

**ODISHA HEALTH SECTOR AND NUTRITION PLAN (OHSNP)
2008-2015: LEARNING AND OPTIONS FOR FUTURE POLICY
AND STRATEGY**



**SUBMITTED TO THE DEVELOPMENT COMMISSIONER, GOVERNMENT OF
ODISHA**

By

TECHNICAL AND MANAGEMENT SUPPORT TEAM (TMST)

APRIL 2015

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List of Abbreviations

AHS	Annual Health Survey
ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
ARI	Acute respiratory infections
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BCC	Behaviour Change Communication
BGSS	Biju Gramin Swasthya Sibir
BWSM	Bihar State Water & Sanitation Mission
CCM	Concurrent Monitoring
CFNS	The Coalition for Food and Nutrition Security
CHC	Community Health Centre
CLTS	Community Led Total Sanitation
CMAM	Community Management of Acute and Severe Malnutrition
CPR	Contraceptive Prevalence Rate
DDWS	Department of Drinking Water Supply
DFID	Department for International Development
DHFW	Department of Health & Family Welfare
DLHS	District Level Household Survey
DWCD	Department of Women & Child Development
DWSM	District Water & Sanitation Mission
DWSSO	District Water Supply and Sanitation Office
EAG	Empowered Action Group
ENIs	Essential Nutrition Interventions
FLW	Front Line Worker
FP	Family Planning
GAM	Global acute malnutrition
GKS	Gaon Kalyan Samiti
GoI	Government of India
GoO	Government of Odisha
GP	Gram Panchayat
HBD	High Burden District

HDI	Human Development Index
HPDs	High Priority Districts
HR	Human Resources
HRH	Human Resources for Health
HMIS	Health Management Information System
HNWASH	Health Nutrition and WASH
ICDS	Integrated Child Development Services
ICT	Information and Communication Technology
IEC	Information Education Communication
IGMSY	Indira Gandhi Matritva Sahyog Yojana
IGTC	Indira Gandhi Training Centre
IMR	Infant Mortality Rate
IPC	Inter Personal Communication
ITN	Insecticidal Treated Nets
IYCF	Infant & Young Child Feeding Practices
JSY	Janani Suraksha Yojana
JC	Jaanch Committee
KBK	Kalahandi, Bolangir, Koraput
LLIN	Long Lasting Insecticidal Nets
LQAS	Lot Quality Assurance Sampling
MAM	Moderate acute malnutrition
M & E	Monitoring and Evaluation
MCTS	Mother Child Tracking System
MDG	Millennium Development Goals
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIS	Management Information System
MMR	Maternal Mortality Ratio
MNCH	Maternal Neonatal and Child Health
MUAC	Mid-upper arm circumference
NHBD	Non-High Burden Districts
MPHW(M)	Multi Purpose Health Worker (Male)
NFHS	National Family Health Survey
NHM	National Health Mission
NOP	Nutrition Operational Plan

NRC	Nutrition Rehabilitation Centre
NRHM	National Rural Health Mission
NVBDCP	National Vector Borne Disease Control Programme
OBC	Other Backward Class
OHSNP	Odisha Health Sector and Nutrition Plan
OHSP	Odisha Health Sector Plan
ODF	Open Defecation Free
ORS	Oral Rehydration Solution
PHC	Primary Health Care
PLA	Participatory Learning and Action
PVTG	Particularly Vulnerable Tribal Group
RRD	Rural Development Department
RMNCH	Reproductive Maternal Newborn and Child Health
RKS	Rogi Kalyan Samitis
SAM	Severe acute malnutrition
SBA	Swachh Bharat Abhiyan
SC	Scheduled Caste
SNP	Supplementary Nutrition Programme
SRS	Sample Registration Survey
SRCW	State Resource Centre for Women
ST	Scheduled Tribe
SHGs	Self Help Groups
SHRMU	State Human Resources Management
SWSM	State Water & Sanitation Mission
TMST	Technical and Management Support team
THR	Take Home Rations
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Population Assistance
VHNDs	Village Health and Nutrition Days
WSSO	Water and Sanitation Support Organisation
WSPs	Water and Sanitation Programmes
WASH	Water sanitation and hygiene

1. Executive Summary

The Odisha Health Sector and Nutrition Plan (OHSNP) has been implemented by the Government of Odisha (GoO) between April 2008 and March 2015, with financial and technical support from the UK Department for International Development (DFID). The four immediate objectives of OHSNP were: i) Improved Access to Priority Health, Nutrition and Water and Sanitation Services in Underserved Areas; ii) Public Health Management Systems Strengthened; iii) Positive Health, Nutrition and Hygiene Practices and Health Seeking Behaviour of Communities Improved; iii) Improved use of Evidence in Planning and Delivery of Equitable Health, Nutrition and Water and Sanitation Services.

The focus evolved over time with greatest attention to health reform and systems strengthening, led by the Department of Health & Family Welfare (DHFV), during 2008-12; the addition of strategies to reduce undernutrition, led by Department of Women & Child Development (DWCD) during 2010-15; and greater convergence of health, nutrition and water, sanitation and hygiene (HNWASH) activities implemented by the DHFV, DWCD and the Rural Development Department (RDD), during 2012-2015, under the steer of the Development Commissioner. The convergent HNWASH approach during the last three years included introduction of demand-side models for community mobilisation and empowerment in fifteen districts, prioritised as high burden based on nutrition human development indices.

Over the seven-year period, working across three sectors, OHSNP has generated a wealth of understanding at different levels from design to implementation, monitoring and results which have been reported through a series of reports produced by the Technical Management Support Team (TMST) with the Departments. The intention of this paper is to focus on a few important themes and provide a synthesis of related lessons, including examples of models and approaches which can be incorporated into future policy and strategy by GoO.

The paper draws on data from the Odisha specific Concurrent Monitoring Survey (CCM II, 2014), which was commissioned by TMST on behalf of GoO. In terms of coverage of key health, nutrition and WASH services the outstanding findings are:

- Major progress on coverage of select maternal and child health (MCH) services since 2005/6
- Major progress on increasing coverage for women from Scheduled Tribe communities
- Similar coverage of services in the more difficult to reach high burden districts as in other districts in the state, suggesting the success of targeting
- Sub-optimal coverage of nutrition services and practices across all districts, with feeding practices for children between 7-24 months, and reach of services to adolescent girls, a particular concern
- Low coverage of sanitation and hygiene practices

In terms of impact, the evidence points to a reduction in maternal, infant and child mortality during the programme period, but the burden of undernutrition has not yet reduced.

Policy, planning and implementation approaches in five thematic areas are discussed: i. Intersectoral convergence for health, nutrition and Water, sanitation and hygiene (WASH); ii. Equity driven strategy and implementation; iii. Priority health reforms; iv. Re-positioning child nutrition programming; v. Demand-side models for community mobilisation/empowerment. These themes

have been highlighted as they encapsulate the special endeavour of OHSNP to adopt a holistic public health approach, in terms of stronger convergence between the health, nutrition and WASH sectors; high focus on equity; and balanced attention to both supply and demand side models. For each theme a set of key messages for policy and strategy are identified and can be read as stand-alone sections. Proposed actions to strengthen future policy and strategy from are collated at the end of each section.

The strongest message relates to the complex problem of child undernutrition in Odisha and the need to connect the nutrition specific interventions around food, feeding practices and infection prevention, with wider approaches which address the underlying determinants. The heightened attention to supply-side water and sanitation strategies, together with community-based models for increasing sanitation and strengthening women's empowerment; and support for pregnant women and infants through the Mamata conditional cash transfer scheme, are all essential measures. However these are primarily led by three departments of government, DWCD, DHFW and RDD. Other departments, for example, those responsible for employment, agriculture, education and Scheduled Castes and Tribes, need to be fully involved in developing and implementing joint strategies to reduce undernutrition.

Odisha is on the right path and benefits from strong administrative and political leadership for health, nutrition and WASH, with the existing high level Nutrition Council in place for ensuring accountability. Investment in capacity building of techno-management and service delivery staff to deliver quality services, and empowerment of communities to increase their control towards healthier lives needs on-going support from government. The most urgent policy initiatives are a Multi-Sectoral Nutrition Policy and a Convergent Solid and Liquid Waste Management Policy. With 43% of all households in Odisha falling in the lowest standard of living category (CCM II, 2014), the challenge for improving child nutrition is evident. Poverty reduction strategies underpin the multi-sectoral approach.

2. Background

The UK Department for International Development (DFID) has been a long-term partner in Odisha, working with the state government and other partners across several development sectors for more than 30 years. Improvement of the health sector has been a priority of this partnership, with DFID support for a series of projects and plans over the period.

Considerable progress had been made in key health indicators over the last two decades, but efforts began from a low base and during the 1990s Odisha persistently had the highest Infant Mortality Rate (IMR) of the states in India. By 2006 Odisha remained one of only three states with an IMR above 70 and a Maternal Mortality Rate (MMR) similar to the other Empowered Action Group (EAG) States, well above the rest of India, Sample Registration Survey (SRS).

There were some encouraging indications of progress in reducing child undernutrition between the last two rounds of the National Family Health Survey (NFHS) survey (1998-99 and 2005-06), with the rate of children underweight declining at faster than the national average. However, there was less progress in childhood stunting and across all the measures of undernutrition, absolute levels remained unacceptably high with 40% of under 3 year olds underweight, 44% stunted and 24% wasted in 2005-06 NFHS III.

Water, sanitation and hygiene (WASH) coverage, an important determinant of the health and nutritional status, has been persistently low. The latest census data 2011 found only 14% of rural households have access to sanitation facilities and 85% defecate in the open.

Wealth, health and nutrition inequities have shown marked geographic distribution in the State, with poorer indicators in the southern and western districts. Repeated rounds of NFHS found disparities in health and nutrition indicators amongst the socially disadvantaged groups, especially Scheduled Tribes' (ST) communities. Overall Odisha has experienced high levels of poverty relative to national and global standards.

3. Objectives of the Odisha Health Sector and Nutrition Plan (OHSNP)

Within this context, the Odisha Health Sector and Nutrition Plan (OHSNP) was developed through a series of consultations in the State, and has been implemented between 2008 and 2015, with financial and technical support from Department for International Development (DFID). Technical support has been provided by a long-term team of specialists known as the Technical and Management Support Team (TMST). The immediate objectives (the Outputs) of OHSNP were:

- 1. Improved Access to Priority Health, Nutrition and Water and Sanitation Services in Underserved Areas**
- 2. Public Health Management Systems Strengthened**
- 3. Positive Health, Nutrition and Hygiene Practices and Health Seeking Behaviour of Communities Improved**
- 4. Improved use of Evidence in Planning and Delivery of Equitable Health, Nutrition and Water and Sanitation Services**

The focus evolved over time with greatest attention to health reform and systems strengthening through the OHSP, led by Department of Health & Family Welfare (DHFV), during 2008-12; the addition of strategies to reduce undernutrition through the Nutrition Operational Plan (NOP), led by Department of Women & Child Development (DWCD), during 2010-15; and greater convergence of health, nutrition and water, sanitation and hygiene (HNWASH) activities steered by DHFV, DWCD and the Rural Development Department (RDD), during 2012-2015.

The health, nutrition and Water, sanitation and hygiene (WASH) plans, jointly known as OHSNP, aimed to increase use of quality health, nutrition and sanitation services by the poor (the Outcome), contributing to the improved health and nutrition status of the people of Odisha (the Impact). The data related to these goals are presented in the next section.

4. Odisha Health and nutrition status 2015: goals met and shortfalls

Table 1 below shows the mortality data and prevalence of child undernutrition, the indicators of impact. For the mortality data, data from the Sample Registration System¹ is used for the baseline and achievement data. The data on child undernutrition is sourced from two large independent

¹ http://www.censusindia.gov.in/2011-common/Sample_Registration_System.html

surveys, the NFHS 2005-6 for the baseline, conducted by agencies on behalf of GOI which provides state level estimate for every state in India².

The achievement column uses data from the Odisha specific Concurrent Monitoring Survey (CCM II, 2014), which has been commissioned by TMST on behalf of Government of Odisha (GoO). This is a very large sample survey (more than half a million respondents) which provides State, district and block level estimates across a wide range of health, nutrition and WASH indicators. CCM II methodology paid particular attention to inclusiveness of the sampling, ensuring that respondents from all backgrounds and the remotest hamlets were appropriately represented in the survey. The very large sample size gives high confidence that these are stable and reliable estimates. An independent quality assurance team was also contracted to check data in the field.

The targets are from the OHSNP results framework (logical framework) agreed between GoO and Department for International Development (DFID).

It is evident from the table that the progress on reduction of infant, child and maternal mortality has been very good. However, progress on reduction of undernutrition falls considerably short of the expected target. Possible explanations for progress made and lack of progress on programme impact are discussed throughout this report, with special reference to nutrition in section 5.4.

Table 1 Impact Indicators

	IMPACT INDICATORS	BASELINE	TARGET 2014-15	ACHIEVEMENT	MET [green] NEARLY MET [orange] NOT MET [red]
1	IMR per 1000 live births	69 (SRS-2008)	50	51 (SRS-2013)	
2	Under Five Mortality Rate per 1000 live births	95 NFHS-3 (2005-06)	63	63 (SRS-2013)	
3	MMRper 100,000 live births	303 SRS-2008 (for 2004-06)	200	222 (SRS-2011-13)	
5	Percentage of Underweight children under 5 years of age	42% NFHS-3 Rural 54%-ST	25%- HBD 30%-ST	42.8 % - State 48.5% - HBD 53.2 – ST (CCM II 2014)	
6	Percentage of Stunting in children under 5 years of age	45%	35%	47.5% (CCMII 2014)	
7	Percentage of Wasting in children under 5 years of age	20%	10%	25.4% (CCM II 2014)	

² <http://www.rchiips.org/nfhs/>

Table 2 below shows the coverage of key services and practices for health, nutrition and WASH. The baseline and end line data is drawn from multiple sources as different surveys collect data for different indicators. The achievement column includes data from CCM II, 2014, referred to above. Interpreting data between surveys with varying methodologies always needs to be treated cautiously,

It is also useful to note here that whilst responsibility for meeting the targets is assigned to different departments (DHFV, DWCD, RDD), this report underscores the interrelationships between the sectors – the adverse effects of undernutrition on health (morbidity and mortality); the adverse effect of disease on nutritional status; and WASH as an underlying determinant of health and nutrition. This is discussed in the sections below.

Table 2 Outcome Indicators

	OUTCOME INDICATORS	BASELINE 2008-09	TARGET 2014-15	ACHIEVEMENT	MET [green] NEARLY MET [orange] NOT MET [red]
	Contraceptive Prevalence Rate(CPR)	38% 27%-ST DLHS-3 (2007-08)	50%	46.3% (AHS 2012-13) 61.5% (any method, CCM II 2014) 33.6% (any modern method, CCM II 2014)	
1	% of deliveries taking place in health facilities	47%(all) 31%(Rural) 12% (ST), 30% (SC) NFHS-3	87% 90% (ST)	73% HMIS-Dec'14 82.1% (CCM II 2014)	
2	%of children breast fed within an hour of birth	55% NFHS-3 Rural	80%-HBD	41.1% - HBD (CCMII 2014)	
	% of children 6-9 months given solid or semi-solid food the previous day and are still being breastfed	59.8 District Level Household Survey, DLHS-3 rural		49.5%-STATE 44.6 %- HBD (CCM II 2014)	
4	% of children with full immunization	55% NFHS-3 Rural	90%	80% HMIS-Dec'14 75% (CCM II 2014)	
5	Number of people with sustainable access to drinking water source	18 million DDWS MIS	30 million	24.01 million DDWS MIS	
6	Number of people using all sanitation facilities	9 million Census 2011 (Rural)	16 million	13.84 million DDWS MIS	

The coverage data shows an increase for many of the indicators over the baseline, except for the infant and young child feeding (IYCF) practices. However, all the coverage indicators fall short of the target. Two indicators of IYCF are shown here, early initiation of breastfeeding and consumption of solids/semi-solids by babies of 6-9 months of age, with the full set of 7 IYCF indicators presented in section 5.4.

On a more positive note, there has been remarkable achievement in closing the equity gap for key Maternal, Neonatal and Child (MNCH) services. Fig 1 below shows data for women from the ST community compared with all women in Odisha at two points in time, 2005/6 NFHS III and 2014 CCM II, for key services over the continuum of care. There has been a large increase in the coverage of each of these services for all women in Odisha. And the coverage for ST women has increased by an even greater proportion. The ST curve in 2014 is the same shape as all women and the gap has nearly closed. As mentioned, CCM II design ensures full representation of all groups so this finding provides strong evidence that in just under a decade, the GoO has managed to dramatically increase coverage of these MNCH services for all its population. High coverage is achieved when all sections of society access the services provided.

