS : Articles	Economic & Political Weekly	2006
CCF	1	Christian Children's Fund-India	Nutrition Program	Christian Children's Fund-India	
Planning Commission	1	Working Group on Food & Nutrition Security (Planning Commission)	Report of the Sub-Group on Child Nutrition	Planning Commission	2006
National Institute of Nutrition	1	National Institute of Nutrition	Impact Evaluation of Positive Deviance Programme in the State of West Bengal	National Institute of Nutrition	2006
WORLD BANK	1	Education Department, GoKarnataka	Early Childhood Development - Govt. of Karnataka	Education Department, GoKarnataka	2002
	2	Citizens' Initiative for the Rights of Children Under Six	Focus on Children Under Six - Abridged Report Dec'06	Citizens' Initiative for the Rights of Children Under Six	2006
	3		Early Childhood Education in Uttaranchal - School Education Department, Uttaranchal		
	4	National Institute of Educational Planning and Administration	Linking Early Childhood Education to Primary Education - Neelam Sood (July, 2001)	National Institute of Educational Planning and Administration	2001
	5	Women in Education	Situational Analysis of Preschool Education Component in selected ICDS Anganwadis of HarDOI District in U.P. - Vol-I, for Care-India Girl's Education Unit, New Delhi. (1998)	Women in Education	1998
	6	Deptt. Of Elementary Education & Literacy, Ministry of HRD	Early Childhood Care and Education in India - An Overview - Deptt. Of Elementary Education & Literacy, GOI	Dept. Of Elementary Education & Literacy, Ministry of HRD	2003
	7	Dr. Deepa Das, Dr. Sushma Singh Ms. Sushma Vinayak Ms. Amal Seth	On the Threshold of Primary Education - Evaluation of the ECCE Programme in the DPEP II Districts of U.P. (March, 2002) Submitted by - The State Institute of Education Management & Training, U.P.		2002
	8	Venita Kaul	Education for All - Year 2000 Assessment - Early Childhood Care and Education - Venita Kaul, Ministry of HRD, GOI & NIEPA, Delhi	The Registrar, National Institute of Educational Planning and Administration	2000
	9	ASSERT	Early Childhood Education Programme under DPEP-III - ECE Evaluation Report Feb. 2006 by ASSERT, Patna	ASSERT	2006
	10	Department of Pre-School & Elementary Education, NCERT, Delhi	Shishu Shiksha Kendras (An U.P. Basic Education Project Initiative) Deptt. Of Pre-School & Elementary Education, NCERT, New Delhi	Department of Pre-School & Elementary Education, NCERT, Delhi	
	11	Centre for Learning Resources	Mental Stimulation of Children in the Birth - 3 Age Group - A House Based Approach Linked to Urban Anganwadi Centres of the ICDS, Project Report April 1999, Centre for Learning Resources, Pune	Centre for Learning Resources	1999
	12	Educational Resource Unit, Delhi, Hyderabad & Lucknow	Snakes And Ladders, Factors that Facilitate or Impede Successful Primary School Completion (Qualitative Study Commissioned by The World Bank)	Educational Resource Unit, Delhi, Hyderabad & Lucknow	2003
	13	Mobile Creches	Significance of ECCD for Children in Vulnerable Urban Settings - An Abstract of Research Study	Mobile Creches, New Delhi	2006

Annex C: Details on Integrated Packages

APERP		
Criteria↙ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i> Decrease in underweight – pre and post design with no control	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> Expanded to about 40,000 AWCs
Background: APERP was initiated in 1999 in AP and was completed in 2005		
Objective: Specific objective was to improve the nutrition and health of poor preschool children and women by increasing the quality, impact and cost-effectiveness of the ICDS program in AP.		
Coverage: A total of 11 million beneficiaries		
Target: children under three years of age; adolescent girls; and, pregnant and lactating women.		
Components:		
Service delivery		
<ul style="list-style-type: none"> ▪ service quality improvement: by improving AWCs, establishment of min AWCs in hilly and tribal areas and provision of weighing scales, community growth charts, preschool materials and drugs ▪ Women's empowerment – training for NHED for women and adolescent groups, procurement of IFA tablets and deworming for adolescent groups ▪ staffing and infrastructure development - expansion of ICDS services, procurement of equipment etc., innovative training for women in masonry 		
Program support		
<ul style="list-style-type: none"> ▪ management and institutional development (management development through training of middle level staff 'quality circles', establishment of a state program management unit). ▪ IEC – support fixed day strategies such as mother and child health days, communication workshops for all levels functionaries, development of materials and media services ▪ Training through UDISHA program 		
M & E: Improvement in MIS, operational research on the feasibility on community based SNP, continuous social assessments, baseline and endline surveys and PRA studies.		
Impact: Decrease in severe malnutrition from 2.9% to 2.1% and moderate malnutrition from 13.3% to 12.9%. (pre and post but different classifications were used)		
Outcomes:		
<ul style="list-style-type: none"> ▪ No data available for intermediate nutritional outcomes. ▪ Local food concept has been implemented in 187 project blocks ▪ Formation of formalized mothers committees – 50,000 committees have been formed. Each group has a bank account for management of community funds ▪ 4211 mini AWC are operating in thinly populated slums and tribal areas ▪ 14,975 Model AWC were developed ▪ Formation of Balika Mandals (adolescent girls groups) consisting of about 250,000 girls they act as change agents. First time these groups were formed in ICDS. This has been replicated in other states. 		
Design of Evaluation: Not Available		
Cost estimate: Credit of US\$74.5 million funding includes civil works, goods, services and salaries and operating costs over a 6 year period.		
Perceived aspects that resulted in success:		
Lessons Learned: need to increase focus on the young child (6m to 3 yrs); revise and strengthen population basis of ICDS resource allocation to improve access to ICDS for poor children; improve M&E; strengthen systems; single worker design has limited ability to deliver desired outcomes; improving community participation improves service quality; keeping SPMUs outside ICDS may harm; innovative training can add to service quality; state level innovations combined with interstate learning can strengthen national program		
Environment: Vacancies of about 50% or greater were found for CDPOs, ACDPOs, Supervisory levels		
Organizations involved: Government and World Bank		

ANCHAL SE ANGAN TAK (ASAT) – Best Practice – Integrated Package

Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i> Decrease in stunting compared to control
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> Pilot already expanded - but further expansion dependent on funds and government commitment

Background:

Goal/Objective: The goal of the ASAT strategy is to strengthen the ICDS program so as to achieve its goal of improving child survival, growth and development.

Coverage: Today 7 of the 32 districts in Rajasthan are being covered reaching an estimated population of 6.6 million. Special Plan Of Action is currently operating in 2 blocks in each of the 7 ASAT districts.

Target: children under three years of age; adolescent girls; and, pregnant and lactating women.

Additional to ICDS

Supportive structure: It enhances the existing structure by additional components at the village, district and state levels. At the village level, in Rajasthan an additional worker besides the AWW is in place - the ASHA/Sahyogini. ASAT introduced a new cadre of local volunteers at the village level named Gram Sampark Samooch (GSS). At the Block level ASAT has just initiated (start 2006) a Block Support Team (BST) in a few blocks. Their role is to assist the staff at the block and village level to implement the program. At the district level, ASAT has added a District Mobile Monitoring Training Team (DMMTT) to monitor progress and provide on the job guidance to village teams. This has just been initiated in a few districts. A District Support Team (DST) has also been constituted to improve coordination between sectors, review overall progress, and ensure effective implementation across the district. A State Level Training and Monitoring Unit has been formed. This is 4 member team headed by the ASAT Nodal Officer in Charge, Training and Monitoring. 3 officers work under the supervisor focusing at the field level.

Monitoring: The Mamta Card is used to monitor progress of children. The MIS system has been improved with new tools etc.

Tools: The Mamta Card, Mamta Posters, Sikho Sikha Sabha Folders (illustrated information for the AWW, AWH, Sahyogini and ANM to use), Content Guide of Malnutrition Centres, Training manuals and booklets for AWW.

Activities:

- Household counselling on various issues related to health and nutrition.
- Maternal and Child Health and Nutrition (MCHN) Day - This is a state-wide monthly fixed day event. It focuses on immunization, vitamin A supplementation (twice a year), weighing of pregnant women, provision of IFA tablets to pregnant women and adolescent girls, iodized salt testing and counselling on maternal and child issues. It is held at the AWC and facilitated by the ANM and AWW with assistance from the Sahyogini and the AWH.
- Fixed Weighing and Counselling Day - This state-wide initiative started recently (February 2006) and occurs on a fixed day one week prior to the MCHN Day. All children in the village less than six years of age are weighed. The AWW and Sahyogini facilitate the process.
- Special Plan of Action was initiated in 2005 in 14 blocks. The goal of SPOA is to manage child malnutrition through support of ICDS by training ICDS functionaries, adopting WHO standard protocols, strengthening referral services and counselling families. The strategy focuses efforts on interventions and capacity building at the 3 levels: community - AWCs; family based interventions; and, district hospitals.

Training: Training tools and modules have been developed to train all functionaries and in systematic training sessions.

Impact: In the 2006 survey the prevalence of underweight was estimated to be 50% in the ASAT areas and 56% in the non-ASAT areas (statistically non-significant difference). These prevalences are higher than those reported for Rajasthan in the NFHS 3 (2006), 45.9%. Stunting was significantly higher in the non-ASAT areas in comparison to the ASAT group (45% compared to 35%; $p < 0.01$). The ASAT group had similar stunting prevalence as that reported in the NFHS 3 (2006), which was 36.4%.