Figure 1

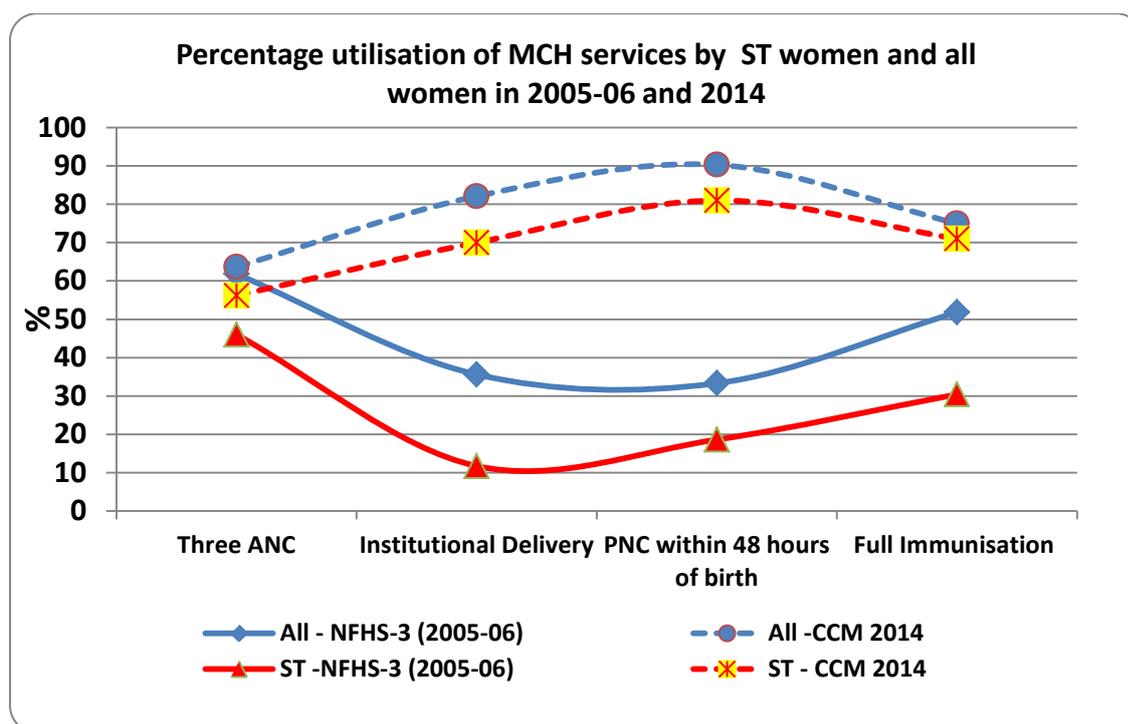
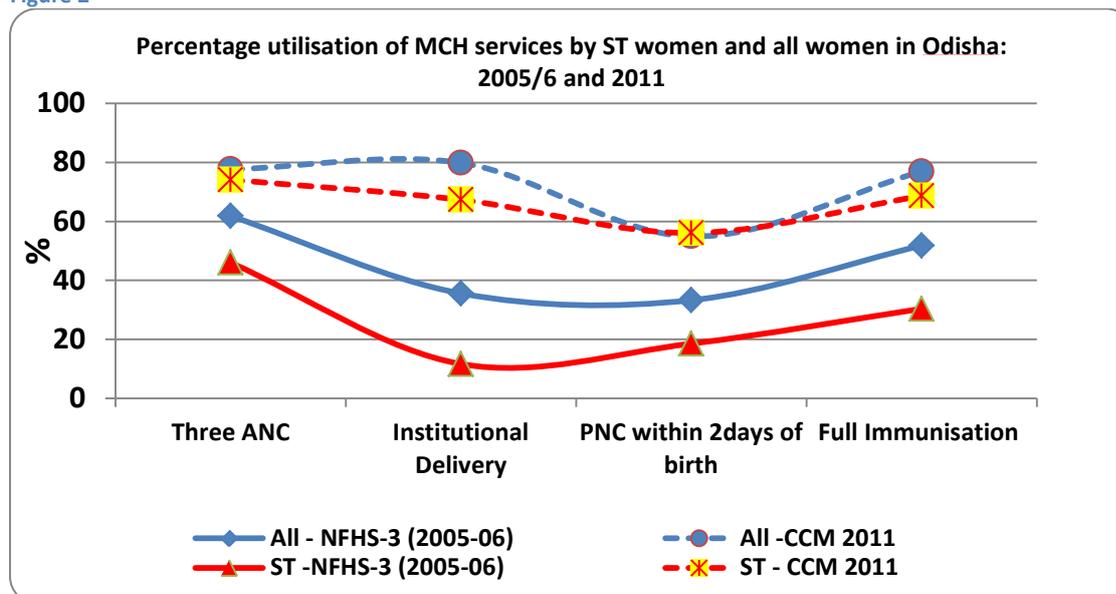


Fig 2 below presents an interesting comparison. This shows the same NFHS III baseline for the same coverage indicators, but using CCM I data from 2014. Of note is the major increase in post-natal care within 48 hours for all women and some improvement in all other indicators. The progressive improvement from 2006/6 to 2011 and 2014 shows the results of persistent efforts for inclusive service delivery, driven jointly by National Rural Health Mission (NRHM) and OHSNP.

Figure 2



A final word in this section on the data sources: The health management information system (HMIS) data for institutional delivery and full immunisation shows very similar coverage. Prior to NRHM and OHSNP, internal data often differed widely from independent surveys, usually with the department data showing inflated reports, notably for immunisation. The data presented here suggests great improvement in the HMIS, one of the critical components of the health system.

5. Key lessons learnt during Odisha Health Sector and Nutrition Plan OHSNP

OHSNP has worked with three sectors over a 7 year period, generating a wealth of understanding at different levels from design to implementation, monitoring and results. Many of the lessons have been documented in reports from TMST to GoO and DFID during the course of implementation and are available on the NRHM website and with DWCD and RRD. The intention of this paper is to focus on a few important themes and provide a synthesis of related lessons, including examples of models and approaches which can be incorporated into future policy and strategy by GoO.

The five thematic areas are:

- 5.1 Intersectoral convergence for health, nutrition and WASH
- 5.2 Equity driven strategy and implementation
- 5.3 Priority health reforms
- 5.4 Re-positioning child nutrition programming
- 5.5 Demand-side models for community mobilisation/empowerment

5.1 Intersectoral convergence for health, nutrition and WASH

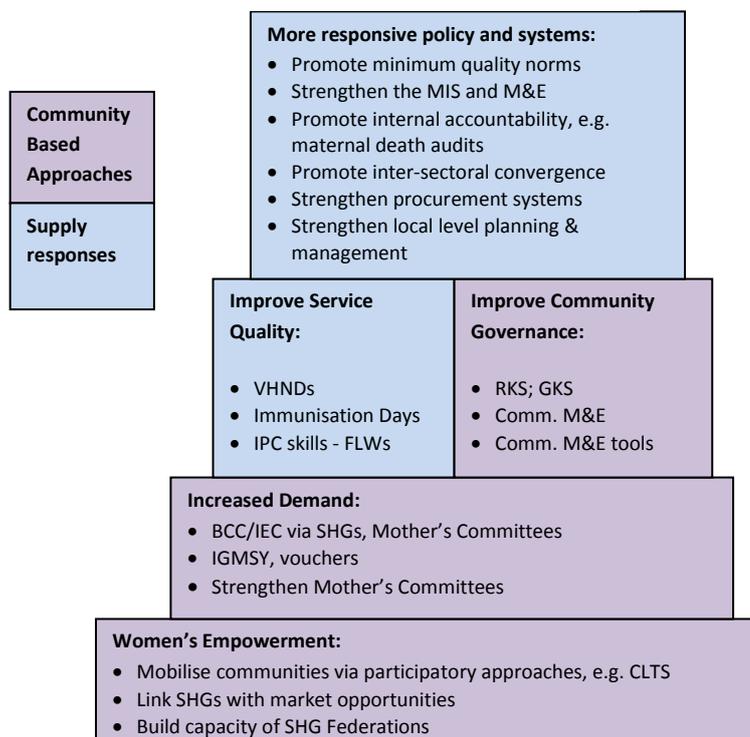
Key Messages

1. Strengthening delivery and responsiveness of supply side services must be complemented by innovative and evidence based community based approaches on the demand side.
2. Convergence at all levels should be a key feature of many of these mutually reinforcing supply side and demand side interventions in health, nutrition and WASH.
3. In-built super-Departmental leadership is critical to effective convergence, which needs to be driven from the policy level.
4. A multi-sectoral Nutrition Policy is urgently required to address undernutrition in Odisha.
5. Convergent Solid and Liquid Waste Management policy is needed, in line with GoI guidance, if the Swachh Bharat Abhiyaan vision is to be attained by 2019.
6. High quality operational monitoring and rapid assessments are critical to implementation effectiveness, performance management and course correction.

Introduction

OHSNP focused on quality, equity, decentralisation and evidence based health, nutrition and WASH programming. This was approached through strengthening delivery and responsiveness of services on the supply side, and innovative community based interventions on the demand side, see Figure 1. In this innovative, integrated multi-sectoral model, convergence has been a key feature of many mutually reinforcing supply side and demand side interventions by the nodal Departments, with support from the TMST. Convergence structures, mechanisms and processes address needs to engage multiple Departments concurrently, in order that the desired health and nutrition outcomes may be attained.

Figure 3 Building Blocks for Community Based Approaches and Supply Side Responsiveness



The convergent governance mechanism has built consensus across departments

Steering and oversight of OHSNP was undertaken by a convergent governance mechanism, the Project Steering Committee. This comprises the Principal Secretaries and senior officials of the three OHSNP nodal Departments: Health and Family Welfare (DHFV), Woman and Child Development (DWCD) and Rural Development (RDD). Other related Departments with an interest, such as the Panchayati Raj Department, the Scheduled Tribes and Scheduled Castes Development Department and the School and Mass Education Department, have also participated. Overall leadership of the Project Steering Committee is provided by the Development Commissioner. This governance structure has proved vibrant and extremely successful as a consensus building and strategic decision making forum at the State level. The leadership of all Departments has engaged fully and effectively throughout OHSNP, under the overall oversight and guidance of the Development Commissioner. OHSNP has necessarily prioritised convergent action where appropriate, bringing together sectoral implementation in health, through the National Health Mission (NHM) platform, nutrition, through the Integrated Child Development Services (ICDS) platform and WASH, through the Water and Sanitation Support Organisation (WSSO) platform. Delivering quality, accessible services on / towards a universal basis, or in targeted interventions implemented at scale, has required that sectors work together conjointly at specific junctures and in clearly defined, reciprocally supportive roles.

Challenges to convergence need to be addressed at various levels of the system and across stakeholders

Under OHSNP, it has been evident that challenges can present in ensuring that sectors are working together effectively at every level, in order to deploy the State's scarce resources efficiently towards common goals. For example, as Ved and Menon describe³, undernutrition is a persistent challenge. Given the multiple determinants of child undernutrition, a range of inputs across sectors are required. This is described in more detail in Section 5. However, although convergence between nutrition and health in particular has long been recognised as necessary for improving child undernutrition and more recent evidence highlights the critical role of water, sanitation and hygiene, despite strong efforts convergence at all levels has remained less than optimal. Some of the inhibiting factors observed under OHSNP include the range and diversity of stakeholders, the technical and socio-economic complexity of the issues, lack of convergent policy, limited institutional arrangements to facilitate convergence, and ineffective operational monitoring.

This section sets out experience, lessons and recommendations in relation to convergence stemming from implementation of OHSNP. We focus on three major steps in the policy process: policy formation, implementation (including institutional mechanisms), and monitoring and evaluation.

Policy Formation

The two principal platforms currently addressing nutrition are ICDS, within DWCD, and DHFW. Under OHSNP, the NOP was developed, which supported these Departments, especially DWCD, to

³ Ved, R. and Menon, P. (2012): *Analyzing Intersectoral Convergence to Improve Child Undernutrition in India Development and Application of a Framework to Examine Policies in Agriculture, Health, and Nutrition*, IFPRI Discussion Paper 01208, September 2012

implement policy and strategy in relation to an evidence based package of essential *nutrition specific* interventions. However, it was recognised that the determinants of malnutrition extended far beyond the direct interventions within the ambits of ICDS and DHFW. To help address this, the seventh strategy of the NOP was *Interdepartmental Convergence*.

The Nutrition Council is a forum which can take leadership of a multi-sectoral policy and strategy

In order to support greater convergence and bring in essential support from other Departments, on 9 November 2010 the multi-sectoral Nutrition Council was formed, with a view to driving action to improve nutrition in the State. The Nutrition Council is chaired by the Chief Minister. The DWCD Minister is the Vice Chairperson and DWCD Secretary is the Member Convener. The Members include the most senior officers of the State, including the Chief Secretary and Development Commissioner, as well as the administrative heads of seven other government departments: the Secretaries of Finance, Health and Family Welfare, Rural Development, Scheduled Tribes and Scheduled Castes Development, Panchayati Raj, School and Mass Education and Urban Development, as well as the Director Social Welfare, Regional Commissioners and four District Collectors, on a rotational basis. Representatives from partners, including TMST, UNICEF and CARE, are observers.

The Nutrition Council was an innovation. The Government of Odisha was one of the first States in India to respond to the complexity of malnutrition by establishing a multi-sectoral response through an inter-departmental forum to drive convergent approaches. This political and administrative commitment supported convergence in some key areas. For example, DWCD has increasingly converged with Scheduled Tribes and Scheduled Castes Development to reach the marginalised in tribal sub-plan areas, with Rural Development to provide safe drinking water at Anganwadi Centres and with Health and family Welfare in the management of severely underweight children. The convergence agenda has also percolated to the District and sub-District levels. Integration platforms such as Village Health and Nutrition Day (VHND) and Gaon Kalyan Samitis (GKS) are increasingly used to address undernutrition in rural communities and convergent planning and monitoring meetings at District and sub-District levels are taking place, in order to increase programme effectiveness.

The emerging health agenda requires a convergent approach to tackle the burden of disease

However, the Nutrition Council has not as yet been able to achieve enough traction, or generate enough momentum, to really tackle the multidimensional causes of malnutrition to the extent that there is a meaningful impact on nutrition outcomes. In order to address this, we recommend that the Nutrition Council reinvigorates its efforts and takes leadership on the development of a multi-sectoral Nutrition Policy. An evidence-based, multi-sectoral policy is urgently required in order to ensure that the right mix of *nutrition sensitive*, as well as *nutrition specific*, interventions are implemented throughout the State. This is critical if real progress is to be made in reducing the Odisha's heavy burden of undernutrition, discussed further in section X

Under OHSNP, the public health agenda has been instigated and advanced. This is forward looking, and will help the State to address the overlap between what may be called the *unfinished agenda in health* and currently *emerging issues in health*. Together, they represent a very heavy burden of disease for the State.

The Unfinished Agenda in Health:

- Most Indian States, including Odisha, are unlikely to achieve the health Millennium Development Goals
- Maternal Neonatal and Child Health
- Infectious diseases
- Malnutrition (including undernutrition and poor nutrition)

Emerging Issues in Health:

- Ageing (bone density, sensory health, for example sight and hearing)
- Non-Communicable Diseases (cardio-vascular disease, diabetes, cancer, mental health)
- Behavioural health (alcohol, tobacco, lack of exercise)
- Injury, including suicide (farmers, women and girls)
- Malnutrition (including over-nutrition / obesity and poor nutrition)

These two groups of health issues exemplify the changing patterns of the burden of disease which the State now increasingly recognises it needs to address at the policy level.⁴ The implications apply to Odisha's rural communities, as well as to its urban communities; that is they reflect population health. As well as providing concerted support to address the *unfinished agenda* and to ensure essential last mile delivery in improved health and nutrition, especially in relation to maternal, neonatal and child health, OHSNP has moved forward with the development of the public health agenda. This has necessarily instigated the beginning of dispersal in the health system from doctor-focussed operations, to the broader involvement of a wide range of public health professionals, including those in public health nursing, etymology, laboratory work and behaviour change communication. However, the emerging health agenda clearly evidences the need for increased convergence between Departments, as well as within the Department of Health and Family Welfare. The emerging health issues faced by the State have substantial multifactorial determinants, critically including nutrition, behavioural, environmental, gender and other social and equity based factors.

The Swachh Bharat Mission requires convergent policy development

The new national government has catapulted Swachh Bharat Abhiyaan to top of national policy agenda⁵ and it is clear that coordinated, convergent policy across multiple Departments in Odisha will need to be garnered through the Swachh Bharat Mission, in order to initiate and sustain implementation, make necessary progress and achieve the 2019 targets. The new government In Odisha has made a good start, with high level support from the Chief Minister, and concerted joint planning and action, led by the Principal Secretary Rural Development. OHSNP has contributed to these processes to date, and will continue to do so under the extension to 2016 of the *Support to WASH Programme, Odisha*.

⁴ Patel, V.; Chatterji, S.; Chisholm, D.; Ebrahim, S.; Gopalakrishna, G.; Mathers, C.; Mohan, V.; Prabhakaran, D.; Ravindran, R.D.; Reddy, K.S. (2011): *Chronic diseases and injuries in India*, Lancet Vol 377 No 9763 P413-429

⁵ Ministry of Drinking Water and Sanitation, Government of India (2014): *Guidelines for Swachh Bharat Mission (Gramin)*

It has been recognised from the outset that the issues that the Swachh Bharat Mission must address are multi-sectoral and will require convergent policy development. National government has issued guidance for states to develop Solid and Liquid Waste Management Policy⁶ wherein it is emphasised that policy development and plans should be convergent and set out clear roles and responsibilities for the key actors at all levels.

Many Departments will participate. However, the centrality of the issues to health and nutrition and the substantial responsibilities allocated to DHFW, DWCD, School and Mass Education and the Panchayati Raj Department, amongst others, is clear. DHFW will benefit from reduction in the diarrhoeas and many other diseases and infections, including hospital acquired infections, anaemia, blindness, dengue, and malaria. This will lead to increased availability of clinical resources and reduced medical expenditures. DHFW will be responsible for implementation throughout all its facilities. Recently evidence has been building rapidly on the direct relationship between poor sanitation and undernutrition, especially stunting: *Undernutrition in rural Indian children has been an intractable puzzle... The impact on nutrition of many faecally transmitted infections, not just the diarrhoeas, has been a blind spot.*⁷ Like health, DWCD will be responsible for implementation throughout its facilities. In education, children are seen as agents of change, as well as citizens of the future. If they learn good hygiene and sanitation practices at school, they will expect to see them in the home and will encourage their parents to provide and use facilities. Indeed, a girl from one village has started a campaign wherein girls from her village asserted that they will not marry in to households without latrines. This is a mantra that could spread, and become an effective, community led campaign. School and Mass Education will also be responsible for implementation of Swachh Bharat Abhiyaan throughout its facilities and by its teachers and other staff.

Whilst a good start has been made, as with all new policy priorities, the momentum will need to be sustained in order to galvanise implementation across departments, long term. The forthcoming multi-sectoral Solid and Liquid Waste Management Policy process will help in this regard. It will also highlight some of the cross-cutting benefits which could be gained, such as privacy, security, gender sensitivity, social cohesion, collective action and, in due course, economic benefits.

Convergent cross-cutting policy has also been a feature during OHSNP implementation, in part because many elements of the programme are affected by the same structural determinants of poverty and equity, including gender. For example, the convergent Odisha State Policy for Girls and Women (2014)⁸, led by DWCD, was supported with thematic consultations led by the State Commission for Women, Mahila Vikas Sambhaya, State Social Welfare Board, National Health Mission (NHM), Odisha Livelihood Mission and State Commission for Persons with Disability. This was supported by the Chief Secretary, and received technical assistance from the new State Resource Centre for Women (SRCW) and the United Nations Fund for Population Assistance (UNFPA).

⁶ Ministry of Drinking Water and Sanitation, Government of India and Asian Development Bank (2014): *Guidelines on Solid and Liquid Waste Management in Rural Areas*

⁷ Chambers, R. and von Medeazza, G. (2013): *Sanitation and Stunting in India: Undernutrition's Blind Spot*, Economic and Political Weekly, Vol - XLVIII No. 25, June 22, 2013

⁸ Government of Odisha (2014): *Odisha State Policy for Girls and Women*

Implementation

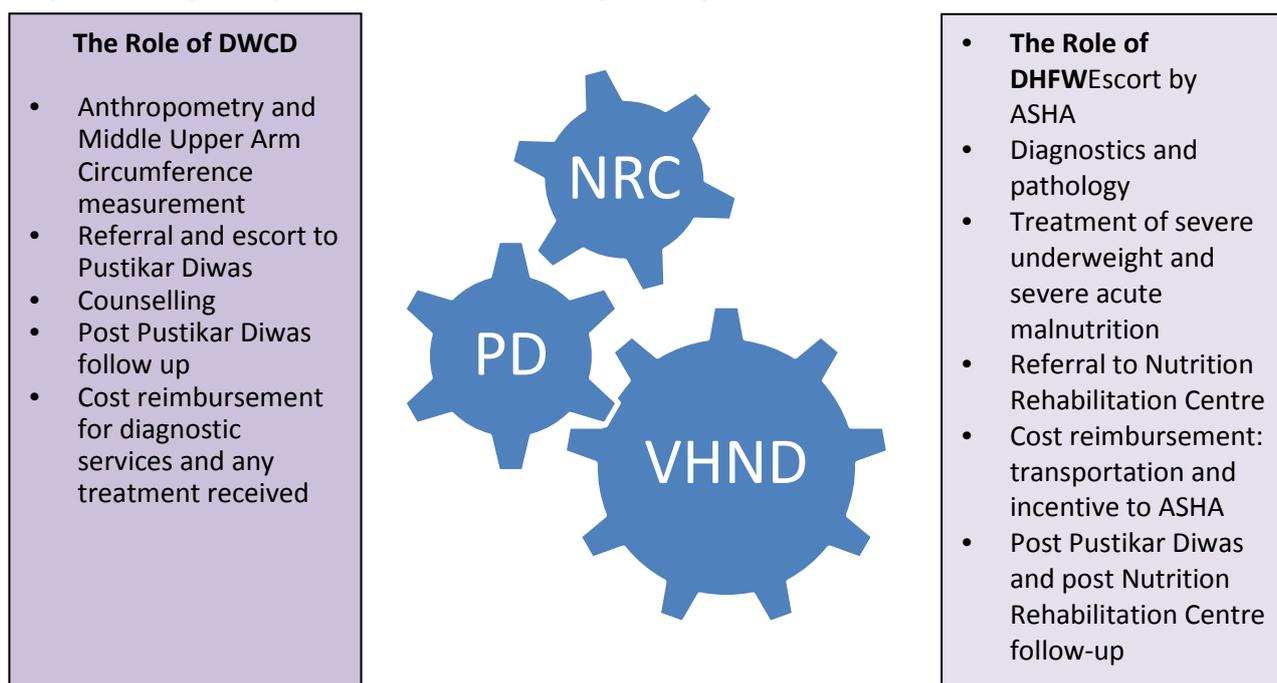
On the supply side, the response to the seemingly intractable problem of undernutrition in Odisha is implemented at the community level through completely convergent action by the frontline workers of DWCD and DHFW. This model highlights the considerable benefits of appropriate interdepartmental convergence and has been supported by OHSNP, under the Nutrition Operational Plan. A rational continuum of care has been established and institutionalised. It has three linked responses: the Village Health and Nutrition Day (VHND), Pustikar Diwas and the Nutrition Rehabilitation Centre (NRC). Each of these responses is a cog in a cycle of services which is targeted at the specific groups which are most vulnerable. It enables identification of undernutrition, including severe undernutrition, and refers them appropriately into the service which can best meet their needs. It then monitors their progress and triggers any further referral necessary, or enables their discharge back into the community if their recovery has been achieved and verified. Children may be referred through this service cycle many times if they suffer chronic undernutrition.

Children are assessed at Village Health and Nutrition Days (VHND), which is run jointly by Anganwadi Workers (AWW) and Auxiliary Nurse Midwives as part of the routine services offered to all mothers and children at the community level. Village Health and Nutrition Days (VHND) is provided at the Anganwadi Centre covering a village or cluster of villages and is focussed on growth monitoring and assessment of illness. Under OHSNP it has been possible to utilise technical assistance to improve VHND services so that they target the specific age groups where intervention will be most effective. In addition, the content of the services has been revised in line with new evidence and best practice and a convergent approach to training implemented. All front line workers in the State have been trained in the same revised curriculum, in order to ensure that their knowledge is kept up-to-date with the global evidence and their skills are maintained and developed.

Pustikar Diwas is an outpatient model of management of undernutrition where further screening of children to determine the severity of their case takes place and treatment for underlying infections in medically uncomplicated children is delivered. It takes place in primary health centres and community health centres (CHCs). At Pustikar Diwas, medical and nursing personnel assess, diagnose, and treat children with severe acute malnutrition and counsel those without any medical complications in the provision of energy-dense food at home, breastfeeding, deworming, vitamin A and iron supplementation, and information about *nutrition sensitive* interventions, such as safe drinking water, hand washing, and use of latrines⁹. If the case is severe and medically complicated, the child will be referred to the Nutrition Rehabilitation Centre where their undernutrition is stabilised and their medical problems treated.

⁹ Narayan Parhi, R. and Saxton, J. (2014): *Pustikar Diwas: Convergent Action to Reduce Child Undernutrition in Odisha*, POSHAN Implementation Note 3. New Delhi, India: IFPRI

Figure 4 Convergent Response to Undernutrition: The Cogs in the Cycle



This convergent continuum of services is rational and provides critical support for many vulnerable children, especially through early identification and management of undernutrition. Further, the collaboration has increased the focus on undernutrition in Odisha and has prompted the expansion of services. However, challenges remain and the model is not always as effective as it should be.

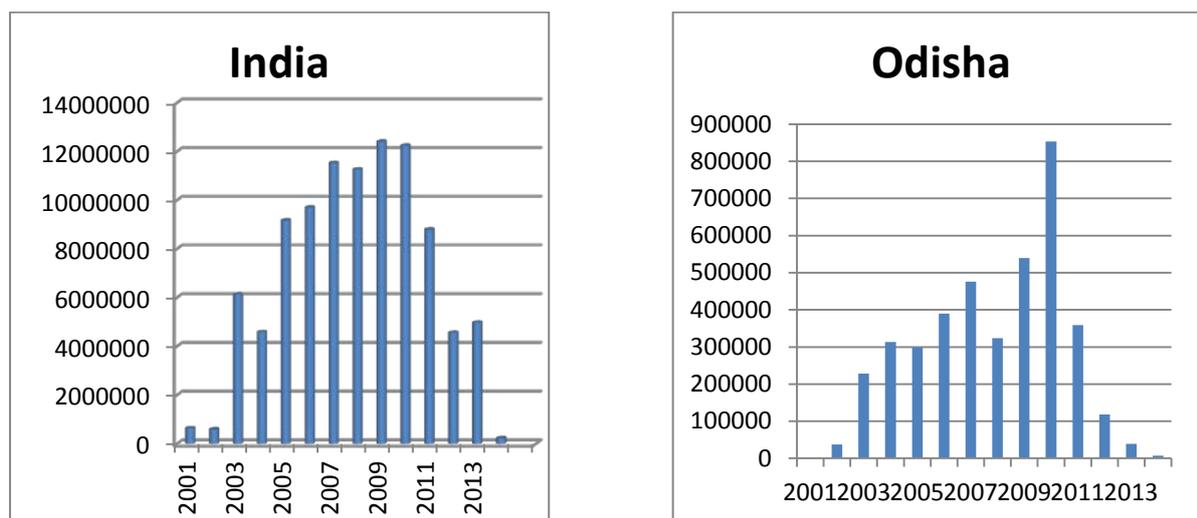
This level of convergent action at the community level requires substantial coordination by government officials, including convergent block level and district level meetings focusing on monitoring and planning support. These meetings are time consuming, and do not always take place. Further, effective management of child undernutrition necessarily requires that the service continuum does not break down, yet gaps are still evident and many children fall between the cracks, failing to access the services they need. These gaps are aggravated by shortages of medical personnel, especially in remote and hard to reach areas, lack of access to adequate diagnostics, overcrowded facilities and inadequate tracking and follow up of children in the system. They are also affected by differences between the departments in relation to incentivisation of their frontline workers, funds flow in relation to their allowances and overlaps in the roles of AWWs and Accredited Social Health Activist (ASHAs), for example.

Prior to very recent developments in rural sanitation in 2014, under the Swachh Bharat Mission, the Sanitation Strategy of the Government of India was the Nirmal Bharat Abhiyaan, which aimed to achieve *Sanitation for All* by 2022. A core plank of the strategy was to render villages open defecation free (ODF) as the first step toward complete liquid and solid waste management in rural areas.

Implementation of this strategy was designed to take place through reform which constituted convergence between the Nirmal Bharat Abhiyaan and the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) on the provision of incentives at the individual household

level for the construction of latrines. This is an example of where the imposition of unwieldy convergence mechanisms has proved a hindrance to implementation; indeed practically halted progress completely. Figure 5 demonstrates the effect of this ill-conceived convergent incentive scheme on latrine construction in India and in Odisha, which, notwithstanding weaknesses in the data, which has been widely criticised, falls off dramatically from 2010-2011¹⁰.

Figure 5 Reported Latrine Construction 2001–2014 Ministry of Drinking Water and Sanitation



Under OHSNP and the *Support to WASH Programme, Odisha* (2012-2016), efforts to support rural sanitation during this period were extremely challenging. TMST joined with other concerned agencies such as Unicef and WaterAid to outline the problem at government level. The convergent incentive arrangements created a bottleneck due to a poor *fit* and poor coordination between Departments, as well as the enormity of the paperwork required to obtain the MNREGA part of the incentive. This was not workable at the District and sub-District implementation levels and demonstrates how convergence between Departments can fail due to lack of commitment, inappropriate institutional arrangements, incompatible working practices and failure to engage the community in a meaningful way.

Since 2014 the Swachh Bharat Abhiyaan has been underway and the MNREGA part of the incentive for household latrines has been stopped; the full incentive now comes from the Rural Development Department. Though the convergence aspect was not the only challenge, it was the most contested and detrimental part of the scheme. Subsequent progress on rural sanitation has been very encouraging, and is discussed in detail in Section 5, as well as in relation to convergence on the demand side, below.

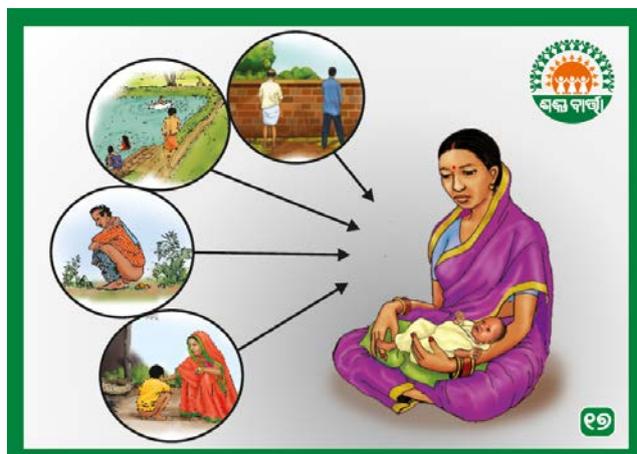
OHSNP's integrated multi-sectoral model is characterised by mutually reinforcing supply side and demand side interventions, where convergence has been a key feature. Shakti Varta is an extremely innovative large scale initiative on the demand side, in which convergence between the three

¹⁰ Data from Ministry of Drinking Water and Sanitation, Government of India, on-line management information system

OHSNP nodal Departments is inherent. However, the collaboration extends further, with Mission Shakti, other women's self-help groups, NGOs and other community structures playing critical roles in an innovative government-civil society partnership model. Key to laying down mechanisms and processes to enable this model to be successful have been political and administrative will, the formation of an intersector committee, nesting the initiative within existing structures and a strong focus on inclusiveness, communication and coordination, from the outset.

Shakti Varta is an evidence-based initiative designed to deliver a convergent health, nutrition and WASH Participatory Learning and Action (PLA) cycle, throughout the fifteen nutrition high burden districts (HBDs) of Odisha. It is based on evidence of the effectiveness of Participatory Learning and Action (PLA) with women's groups in reducing neonatal mortality and maternal depression¹¹. Shakti Varta targets around 17.5 million people, and will ultimately work with some 100,000 self-help groups to empower the community in the definition and resolution of the health, nutrition and WASH constraints they face. The initiation of Shakti Varta was catalysed by the recognition by TMST, policy actors across sectors, development partners and other stakeholders of the importance of systematic demand creation and strengthening local accountability for services. These stakeholders also recognised the interrelated determinants of the health, nutrition and WASH issues which Shakti Varta was designed to address:

Photo 1 Shakti Varta Picture Card linking Sanitation with Child Health

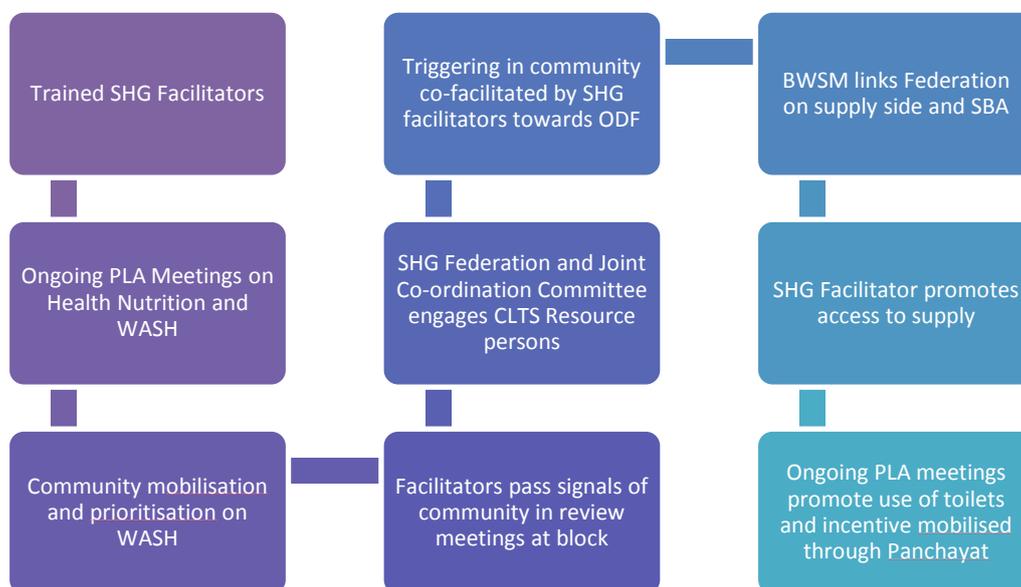


During the implementation of OHSNP, there has been an increased focus on multi-partner convergent action to accelerate and multiply progress on sanitation, through demonstrating and scaling up modified models of Community Led Total Sanitation, as part of a long term strategy to address open defecation in Odisha. As a convergent health, nutrition and WASH action, Shakti Varta has been ideally situated to respond to this and to forge linkages with the supply side response to meet emergent demand, including for the implementation of modified models of Community Led Total Sanitation and technical and hardware support. Figure 6 demonstrates how Shakti Varta

¹¹ Tripathy, P.; Nair, N.; Barnett, S.; Mahapatra, R.; Borghi, J.; Rath, S.; Rath, S.; Gope, R.; Mahto, D.; Sinha, R.; Lakshminarayana, R.; Patel, P.; Pagel, C.; Prost, A.; Costello, A. (2010): *Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial*, Lancet 2010; 375: 1182–92

advances the required linkages to bring in the resources needed to address rural community sanitation, in response to the priorities of the community.

Figure 6 Convergent Shakti Varta Initiative Linkages to Advance Community Sanitation



Monitoring and Evaluation

Under OHSNP, there has been a strong focus on robust evidence. This has related both to the evidence base for interventions implemented and the generation of new evidence, to enable the State to monitor progress in health, nutrition and WASH. OHSNP has also focussed on data demand and information use, strengthening management information systems and the use of technology to enable policy makers and implementers to access information more quickly and to drill down to the specific information they require to support decision making.