Outcomes: In terms of feeding practices, there was a significant difference in the percent of women who feed the newborn colostrums (18% versus 47%). There was also a significant difference in substance given to child before initiating breastfeeding - 39.6% of ASAT mothers gave sugar water compared to 51.3% of non-ASAT mothers. Also, diarrhoea episodes were less in the ASAT areas compared to the control. Significantly more pregnant women received IFA tablets during pregnancy in the ASAT areas compared to the control. Use of soap for washing was more frequent in ASAT areas (but still low overall). There was more contact with the AWW (59.7% compared to 46.8%) and sahyogini and more regular growth monitoring in ASAT areas than in the control (59.7% compared to 42.3%).

Design of Evaluation: Cross sectional study with control. Sample size used was 720 children <3 years of age in both control and intervention group. A survey was conducted in 2003 in the 7 ASAT districts measuring children 12 to 36 months - prevalence of underweight was estimated to be 50%. A comparison between the 2003 survey and the 2006 survey is difficult for anthropometric measurements because of differences in the age range of the sampled children. Comparison between intervention and control villages in the 2006 survey is more meaningful.

Cost estimate: For each AWC, cost of initiating and operating ASAT for one year is estimated to be INR 12,971 or US\$ 295. Of that US\$ 295, US \$240 (or about 81%) is estimated to be annually recurring costs, assuming that training will take place at all levels at least once a year. Considering only the recurring costs, the additional cost of implementing ASAT is estimated to be 11% more than the regular ICDS program. The additional cost of ASAT activities (capital and recurring costs) is estimated to be 13% more than the total costs of running an AWC.

Perceived aspects that resulted in success:

Environment: Low literacy rates among women

Organizations involved: Government and UNICEF

DULAR STRATEGY – Best Practice – Integrated Package		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary)	(quantitative/qualitative evidence - proven effectiveness) Decrease in underweight and stunting compared to control
Transferability	(shows promise for replication)	(replicated or has potential for replication) Pilot already expanded - but further expansion dependent on funds and government commitment
Background: Dular was initiated in 1999 as a pilot and is being implemented in Bihar and Jharkhand.		
Objective: The Dular strategy focuses on changing care behaviours of caregivers so as to improve the survival, growth and development of the child by strengthening the existing ICDS by providing new tools, incorporating new training, enhancing the structure and focussing on changing care behaviours at the family level so as to achieve the ICDS goal reduction in malnutrition and enhance child development.		
Coverage: Dular is now operating in 10 districts of the States of Bihar (6 districts but not yet district-wide) and Jharkhand (4) covering about 8 million people.		
Target: children under three years of age; adolescent girls; and, pregnant and lactating women.		
Additional to ICDS		
Supportive structure: It enhances the existing structure by forming additional components at the village, district and state levels. At the village level, Dular introduced a new cadre of volunteers named Local Resource Persons (LRPs) to assist the AWW. At the district level, Dular has added a District Mobile Monitoring Training Team (DMMTT) to monitor progress and provide on the job guidance to village teams. A District Support Team (DST) has also been constituted to improve coordination between sectors, review overall progress, and ensure effective implementation across the district. At the State level a Task Force dedicated to assessing and developing communication and training needs. There is also a Dular Cell whose main role is to monitor progress of Dular and link it to overall quality improvement of ICDS.		
Monitoring: The Dular Management Information System (MIS) is integrated in the ICDS MIS. At the household level a Dular Card is provided to caregivers to monitor progress of their children. An adolescent card is provided to adolescent girls which tracks IFA tablet intake and provides information on key health, nutrition and hygiene issues.		
Tools: Dular also has developed a Dular Kit consisting of 10 flash cards that is used by the LRPs and AWW to counsel households and for training purposes. A specific folder on IDD has also been developed.		
Activities: Initiation of Dular in village: Dular is actually initiated with a two-day village contact drive (VCD) where the whole community participates. The VCD uses participatory methods and demonstrations to enhance awareness and participation of the community. Household counselling on various issues related to health and nutrition. Regular weighing of children.		
Training: Training tools and modules have been developed to train all functionaries and LRPs in systematic training sessions.		
Impact: In the 2005 evaluation reported a significant difference in the malnutrition rates (underweight) reported between the Dular and non-Dular villages (55.5% vs. 65.4%) and a significantly lower stunted population in the Dular villages (61.8%) as compared to the non-Dular villages (72.0%). Although wasting was also seen to be lower in the Dular villages (9.3%) than the non-Dular villages (14.2%) this was not found to be statistically significant. In comparing the differences in malnutrition rates of the 2005 evaluation to the ones conducted in 2003 and 2004, there is an increasingly widening gap between malnutrition rates in Dular villages as compared to non-Dular villages indicating that over time the interventions become more effective. The National Family Health Survey III (NFHS 2006) indicated that the prevalence of underweight in rural Bihar was 59.3% (58.4% for total Bihar), which also indicates a positive impact of the strategy as the underweight prevalence in Dular villages was 55.5% (2005 evaluation). The NFHS 2 (1999) reported underweight prevalence in Bihar at 54.3% indicating that a worsening trend in Bihar as a whole.		
Outcomes: The evaluation also reported that the Dular villages had a significantly higher rate of colostrum feeding at 84% than the non-Dular villages (64%). However the median age of introduction of complementary foods was not statistically significantly different between the two groups and remained high at 8 months.		
Design of Evaluation: The last impact evaluation on Dular was conducted in the summer of 2005 comparing intervention and non-intervention villages. The focus of the evaluation was to examine malnutrition outcomes. The sample size for the evaluation was 750 children in each of Dular and non-Dular areas (control). Anthropometric measurements were taken of children 0-36 months of age.		
Cost estimate: The cost estimates for Dular take into account the cost of technical support, trainings, meetings, and materials required. For each AWC, cost of initiating and operating Dular for one year is estimated to be INR 12,026 or US\$ 273 above the regular ICDS operating budget. Of the US\$ 273, US \$197 (or about 72%) is estimated to be annually recurring costs, assuming that training will take place at all levels at least once a year. It is estimated that it costs US \$ 2,056 to operate an AWC for a year (including costs of supplementary food). It is estimated that an additional 13% of funds are required in the first year of implementing Dular. When considering just the recurring costs, the increase in funds required to implement Dular in subsequent years is an additional 10%.		
Perceived aspects that resulted in success: LRPs, supportive structure at all levels provided commitment and knowledge, monitoring system, new tools.		
Environment: ICDS has over 90% vacancies at the sectoral level, leaving the majority of AWW unsupervised. Dular filled a human resource gap for ICDS. The literacy rate is <60% among mothers.		
Organizations involved: Government and UNICEF		

ICDS III (WCD)		
Criteria ↓ Type →	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary) Decrease in underweight – pre and post design with no control	(quantitative/qualitative evidence - proven effectiveness)
Transferability	(shows promise for replication)	(replicated or has potential for replication) Expanded to 11 states
Background: ICDS III was initiated in 1999 in 5 states (Kerala, Maharashtra, Rajasthan, TN and UP). In 2003 the program was expanded to an additional 6 additional states (MP, Bihar, Chhattisgarh, Jharkhand, Orissa and Uttaranchal). All states and territories were targeted for the improvement of worker's skills. The project was completed in 2006.		
Objective: The specific objectives were to (i) to improve quality of service delivery to beneficiaries, (ii) to expand ICDS to benefit uncovered communities, (iii) to strengthen institutional framework for programme implementation, (iv) to consolidate gains made by earlier World Bank assisted Projects, (v) to replicate successful innovations and initiatives from previous projects and (vi) to introduce new activities in line with the latest paradigms of child development.		
Coverage: In the original 5 states a total of 18.5 million beneficiaries with the additional 6 states an additional 6.6 beneficiaries were targeted.		
Target: children under three years of age; adolescent girls; and, pregnant and lactating women.		
Components:		
Service delivery		
<ul style="list-style-type: none"> ▪ service quality improvement: a) with emphasis on SN and regular monitoring; immunization and promotion of psycho-social development of children; implementing Free expression for quality improvement (FREQI - formation of quality circles to encourage better interaction among AWCs so that they could exchange notes freely, bring them to the notice of the supervisory staff and with their support achieve higher quality of service delivery). ▪ adolescent girl empowerment (IFA and deworming); ▪ staffing and infrastructure development - staffing, construction of new facilities, installation of hand pumps, procurement of equipment etc. 		
Program support		
<ul style="list-style-type: none"> ▪ management and institutional development (study tours, workshops, quality improvement, establishment of central and state program management units). ▪ capacity building for training (training of staff in old and new blocks, strengthening and establishing training centres, and teams at state and district levels, development of training materials) ▪ IEC – development of materials and media services, communication training and campaigns, and community mobilization 		
Central component: Computerized MIS with emphasis on monitoring and evaluation, Nutrition surveys (baseline and endline), Review of operational research priorities, National training for all states and territories		
Impact: Baseline (2000) and endline surveys (2005) were conducted in the 5 original states. Overall underweight decreased from 44.5% to 36% statistically significant ($p < 0.0001$) (<-2SD of NCHS). The malnutrition rates decreased in each state as follows: Kerala 11.1% to 3.5%; Maharashtra 51.8% to 42.6%; Rajasthan 43% to 35.4%; TN 50.9% to 39.5%; UP 58.1% to 44.7%. The endline survey also included a few general ICDS groups in each state (not ICDS III sites) to provide some indications of how this program compared to non ICDS III areas (not true controls). The results varied. The following are the differences in malnutrition rates of the Endline compared to general ICDS areas: Kerala 3.5% compared to 6.04%; Maharashtra 42.6% vs. 33.3%; Rajasthan 35.4% vs. 34.1%; TN 39.5% vs. 43.3%; UP 44.7% vs. 46.5%.		
Outcomes:		
<ul style="list-style-type: none"> ▪ Proportion of children whose mothers did not squeeze out the first milk (colostrums) from breast (59% in BLS to 64% in ELS) ▪ Proportion of children under 3 year who were breastfed within 2 hours of birth (37% in BLS to 51% in ELS) ▪ Proportion of children age 6-9 months receiving solid or semi-solid food and breast milk (complementary feeding) (38% in BLS to 64% in ELS) ▪ Proportion of children age 6-36 months consumed Vitamin-A rich food (53% in BLS to 71% in ELS) ▪ However, breastfeeding exclusively up to six months remains a problem. It has been found that only 21% children under six months were reported to have been exclusively breastfed, which has come down from 28% in BLS. ELS also reveals that about 37% children up to six months have been given plain water along with the breast milk. ▪ Significant progress is indicated in antenatal care of the pregnant women, immunization, de-worming and treatment of diarrhoea. Monthly growth monitoring of under-3 children has also improved overall as reported by AWWs (from 67% in BLS to 82% in ELS). Practice of weighing at birth showed overall improvement from 40% in BLS to 46% in ELS. ▪ An impact evaluation exclusively for Project Udishia was not conducted the endline survey found that at least 50 percent of AWWs who were interviewed in ELS, the service delivery has improved due to training in preschool activities, household survey, immunization, creating awareness on health and hygiene among mothers, nutrition education to adolescent girls. 		
Design of Evaluation: In each of the 5 original states a baseline survey was conducted in 2000 with and endline survey being conducted in 2005.		
Cost estimate: \$287 million credit		
Perceived aspects that resulted in success: Presence of a dedicated project management unit both at the State levels and also at the central has helped accelerate project implementation with required guidance and technical support, especially in financial management and procurement related issue, and also in carrying out some of the key M & E activities. However, appointment of specialists and continuity of the project personnel both in SPMUs and CPMU is essential for an effective implementation of the project. IEC and FREQI activities have been instrumental in increasing the awareness level of AWWs on key nutrition and health issues.		
Lessons learned: One worker model is not sufficient to carry out health and nutrition aspects of project; high turnover of staff impeded progress; IEC needs more serious attention; program needs to be well targeted with strong health and nutrition education counselling.		
Environment:		
Organizations involved: Government and World Bank		