State-wide Concurrent Monitoring Surveys, wherein multiple health nutrition and WASH indicators are estimated through the same survey process, in order to give a concurrent picture of progress across sectors, have been a key convergent feature of OHSNP. The Concurrent Monitoring II (2014) data presented throughout this report have been extracted from the largest and most comprehensive survey to date. More than 500,000 individual interviews were undertaken in Odisha, in order to complete the survey, ensuring that it is representative and therefore delivers a high degree of precision. In addition, the Concurrent monitoring Surveys provide reliable block level estimates, in every district of Odisha, which enables geographically specific problem identification and targeting. The Concurrent Monitoring Surveys provide the State with an invaluable resource which will be utilised by many Departments, implementers, agencies and researchers for years to come, supporting evidence based policy, strategy and intervention.

In addition to these larger studies, under OHSNP a raft of smaller scale operational and rapid assessments have been instigated in relation to convergent actions, in order to provide information which can be used to address the effectiveness of implementation, the management of

performance, the design of measures for course correction where required, further planning and essential learning for scale up.

Also designed to provide rapid, usable feedback is Lot Quality Assurance Sampling (LQAS). OHSNP successfully utilised LQAS in support of the response to malaria by the National Vector Borne Disease Control Programme (NVBDCP) for six years, supported by the Liverpool School of Tropical Medicine. Originally executed manually, OHSNP also supported the automation of the process, which was a considerable step forward. This has been an extremely successful, sustainable and transferable initiative. The training of Master Trainers within the State in undertaking LQAS has now seen the method successfully applied to a completely different area of work in human resources: the mentoring of Auxilliary Nurse Midwives. In due course, it is hoped that it will also be utilised fully to support effective, evidence based implementation of the convergent Reproductive Maternal Newborn Child Health +Adolescents initiative.

Whilst it has been possible to automate LQAS, which increases efficiency and reduces error, there are some processes for essential data management across Departments, which have been challenging as a result of lack of trained human resources to undertake data entry and analysis. It is the case that all Departments need adequate human resources with knowledge and skills in monitoring and evaluation and in the required information technology applications to undertake their work efficiently and effectively. This is an area of concern.

Finally, more research is required on the issue of convergence itself, in order to support government to make effective decisions about whether to entertain convergent policies and strategies in certain areas of work, in which areas of work it is likely to be the best modus operandi, what factors drive successful convergence, or present intractable challenges which may hinder progress and detailed analysis of the processes of convergence of which we have experience, and their outcomes. Research in this area would be of interest in Odisha, and throughout India.

Actions to strengthen future policy and strategy

1. Strengthening delivery and responsiveness of supply side services must be complemented by innovative and evidence based community based approaches on the demand side

In policy and strategy, as well as in operational planning, both strengthening delivery and responsiveness of services on the supply side, and innovative community based interventions on the demand side, benefit from being addressed in concert, in order to be effective.

2. Convergence at all levels should be a key feature of many mutually reinforcing supply side and demand side interventions in health, nutrition and WASH

In the innovative, integrated multi-sectoral model demonstrated by OHSNP, convergence has been a key feature of many mutually reinforcing supply side and demand side interventions by the nodal departments. Policy and strategy will benefit from ensuring that convergence structures, mechanisms and processes engage multiple departments concurrently and at multiple levels, in order that the desired outcomes may be attained.

3. In-built super-Departmental leadership is critical to effective convergence, which needs to be driven from the policy level

Under OHSNP, the convergent governance mechanism, the Project Steering Committee, led by the Development Commissioner, has been effective in building consensus across departments. This governance structure has proved extremely successful as a coherent, cross-departmental strategic decision making forum at the State level. This could usefully be replicated in policy and strategy where it is required that sectors work together conjointly and in clearly defined, reciprocally supportive roles.

4. A multi-sectoral Nutrition Policy is urgently required to address malnutrition in Odisha

An evidence-based, multi-sectoral policy is urgently required in order to ensure that the right mix of *nutrition sensitive* as well as *nutrition specific* interventions is implemented throughout the State. This is critical if real progress is to be made in reducing the Odisha's heavy burden of malnutrition.

5. Convergent Solid and Liquid Waste Management policy is needed, in line with GoI guidance, if the Swachh Bharat Abhiyaan vision is to be attained by 2019

It is proposed that convergent development and implementation of Solid and Liquid Waste Management Policy and Strategy, in line with guidelines from national government, be undertaken as soon as possible. They should set out clear roles and responsibilities for key actors at all levels and highlight cross-cutting benefits, such as privacy, security, gender sensitivity, social cohesion, collective action, environmental benefits and economic development.

6. High quality operational monitoring and rapid assessments are critical to implementation effectiveness, performance management and course correction

Under OHSNP, there has been a strong focus on robust evidence and data demand and information use. It is recommended that this is built in to all future policy and strategy. This includes commissioning studies and use of management information systems and the use of technology, in order to enable policy makers and implementers to access information more quickly and to drill down to the specific information they require to support decision making. Also, smaller scale operational studies and rapid assessments in relation to convergent actions to inform course correction.

5.2 Equity driven strategy and implementation

Key Messages

1. Equity orientated policies have created the framework for planning and financing.
2. Flexible funding and technical assistance from OHSNP and NRHM, have been used to innovate and target resources to where outcomes were worst.
3. Out of pocket spending on institutional deliveries has been reduced.
4. The gap in coverage of key MNCH services for women and children from scheduled tribe communities has been reduced.
5. Strengthening internal and external accountability mechanisms is a priority for improving the equitable provision of quality care and has been prioritised under the OHSNP, but remains unfinished business.
6. Women's empowerment has been a focus of OHSNP and the new State Policy for Women and Girls sets out the essential agenda to reduce gender inequalities.
7. Achievement of more equitable outcomes is work still in process.

Health equity is an established principle of policy in India but implementation remains incomplete. Rising political and civil pressure to achieve universal health coverage (GoI, 2011) and rid the country of entrenched social inequalities in health is refocusing the spotlight on equity¹². In Odisha, poverty, health and nutrition outcomes have been shown to vary by region and according to socio-economic, caste and tribal status. Gender is also a determinant of health with high levels of violence against women in the state and a declining child sex ratio.

An enabling environment was created to drive equity

Over the past ten years, an enabling policy environment has led the Government of Odisha to pursue equity driven strategies. Political stability and broad based economic growth since 2003 has underpinned the state's political commitment to tackling inequality and addressing social exclusion fuelling left wing extremism (World Bank, 2008). Equity oriented policy frameworks have allowed reform minded leaders to seize the opportunities of flexible funding and technical assistance provided by OHSNP and NRHM, to innovate and tackle challenging institutional and systems constraints, and target resources to where outcomes were worst.

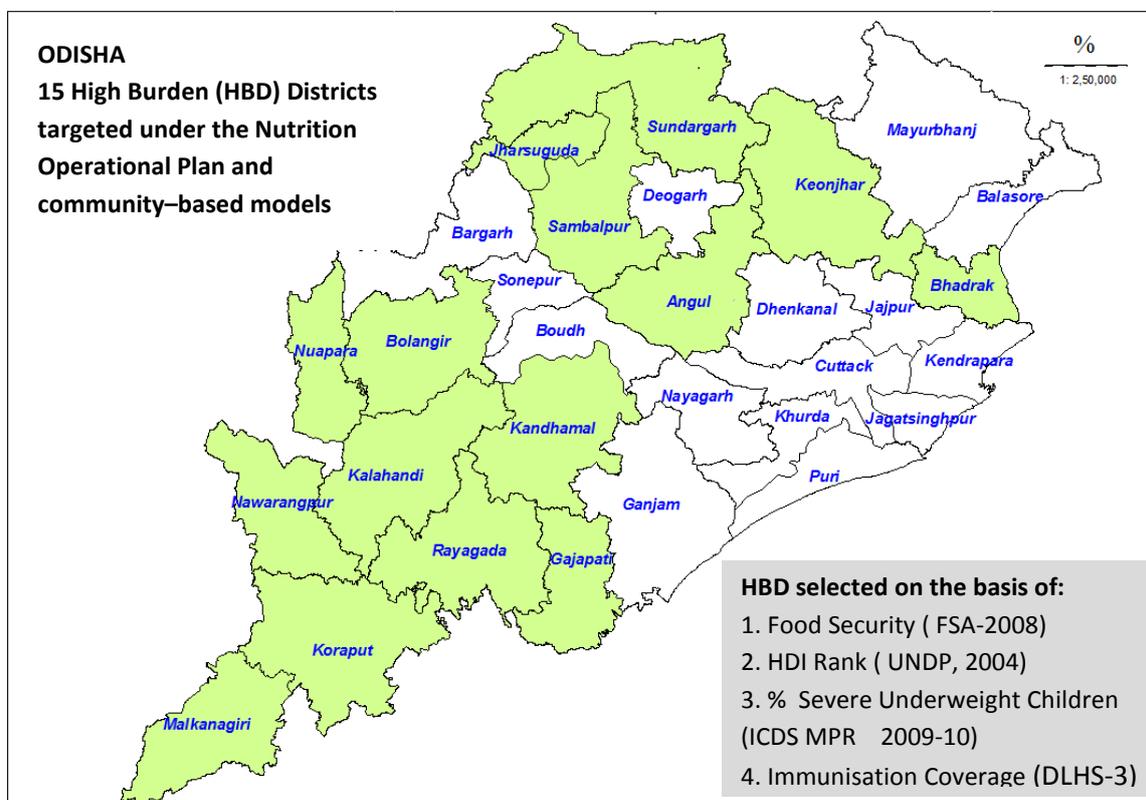
Evidence informed equity strategies provided a road map

The Health Equity Strategy (2009) and the NOP (2010) provided a roadmap for closing the equity gap and improving access to services in difficult to reach areas and to vulnerable populations. Both had a strong geographical focus on KBK+ and high burden districts alongside a systems strengthening approach to addressing inequity. This dual focused approach has been beneficial especially for

¹² Reddy, K.S., Patel, V., Jha, P., Paul, V.K., Shiva Kumar, A.S., & Dandona, L. (2011). Towards achievement of universal health care in India by 2020: a call to action. *The Lancet* 377 (9767), 760-768.

health, which was able to leverage the multiple streams of central and external support available to the department and the systems strengthening support that had been ongoing for many years¹³.

Figure 7 15 High Burden (HBD) Districts targeted under the Nutrition Operational Plan and community-based models



Resources targeted to focus districts using evidence to drive funding allocations

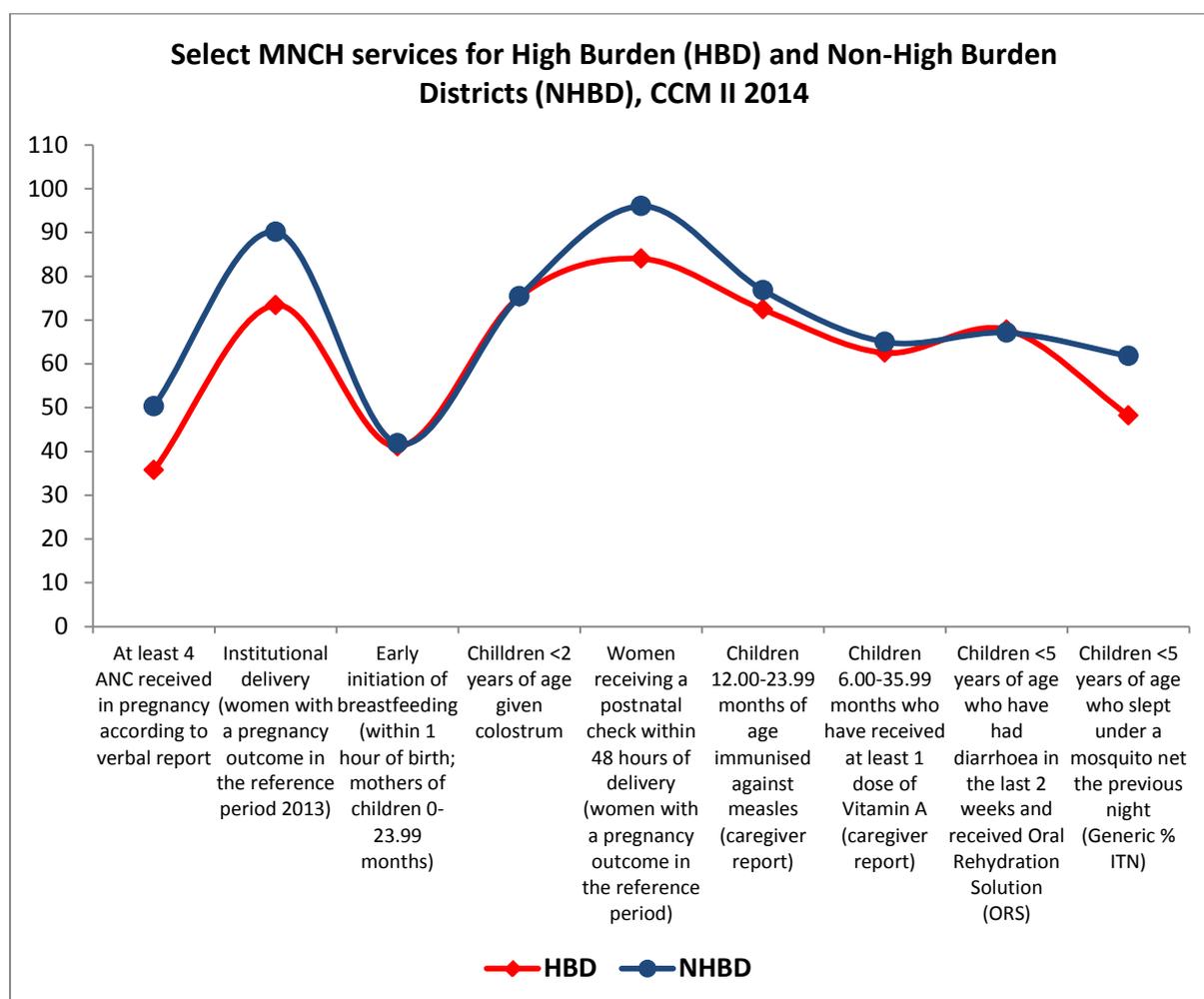
Benefits have been gained from DHFW and DWCD defining and prioritising the districts where services and outcomes are worse. With access to flexible NRHM funding, health moved away from norm based budgeting to providing differential budget allocations in response to priorities and need. Expenditure of NRHM funds grew by 45% in KBK+ districts between 2008-09 and 2012-13, in comparison to 28% in other districts. Over time, the health sector has developed more sophisticated criteria for mapping vulnerability. From a focus on KBK+ districts, composite indicators have been used to define levels of vulnerability at block and facility level, which inform priorities and NRHM budget allocations. Poor performing blocks, tribal blocks and blocks with vulnerable populations receive 30% higher allocations than others. Vulnerable blocks and institutions make up a large share of DHFW’s High Focus Districts, which in 2012-13 received 56% more funding per capita than non-High Focus Districts. This demonstrates how OHSNP and NRHM worked in synergy to take the equity agenda forward.

¹³ Including continuous UK Aid stretching back to the 1980s.

Universalisation of ICDS services, as directed by the Supreme Court of India, has meant that targeting of underperforming areas has been less systematic by DWCD. However, additional initiatives under the NOP have been targeted to 15 high burden districts, which were selected on the basis of a number of indicators including low rank in the Human Development Index (HDI) in Odisha (United Nations Development Programme, UNDP 2004. OHSNP has also prioritised the high burden districts for introducing models for community mobilisation and empowerment, discussed in section 5.5 . Greater targeting of resources to high burden districts and differential budgeting to respond to the demands of delivering services in geographically difficult areas, particularly supporting the varied mobility needs of AWWs and Supervisors would be beneficial, and methodologies used by DHFW could be used as a starting point.

Progress in reducing the gap in service use between high burden and non-high burden districts has been good across the majority of health and nutrition services, with slightly lower coverage in high burden than non-high burden districts. This gap is smaller than what would be expected in the absence of active policies and plans to target difficult areas. Examples of coverage across a range of MNCH services for HBD and NHBD districts is shown in fig 8 below.

Figure 8 Select MNCH services for High Burden (HBD) and Non-High Burden Districts (NHBD), CCM II 2014



There are still considerable gaps in institutional delivery between high burden and non-high burden districts, at 73.4% and 90.1% respectively. However, coverage in high burden districts is reasonably high considering the greater access barriers in these areas. While the focus now is to further improve access to institutional delivery in HBD and High Priority Districts (HPDs), the government has considered safe home delivery option for the nearly 25% of women who are currently do not access institutional delivery in HBDs (30% for ST women, CCM II). By incentivising the mother in HBD (Rs 500, a much smaller amount than that for institutional delivery) and the ANM based on conditionalities including updating the Mother Child Tracking System (MCTS) and birth registration, and making provision for misoprostol for home deliveries, the state has provided an option of skilled birth at home by ANMs. Whilst this is positive, there also needs to be constant monitoring of the effect of incentives on place of delivery, with increasing access to institutional delivery the goal for all.

Two other indicators stand out in relation to high burden districts and non-high burden districts which shows better coverage in high burden districts than non-high burden districts. These are:

- Children < 5 years who slept under Long Lasting Insecticidal Net (LLIN) the previous night was 42.6% in high burden districts compared with 34.4% in non-high burden districts, demonstrating appropriate targeting to where the burden of malaria is higher.
- Percentage of Children < 5 years who attended VHND in the previous month was 34.8% in high burden districts compared with 29.9% in non-high burden districts. Across the board, this coverage is well below expected, but penetration is slightly better in the more difficult districts, which is a positive finding.

It is also of note that 4 Antenatal Care (ANC) is low in both HBD and NHBD, and there is a wide gap between these groups of districts. This indicates quality of ANC falls short for most women, and especially for women living in NBD where nearly two-thirds have not received the expected standard of 4 ANC check-ups.

In summary, the evidence suggests that differential budgeting has pushed more resources in to the high burden districts. Fig 1 in section 4 above also indicates targeting of the more vulnerable population has been successful.