Community Based Maternal and Child Health Nutrition (MCHN) – Promising Practice - Integrated package		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(<i>anecdotal or preliminary</i>) Decrease in severe malnutrition (no sig tested)	(<i>quantitative/qualitative evidence - proven effectiveness</i>)
Transferability	(<i>shows promise for replication</i>)	(<i>replicated or has potential for replication</i>)
Background: this pilot was implemented in UP. Baseline study between July to December 2000 and the project activities started January 2001 to December 2004. Evaluation study was done during April -May 2005.		
Objective: Key objectives of the Community based MCHN project included; 1. Reducing underweight in children <2 years by 20%; 2. Improving coverage of children with Vitamin A supplementation to 80%; 3. Ensuring 60% women consume a minimum of 100 Iron-Folic-Acid (IFA) tablets; 4. Ensuring 100% households use only iodized salt.		
Coverage: A total of 907 villages of 8 blocks of 4 districts with a total population of 1,331,549 were covered under the project.		
Target: Children below 2 years, pregnant, lactating women and newly wed. Children below six years with clinical sign of severe malnutrition were given special attention. Therefore families who had any one member in this category were accorded priority and were recognized as "At Risk" of under nutrition.		
Additional to ICDS		
Supportive structure: • BPMs (Bal-Parivar-Mitra) meaning 'friends of families' were community based volunteers selected and trained by the Project. They made regular contacts to target groups, which helped increase the correct knowledge and practices among them. They also coordinated and supported ANMs and AWWs in their activities. 4-5 BPMs are identified using cluster community participatory approach. These volunteers work with 50-60 households and focus on the identified 15-20 'at risk families'. No honorarium fees were provided but were paid Rs 100/quarter for monitoring reports. They are linked to the local functionaries - establishment of 2 state nutrition and resources centres and 3 district and nutrition resource centres. • The strategy of involving Block-Trainer-cum-Monitor (BTM), who was the additional staff, was very effective. Under the supervision of Medical Colleges BTM was the key person helping Project implementation at grass-root-level. The BTM worked under the DNRC		
Training: Training of functionaries and BPMs, training at community, block and district levels.		
Monitoring: pictorial monitoring system developed and MIS system for all levels. BPMs completed forms monthly while at sector, block and district levels the forms were compiled on a quarterly basis.		
Impact: Decline of 43% in the proportion of severely malnourished (IAP classification method) children (baseline: 25%; end line: 14%). The proportion of severely and moderate malnourished cases was slightly higher in case of female children below 2 year of age, in comparison to their male counterparts. As per the NCHS (Standard Deviation - SD) method, the proportion of children falling under –2SD category was 34% and – 3SD 32% in the end line. However, a comparison with baseline could not be done due to incomplete data/figures of baseline.		
Outcomes: •Pregnant mothers - Compared to 6 percent during baseline 61 percent in the end line confirmed receiving 90+ IFA tablets during their index pregnancy. As far the consumption of 90 or more tablets, it had increased from 9 percent in the baseline to 22 percent in the end line. 95% of mothers across all the four MCHN districts were found aware about taking two TT shots during pregnancy. 63% of the mothers, reportedly, received two TT injections during their index pregnancy, which however improved from 47% of the baseline. Care for new borns/infants - The practice of initiating breastfeeding within 1 hour of birth has increased by five times in the end line (21.9%) from baseline (4.6%) - overall improvement regarding the practice of colostrum feeding in the end line (baseline: 28%; end line: 53%). The proportion of such cases where semi-solid food was introduced between 6 to 9 months substantially increased from 18% in the baseline to 63% in the end line. • Overall, the proportion of households using salt with iodine (either <15 ppm or =>15 ppm) increased from 31% of baseline to 67% in the end line. • A significant increase in the practice of washing hands with soap after defecating (baseline: 35%, end line: 83%). Knowledge use and availability of ORS increased. Use of hand pump for drinking water increased and use of well decreased. There was an increase in use of latrine facilities by those who have them.		
Design of Evaluation: Required sample size at 95% level of confidence, 5% permissible error is 384. Therefore minimum required per district was 400. In each block a multi-stage sampling procedure was followed to select the respondents. At the first stage, villages were selected followed by the selection of households and respondents. The number of households selected per village was fixed at 20. Thus, in all 10 villages in each block were selected following PPS sampling procedure using 2001 census. Thus, a total of 1600 households from 80 projects villages were covered for quantitative study.		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: ICDS/PRI/Health/ UNICEF		

POSITIVE DEVIANCE (PD) -- UNICEF – Best Practice - Integrated package with emphasis on one approach		
Criteria↓ Type→	Promising Practice (anecdotal or preliminary)	Best Practice (quantitative/qualitative evidence - proven effectiveness)
Evidence of success		Decrease in stunting overall and decrease in stunting and underweight in 12-17 m olds compared to control
Transferability	(shows promise for replication)	(replicated or has potential for replication) Pilot already expanded
Background:		
Objective: Introduced PD to accelerate the process of reduction and prevention of under nutrition among children in the age group 0-3 yrs by enabling communities to adopt the best local practices of childcare in a sustained basis. Acts as an improvement tool for ICDS to improve the process as well as outcome variables.		
Coverage: currently (2006) PD is operating in 24 Blocks in West Bengal		
Target: children under 3 and their mothers		
Additional to ICDS		
Tools: growth monitoring tools, community mapping, community growth charts, mother-child protection card, cohort registers, use of “mascot a pictorial method to monitor the attendance of the malnourished children regularly at NCCS”		
Activities: There is a specific set of steps to complete the process of PD in a district: Preparatory activities & planning; Sensitization & training; Community mobilization, participation & making malnutrition “visible” to the community; Special interventions for the grade ii/iii/iv malnourished children of the area (nutrition counselling & child care session - NCCS); Monitoring & data management; Expansion & phase out		
Training: Training modules and systems were out in place		
Monitoring: MIS system specifically for PD were introduced		
Impact: As per IAP classification, the overall prevalence of under nutrition was similar between the PD and control groups; however, this prevalence was significantly ($p<0.05$) lower in PD (55%) compared to control (64%) among 12-17 months children. According to SD classification, the overall prevalence of underweight and wasting were similar between the two groups, while the overall prevalence of stunting was significantly lower ($p<0.01$) in PD area (26.5%) compared to control area (32%). The prevalence of underweight and stunting (45.6% and 25.2% respectively) was significantly ($p<0.01$) lower in the PD area compared to control area (63.2% and 37.4% respectively) in children aged 12-17 months. No gender differentials were observed in the case of underweight or wasting between the two groups, however, the prevalence of stunting reduced significantly ($p<0.05$) among girls in PD area compared to control area. During the period of implementation of PD programme, the proportion of normal ($p<0.05$) and Grade-I ($p<0.01$) children increased significantly and consequently that of grade II & III under nutrition significantly ($p<0.01$) decreased. The NCCS activities were in operation for the previous six months in 23% of AWCs of PD area and the relapse of growth faltering was minimal.		
<ul style="list-style-type: none"> ▪ Outcomes: A significantly higher proportion of mothers in PD area initiated breast feeding within 3 hours of delivery (76%) and did not give pre-lacteal feeds (78%) compared to 44% and 35% respectively in the control areas and in contrast a significantly higher ($p<0.01$) proportion of mothers in control area initiated breast feeding after 24 hours of delivery compared to mothers in PD area. The extent of colostrum feeding (90%) and exclusive breast-feeding at 4-5 months (70%) were significantly higher in PD area compared to 82% and 61% respectively in control area. Among children aged <12 months, 12-23 months and 24-35 months about 19%, 44% and 45% started receiving complementary foods at 6 months of age compared to 13%, 29% and 23% respectively in the control area. These proportions were significantly ($p<0.01$) different between the PD and control areas in the 12-23 months and 24-35 months age group. ▪ A significantly ($p<0.01$) higher proportion of children (86%) in PD area were completely immunized compared to 68% in control area and also coverage for all the individual vaccines were significantly ($p<0.01$) higher in PD in contrast to control area. With respect to twice-yearly vitamin A supplementation, a significantly ($p<0.01$) higher proportion (84% in PD area) received one or two doses as compared to 74% in control area and the coverage for the 2nd dose of vitamin A improved significantly ($p<0.01$) to 50% in PD compared to 33.1% in control area which was mostly delivered at the sub-centre by ANM in both the areas. ▪ Optimal / satisfactory growth monitoring (weighing children 9 times a year) was significantly ($p<0.01$) higher in PD area (50%) in relation to 13% in control area. A significantly higher proportion ($p<0.01$) of mothers in PD area compared to control areas reported that the AWW discussed the nutritional status of their children with them. History of morbidity during the previous 15 days of visit was similar for fever and diarrhoea in both the areas, while a significantly ($p<0.05$) lower proportion of children were suffering from ARI in PD (30%) compared to control area (35%). A significantly ($P<0.01$) higher proportion of children in PD areas received treatment for diarrhoea (26%) and ARI (48%) from health functionaries such as AWW/ANM/MO compared to 13% and 18% respectively in the control area. The proportion of referrals by the AWW to a government MO or private doctor was significantly ($p<0.01$) high in PD area (37%) compared to 18% in control area. ▪ A significantly ($p<0.01$) higher proportion of mothers in PD area (69%) reportedly received health and nutrition education (H & NE) compared to 27% in control areas imparted by the AWW mostly at the AWCs. The usage of different education tools was significantly higher ($P<0.01$) in PD area in contrast to control. A higher ($p<0.01$) proportion of mother’s committees, Mahila Mandals, village health committees and women working groups were operating in PD areas compared to control area. The knowledge of AWWs in terms of weighing efficiency, growth monitoring, immunization, massive dose vitamin A supplementation and Health and nutrition education was observed to be significantly better in the PD area compared to control area. 		
Design of Evaluation: Cross sectional study with control using systematic random sampling methodology. Sample size used was 1000 children <3 years of age in both control and intervention group (assessing for difference from 30% malnutrition to 15%, confidence interval of 95% and 90% power). A total of 1900 <3 year children (950 each from PD and control areas) from 80 AWCs (40 each from PD and control areas) were covered for the study.		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment: Literacy rate among women 60%		
Organizations involved: Government and UNICEF		

POSITIVE DEVIANCE (PD) – CINI – Promising Practice		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	Decrease in underweight within intervention areas <i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> Pilot already expanded
Transferability		
Background:		
Objective: To reduce, sustain and prevent malnutrition among children <3 yrs and to promote ECD through positive child care practices.		
Coverage: By 2004 covered 4 blocks with 798 AWCs but not all AWCs covered - in the end a total of 96 AWCs were covered.		
Target: children under 3 and their mothers		
Additional to ICDS		
Additional staff: Staff recruited for PD . There was a District Task Force and Block Task Force. Functionaries at that level were involved and included members from the NGO.		
Monitoring: Community based monitoring with the 'mascot'. An MIS system was implemented. Nutrition counselling and child care session register /formats were developed to record attendance and outcome after 12 sessions. Mother child protection card - family based monitoring tool was developed.		
Tools: IEC and BCC materials were developed (posters, pamphlets, skits)		
Activities: PD steps - 1. meetings with community leaders 2. community meeting 3. formation of a village health committee 4. training of village health committee 5. situational analysis 6. PD inquiry 7. sharing meeting with community 8. Pre - Nutrition Counselling and Child Care sessions (NCCS) 9. NCCS 10. Post NCCS 11. Monitoring 12. evaluation		
Emphasis on growth monitoring component. Weighing was conducted every month for children <3 yrs. This included a community growth chart with colour coded nutritional status.		
Resource/social mapping tool was used by the Village health Committee. Also innovations such as health fairs, picnics were organized.		
Training: Specific training in PD was conducted for functionaries.		
Impact: Murshidabad District - Out of a total of 3521 children, 648 were severely or moderately malnourished - Grades 2 and 3 (18.4%). There was a decrease in moderate and severe malnutrition from 648 children during 1st session to 250 by session 3, to 6 by session 6 and 0 by session 12. South 24 Paraganas District - Out of a total of 2589 children 370 were found to be moderately or severely malnourished - Grades 2 and 3 (14.3%). This number decreased to 122 by 3rd session, 42 by 6th session and 4 by 9th session.		
Outcomes: Improvements regarding overall performance in centre was seen. Although PD covers a limited number of centres, there were improvements in the Block overall as seen in decreased malnutrition rates, improvements in weighing of children, care practices (improvements in feeding to children during illness and increase in hand washing with soap).		
Design of Evaluation: Monitoring of malnutrition pre and after 12 sessions. No control. Evaluation was conducted in 2004		
Cost estimate: Total project budget was INR 5,604,158 = US \$167,367 (exchange 1\$US = 44 INR). As this project supported 96 AWC an average cost of US\$ 1,327 per AWC for 3 years = US\$ 442/AWC/year.		
Perceived aspects that resulted in success		
Environment:		
Organizations involved: Government/CINI/UNICEF		

Positive Deviance/Hearth Approach - CCF		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i> Post intervention 60% were no longer malnourished	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> Replicated in 935 villages
Background: West Bengal, Bihar, Jharkhand and Orissa. Started in 2003.		
Objective: Fight malnutrition through PD/Hearth Approach in which the concept works by 1) as a method for discovering affordable local foods that mothers can provide to their children and 2) as a communication method to convince mothers of malnourished children that an affordable solution exists within the community.		
Coverage: 935 villages covered through 4133 PD/Hearth Sessions in which 19,326 mothers and adolescent girls participated. 41,156 children were covered and 12,207 children had moved out of valuation.		
Target:		
Additional to ICDS		
Supportive structure:		
Tools:		
Activities:		
Training: 5 days TOT and 2 day orientation among staff at selected are for implementation		
Monitoring:		
Impact: 2004 workshop reported that out of 3000 children 60% moved out of malnutrition.		
Outcomes:		
Design of Evaluation:		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government, CCF		

RACHNA - The Reproductive and Child Health, Nutrition and HIV/AIDS Program (2 projects - INHP and Chayan)		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Background: 78 districts in 9 states - AP, Bihar, Chhattisgarh, Jharkhand, MP, Orissa, Rajasthan, UP, WB. 2001 - 2006.		
Objective: reduce child mortality and reduce malnutrition. Primary objective is to strengthen ICDS program and increase convergence with MOHFW RCH program for improved provision of health and nutrition services.		
Coverage: RACHNA total - Over 102 million people in the 9 states. 94,592 AWCs		
Target: pregnant and lactating women and children less than 2 years of age		
Additional to ICDS		
Supportive structure: Change Agents (CA) at village level are community volunteers that focus on 15-25 households working with support of AWW to promote health maternal child care practices. At mid term decided to use the ones available but did not focus on engaging new ones. Block level - Panchayat Rep. Districts - 4 positions - Govt partnership Officer, capacity building officer, demonstration and Partnerships officer, food monitoring officer. In Chayan additional 2 - training coordinator, social marketing operator. State Management Team - State Program Representative and several regional managers assisted by M&E and documentation team		
Tools:		
Activities: Corn Soya Blend was phased out by mid 2003 but fortified oil continued to be provided. Block level resource mapping - process of program review and action by system functionaries at block level. After mid term review this evolved into more frequent block level program reviews using existing forums within ICDS/health. Nutrition and Health Day (NHD) - every month fixed day where take home rations are distributed and ANM visits the AWC and officers health services. This continued after the mid term review. Demonstration sites - In partnership with local NGOs developed demonstration sites in 10% of AWCs where program implementation could be demonstrated and then adapted in other sites. After mid term review less focus on maintaining demonstration sites. Early Learning Sites - fast paced implementation over the first few months in a handful of sites to give field teams hands on learning opportunities.		
Training: Capacity Building - All INHP staff, system functionaries, NGO functionaries including government staff participated in structured training programs. After mid term evolved into on site training using ICDS sector meetings.		
Monitoring: Community based monitoring system - includes individual self monitoring tool and collective social mapping to track caring practices and service utilization leading to identification and addressing of problems by community groups. By mid-term decided not to continue to use the social mapping for monitoring purposes. Rapid Assessments in Panel of Districts (RAPs) - independently conducted annual household surveys to assess progression of outcomes and processes in one district in each state and using this information for refining program. Health Monitoring Information System (HMIS) - Process based. After mid term review only included donor required data, rest was integrated into government systems.		
Impact: Underweight and stunting did not decrease. In AP, underweight increased from 25.7% to 29.2% in the intervention area and from 28.5 to 30% in control. In UP, underweight increased from 36% to 41% in the intervention area and from 36% to 38% in control. However in UP the intervention had an effect on wasting. INHP interventions protected against wasting among all children, boys, infants 0-5 months, and infants 6-11 months. For all children in intervention area wasting only increased from 4.9% to 8.5% whereas in the control area wasting increased from 6.7 to 13.8% (p<0.05). Anemia levels decreased slightly (from 88.6% to 86.7%) in intervention areas in UP while in control areas anemia increased (83.1% to 87.4%) - p<0.05. A pre and post evaluation across 8 states saw an 8 percentage point decrease in underweight among young children - over 5 yrs. Decrease from 61% to 53% (> -2 Z scores).		
Outcomes: Antenatal service utilization - In UP utilization of ANC significantly increased from 35% to 53% (1 or more visits) and from 11% to 25% (3 or more visits) with no change in control (p<0.05). Change in AP but not significant. Service provider home visits during pregnancy increased in intervention area in AP from 36% to 49% (statistically sig <0.05). Specifically AWW but not ANM. Service provider home visits during pregnancy increased in intervention area in UP from 20% to 60% (statistically sig). Specifically AWW and ANM. Rest for pregnant women increased in intervention area in AP and UP, while extra food increased in UP. IFA tablet consumption significantly increased in AP and UP. Maternal Nutrition - Receipt of Supplementary nutrition increased by pregnant and post partum women in both AP and UP intervention areas. Infant feeding - In UP and AP timely initiation of BF increased significantly but in UP it was dramatic - by 55 percentage points. Pre-lacteal feeds decreased in both states significantly. Inappropriate early introduction of complementary foods decreased in both states. In AP the introduction of solid foods at 6-8 months significantly increased in intervention areas. Micronutrient supplementation - vitamin A supplementation increased significantly in both AP and UP to 69% or greater. IFA supplementation also increased significantly in both states in comparison to the control.		
Design of Evaluation: Pre-test, post-test quasi experimental design with control. In AP and UP. 1 district INHP the other ICDS. Baseline - 2 districts in UP and 2 in AP collected Jan- Feb 2004. Multi-stage survey sampling design. End line - Same 2 districts in the 2 states. Jan - March 2006. Same methodology as baseline. Used a statistical power of 80% to detect a difference and a significance level of 95% (alpha = 0.05). The sample size was not increased to account for design effect which in nutrition programs has been minimal. 1200 children 12-24 months for anthropometry is required and 800 children for anaemia in each arm and 800 pregnant women in each arm. Multi-stage survey sampling design was used. Pre and post assessments in 8 states over 5 yr period. No control		
Cost estimate: US\$ 13.5 to 14.7 million annual cost for coverage of 9 states. Avg cost of implementing RACHNA in a single state is \$US1.9 million . Cost per death averted - US\$ 2,135 and cost per DALY gained US\$75 - based on exclusive breastfeeding and vitamin A supplementation. If it costs US\$14 million on average per year (recurrent costs) and they reach 94,592 AWC - therefore cost per year to run AWC is \$148		
Perceived aspects that resulted in success:		