HR policies are core to the equity response

Inequities in the availability of health staff underpin the uneven provision of health services in the State. More rational re-deployment of staff has been a priority for the DHFW, which created the State Human Resource Management Unit to drive this process. This, along with other measures to strengthen human resources, is discussed in more detail in section 5.3 of this report. Whilst more time is needed before the full impact of the various human resource initiatives can be measured but declines in the state vacancy rates of doctors and staff nurses from 29.1% and 21.0% in 2008-09 to 10.3% and 16.0 % in 2014-15 respectively, are indicative results of these multifaceted efforts. Continued investment in tackling the institutional bottlenecks that undermine the equitable distribution of human resources for health (HRH), especially doctors, will be needed for several years to come. HR issues are discussed further in section 5.3.

Innovation and expansion of service delivery allows it to better reach underserved populations

Over the life of OHSNP the reach of services has expanded. AnganWadi Centre (AWCs) and mini-AWCs now provide universal coverage. Various innovative programmes have increased access in remote areas. Mobile health units have become the major source of health care in the remote and inaccessible villages they serve. In 2011, they met almost 80% of the health care needs of families reporting illness in the past 6 months and saved families Rs 170-250 on travel costs to the nearest primary health care centre or district hospital¹⁴. Malaria morbidity and mortality is a major burden in high transmission forest and hill areas, where penetration of health services is more difficult and the majority of the population is Scheduled Tribes. Community based diagnosis and treatment of malaria by ASHAs has brought these critical services closer to users. Distribution of long lasting insecticide treated nets (LLIN) is also having an effect, and an evaluation in five high malaria incidence districts found most pregnant women reported sleeping under an insecticide treated net¹⁵.

Multiple strategies to reduce out of pocket spending are showing benefits

National research shows that it is outpatient costs, particularly medicines, which make up most out of pocket spending and is the main cause of catastrophic spending on health. In this respect, Odisha specific evidence and policy advice through OHSNP has contributed to the Government's recent decision to introduce a free drugs policy (2014), the Odisha State Medical Corporation, and the six-fold increase in the state drug budget between 2010-11 and 2014-15¹⁶. Odisha has also introduced the conditional cash transfer programme, MAMATA, to promote maternal and child health, applying international evidence made available through OHSNP. More time is needed before evidence is available of how the various financial protection policies and schemes impact on household spending on health, targeted behaviours such as infant and young child feeding, and the use of health services. This will be essential for building a more coherent State policy on financial protection and the use of financial instruments to change behaviours, and for strengthening implementation and management of the various schemes.

The significant drop in out of pocket spending on institutional deliveries, accompanied by Janani Suraksha Yojana) JSY and more recently MAMATA, as well as improvements on the supply side, including, for example, upgrading of 17 Comprehensive Emergency Obstetric and Neonatal Care Units and 88 Basic Emergency Obstetric and Newborn Units, has contributed to the increased take up¹⁷. The changes in coverage of institutional delivery are discussed above and whilst the equity specific gains in institutional delivery are a major achievement, decline in the maternal mortality ratio suggests more effort is needed to improve the quality of services and to ensure institutional delivery for all¹⁸.

¹⁴ D-Cor, 2011, Consulting Private Limited. (2011a). *Impact assessment of the Mobile Health Units (MHUs) in Orissa*.

¹⁵ Orissa Technical and Management Support Team, 2011, Evaluation of Long Lasting Insecticide Nets (LLIN) for Pregnant Women in Odisha.

¹⁶ Orissa TMST, 2010, Public Health Beneficiary Survey; Orissa TMST, 2011, Policy Brief on Out of Pocket Spending on Health In Orissa.

¹⁷ Lim, S., Dandona, L., Hoisington, J.A., James, S.L., Hogan, M.C., & Gakidou, E. (2011). India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation. *The Lancet*. 375 (9730), 2009-2023.

¹⁸ Randive, B., Diwan, V., & de Costa, A. (2013). India's Conditional Cash Transfer Programme (the JSY) to Promote Institutional Birth: Is There an Association between Institutional Birth Proportion and Maternal Mortality? *PLOS ONE* 8 (6). e67452.

doi:10.1371/journal.pone.0067452

Quality of care and accountability need improving

Gaps in the quality of services affect use and outcomes. The practice of placing female doctors at district hospitals and CHCs close to district headquarters disadvantages rural and remote women, especially for accessing reproductive health services. Various studies have found frontline workers (FLWs) have poor interpersonal and counseling skills, and insufficient attention is given to providing respectful care¹⁹. OHSNP has aimed to redress this through large-scale training of FLWs on interpersonal communication. Discrimination towards Scheduled Caste and Scheduled Tribe communities persist, with reports that some frontline workers avoid making home visits to these families, and accountability for such behavior is generally lacking²⁰.

Weak accountability of providers presents itself in various ways, including irrational drug prescribing practices, informal payments, absenteeism, and poor quality of take home rations. Strengthening internal and external accountability mechanisms is a priority for improving the equitable provision of quality care and has been prioritised under the OHSNP through support to strengthening community voice and monitoring as well as health systems strengthening. This has included support to introducing and strengthening Mothers' Committees and Jaanch Committees (JC) at Anganwadi Centres to monitor nutrition services, as well as communication campaigns to raise community awareness of entitlements. This work needs to be further developed, as do other governance mechanisms such as the Gaon Kalyan Samiti, RKS and hospital quality improvement bodies, which have been areas of attention. OHSNP's support to HMIS strengthening, the introduction of electronic technologies to manage drug prescribing as part of the roll-out of the national health insurance programme Rashtriya Swasthya Bima Yojana (RSBY), and the establishment of the Odisha State Medical Corporation are also contributing to improved management and oversight.

More attention to gender is needed

Political commitment to health equity has mobilised the departments to address geographic and social inequities. Far less attention has been paid to gender determinants of health and addressing the needs of women and girls. The recent launch of the Odisha State Policy for Girls and Women (2014) and the Odisha Task Force for Care, Protection and Development of the Girl Child may help rectify this. Women's empowerment has become a central feature of OHSNP and its multisectoral work at the community level to empower women and communities to take control of their health, and improve health and nutrition outcomes, including through Shakti Varta.

Violence against women in the state needs sustained political attention and strengthening of government systems and services to protect and treat survivors. Prevention activities are very limited though attitudes among men and women that condone violence against women seem to be changing. In NFHS 3, 61% of women reported that a husband was sometimes justified in hitting his wife, in CCM II data 2014, only 6.5% of women (15-49 years) reported believe this is sometimes acceptable.

The infant mortality rate has been higher for girls than boys for the past ten years²¹. Added to this, there has been a decline in the child sex ratio in the more developed belt of the State. Census 2011 reported a child sex ratio of just 871. The government's strong focus on maternal health has

¹⁹ Orissa TMST, 2012,

²⁰ Orissa TMST, 2014,

²¹ SRS, 2004-2013.

supported the achievements mentioned earlier, but this has eclipsed attention to women's non-reproductive health needs. Adolescents remain a highly vulnerable and severely underserved target group. Much greater attention to gender and women's empowerment is needed in the future. This will require a multi-sectoral and government wide mission that addresses social norms and attitudes building on headway made by Shakti Varta, and institutionalises gender into government systems and services in the way that social equity has become mainstream.

Achievement of more equitable outcomes is work still in process

Whilst there has been overall major progress in equitable provision of health and nutrition services, equality in health and nutrition status is still work in progress. This is particularly notable for undernutrition, discussed in section 5.4 below.

Actions to strengthen future policy and strategy

1. Maintain the focus on equity in the health and nutrition sectors

Expand vulnerability mapping and differential budgeting to the nutrition sector to target greater resources to high priority and high burden districts and disadvantaged populations. In both sectors provide block managers authority and flexible funding to tailor service delivery to the local context.

2. Build on the new state policy for women and girls to integrate gender into the institutional systems and organisational culture of the two sectors

Strengthen sector analysis of gender as a determinant of health and nutrition, build the evidence base and the capacity and supporting attitudes of leaders and human resources. Better meet women's non-reproductive health service needs and prioritise the delivery of services to adolescents in both sectors.

3. Continue human resource reforms and investments to improve the availability of doctors and public health providers in remote and difficult areas, and reduce absenteeism

4. Develop a strategy for developing women leaders in both sectors, and for tackling the gender-based constraints faced by female staff including promotion and professional development.

5. Work towards universal health coverage

Improve oversight and implementation of health protection and cash transfer schemes, and new policies like the drug policy, in order to reduce out of pocket spending on health care and improve health behaviours.

6. Improve accountability for quality and respectful care at all levels in both sectors

Including clinical care, home visits, counselling, prescribing practices and reducing discrimination against disadvantaged groups.

7. Continue to generate disaggregated evidence on gender, income, caste, tribe and geographic utilisation of health and nutrition services and outcomes to inform sector and state development.

8. **Continue to strengthen and empower social accountability mechanisms** such as Jaanch Committee, RKS and GKS, and raise public awareness of entitlements and the means for public monitoring of health and nutrition outcomes and services.

5.3 Priority health reforms

Key Messages

1. Skilled people are the most important resource for delivery of quality health services and accordingly, DHFW has taken Human Resources as a priority area of for reform.
2. There has been good progress on several components of reform including institutional and cadre restructuring.
3. The overall increase in service delivery staff has been 4,625 in a 5 year period (2008/9-2013/14).
4. Actions to strengthen the new Public Health Cadre, Nursing structure and more equitable distribution of human resources in the state need to be continued.

Over the 7-year period of OHSNP, there have been several areas of health reform including financial planning, procurement of drugs and equipment, human resources management and information systems. These are referred to in this document and available with the DHFW. This section highlights lessons from human resources management and benefits for service delivery.

Human Resources

Skilled people are the most important resource for delivery of quality health services with high coverage. The DHFW has pro-actively tackled many difficult issues around human resources management to increase the presence of appropriately skilled staff on the ground and to manage them effectively.

Progress of the various components of human resources reform are summarised in table 3 below:

Table 3 Summary of components of human resources reform

Reform area	Progress
Institutional: creation of a State Human Resources Management (SHRMU) Unit within the DHFW	In place and functioning, future funding to be determined and the unit utilised for HR planning and management functions by the directorate of health services
Database	In place for doctors and nurses. Regular up-dating and addition of other cadres required and development into fully fledged MIS
Structural reforms for various cadres	Undertaken and largely complete for doctors, nurses, pharmacists and lab technicians, also multi-skill training in process. The new Public Health Cadre and revised Nursing structures to be fully implemented. The technical assistances partners available DHFW during 2016

Reform area	Progress
Institutional: creation of a State Human Resources Management (SHRMU) Unit within the DHFW	In place and functioning, future funding to be determined and the unit utilised for HR planning and management functions by the directorate of health services
Database	In place for doctors and nurses. Regular up-dating and addition of other cadres required and development into fully fledged MIS
	through DFID's Strategic Health Partnerships will be a valuable resource to draw on to pursue these agendas.
Increased HR placement and production	Creation of large numbers of additional posts, increased recruitment, increased productivity of medical colleges. Increased recruitment and retention in hard to reach areas including KBK needs continuing attention
Capacity building / multi-skilling	In process and needs continuous attention required in partnership with the public health institutions in the state and nationally
Accountability and performance management	NHM has made progress, further development needed across DHFW
Evidence for planning	Studies have informed the reform process and further rapid assessments can be commissioned by the DHFW so there is an ongoing process of feeding lessons from implementation back into policy development and planning

As a result of reforms the number of health staff on the ground has substantially increased, translating into increased availability of services, especially in rural areas, specifically there has been:

- A 13% increase in the number of sanctioned posts for doctors, from 4,258 in 2008/09 to 4,842 in 2014/15, including creation of 443 additional posts
- A huge increase in posts for paramedics and nurses (10,301 extra) with better promotional avenues, incentives and appropriate training
- Reduction in vacancies for doctors, from 29% in 2008/09 to 10.3% in 2014/15 even though the number of sanctioned posts increased; and for nurses, from 21% in 2008/09 to 16% in 2014/15

The overall increase in service delivery staff has been over 4,500 over 5 years as shown in table 4 below.

Table 4 Increased availability of permanent government employed health staff

SN	Category of post	# Sanctioned in 2008/09	Staff available in 2008/09	# Sanctioned in 2013/14	Staff available in 2013/14	Increase in # staff
1	Doctor	4,258	3,019	4,805	4,200	1,181 (39%)
2	Staff nurse	2,046	1,600	2,882	2,453	853 (53%)
3	ANM	6,918	6,295	9,234	8,357	2,062 (33%)
4	Male MPHWH	4,729	3,079	4,944	3,767	688 (22%)
5	Lab technician**	1,123	876	1,094	717	-159
	TOTAL		14,869		19,494	4,625

** Availability of lab technicians has been reduced due to court cases regarding the affiliation of AICTE in the last 5 years.

The challenge now is to maintain the gains and momentum achieved and to ensure these systemic reforms translate into further improvements in MNCH services in underserved areas and reduction of health inequities. The experience of reform has generated some useful lessons for the next stage of work:

The State Human Resource Management Unit (SHRMU) is essential for reform and HRM management

The SHRMU has played a critical role in the reform process and will continue to be an essential pillar in effective HRH management. Chaired by the Health Secretary, the Steering Committee has met regularly, making decisions of strategic importance in driving the reform process. To maintain momentum, an alternative source of funds for posts and activities needs to be allocated post OHSNP and demands placed on the unit by senior managers in government.

Creation of new posts to meet HR norms needs to be staggered to secure financial approval

The gap between need and supply of doctors and nurses was identified early on in the reform process. However, meeting this gap has huge financial implications (as well as skill availability, which is another important issue). The process of staggering new post creation over a 5-year period, and in fact beginning with a restructuring of current posts rather than post creation, has enabled the DHFW to gain approval from the Department of Finance for incremental budget increases.

Garnering support from the cadre base is an essential step in the HR reform process

SRHMU was careful to facilitate discussion with the doctors, nurses, pharmacists and lab technicians over changes that would affect them. Change is always difficult for staff to accept and this helped gain their support for government policy with minimum disruption. Whilst a consultative process takes time, for further reforms planned by government, this is an essential step in the process.

Strengthening Nursing needs to redress issues related to low status

There are some specific challenges to nursing reform. These include a long period of low investment in capacity development and, relatedly, too few senior level positions for nurses within the DHFW. Reliance on management of the profession by doctors has limited the understanding of and drive for

reform. Gender and professional status and inter-linked issues cannot be ignored in both the process and results of reform. Rapid progression to the Director of Nursing post being held by a nurse will bring greater leadership and confidence to the profession.

Multiple measures are needed to improve the availability of human resources for health in underserved areas

Inequitable distribution of skilled human resources for health is a major problem in many countries and States. In Odisha, recruitment and retention in difficult areas has been addressed through multiple measures. Newly appointed doctors are now posted to KBK+ for a minimum of three years. Place based incentives reward doctors posted to difficult areas and peripheral institutions. Transfer and rotation policy guarantees doctors posted in remote and difficult areas can be transferred out after a fixed period of time, and links promotion to a mandatory period of service in remote and difficult areas. New nursing schools in the southern and western regions will increase the pool of nurses in these poorer performing areas. Scholarships for female nursing students from Scheduled Caste and Scheduled Tribe backgrounds from non-KBK+ and KBK+ districts respectively were introduced in 2011.

Various approaches are being tried to improve the motivation and performance of frontline workers, such as: financial incentives for paramedics working in difficult areas; building of accommodation for ANMs; enhanced incentives for ASHAs working in vulnerable geographical pockets; and the creation of rest homes in the vicinity of hospitals for the use of ASHAs accompanying pregnant women.

The creation of the public health cadre is another measure which is supportive of services in underserved areas, both in tackling the higher burden of diseases such as malaria in these areas and by giving greater recognition and career opportunities to public health specialists serving in peripheral areas.

Addressing the institutional and socio-cultural factors that undermine the professional standing of public health staff and disadvantage female medical and paramedical workers are challenging agendas which will need to be addressed in the future.

Actions to strengthen future policy and strategy

1. Continue to strengthen the State Human Resource Management Unit

This is an important HR and planning resource for DHFW and will need a financial and staff development plan to retain as a functional unit.

2. Completion of reforms for a dedicated public health cadre and provision of appropriate capacity building and support to ensure smooth implementation.

An MOU has been agreed with the Faculty of Public Health, UK, to provide technical assistance to support this, drawing on funds from DFID's Strategic Health Partnership.

3. Taking forward the vision for development of a vibrant nursing profession.

Overall the confidence and status of the (predominantly female) nursing profession needs to be enhanced, including designating the Director of Nursing as post for nurses and strengthen

the capacity for leadership. Support from DFID's Strategic Health Partnership is available for strengthening pre-service training.

4. **Implementation and assessment of place based incentives** for doctors and other health workers to improve retention in hard to reach and difficult areas. The place based incentives has been approved by government and funds assigned, an excellent commitment for follow-through by DHFW.
5. **Approval of the Exit/Transfer Policy for doctors** and its subsequent implementation.
6. **Increasing staff output at health facilities**
Whilst the output across many services and specialisms is high, it can be improved in other areas through further improving the functionality of facilities (infrastructure, drugs, equipment, and environment) and widening performance management systems beyond contract personnel.

5.4 Re-positioning child nutrition programming in Odisha

Key Messages

1. The Nutrition Operational Plan has focussed attention on children below two-years of age, in line with the international and Indian evidence; and the post vulnerable children in fifteen high-burden districts where access barriers are greater.
2. Similar coverage of nutrition services for children in high burden and non-high burden districts suggests some success in targeting the hard to reach areas.
3. However, Infant and Young feeding Practices remain far below the desired coverage level across all districts, except for exclusive and continued breast feeding.
4. Prevention and management of childhood diseases which effect nutritional status are also suboptimal, though measles immunisation and malaria protection has improved.
5. Sanitation and hygiene practices, an underlying determinant of nutrition are very low across all districts.
6. Sustained effort to increase the coverage and quality of the nutrition specific interventions by DWCD and DHFW, plus leadership from the Nutrition Council to drive the agreed multi-sectoral approach, is strongly needed to make a dent resistant undernutrition in Odisha.