Environment: Only 2 yr intervention.

Organizations involved: CARE and State Governments

Tamil Nadu Integrated Nutrition Program 1 (TINP)		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		
Background: 1980 – 1989		
Objective: Improve the health and nutritional status of pre-school children and to extend health and related services to other high risk groups such as pregnant and lactating women.		
Coverage: At the end of phase five covered 173 Rural Blocks in 6 districts. About 9 million beneficiaries. Establishment of a community nutrition centre at village level (up to 9000)		
Target: Children under 36 months, pregnant and lactating women		
Additional to ICDS		
Supportive structure: Establishment of a Community Nutrition Centre (CNC) to cover a population of 1500. The CNC is run by a trained Community Nutrition Worker (CNW). The CNW is assisted, guided and supervised at different levels by Nutrition Supervisor, Nutrition Instructress at block level, Taluk Project Nutrition Officer and District Project Nutrition Officer. The ratio of supervisor to worker was 1:10. ICDS norm is 1:20.		
Activities: Supplementary nutrition was provided to children in Grade 3 and 4 malnutrition and those children faltering after 3 consecutive months. For 6-12 month olds feeding was initiated if a child failed to gain 300 g per month for 2 months. For children 12-36 months 4 months of failure to meet this criteria were required. All children in Grade 3 and 4 were fed double ration. Once begun feeding continued once per day for a minimum of 3 months or until age 36 months. If a child gained 500 g or more by that time feeding ceased other wise child was referred to a health sub centre. Every day monthly weighing of children 6-36 months. NHE, primary health care activities, VAS and deworming		
Training: 60 days pre-service training and 2 days every two month in service training. Building and running of 10 training centres and establishing 39 Primary Health Centres.		
Monitoring: intensive monitoring and feedback mechanism		
Impact: 1. Statistically significant improvement in weight-for-age over period 1982 to 1990. There is also a steady drop in malnutrition rates for all ages included. The mean weight of 6 month olds in 1990 are 360 g heavier than in 1982 (6.5% gain in weight). At 36 months age the weight difference from 1982 to 1990 was 650 g (6.2 %gain in weight). These differences were statistically significant in all monthly ages between 6 and 36 months. % of children below - 2SD of NCHS decreased by 10.12 percentage points between 1982 and 1990. Nutritional Status: Severe Malnutrition - declined by a third and a half among children 6-24 m and by about half among 6-60 months. Moderate malnutrition decreased by 14% in the 1st project areas and increased in the areas in 2nd and 3rd phases. Decrease in malnutrition rates between 1.5 and 2.4 percentage points annually per year (Shekar 2004 - based on monitoring data).		
Outcomes: VAS increased from 46% in 1982 to 70% in 1986 but dropped to 57% in 1990. Deworming coverage increased from 42% in 1982 to 66% in 1986 and dropped to 51% in 1990. 63% of children were completely immunized in 1982, this increased to 79% in 1986 and further increased to 83% in 1990.		
Design of Evaluation: 1. Statistical analysis of large representative sample of service records for 1982 - 90 from 9000 community nutrition centres created by the project. Project monitoring data and interviews were also used. There is no good evaluation of the impact of TINP, independent of secular trends, since TINP I. The most recent independent sample survey data for Tamil Nadu are from the National Family Health Survey of 1999. These show that, while malnutrition continues to decline in the State, it is not doing better than neighbouring States.		
Cost estimate: 81 million supported by an IDA credit of 32 million. The recurrent cost per beneficiary has been estimated to be \$9.50 a year.		
Perceived aspects that resulted in success: targeted feeding; careful selection and training of CNW; detailed work routine; heavy emphasis and intensive and supportive supervision (1 supervisor for 10 workers); efforts to gain community support; emphasis on accurate monitoring and use of data for trouble shooting and feedback.		
Environment: ICDS not operating yet in TN. Basis of program was that most malnutrition is the result of inappropriate child care practices		
Organizations involved: Government and World Bank		

Tamil Nadu Integrated Nutrition Program 2 (TINP)		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		
Background: 1990 – 1998		
Objective: Improve the nutrition and health status of children 0-72 months with emphasis on 0-36 months and pregnant/lactating women		
Coverage: Covered 318 rural blocks in 24 districts. Establishment of a community nutrition centre at village level (up to 18,500 - covering 80% of rural TN remaining to be covered by ICDS)		
Target: Children 0-72 months, pregnant and lactating women		
Additional to ICDS		
Supportive structure: Community Nutrition Worker and helper focussing on children under 3 and their mothers and a Community Welfare Organizer (from the NMP) to cater to children 4-6 yrs as well as a helper. Initiation of the 'two worker model' plus two helpers. Project Coordination Office at state level divide into 4 units: nutrition; communication; training; operations research and monitoring. By end of TINP 2 had 80 professionals and support staff. Community Nutrition Supervisor - covers 15 centres, supervisor role. Community Nutrition Instructress - responsible for entire block (80 centres) to provide on-spot training. Statistical Inspector - monitor, consolidate and report data, District Communication Officer, District project Nutrition Officer.		
Tools:		
Activities: supplementary food for malnourished children, vitamin A, deworming and immunization provided to all. Counselling to mothers on IYCF Expand nutrition supplementation to more children (less strict criteria for providing supplementary food) and integration of the state-wide Noon Meal Program (NMP) covering ages 3-6 yrs with TINP by combining centres. Monthly weighing of children 6-36 months. Interventions targeted to those in grade 3 and 4 malnutrition and those children faltering. Initiated non-formal pre-school education. More attention to coordination between health and nutrition service delivery		
Training:		
Monitoring: Introduction of mother linked child health card to establish a link between births and TINP enrolment. Maternal growth monitoring.		
Impact: Independent survey - severe malnutrition declined by 44% over 5 year period. Moderate malnutrition in new areas (where TINP1 was not being implemented) saw a 23% reduction.		
Outcomes:		
Design of Evaluation:		
Cost estimate: IDA credit of USD 96 million		
Perceived aspects that resulted in success:		
Environment: based on experiences of TINP 1 expansion of the project was the main focus in TINP 2 - difference was the inclusion of older children, preschool education and the two worker model.		
Organizations involved: Government and World Bank		

Annex D: Details on Improved “Supplementary Nutrition”

Vita Shakti : Local fortification of khichdi – Best Practice		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i> Decrease in anaemia prevalence and increase in iron stores
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> West Bengal is expanding state-wide
Background: 2005		
Objective: to study impact of fortified premix for khichdi (rice and lentil mixture supplied by ICDS)		
Coverage: study consisting of 696 children		
Target: children 3-6 years old		
Additional to ICDS:		
Fortified food: Premix - 14 mg microencapsulated ferrous fumerate, vitamin A 500 IU, folic acid 0.05 mg per 0.25 g serving. All monitoring, training, IEC materials required to introduce the product.		
Impact: Improvements after 24 weeks were seen in iron stores (serum ferritin increased from 25.12 to 35.48 in treatment group and in control actually decreased from 25.7 to 22.91), improvements in Hb mean in anaemic children was reported (99.85 to 116.92 in treatment groups and 98.85 to 109.9 in control - p=0.004), and reducing significantly the prevalence of anaemia (19.1% to 4.1% in treatment groups as compared to reduction of 32.6 to 20.7% in control - p<0.001), iron deficiency (decreased from 22.55 to 10.2 % in treatment group and an increase was seen in control from 20.7% to 30.4% - p<0.001) and iron deficiency anaemia (decrease from 4.9 to 0.44 in treatment and a minimal decrease from 9.4% to 9.3% in control - p<0.001) in children and increased serum retinol concentrations in females in the population.		
Outcomes: Compliance was high as khichdi was received by about 90% of children in both treatment and control areas and according to monitoring reports children consumed 100% of the khichdi. No problems with storage or the addition of premix were reported during focus group discussions.		
Design of Evaluation: Sample size of 120 children to detect a change in Hb status of 0.6g/L, assuming SD of 1.66, alpha= 0.05 and beta = 0.20 with design effect of 2. An additional 45% was added to account for loss to follow up. 696 children were screened for enrolment. Cluster randomized design was used with the AWC as the point of randomization. 516 samples collected during the 24 week trial.		
Cost estimate: Rs 9 per beneficiary per year for fortificant		
Perceived aspects that resulted in success:		
Environment: Government expanding state wide		
Organizations involved: Government/ MI		

Fortified candies – Best Practice		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary)	(quantitative/qualitative evidence - proven effectiveness) Decrease in anaemia and VAD in children
Transferability	(shows promise for replication)	(replicated or has potential for replication) Currently expanded state-wide in Bihar
Background: West Bengal. Efficacy study found that the candies resulted in a 50% reduction in anaemia (from 50% down to 23.5%) and prevalence of Vitamin A Deficiency was reduced from 26.5% to 15.5%.		
Objective: To test the effectiveness of Fortified Candy in improving the iron and vitamin A status in the recipients		
Coverage: As of 2005, 5 million beneficiaries are receiving nutri candy.		
Target: Children 24 - 59 months, adolescent girls and pregnant/lactating women		
Additional to ICDS:		
Food: Fortified Candy - 3 g sugar candy centre filled with iron (7mg), folic acid (50 ug), vitamin A (500IU) and vit C (10 mg)		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: Mean Hb concentrations differed significantly in one district from baseline to end line in pre school children - 10.3 to 11.2 ($p \leq 0.05$) this increase resulted in a 15 percentage point decrease in anaemia prevalence (from 66.6% to 51.1%). Paired samples for adolescent girls in baseline and end line revealed a significant decreased in anaemia prevalence from 63.1% to 52.9% ($p < 0.05$). In preschool children prevalence of VAD (serum retinol levels $< 0.70 \mu\text{mol/l}$) significantly decreased from 26.5% to 15.5%. The difference was also significant between treatment and control groups.		
Outcomes: Process evaluation showed that candies were very popular among children. Anecdotal evidence that there was increased attendance at AWCs due to candies. No problems reported by AWW, supervisors and CDPOs with regards to supply logistics or distribution of candies.		
Design of Evaluation: Pre post analysis - two cross sectional surveys at baseline and 18 months after intervention. Sample size at baseline and end line was 1500PLW, about 290 Ado girls and at least 1435 preschool children in each of two districts (control and treatment) at both baseline and end line.		
Cost estimate: US \$1.20 per beneficiary per year		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government of West Bengal / MI		

BP5 biscuit		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		
Background: Orissa – Initiated 18 months study in April 2003. Evaluation was conducted in 2005		
Objective: to demonstrate an efficient model to improve the nutritional status of severely malnourished children by weighing of children, training, education and monitoring		
Coverage: 1837 severely malnourished children were provided with BP5 biscuits		
Target: 6-36 mths. severely malnourished children		
Additional to ICDS		
Food: BP5 biscuit was provided to severely malnourished children. They ate 3 per day - morning, lunch and 1 to take home and eat		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: The number of severely malnourished children had fallen by 47.7%		
Outcomes: Feeding and caring practices improved, improved service delivery an access, improved health status as demonstrated through weight recordings, there was increased level of awareness, increase colostrums feeding, increased access to early treatment of illness, increase health referrals, improved capacity of the AWW.		
Design of Evaluation: Pre-post design with control.		
Cost estimate: INR 11,000,000 (US\$ 250,000) for biscuits.		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government, WFP, DANIDA		

Indiamix		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i> Decrease in anaemia and VAD prevalence
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i> Implemented in 6 states
Background: Assam, Kerala, MP, UP, Rajasthan, Orissa. Initiated in 2002.		
Objective: to provide fortified food to beneficiaries in ICDS		
Coverage: 7.2 million beneficiaries		
Target: ICDS beneficiaries		
Additional to ICDS		
Food: India mix is a blend of pre-cooked cereal and whole soya fortified with 11 vitamins and minerals. This was centrally produced and transported to AWCs for distribution.		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: Study in MP showed decrease in VAD by 50% in intervention block in comparison to 38% in control (statistically significant difference). More than 20% decline in anaemia prevalence in intervention block compared to 15% decline in control block (statistically significant difference).		
Outcomes: Acceptability study in Orissa showed that the fortified blended food was better accepted by the community, due to its versatility (different recipes) and logistic ease (one commodity vs. 3 - wheat, rice, lentil, oil etc.)		
Design of Evaluation: Pre -post design with control		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government and WFP		
Did not receive actual study report. The blended food may not be useful as food distributed through ICDS is now being decentralized therefore central processing is being phased out.		

Community produced complementary food – Promising practice		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary) Established successful cooperative	(quantitative/qualitative evidence - proven effectiveness)
Transferability	(shows promise for replication) Still exists??	(replicated or has potential for replication)
Background: MP		
Objective: Provide acceptable low cost nutritious product (Indiamix), develop entrepreneurship, improve complementary feeding practices, generate income		
Coverage:		
Target:		
Additional to ICDS Developed a registered cooperative. A society was formed to manage Indiamix. An entry of INR10 with a share value of INR 100.		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: Established a small production unit of Indiamix that operated in 8 hour shifts. By the end of 2003 had a cumulative profit of INR 2,247,000. By 2006 152 women share holders with INR2,250 each. 15 women became full time employees for making Indiamix. There was formation of 15 member Self Help Group.		
Outcomes:		
Design of Evaluation:		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government and WFP		
Did not expand because demand for Indiamix was low and the society was still owed funds for previous deliveries.		

Ready to Eat Foods - Gujarat Study		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		
Background: Gujarat		
Objective: Evaluate the acceptability of a new RTE food powder introduced among children aged 6-36 months. Baseline survey		
Coverage: 5 Districts but full district not covered (about 8 blocks?)		
Target: Children 6-36 months		
Additional to ICDS		
Food: Take home ration. RTE - 75 g for nourished children and 150 g per day for malnourished children. RTE is to be mixed with milk or water or can be eaten as powder.		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: All functionaries surveyed heard about the RTE, majority knew they had to store it in containers provided, majority knew that a normal child required 75 g of RTE per day and a malnourished child required 150 g per day. Majority of mothers said kids liked the taste. 93% of mothers were feeding the RTE to the child. However a few storage problems were reported.		
Outcomes:		
Design of Evaluation: 5 Districts - 11 blocks in each. From each block 6 AWCs were randomly selected. Therefore a total of 66 AWC selected. Systematic random sampling was used to select 800 mothers of children 6-36.		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: Government of Gujarat , WCD		
Full report was not available. It is our understanding that WFP is taking this over for the whole state.		

Fortified Ready to Eat Foods – Best Practice		
Criteria↓ Type→	Promising Practice (anecdotal or preliminary)	Best Practice (quantitative/qualitative evidence - proven effectiveness)
Evidence of success		Decrease in VAD and night blindness in children and in anaemia prevalence in women compared to control.
Transferability	(shows promise for replication)	(replicated or has potential for replication) Already picked up by WFP state-wide
Background: WFP taking over for full state		
Objective: to study impact of Ready to eat food - RTE is a mix of wheat flour and bengal gram flour with a little oil provides 300 cal and 10 g protein		
Coverage: 350,000 beneficiaries in 4 Districts		
Target: Children 25-71 months, Pregnant and lactating women.		
Additional to ICDS		
Fortified foods: RTE - children receive 75 g of RTE per day for 300 days/yr. Pregnant and lactating women receive 150 g of RTE /day. 75 g of RTE contains - 500 IU vit A; 7mg iron; 50ug Folic acid; 10 mg vit C		
Supportive structure:		
Tools:		
Activities:		
Training:		
Monitoring:		
Impact: In children the prevalence of vitamin A deficiency (serum retinol <0.7 umol/l) decreased from 33% to 9% in intervention district compared to decrease of 35% to 18% in control (significant difference). Night blindness in children decreased form 2.0% to 0.1% in intervention area compared to a decrease from 0.9% to 0.7% in control. Anaemia in women decreased from 83% to 73.5% in intervention area and in control the decrease was slight - 80.9% to 80.5%. No significant change in anaemia prevalence in children.		
Outcomes:		
Design of Evaluation: Pre post analysis - 2 cross sectional surveys at baseline and one year after intervention with control. Hb and serum retinol were assessed. Sample size of 1500 P/L women and 1500 children 36-71 months were used in each of 2 districts at base line and end line for clinical assessment. A sub-sample of 300 P/L women and 275 children were used for each of 2 districts in baseline and end line for biochemical assessment.		
Cost estimate: cost of fortification including quality control at factory level was 8 paise per beneficiary/day. This could be substantially reduced upon scaling up.		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved: MI		