The approach adopted – the Nutrition Operational Plan

In 2008 Odisha DWCD constituted an Advisory Committee which reviewed survey and qualitative data on child nutrition in the State to decide how best to strengthen systems and services. The debate in Odisha on priority interventions to tackle under-nutrition was further informed by new

international evidence about effective direct nutrition interventions (Bhutta et al. 2008²²) and review at the national level in India by the Expert Task Force on Infant and Young Child Nutrition under the Coalition for Sustainable Nutrition Security²³. The resultant evidence-based Nutrition Operational Plan, led by DWCD (under the overarching OHSNP), set-out a course of action which enhanced the focus on 3 target populations:

1. Pregnant and lactating mothers
2. Children below 2 years
3. Adolescent girls (10-19 years of age)

The 15 target districts where nutrition, health and equity indicators were identified as being the poorest, were referred to as the high burden districts. This section focusses on the re-positioning of nutrition services through ICDS to the under 2 age group.

Prior to this, ICDS services were geared more towards older children (3-6 years), which the evidence now showed was too late in a child's life to intervene to prevent childhood stunting (e.g. World Bank 2010²⁴). In particular in India, data showed that stunting and wasting is measurable in children as young as one month of age and may start in the womb; this underscored the importance of the mother's health during pregnancy.²⁵ A better understanding of the long-term consequences of stunting on the health and education potential of a child, and of their future children (given the high likelihood of inter-generational transmission), also underlined the importance for individuals and wider society of preventing stunting (Victora et al. 2008²⁶; Martorell & Zongrone, 2012²⁷).

²² http://www.who.int/nutrition/topics/Lancetseries_Undernutrition3.pdf

²³ <http://www.intrahealth.org/files/media/vistaar-publications/ExecutiveSummary-2.pdf>

²⁴ <http://siteresources.worldbank.org/NUTRITION/Resources/281846-1131636806329/PolicyBriefNutrition.pdf>

²⁵ Paul et al. 2011: <http://www.ncbi.nlm.nih.gov/pubmed/21227494>. Analysis of data in India (NHFS 3, analysis by Vinod Paul, AIIMS) shows 30% of children are stunted and 25% are wasted at about 1 month. One third of newborns are low birth weight. Stunting incidence peaks between 18 months to 24 months.

²⁶ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2258311/>

²⁷ <http://www.ncbi.nlm.nih.gov/pubmed/22742617>

Panel 1: Measures and direct determinants of under-nutrition

- **Stunting** results from chronic under-nutrition and repeat infections (especially diarrhoea)¹, which retards linear growth so children are too short for their age (measured as height-for-age)². Almost all stunting takes place in the first 1000 days after conception³. Stunting is also an intergenerational problem whereby shorter mothers tend to give birth to smaller babies who do not reach their full height potential⁴.
- **Wasting** results from inadequate nutrition (insufficient quantity and diversity of foods) and/or infection (especially measles, diarrhoea, pneumonia and malaria), usually over a shorter period, and results in children becoming too thin². There are two main ways to measure wasting using anthropometric methods: weight-for-height and mid-to-upper arm circumference (MUAC)⁵.
- **Underweight** encompasses both stunting and wasting (measured as weight-for-age)².
- **Acute Malnutrition** can be based on MUAC or weight-for-height and also incorporates oedema (fluid retention which if found in both feet is a sign of a severely malnourished child). There are different categorisations of acute malnutrition depending on the severity of the problem, and whether weight-for-height or MUAC are used. MAM describes moderate acute malnutrition, SAM refers to severe acute malnutrition and includes oedema, and GAM is global acute malnutrition (MAM, SAM and oedema)⁵.

¹Checkley et al. 2008: <http://www.ncbi.nlm.nih.gov/pubmed/18567626>

²WHO, 2015: <http://www.who.int/nutgrowthdb/about/introduction/en/index2.html>

³World Bank, 2010: <http://siteresources.worldbank.org/NUTRITION/Resources/281846-1131636806329/PolicyBriefNutrition.pdf>

⁴Martorell & Zongrone, 2012: <http://www.ncbi.nlm.nih.gov/pubmed/22742617>

⁵ENN (Emergency Nutrition Network) 2012:

<http://www.enonline.net/ourwork/othermeetings/muacwhzscores>

Has the approach been in the right direction?

The Nutrition Operational Plan strategies²⁹ have been reinforced by further evidence which has been built over the period of implementation, documented in the Lancet Series 2013.³⁰ There is now global and national consensus about the importance of intervening in the first 1000 days of life from conception to the age of two years and improving the health and nutritional wellbeing of adolescent girls to ensure good pre-conceptual nutritional status.³¹ The Coalition for Food and Nutrition Security (CFNS), India, Action Agenda 2014, identifies Essential Nutrition Interventions (ENIs) encompassing a continuum of preventive and curative interventions across the 1000-day window and adolescence³². The evidence for focussing on the first 1000 days of life is compelling and the Nutrition Operational Plan has helped re-orientate the programme in this direction.

²⁹ <http://wcdodisha.gov.in/node/42>

³⁰ <http://www.thelancet.com/series/maternal-and-child-nutrition>, 2013

³¹ <http://www.thousanddays.org/>

³² <http://www.nutritioncoalition.in/attachment/LAA-overview-document.pdf>

Evidence of programme coverage and practices

Other reports from TMST provide a detailed assessment of the results of the Nutrition Operational Plan.³³ This paper draws on select findings from the Concurrent Monitoring Survey 2014 (CCM II) which highlight orientation and coverage of nutrition programming for the priority groups discussed above.

Ten proven nutrition specific interventions

Findings from CCM II show where practices and service coverage of the evidence-based nutrition specific interventions are reasonably high and where they are substantially below the ideal 100% coverage. The Lancet Series 2013 identified ten proven 'direct nutrition' interventions for mothers and children which if scaled up to 90% coverage could reduce stunting by 20.3%, and severe wasting by 61.4% globally (Bhutta et al, 2013³⁴).

Table 5 below shows the performance in Odisha for these ten interventions in 2006/6 and 2014.

Table 5 Performance in Odisha for these ten interventions in 2006/6 and 2014

Priority Intervention	2005/6	2014
	NFHS-3	CCM II
Optimum maternal nutrition during pregnancy		
1. Maternal multiple micronutrient supplements [In India only iron and folic acid (IFA) supplementation is part of the programme, not multiple micronutrients ⁴²] At least 90 IFA tablets or 3 months worth of IFA syrup received in last pregnancy according to verbal report	33.8 % ST = 31.6%, SC= 27%, OBC= 37.8%	63% ST=59.9%, SC=63%, General, OBC and others =65.7%
2. Calcium supplementation to mothers at risk of low intake	Not part of programme	Not part of programme
3. Maternal balanced energy protein supplements as needed		
% of pregnant women receiving take home ration	44.6% ST=61.5%, SC=44.5%, OBC=43.5%, Others=24.2%	58.3% ST=60.0% SC=58.0% General/OBC/Others=57.4%
% of breastfeeding women receiving take home ration	39.8% ST=50.8%, SC=40.9%,	69.4% ST=70.6%

³³ NOP Mid-Term Assessment 2014; Evidence paper on coverage of nutrition specific and nutrition sensitive interventions for under two children in the 15 HBDs, compared to those in non-HBDs, 2015; Impact evaluation of 1000 days training, 2015.

³⁴ [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(13\)60996-4.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(13)60996-4.pdf)

⁴² Iron and folic acid + additional micronutrients which can include zinc and vitamins A, B6, B12, C, E and riboflavin

Priority Intervention	2005/6	2014
	NFHS-3	CCM II
Optimum maternal nutrition during pregnancy		
	OBC=40.7%, Others=23.6%	SC=70.2% General/OBC/Others=68.3%
4. Universal salt iodisation		
% households with iodised salt	39.6% Reported for children 6-59 months; ST=30.0%, SC=35.8%, OBC=38.8%, Others=50.1%	68.4% ST=63.1% SC=68.1% General/OBC/Others=71.5%
Infant and young child feeding		
5. Promotion of early and exclusive breastfeeding for 6 months and continued breastfeeding to 24 months		
% Early initiation of breastfeeding (within 1 hour)	54.8% ST=52.2%, SC=61.4%, OBC=55.8%, Others=51.8%	41.5% ST= 41.0% SC= 41.4% General/OBC/Others=41.8% HBD =41.1%
% Exclusive breastfeeding to 6 months	50.8% Based on 24 hour recall; children <6 months who only received breast milk the previous day	82.3% ST=86.8% SC=82.6% General/OBC/Others=79.0% HBD=80.0%
% Continued breastfeeding to 24 months	87.4% Still breastfeeding at 18-23 months of age	95.8% ST=96.2% SC=95.8% General/OBC/Others=95.6% HBD=95.9% Children 20-24 months receiving breast milk the previous day
6. Appropriate complementary feeding education in food secure populations and additional complementary food supplements in food insecure populations		
% introducing solid/semi-solid foods between 6-9 months of age	65.5% Based on 24 hour recall of whether child received solid/semi solid foods; child age 6-8 completed months	46.8% ST=40.5% SC=43.8% General/OBC/Others=53.1% HBD=41.3%
% children receiving take home ration from the Anganwadi centre	52.5% ST=62.2%, SC=58.3%, OBC=45.6%, Others=44.3%	72.0% ST=70.5% SC=73.2% General/OBC/Others=72.3% HBD=71.6%
Micronutrient supplementation in children at risk		
7. Vitamin A supplementation between 6 and 59 months of age	21.3% Children age 6-59 months; Percentage given vitamin A supplements in last 6 months; ST=14.5%, SC=24.7%, OBC=19.9%, Others=25.6%	63.8% ST=59.0% SC=62.5% General/OBC/Others=67.2% Children 6-36 months who have received at least 1 dose of vitamin A.
8. Preventative zinc supplements between 12 and 59 months of age	Not Available	39.6% ST=41.9% SC=40.5% General/OBC/Others=37.7% HBD=42.6% Children with diarrhea in the last 2 weeks given zinc tablets as treatment.

Priority Intervention	2005/6	2014
	NFHS-3	CCM II
Optimum maternal nutrition during pregnancy		
Management of acute malnutrition		
9. Management of moderate acute malnutrition		Provided at AWCs, VHND and Pustikar Divas (referral to PHCs)
% of children 0-59 months weighed at the AWC in the last 12 months preceding the survey	56.1% ST=61.1%, SC=60.2%, OBC=55.9%, Others=45.7%	48.9% ST=50.2% SC=48.3% General/OBC/Others=.3% HBD=51.3% Children <5 years weighed at the VHND the previous month
% of children 0-59 months weighed at the AWC whose mothers received counselling after child was weighed	29.6% ST=27.5%, SC=31.0%, OBC=30.8%, Others=31.3%	48.9% ST=50.3% SC=8.3% General/OBC/Others=48.3% HBD=51.4%
Children <5 years who were referred to Pustikar Diwas from the VHND last month (denominator is children<5 who attended the VHND last month)	Not measured	12.3% ST= 12.6% SC = 14.1% General/OBC/Others= 11.1% HBD =13.1%
Children <5 years who attended their referral to Pustikar Diwas last month and whose caregiver was given nutrition advice	Not measured	84.2% ST= 81.8% SC 82 = % General/OBC/Others= 78.6% HBD = 80.2%
Children <5 years who attended their Pustikar Diwas last month and received a community follow visit	Not measured	70.4% ST= 69.7% SC 70.2 = % General/OBC/Others= 69.7 % HBD = .%
10. Management of severe acute malnutrition		Provided at facilities with NRCs and a community management (CMAM) pilot being conducted in Khandamal district

This table shows that the recommend interventions for maternal nutrition during pregnancy are not yet part of the programme in the states of India. For children, preventive zinc is not part of the programme and availability of treatment of severe acute malnutrition (SAM) is limited.

Further, coverage of the other 6 interventions is far below the required 90%, needed across all the interventions to produce the expected impact. These indicators do not reflect quality dimensions, such as consumption of take home rations (THR) or appropriate identification or action taken where children are below a healthy weight for their age and/or they are losing weight. However, the findings for Pustikar Divas collected in CCM II are encouraging on referral, advice and feedback to the community. Diagnostic tests at Pustikar Divas appear to be lower, with only 40% of all mothers reporting their child had a stool test and only 33% amongst ST mothers.

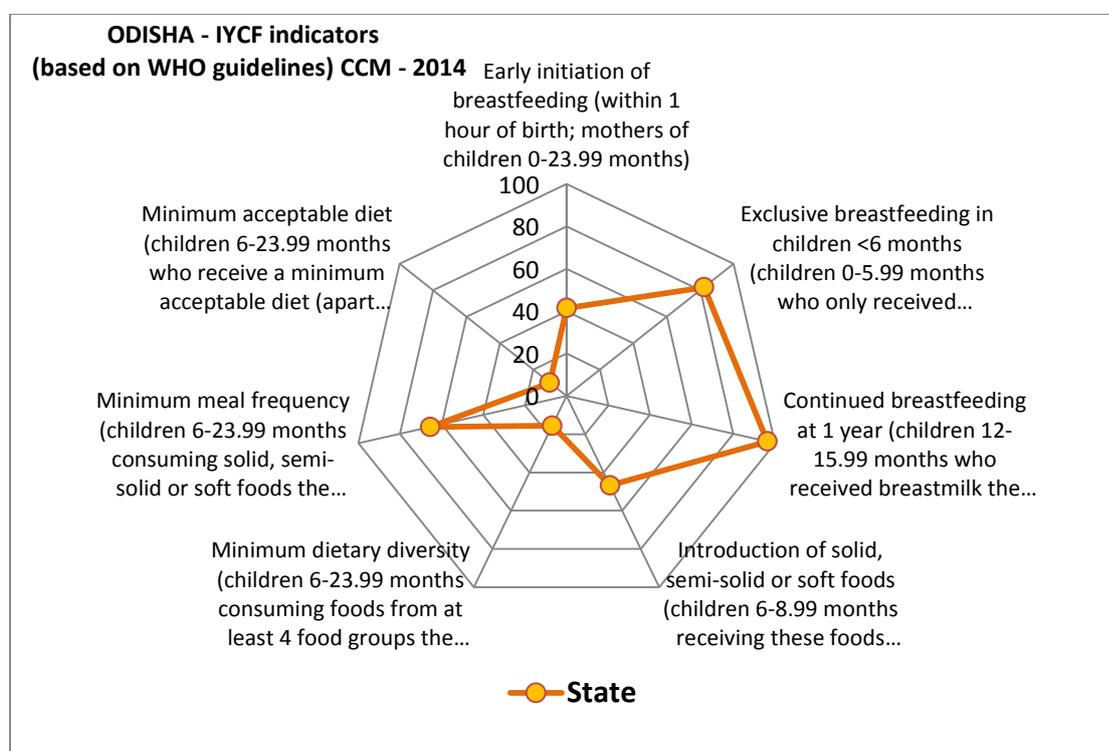
Overall, there is considerable scope to improve coverage of the interventions which are already part of the programme, and to introduce or integrate missing interventions with existing interventions. For example calcium supplements could be given alongside IFA tablets/syrup to pregnant women.

The ten direct interventions discussed above are essential but insufficient to substantially reduce the burden of undernutrition, especially stunting. Shortly, a wider range of interventions (referred to as nutrition sensitive), will be discussed. But first the coverage of additional evidence-based direct nutrition interventions is presented.

Infant and Young Feeding Practices (IYCF)

WHO identified seven Infant and Young Feeding Practices (IYCF) essential for healthy growth. Fig 9 below shows the coverage of all seven IYCF indicators.