Annex E: Details on Pre-School Education

ECE Program under DPEP3 – Bihar		
Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		
<p>Background: ECE under DPEP is to build stronger links between primary school and centres in Bihar/Jharkhand States and was initiated in 1997. The ECE strategy under DPEP was to coordinate with ICDS, open ECE centres in non-ICDS areas, open Bal Varg in formal schools and implement school readiness programs.</p>		
<p>Objective: to restructure and improve system of Preschool education.</p>		
<p>Coverage: Initiated in 17 project districts.</p>		
<p>Target: children 3 to 6 years of age</p>		
<p>Additional to ICDS Supportive structure: There was a <i>didi</i> (elder sister)- majority had education up to secondary school. Activities: ECE strategy under DPEP - coordination with ICDS; opening ECE centres in non-ICDS areas; opening Bal Varg (BV) in formal schools; school readiness programs. Selection of Didi through mata samitis, development of curriculum, development of TLM; training to stakeholders; establishment of centres; provision of play kit, health kit etc; academic support to the Didi through ASRG.</p>		
<p>Impact: The majority of Didis were educated up to secondary school (72%). Materials, seating arrangements similar in all centres, but seating arrangements in BV was not sufficient (located in primary/middle schools). Lack of synchronization between ECE and school. The ASRG frequently visited the ECE centres but not BV. ECE centres and BV followed play way learning method and ensured monthly meeting with MS/VSS and monthly training at CRC was conducted. There was an increase in numbers of children transitioning from preschool to school - increases from 22% in 2005 in respect to 17% in 2001. Impact on women's empowerment, reduction in the presence of sibling care on the girl child, presence of more girls in the centre. Improvement in cognitive skills. The ASRG was the link in the program but teachers remained indifferent to the program. The engagement by teacher of class 1 and 2 was more frequent in BVs.</p> <p>Training – should include 15 days induction training, provision of quarterly training for new inputs and one day monthly training at CRC/BRC level. All had received the induction training, half had received quarterly training and about two-thirds received the monthly one day training (75% in ECE centres).</p>		
<p>Design of Evaluation: 4 allocated districts - 2 BRC for each district was identified - therefore 8 BRC (4 ECE centres in non-ICDS areas which were started in 1998/99 located near preschool and 4 Balvarg (started in 2003 with in school premises) and 52 CRCs. 60 ECE and 60 BVs, 14 ASRG, 120 didis, 120 teachers, 508 grade 1, 956 members of mata samitis/VSS</p>		
<p>Cost estimate:</p>		
<p>Perceived aspects that resulted in success:</p>		
<p>Environment:</p>		
<p>Organizations involved:</p>		

AWCs under convergence mode with Primary Education Program - Maharashtra

Criteria ↓ Type →	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>

Background: The objectives of the World Bank III assistance was to strengthen and improve the quality of services and management of the ICDS program. It was initiated in 1999 and was to be completed in 2004, but was extended until 2006.

Objective: The AWCs convergence mode with Primary Education Program aims to strengthen the ECE component of the AWC. A study was conducted in 2006 to evaluate the status of pre-school activity of AWC under convergence mode with DPEP

Coverage: ?

Target: Children 3-6 years of age

Additional to ICDS

The District Primary Education Program (DPEP) - convergence with ICDS entails the following:

- Extended timing of the AWC to coincide with timings of primary schools
- Provision of extra honorarium to AWW/AWH
- Training of AWW/AWH using training modules along NCERT model
- Provision of pre-school kits/teaching-learning material
- Provision of one time grant towards operational costs and annual grants to replenish materials
- Academic support and monitoring through DPEP
- Strengthening linkage of AWC with primary school
- Locating AWC in premises of primary schools or in close proximity
- Opening of ECE centres in non-ICDS areas
- Involvement of Village Education Committees (VEC) which include adolescent girls, especially in ECE centres through supply of materials, construction of centres etc.

Outcome of study:

- Changes in child:
 - Perceived by parent- 98% said that the child had interest in preschool education. 95% felt there were changes in child that were due to preschool education (more confidence, increase knowledge, maintain cleanliness, speak freely, respect elders, group basics).
 - AWW felt preschool benefited child by increasing knowledge (83%) confidence (68%) hygiene (62%) respect (61) and speaking (52%).
 - Perceived by primary school teacher - 98% reported that there are advantages of preschool education for example - increase in confidence, increase in knowledge, gets ready for school education, learn to speak freely, learns to be group member. 94% felt there is a difference between getting AWC preschool education and other - because increase in knowledge, increase in confidence, regular attendance in school.
- PSE - Preschool education was provided before supplementary nutrition in 75% of AWCs. Teaching hours was reported to be above 2 hrs for 67% of respondents. Blackboards, toys, charts, posters etc were used by majority of AWWs to teach. 69% teach 1 to 3 hours per day before providing SN (81%). Teaching methods - almost all children liked the way of story telling, poems and songs and play toys. About half liked to play in groups and recite hindi alphabet and one-third liked to draw pictures. The distance between AWC and Primary schools less than 500 m in 87% of cases. 87% reported good coordination between school and AWC for pre-school education by joint celebration of national festivals, encouraging children, providing materials (38%) and survey if children for enrolment in school (28.9%). Problems faced by AWW include no cooperation from parents/villagers, shortage of teaching materials and lack of infrastructure.
- Teachers - 80% felt there is cooperation between school and AWC in the form of vaccinations, enrolment of children, celebration of festivals, medical checkups. Source of enrolment in school in the majority of cases is through AWW.
- Background of AWWs - 87% of AWWs had high school education or higher (0% illiterate). 68% of AWWs report that they received fixed curriculum from ICDS. 98% have received training on pre-school education with last training received about 3 months ago (71%).
- Background of parents - 17% literate caregivers (64% had middle school education or higher).

Design of Evaluation: 6 Districts with 3 blocks in each district and 5 AWCs in each block = 90 AWCs. 10-15 parents per AWC. Use of in-depth interviews, FGDs

Cost estimate: ?

Perceived aspects that resulted in success:

Environment:

Organizations involved: World Bank III

World Bank Assisted III - Rajasthan

Criteria↓ Type→	Promising Practice <i>(anecdotal or preliminary)</i>	Best Practice <i>(quantitative/qualitative evidence - proven effectiveness)</i>
Evidence of success	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
Transferability		

Background: The objectives of the World Bank III assistance was to strengthen and improve the quality of services and management of the ICDS program. It was initiated in 1999 and was to be completed in 2004, but was extended until 2006.

Objective: The AWCs convergence mode with Primary Education Program aims to strengthen the ECE component of the AWC. A study was conducted in 2005 to evaluate the status of pre-school activity of AWC under convergence mode with DPEP

Coverage: 66 new projects started

Target: Children 3-6 years of age

Additional to ICDS

The District Primary Education Program (DPEP) - convergence with ICDS entails the following:

- Extended timing of the AWC to coincide with timings of primary schools
- Provision of extra honorarium to AWW/AWH
- Training of AWW/AWH using training modules along NCERT model
- Provision of pre-school kits/teaching-learning material
- Provision of one time grant towards operational costs and annual grants to replenish materials
- Academic support and monitoring through DPEP
- Strengthening linkage of AWC with primary school
- Locating AWC in premises of primary schools or in close proximity
- Opening of ECE centres in non-ICDS areas
- Involvement of Village Education Committees (VEC) which include adolescent girls, especially in ECE centres through supply of materials, construction of centres etc.

Outcomes of study:

Impact - only about one quarter of children enrolled benefit from PSE. Mothers of beneficiaries feel that the children are able to learn and gain knowledge, there is a change in personality. 70% of children from PSE go to primary school, 57% of teachers feel that enrolment and retention in primary school has increased. They see a difference between those children that come from PSE and those that do not.

Quality of PSE - AWW had low education (primary or below) but were trained in PSE (95%) through regular ICDS training. 73% felt needed more training. Most AWC had the necessary material for carrying out PSE, but some did not have any and those that had, a large portion was not being used. Some AWW stated that it was do to the poor quality. Half did not have adequate space or drinking water or toilet. In terms of teaching - AWW did use materials properly. Community expressed concern that the PSE was irregular and short duration; 62% of children attend regularly.

Community acceptance - many community members were not aware of the PSE component. Current beneficiaries expressed satisfaction with the PSE services but said that AWW overemphasized the nutrition component and therefore PSE is neglected. PSE in AWC is perceived to be of lower standards and would send their children to formal schooling as early as possible. Community members are willing to support PSE if taken seriously - as in some villages.

Convergence - Primary school teachers had a positive attitude towards PSE but very little interaction, AWWs felt they made an effort to ensure continuation of schooling by enquiring about school enrolment.

Design of Evaluation:

Cost estimate:

Perceived aspects that resulted in success:

Environment:

Organizations involved: World Bank III

AWCs under convergence mode with DPEP III- UP

Criteria↓ Type→	Promising Practice	Best Practice
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Objective: The AWCs convergence mode with Primary Education Program aims to strengthen the ECE component of the AWC.

A study was conducted in 2005/06 to evaluate the status of pre-school activity of AWC under convergence mode with DPEP

Coverage:

Target: Children 3-6 years of age

Additional to ICDS

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- Opening of ECE centres in non-ICDS areas
- Involvement of Village Education Committees (VEC) which include adolescent girls, especially in ECE centres through supply of materials, construction of centres etc.

Outcomes of study: 94% of children who went to AWC PSE are in primary school (no significant difference between male and female). In terms of social background - 97% of the children in primary school from AWC from general category continued, 93-94% from OBC and SC/ST children continued but only 90% of minorities continued - therefore 10% of the minorities dropped out.

Overall sense that the AWC did have a positive impact on the children (physical and emotional) now in primary school.

However, shifting of AWC to school area has had negative consequences like the PLW do not come to the AWC, immunization interruptions due to older kids, lack of space for the supplementary nutrition component of the AWC, the AWC is further away from beneficiaries, the Supplementary food is often eaten by primary school kids, more holidays for the school teachers and kids but not for AWW (stay open during many holidays) - this creates problems in the sense that the AWW does not have a key. Little space provided for the AWC itself.

Training - 92% of AWW have not received any PSE training specifically. Only half the AWCs had teaching aids. Coordination with school teachers is minimal and there is no active community participation for PSE.

Design of Evaluation: Representative sample of 4 districts, 3 blocks where ICDS has been operational for at least 3 years within each district, 5 AWCs per block were selected. Total of 60 AWCs. Use of interviews, FGDs, observation of PSE records selecting 4 kids from each to follow up - total 720 children.

Cost estimate:

Perceived aspects that resulted in success:

Environment:

Organizations involved: Government, World Bank

Evaluation of the ECCE Program in DPEP III districts of Uttarakhand		
Criteria↓ Type→	Promising Practice	Best Practice
Evidence of success	(anecdotal or preliminary)	(quantitative/qualitative evidence - proven effectiveness)
Transferability	(shows promise for replication)	(replicated or has potential for replication)
Background: DPEP III is operational in Uttaranchal since 2000/01. Study was conducted in 2004		
Objective: ECE under DPEP- III in Uttaranchal is on preparing 3-6 years children especially those belonging to deprived section of society for school education; freeing girls from the responsibility of care of younger sibling to enable them to continue with their school education.		
Coverage: 6 districts of the state through 832 ECCE centres enrolling 9754 boys and 10344 girls aged 3-6.		
Target: children 3 to 6 years of age		
Additional to ICDS		
Activities: ECE is delivered through ICDS. Strategy is convergence with ICDS. Inputs include: provision of learning materials to run centre; induction and refresher training of ICDS functionaries; provision of additional honorarium to AWW and AWH; monitoring of ECCE program. Relocation of centres in school premises and synchronizing of ECCE and school timings. Greater emphasis on community involvement through Village Education Committee. VEC is responsible for purchase of establishment, learning materials, payment of honorarium and supervision.		
Impact: 98% of ECCE centres are operational on school premises. By government order ECCE schools are operational from 8-12 in summer and 10 - 2 in winter. ECCE worker stays an extra hour to prepare. Some children stayed longer so they could go home with older siblings. Results - improvement in transition to 1st grade, increase in girls that go to school and stay. More structured planning and activities, ECE is more important than before, more space for children as located in school, more structured timing, more toys, noon meal for all children 3-6 through department of education, more active emphasis on school readiness, children and space were more hygienic. Training – was deemed to be high quality as reflected in the high competence of workers. Negative - the AWW has less time for 0-3 year olds and PLW. Proposal - have one nursery teacher, AWW and AWH		
Outcomes:		
Design of Evaluation: 3 geographical areas - 1 district selected from each area, 18 ECCE in each of the 3 districts based on socio and geographical representation. 9 ECCE from each block. - total 54 ECCEs. Non-ECCE centres were also visited for observation		
Cost estimate:		
Perceived aspects that resulted in success:		
Environment:		
Organizations involved:		

ECCE Program in the DPEP II Districts of UP

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Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>
<p>Background: ECE strategy in DPEP II focuses on two aspects: 1) ECE facilitates school readiness among children in preschool age group; 2) enable girls to attend school regularly as that are freed from sibling care responsibilities. Study was carried out in 2001/ 2002</p>		
<p>Objective: To promote cause of universalization of primary school by improving quality of ECE component of ICDS and to strengthen aspects of the ECCE program which would facilitate participation of older siblings particularly girls in primary school.</p>		
<p>Coverage: 2079 ECCE centres operating in 18 of the DPEP II districts with enrolment of about 40 children on average between the ages of 3 and 6.</p>		
<p>Target: children 3 to 6 years of age</p>		
<p>Additional to ICDS PSE - synchronize timings of ICDS centres with primary school and shift AWCs to or near primary school. Dept of Ed to support ECCE through supplementing training of personnel and development and supply of resource material. Open ECCE centres where ICDS is not operational. AWW and AWH assume responsibility. The AWC is open 5 hours in timing with the primary school; Selected centres are relocated to primary school. AWC is encouraged to use play way method and provide children a developmentally appropriate program. Additional honorarium is provided (Rs 250 for AWW and Rs 125 for AWH per month). Additional training for ICDS personnel (two level cascade training design); play material for children; One time allocation of Rs 5000 and Rs 1500 as recurring amount to each centre. Strengthening of monitoring aspect with active role of the village education committee and head teachers and introduction of 4 forms. District and State level committees have been formed. A quality coordinator has been appointed for each district. Block resource centre and Panchayat resource centre coordinators. Village Education Committees to play active role and head teachers through capacity building</p>		
<p>Impact: Qualitative assessment on child development - children were randomly selected and asked to perform certain tasks. Children performed well on physical development, socio-motor development and cognitive development but aged 3 or more were poor in language, reading and writing while older children did better (no control). Increased attendance of girls in primary school as they can check on younger siblings as it is close by. Children cope better and perform better if come from ECCE as reported by teachers. Negative impact is that there is not enough food for children at the AWC due to increased attendance (even of older children) and the hours are too long for the younger kids.</p>		
<p>Design of Evaluation: 40 ECCE centres, 16 non ECCE AWC in 4 of 18 DPEP II Districts. Interaction with AWW, AWH school head, VEC members, parents and community through FGDs, interviews and questionnaire. 534 interviewed</p>		
<p>Cost estimate:</p>		
<p>Perceived aspects that resulted in success:</p>		
<p>Environment:</p>		
<p>Organizations involved: Government and World Bank</p>		

Shishu Shiksha Kendras (SSK) Scheme under the UP Basic Education Project

Criteria ↓ Type →	Promising Practice	Best Practice
Evidence of success	<i>(anecdotal or preliminary)</i>	<i>(quantitative/qualitative evidence - proven effectiveness)</i>
Transferability	<i>(shows promise for replication)</i>	<i>(replicated or has potential for replication)</i>

Background: UP Basic Education Project launched ECCE through ICDS primarily and through and NGO – SAVE. A Rapid Assessment carried out in 1998.

Objective: Universalization of education, improve access and build institutional capacity.

Coverage: 1200 SSKs were started/adopted in ICDS blocks and 50 centres additionally supported in non-ICDS blocks (run by NGO – SAVE).

Target: children 3 to 6 years of age

Additional to ICDS

PSE - synchronize timings of ICDS centres with primary school and shift AWCs to or near primary school. Dept of Ed to support ECCE through supplemental training of personnel and development and supply of resource material. Open ECCE centres where ICDS is not operational. AWW and AWH assume responsibility. The AWC is open 5 hours in timing with the primary school; Selected centres are relocated to primary school. AWC is encouraged to use play way method and provide children a developmentally appropriate program. Additional honorarium is provided (Rs 150 for AWW and Rs 75 for AWH per month). Additional training for ICDS personnel (two level cascade training design); play material for children; One time allocation of Rs 5000 and Rs 1000 as recurring amount to each centre. Strengthening of monitoring aspect with active role of the village education committee and head teachers and introduction of 4 forms. District and State level committees have been formed. A quality coordinator has been appointed for each district.

Impact: Quality of ECCE - play material was not adequate in some centres due to number of children and storage space was lacking. The material made by AWW/H for guided play was available, but not very attractive and not used in proper way. There was lack of use of locally available material. Training - refresher training needs to focus on program planning and classroom organization. Monitoring - District teams had not met and the roles of the Block level officer etc was unclear.

Shifting of AWC to school area and synchronize timings – generally was positive for the older girl enrolment and attendance, however, for the children in the AWC, the extra time required more food be provided and arrangements for naps (mats) - which were not anticipated or provided. Shifting to school premises was not always beneficial as there was no space and the AWC had to be run under a tree and at times if the school was closed due to holidays or strike, the AWC would have to close because they do not possess the keys. In some cases the distance for beneficiaries increased as the schools were located further away. Some parents found it difficult to coordinate with the revised timings. Workers also felt the extra time needed at the AWC cut their time to visit households and own personal agendas.

Impact on children - The play material had positive impact on children but there was minimal developmental learning, and no school readiness activities. In children that went to the NGO focussed PSE the children readiness for school improved compared to children who did not go to PSE but not significantly (based on school readiness test). It was reported by teachers that children with PSE are better groomed, disciplined and participate more.

Design of Evaluation: Study carried out in 1998. 3 districts, through purposeful sampling. Use of interviews and FGDs.

Cost estimate:

Perceived aspects that resulted in success:

Environment:

Organizations involved:

Examples of Program Innovations

Karnataka: 2000 preschools were started in the 1960's well before ICDS - they ran the whole day by nursery school graduate teachers but never caught on. The program continued until 1986 when ICDS started. In 1990 there was a major expansion of ICDS and in 1999 it was decided to close the previous centres.

Innovation - training of additional AWWs in joyful learning by an NGO (THREAD from Orissa) and placed in all AWCs - preschool education got more attention but other activities were also carried out and the more established AWWs picked up new methods. Should implement Block and Cluster Resource centres like in DPEP. Need to involve the Stree Shakti Program (savings and loans group).

Karnataka: *Objective:* engage children in interesting and informative play. Each day of the week is reserved for different topic and creative low cost materials are used.

Rajasthan –

Preschool education - full day training, calendar and guidebook developed, material and play equipment, weekly and monthly activities for the year has been developed, making the centre attractive. Conversation and cognitive development activities are to be conducted 5 days in the week. PSE has now been elevated in terms of importance. Field observations indicate the children in these AWC are cleaner, friendlier and less shy, some displayed organizational skills.

SEWA experience (Self Employed Women's Association): Crèches for child care opened - encourages school going and releases older siblings from responsibilities.

Kheda Study - 70% of children went to school for the 1st time after crèches were started in their villages. Locating childcare centres in primary schools is another boost to the school going among young children. Young children get used to the idea of school and older children play with young ones during break. Also bonus is that there is a mixing of children from different casts and social backgrounds.

Toy Bank Initiative

Gujarat – started in 1998. Objective: Community to provide deprived children the opportunity to play with toys and experience play-based learning to improve cognitive, social, emotional and physical learning.