Figure 9 ODISHA - IYCF indicators



The figure above shows only two of the seven IYCF practices have more than 50% coverage – exclusive and continued breast feeding. All the others are very low, with dietary diversity and minimum diet exceptionally low. This data is for all rural areas of Odisha. The data by sub-groups show that all the complementary feeding practices are lower in HBD and amongst ST children, see table 6 below:

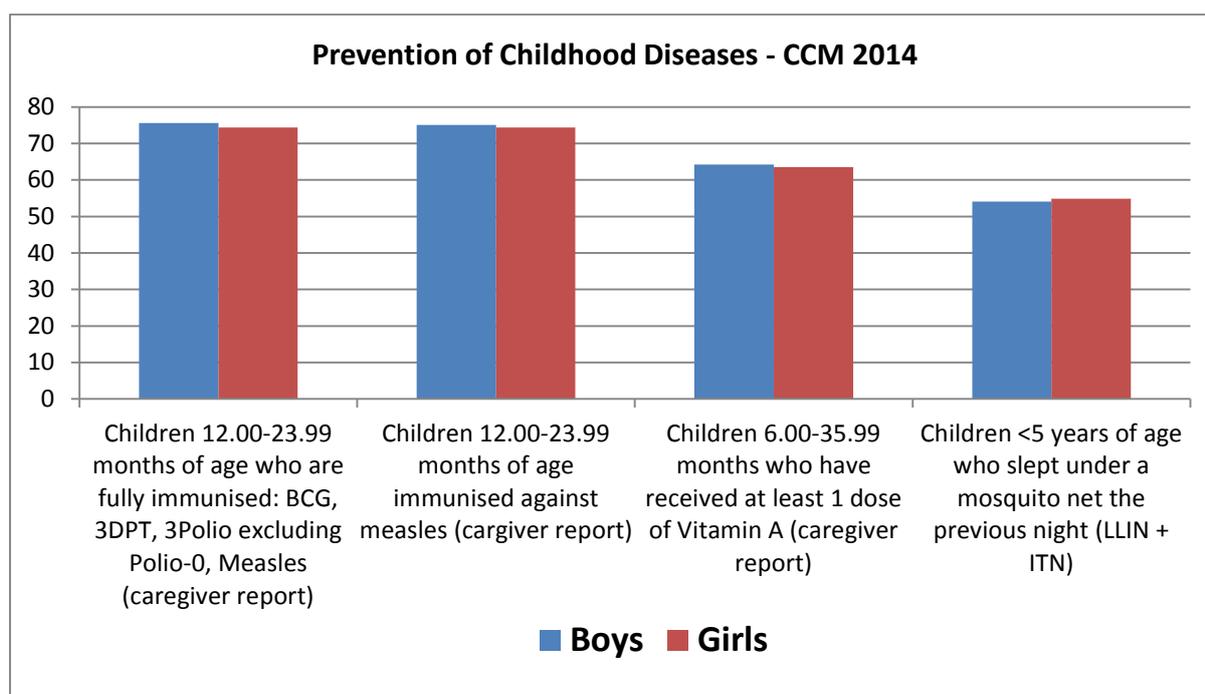
Table 6 ODISHA - IYCF indicators – complementary feeding

ODISHA - IYCF indicators – complementary feeding		
	HBD	NHBD
Introduction of solid, semi-solid or soft foods (children 6-8.99 months receiving these foods the previous day)	41.3	52.4
Minimum dietary diversity (children 6-23.99 months consuming foods from at least 4 food groups the previous day)	13.1	17.5
Minimum meal frequency (children 6-23.99 months consuming solid, semi-solid or soft foods the minimum number of times the previous day; includes milk feeds for non-breastfed children)	61	69.2
Minimum acceptable diet (children 6-23.99 months who receive a minimum acceptable diet (apart from breast milk)	7.6	12.2

Disease prevention and management

Whilst the quantity and quality of diet for infants and young children is an important determinant of nutritional status, infections are a major contributor. Therefore disease prevention and management is considered a nutrition specific intervention. Fig 10 below shows the coverage of disease prevention interventions. These are state level figures (rural) for girls and boys.

Figure 10 Prevention of Childhood Diseases - CCM 2014

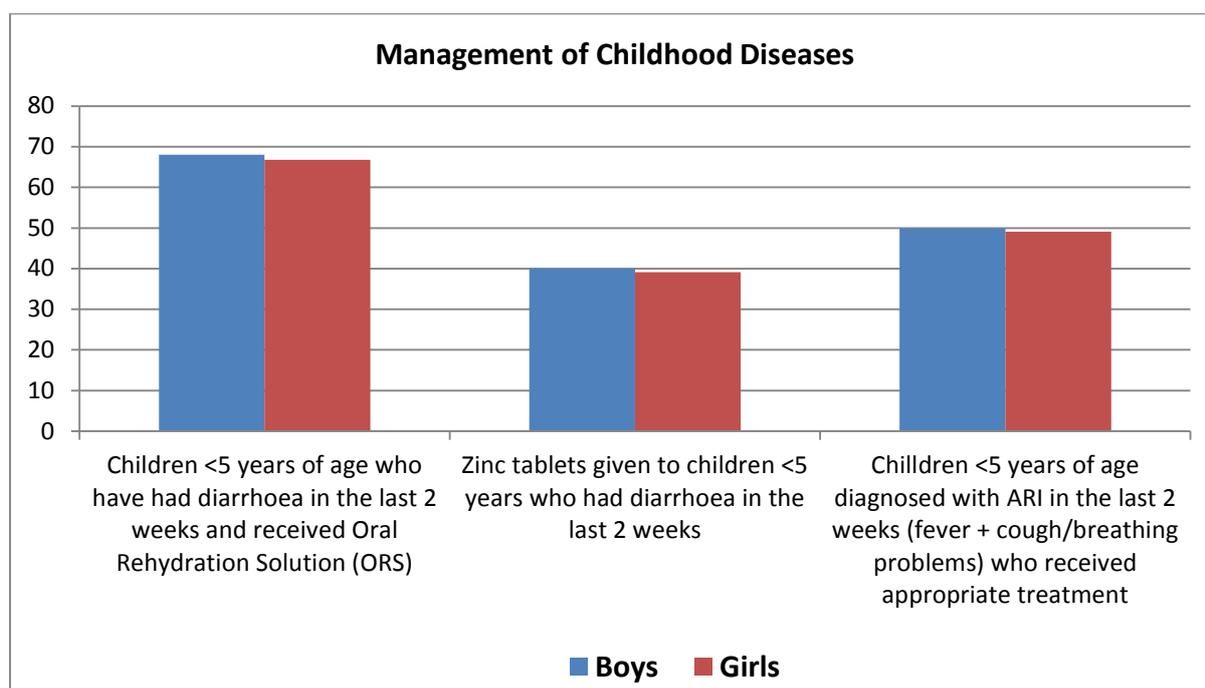


Three quarters of children were fully immunised according to the CCM II survey (2014); this is a slight improvement since the Annual Health Survey (AHS) 2012/13 which reported that 68.9% of children in rural areas were fully immunised. Vitamin A coverage is slightly lower than the AHS rural estimate of 68.8% from 2012/3. Overall there were no apparent differences in coverage for boys and girls.

It is positive to note nearly 50% coverage of use of insecticide treated nets by children under-five (long lasting LLIN plus other ITN). In HBD districts the coverage of LLIN is 42.6% compared with 34.4% in NHBD, showing successful targeting of these districts where the burden of malaria is higher. OHSNP has strongly supported malaria prevention and treatment and contributed to understanding the links between malaria and malnutrition. A national ‘Mal-Mal Workshop’ was held in Odisha in 2011 which raised the profile about the interrelationship between malaria and malnutrition and influenced a decision by the departments to test all children for malaria at Pustikar Divas. Further work on prevention and treatment of malaria and growth monitoring is in progress in South Odisha and the new South Odisha Malaria Monitoring Unit under the DHFW can support dissemination of the findings from the mal-mal camps being conducted.

Fig. 11 below shows management of childhood diseases which strongly affect nutritional status.

Figure 11 Management of Childhood Diseases



Use of ORS for child diarrhoea has nearly doubled since it was measured in the NFHS-3 survey (36.9%). This result is encouraging given that ORS coverage showed very little sign of improvement between the NFHS-3 in 2005/6 and DLHS-2 2006/7 at the national level (Paul et al. 2011⁴³). Whilst the coverage of zinc tablets has room for improvement, it is a relatively new aspect of the programme and has achieved greater coverage in HBDs (42.6%) compared to NHBDs (36.6%). Approximately half of children suffering from ARI received which is a clear area for strengthening. Again, there appears to be no gender bias in coverage of these interventions.

⁴³ [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(10\)61492-4.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(10)61492-4.pdf)

Adolescent girls

Table 7 below shows there is still very low service coverage for adolescent girls, with little over a third having registered at the AWC, about half receiving iron and folic acid (IFA) supplementation and of these about half consuming the supplements. De-worming received in the last 6 months, another intervention to reduce anaemia, is also very low.

CCM II did not collect data on the prevalence of anaemia, but the 2011 Nutrition Baseline Survey (NBLS) showed that the problem is extremely widespread: 71.4% of adolescent girls (11-19 years) were anaemic of which 18% were moderately to severely anaemic. Anaemia not only has serious consequences for the current physical and mental health and development of these girls, but is dangerous for their later pregnancies and childbirth, and is a risk to the health of their future children.

Low registration rates at AWCs despite promotion through the programme, suggests a need for a fresh approach to providing youth friendly services to attract this age group.

Table 7 Coverage of services for adolescent girls 10-19 years

No.	Indicator	CCM (2014)
1	Adolescent girls 10-19 years who are registered at the AWC (excludes married adolescent girls 15-19)	38.5%
2	Adolescent girls 10-19 years who received IFA tablets/syrup last week (excludes married adolescent girls 15-19)	17.5% ST=16.7% SC=17.3% General/OBC/Others=18.0% HBD=16.7%
3	Adolescent girls 10-19 years who consumed IFA tablets/syrup last week (denominator is girls who received IFA tablets/syrup ; excludes married adolescent girls 15-19)	53.6% ST=56.9% SC=53.6% General/OBC/Others=52.1% HBD=52.5%
4	Adolescent girls 10-19 years who received deworming medication in the last 6 months (excludes married adolescent girls 15-19)	30.4% ST=26.5% SC=29.5% General/OBC/Others=32.7% HBD=27.4%

Has the approach been sufficient for impact?

The Mid-Term Assessment of the NOP (2014) discusses many areas where there has been improvement in the planning, management and delivery of nutrition services (ref) and it is useful to review this along-side this section, which focuses on the findings from CCM II. Based on these, this section has shown that coverage of the nutrition-specific interventions are:

- Similar among vulnerable populations (HBD, ST and SC), except complementary feeding practices which are lower than in the general population

- Below the desired coverage level for all infants and young children, except for exclusive and continued breast feeding
- Suboptimal for prevention and management of childhood diseases which affect nutritional status

The evidence from the Lancet Series 2013 identifies ten proven interventions shown in Table 5 above, of which some are not currently part of the programme, but could be integrated. Whilst high coverage of these nutrition-specific interventions is extremely important, these interventions alone are not sufficient to eradicate undernutrition.

There is now international recognition that tackling undernutrition requires a multi-sectoral approach, covering both nutrition specific and sensitive interventions, initially presented in the Lancet Series 2013. Nutrition specific intervention relate to:

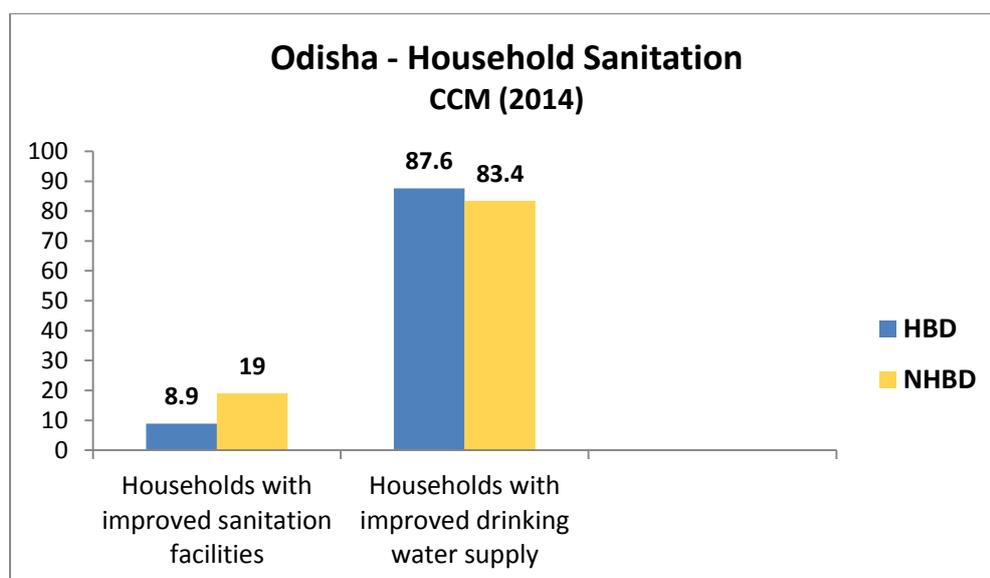
- Support for exclusive breastfeeding up to 6 months of age and continued breastfeeding, together with appropriate and nutritious food, up to 2 years of age
- Fortification of foods
- Micronutrient supplementation
- Prevention and management of childhood illness
- Treatment of severe malnutrition

Nutrition sensitive approaches include wider sectors affect nutrition including:

- Agriculture
- Clean Water and Sanitation
- Education and Employment;
- Health Care
- Empowerment of women

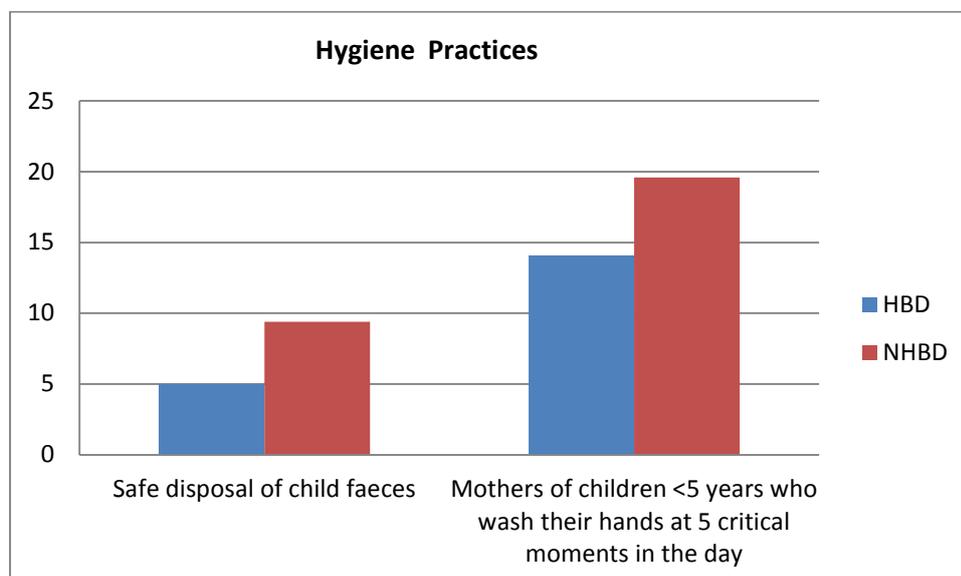
This has been discussed in section A in relation to policy convergence between for health, nutrition and WASH, which became a major focus of OHSNP between 2012-15, and in section E on community-based models for improving sanitation and hygiene. Water, sanitation and hygiene interventions are an important component of nutrition sensitive approaches. Whilst supply of clean water is relatively good, sanitation is extremely low and there is a marked difference between sanitation coverage in HBD and NHBD districts (Fig 12).

Figure 12 Odisha - Household Sanitation



Poor hygiene practices are also widespread, for example safe disposal of child faeces (which is driven to a large extent by lack of sanitation facilities) and hand washing, see Fig 13

Figure 13 Hygiene Practices



Family planning also falls within nutrition sensitive approaches, with evidence that delaying birth until a woman is over 21 years of age is associated with lower rates of stunting. In Odisha, CCM II 2014 found one third of married women (aged 15-49 years) had their first pregnancy aged 19 years or below and the contraceptive prevalence rate (CPR) for modern methods is also very low (33.6%), as reported in section 4.

Given the evidence on coverage of nutrition specific interventions and selected nutrition sensitive approaches, the results shown in section 4 of continuing high prevalence of stunting, wasting and

Actions to strengthen future policy and strategy

1. Set-up a working group to examine the CCM II findings and implications

The new data provides a rich source of data on delivery of services, practices and outcomes at State, district and block levels. A working group including implementers at block level, district and state planners, together with research bodies should review the evidence and implications for policy and practice in Odisha and present a brief to the Nutrition Council, headed by the Chief Minister

2. Develop a multi-sectoral Nutrition Policy as indicated in the converge section above to focus on Nutrition specific and sensitive approaches as discussed in this report. Sanitation and hygiene coverage; enhancement of MAMATA conditional cash transfers to benefit children up to 2 years of age (currently to 1 year) to support the 1000 days approach; provision of crèche facilities for young children, strategies to increase the age of first birth; revision of PDS, support for kitchen gardens; and women's empowerment models are examples of nutrition sensitive areas for inclusion.

3. Continue to target women and children in high burden districts and from the most vulnerable social and economic groups

The gains made in equitable service delivery need to translate in to better and equitable nutrition outcomes

4. Continue to prioritise first 1000 days of life (from conception to 2-years)

All evidence supports continuation in this direction for ICDS services and the relevant services which fall under the DHFW.

5. Consider expanding interventions under ICDS and DHFW to include all the ten proven interventions listed in the Lancet Series 2013. These are multiple micronutrient supplements for pregnant women, calcium supplementation for mothers at risk of low intake, and scaled-up management of severe acute malnutrition. Also review fortification of Take Home Ration for pregnant women and young children with micronutrients (as approved by GOI)

6. Use all opportunities to increase coverage of the direct nutrition interventions which are already part of the programme. For example early initiation of breast feeding at facilities can be readily improved (from conception to 2-years)

7. Monitor all the seven Infant and Young Child Feeding Practices

Dietary diversity and minimum diet for children below 2 years needs closer attention and

8. Adolescent nutrition and education: this group needs to be given much higher priority not just in policy and plans, but monitoring the coverage, quality and appropriateness (youth friendliness) of implementation.

9. Address Human resource gaps

This is an on-going priority to deliver effective nutrition services, with particular gaps at the supervisory and programme management levels.

5.5 Demand-side models for community mobilization and empowerment

Key Messages

1. Reflective women's group based approaches are empowering women for health development.
2. Large-scale community empowerment programmes requires innovation to develop systems, structures and processes that support implementation.
3. Social inclusion needs to be integrated throughout the programme management cycle.
4. Shakti Varta and CLTS may challenge the institutional status quo. Government 'ownership' of demand side processes is important for transforming attitudes and working practices.
5. Using specialist agencies has significantly shortened the State's CLTS learning curve.

By the end of Phase 1 of OHSNP, it was clear that child mortality in the poorer, less developed districts lagged behind the state average. The Government recognised that supply side strengthening was insufficient for tackling the underlying social determinants of health in these more difficult operating environments with large populations of Scheduled Tribes and Scheduled Castes. To affect

Community Empowerment

Community empowerment refers to the process of enabling communities to increase control over the factors and decisions that shape their lives. Community empowerment implies a capacity for self-determination which depends on communities having access to the information needed to make informed decisions on issues of collective concern and the opportunities and resources needed to address them.

behaviour change and raise the demand for services, supply side approaches have been combined with demand side community empowerment interventions to enable communities, especially women, to increase control over their health. This reshaping of the focus of OHSNP to embrace the determinants of health has sought to leverage community resources and leadership for sustainable health development, promote social accountability and empower women for better health outcomes.

OHSNP's ability to influence both demand and supply side processes to address key health concerns yields important insights into the relationship between community empowerment and basic service provision and broader processes of social development, in which equity is a core concern.

OHSNP has supported two models of community mobilisation, Shakti Varta and Community Led Total Sanitation, which are planned for large-scale implementation. Learning from these two community based demand side approaches is presented here.

Shakti Varta

Figure 15 Shakti Varta



Shakti Varta aims to reduce maternal and newborn mortality and malnutrition and mobilises women and communities around health, nutrition, and water and sanitation (WASH) messages. Central to Shakti Varta is a PLA approach that engages women group members in a reflective process, known as a PLA cycle. Through the PLA cycle, women identify and prioritise their local health, nutrition, and water and sanitation (HNWASH) problems, develop local strategies for action, and review their achievements.

The PLA cycle consists of twenty group meetings that are facilitated by a local SHG member who is trained as a facilitator for her Gram Panchayat (GP). She uses engaging interactive tools such as story-telling, picture cards and games, to lead the PLA meetings. It takes approximately 12-15 months to cover the entire PLA cycle of fortnightly meetings. The PLA cycle also includes two community meetings to mobilise community leaders, men and the broader community in the change process.

Reflective women's group based approaches are empowering women for health development

Enabling women's empowerment is at the core of Shakti Varta. Women are the primary participants, the facilitators of the PLA cycle, and the drivers of change. The PLA process is participatory and reflective and builds women's confidence and group solidarity to solve problems. Through this empowering process, women are better equipped to digest and apply new information and bring about changes in family behaviours that support health and nutrition, including for example better infant feeding and sanitation practices.

While it is too early to report on the impact of Shakti Varta on health outcomes, already there is evidence of the process empowering women with information, building their confidence, and nurturing solidarity among group members. Women's empowerment is fundamental to improving maternal and child health outcomes, and women's group based approaches that build on existing community assets are a viable methodology. Initial evidence of the impact of Shakti Varta on health and nutrition outcomes and women's empowerment measures will be available in 2016 and further evidence could be collected post-intervention in 2017. Assuming the results are positive, Shakti Varta provides a platform for the State to develop additional PLA cycles related to women's empowerment and the social determinants of health and nutrition.

Sectoral convergence through a community programme is institutionally complex and time-consuming, but rewarding

Shakti Varta is a convergent programme led by the Department of Women and Child Development (DWCD) working in coordination with the DHFW, the Rural Development Department (RDD), and

Mission Shakti; and supported by district and State level NGO partners, and technical assistance from Odisha's TMST. The institutional structure is inevitably complex as the programme aims to leverage departments' structures and resources, and create the space and capacity for innovation and flexibility essential for delivering a large-scale community empowerment programme. Though design and implementation has been slower than envisaged, the process of building and maintaining ownership among government departments has been essential for leveraging commitment and resources from policy-makers. In the field, convergence means community change processes and demands can be linked to government programmes and services. For example, AWWs and ASHAs participate in Shakti Varta women's group meetings which helps build their relationships with village women and women's confidence in them; and Shakti Varta block coordinators connect community demands for toilet to RDD's block coordinators.

The key message is that while it may take time and be challenging to forge convergence in implementation of community programmes, convergence of departments and non-state actors is essential to deliver large scale community mobilisation programmes that would stretch the resources of one actor. Most importantly, it enables timely government response to community demands that result from the empowerment process. The timely response from delivery of services, such as home and community visits, is critical to maintaining momentum in behaviour change and for reinforcing the confidence and initiative of local women and men.

A large-scale community empowerment programme requires innovation to develop systems, structures and processes that support implementation

Shakti Varta's design draws from national and regional trials that demonstrated the effectiveness of PLA approaches to reduce maternal and neonatal mortality.⁴⁴ Shakti Varta will take PLA from an experimental design to an unprecedented scale. Starting from three districts the program will roll out to another 12 high burden districts, and cover 24,000 villages and 17.5 million people (compared with the trial cited above which covered a total population of 228 000). In the first three districts of Bolangir, Kandhamal and Rayagada, Shakti Varta has already mobilised 28,490 women's self-help groups (SHGs). Taking a community empowerment programme to such scale has required the

Shakti Varta delivery structure

- 7,000 Gram Panchayat (GP) level Facilitators
- 608 Block Coordinators cum trainers
- 152 Block Finance Coordinators
- 1 state Resource Pool of 30 master trainers

careful development of systems, structures, and processes that support implementation and management and are able to assure the quality of group facilitation by locally trained village women over a large geographical area. This has required innovation and the leveraging of existing resources.

Systems of training and support have had to be developed that can be taken to scale while also tailored

to the practical realities of working with women with little formal education. Training of group facilitators is therefore spread out over the course of the PLA cycle in five tranches so that new information can be shared, skills developed over time, and training sessions used to discuss and solve issues emerging from the community. Block level supervisors train facilitators and provide on-going field support, and in turn have access to online and offline resources and help.

⁴⁴ Tripathy et al, Lancet 2010

Supervision and monitoring systems have been built from the platforms that ICDS and Mission Shakti offer but have had to be re-engineered so as to meet programme needs, and bring in NGO human resources to fill key functions. The management information system needed to be embedded within government for sustainability, and able to support the information needs of village facilitators through to State managers. This led to new institutional structures and communication resources within government (State Resource Centre at State and block level) and an innovative MIS that blends traditional methods and modern information and communication technology (ICT) tools.

State and non-state partnerships can work effectively

Shakti Varta demonstrates that while existing government and self-help promoting institutions provide a valuable resource for delivering large-scale community empowerment programmes, these structures and systems have insufficient capacity to stretch to new community programmes on their own and need to be supplemented with external technical and implementation support. At the implementation level, district NGOs undertake block level supportive supervision, training and monitoring of Shakti Varta facilitators, alongside ICDS and Mission Shakti staff, while external technical assistance has supported innovative management systems and programme design, quality assurance and documentation. Shakti Varta shows that a partnership of state and non-state actors can work effectively, however, this requires active management to harness the comparative strengths of each and to negotiate how they can work together despite different operating norms. For 2015-16, financial support to district NGOs will be provided by the State government rather than TMST. In this respect, systems for procuring non-state organisations will need to be developed that are efficient and adhere to due diligence and transparency. Continued partnerships with district NGOs to support implementation, and state level technical resource agencies will be essential to complete Shakti Varta's PLA cycle and roll out to all 15 High Burden Districts.

Social inclusion needs to be integrated throughout the programme management cycle

Shakti Varta has an equity focus. It is targeted to the 15 high burden districts and seeks to impact the health and nutrition outcomes of the most disadvantaged. To ensure social inclusion translates into implementation, Shakti Varta has undertaken several important steps. Comprehensive mapping of villages and tag villages by caste and tribe status, cut-off and remote areas, the location of health and nutrition services, and communication networks has ensured that Shakti Varta groups are sited to include socially and geographically disadvantaged communities. Facilitators have been selected from the same social backgrounds as the groups they facilitate, with a preference for Scheduled Tribe and Scheduled Caste women. Social inclusion is integrated into facilitator and supervisor training. The monitoring system reports on the social background of participants and facilitators, and the impact evaluation framework measures outcomes disaggregated by various socio-economic indicators including caste and tribal status. The learning is that systematic actions are essential for ensuring that community programmes reach the most disadvantaged that may tend to be left out due to their more isolated location, small population size, and social exclusion.

Community programmes need to be specially tailored to operating in conflict-affected areas

Shakti Varta has found implementation difficult in conflict-affected areas: mapping and the collection of data is risky, community people are reluctant to meet in groups, women feel threatened to travel to different villages to facilitate Shakti Varta meetings, and the mobility of block

coordinators and frontline workers is constrained. In such an operating environment, community based programmes like Shakti Varta need to be redesigned to be fit for context, and assessed for their adherence to do-no-harm principles.

Demand Responsiveness in Community Led Total Sanitation (CLTS)

Government supply led systems in WASH have historically failed to reach communities in remote, poor areas. The World Bank Water and Sanitation Programme's review of sanitation in India (2010) showed that States that focus on demand creation perform better in terms of toilet construction and use than supply led approaches.

In the 2011 Odisha census, only around 14% of households had access to a toilet and only 10% ten percent to both a toilet and tap connection. Low WASH service levels are associated with a high water and sanitation related disease burden, estimated at around 30% of total disease burden in tribal and scheduled caste areas. The State set a Millennium Development Goals (MDG) target of 50% of rural households to have improved sanitation by 2015, requiring the construction of an additional 7 million toilets, and a target of total sanitation coverage by 2022.

CLTS is inherently empowering at local levels but must also be contextualised at the state institutional level to be effective at scale

The need for WASH services in marginalised areas delivered through locally led, socially empowering and demand responsive processes led to the well regarded CLTS approach being included within the HNWASH programme design. As its name implies, CLTS recognises the inherent power of local communities to identify and solve their own sanitation and hygiene related challenges and, in doing so, become ODF.

CLTS is widely accepted to contain six core principles: 1) community self-help action; 2) hands-off triggering; 3) facilitation not teaching, 4) poorer and weaker people are helped by others; 5) no standard designs for latrines, and 6) no individual household hardware incentives.

Following some early procurement delays related to challenges faced in contextualising CLTS within the State government context, a modified CLTS approach was agreed. This departed from the standard approach by including standard 'pucca' toilet designs to improve sustainability of use and, in the interests of meeting RDD work plan goals, accommodated federal and state hardware incentives, even though subsequent progress has not depended on them.

Once finalised, the model was integrated within the latter cycles of the PLA Shakti Varta process and launched as a stand-alone CLTS initiative in two phases under RDD. Under this arrangement technical assistance has worked with RDD/State Water and Sanitation Mission (SWSM) to develop the systems, procedures, partnerships, human resources, technologies and supply chains needed for its successful implementation at block level and to create an enabling environment to scale up the approach in 15 high burden districts through Shakti Varta, and across the state. Two specialised CLTS agencies were recruited to support community level implementation and training.

Shakti Varta and C4/6CLTS may challenge the institutional status quo. Government 'ownership' of demand side processes is important for transforming attitudes and working practices.

Shifting to demand led approaches in WASH is not an easy task since it requires fundamental shifts in institutional, professional and personal outlooks that frequently threaten established ways of working in government, particularly around decision making, budget disbursements and expectations that rapid scale up can be achieved simply by making more funds available.

However, under RDD leadership, 150⁴⁷ communities across 8 districts have been declared ODF through CLTS using their own resources. This mirrors experiences in Maharashtra and Himachal Pradesh States and in Rajshahi in Bangladesh⁴⁸, where popular championing under government leadership for sanitation proved decisive in achieving widespread latrine coverage. As is frequently noted about CLTS, once a person, whether a public servant or private citizen, has experienced the CLTS triggering process, s/he quickly becomes a strong proponent for ODF communities.

CLTS triggering must be community owned and led since shock and embarrassment are its primary drivers for change.

Experience from HNWASH to date is consistent with experiences elsewhere in the region with step changes in community attitudes towards sanitation and hygiene evident as a result of context specific triggering. This is indicated by the collective pledge made by each community to become ODF and their plans made to bring this about.

The motivational triggers for this step change are seen to be traumatic effect of the triggering exercise, when the stark reality and consequences of open defecation and poor hygiene are revealed, the high social and cultural status associated with ODF status, reduced sickness reported, improved privacy, enhanced marriage prospects for men and the prospect of additional utility services being provided by GPs and DWSMs as rewards for attaining ODF status.

CLTS's effectiveness has transformed state sanitation priorities in a surprisingly short timeframe

Despite CLTS being a 'bottom up' and unorthodox working modality for SWSM, its success and grass roots popularity have led State Government to endorse it as the recommended approach for sanitation promotion in rural areas within eighteen months of TMST supported implementation beginning. The strategic advocacy role played by TA in influencing senior RDD and SWSM officials in this direction is seen to have been important.

CLTS is inherently replicable at local level

An important attribute of the CLTS model rolled out is its inherent replicability at community and ward level. This is seen to draw primarily on ODF communities' abilities to inspire, stimulate friendly local rivalries, and win the attentions of local government, the media, and others. As demonstrated in multiple places, once ODF status was reached in a community, news of its success spread quickly to neighbours, GPs and local officials.

⁴⁷ 145 through CLTS projects and 5 'spontaneously' in their vicinities (see replicability)

⁴⁸ Under the Village Education Resource Centre (VERC) who pioneered CLTS in 2000 (see <http://verc.org/clts.html>)

With minimal external encouragement, local sanitation champions from newly ODF villages visited their neighbours to recount how they had overcome their sanitation challenges. As a result, several additional communities made public pledges to become ODF and, by April 2015, five such had achieved this with many more in process.

It is noted that most of these communities 'piggy backed' on the facilitators and hardware supply chains set up to assist CLTS project communities and this suggests that scaling up will be best served by CLTS resource working in geographic clusters. It is also noted that DWSM monitoring needs to be developed to track this additional coverage.

Government's Role and Supply Side Factors

Progress in sanitation with limited government intervention should not be considered surprising since sanitation coverage globally has depended little on public intervention and almost entirely on householder and local private sector levels inputs¹. Market based models have been successful in most places but they tend to require additional assistance in underdeveloped countries if they are to reach the poorest.

Government's role is to facilitate not direct or control, but a systems approach is still required

Government's role in CLTS is normally taken to be that of a high level process facilitator able to create the operational space and provide the resources needed for the establishment and scale up of the approach. This is recognised to include establishing a suitable policy environment; building the capacity of CLTS focused organisations and facilitators; coordinating agency inputs; stimulating supply chains and establishing effective monitoring systems.

The role played by GOO in CLTS promotion aligns well with this established good practice and may be attributed in part to the systems development approach adopted with RDD/SWSM by TMST WASH advisers. Key evidence of this includes:

- RDD's endorsement of CLTS as its recommended approach for rural sanitation
- Preparation of a State Rural Drinking Water and Sanitation Strategy Paper and Information, Education, Communication IEC/ Information, Education, Communication BCC sanitation materials for use at Gram Panchayat level
- A higher overall priority given to sanitation in RDD planning and programming, including requiring government staff to construct toilets and support local CLTS initiatives
- Preparation of Sanitation Implementation Guidelines for the Nirmal Odisha Abhiyaan programme
- Harmonisation and simplification of the Federal and State household incentive schemes
- Strengthening of the Indira Gandhi Training Centre (IGTC) to provide WASH capacity building, including CLTS facilitator training
- Acknowledgement of the specialist role played by NGOs in CLTS training and facilitation
- A strategy to deploy and incentivise CLTS resource pools at district level

- The development of several hardware supply chain models involving District Water Supply and Sanitation Office (DWSSO) self-help federations and NGOs
- Regular networking with WASH sector agencies.

Mechanisms for Ensuring Inclusion and Equity in Relation to Benefits

As is widely recognised, CLTS implemented well can serve as a powerful tool for social development, including improved equity, and have an important bearing on the practices and priorities of neighbours and local government.

CLTS requires a whole community response

CLTS triggering is a whole community exercise that is effective largely for the reason that it explicitly recognises that WASH related disease transmission routes recognise no caste, status, income or other barriers. The failure of a few households to practice ODF behaviours can impact the whole community. For this reason a whole community response is essential to ensure that all households participate in awareness raising, triggering, hygiene promotion and toilet construction activities, regardless of their backgrounds or status.

The acid test for the success in ‘triggering’ is normally taken to be the demonstrated willingness of householders to invest in sanitation without subsidy, and to provide additional resources to help the poorest also construct toilets. This does not necessarily represent a shift towards more egalitarian outlooks in communities but rather a heightened recognition of interdependence with respect to hygiene practices that ensures that programme benefits will broadly accrue equally. This said, anecdotal evidence suggests that improved social cohesion and reduced discriminatory practices result through the socially galvanizing practices associated with CLTS.

Exclusion of marginalised communities can result if they fail to be inclusive

In the event that a community decides to exclude selected households from the CLTS process, or fails to find the resources needed to ensure that all householders can build a toilet, the process is abandoned. While essential to prevent wasting resources, it is recognised that this stance may lead to the exclusion of some heavily marginalised communities.

Equity in the sustainability of benefits, once toilets have been built and are in use, is achieved through regular community self-monitoring which includes identifying ODF violators and levying fines as appropriate. Ensuring non-discrimination and transparency in the provision of individual household hardware incentives by DWSMs is flagged as an area for programme attention.

Partnerships in CLTS

Using specialist agencies has significantly shortened the State’s CLTS learning curve

As noted above, the generally accepted role of government in CLTS is that of a process enabler. This involves establishing an appropriate operational environment and entering into partnerships with specialised agencies to harness comparative strengths in the pursuit of strategic objectives.

Under HNWASH, successful operational partnerships have been built with two specialist CLTS agencies, Knowledge Links and Feedback Foundation, whose roles have been to facilitate CLTS at community level, train CLTS trainers, resource people and artisans. These partners have, in turn, partnered with community based organisations for CLTS implementation. Other responsibilities have included helping communities to establish in-village ODF monitoring systems and facilitating community links with local government and hardware suppliers.

While relatively expensive, these contracted partnerships, have proved invaluable in introducing CLTS to Odisha and are seen to have reduced the learning curve that would otherwise have been necessary. Looking forward, it is anticipated that specialist NGOs will continue to play a role in helping to scale up CLTS across the state by capacity building NGOs and training CLTS Master Trainers to support DWSMs in 15 HBDs.

Innovation in Scaling Up

Scaling up CLTS

A measure of HNWASH's success is the State's preparedness for CLTS scaling up

The various strategies that have evolved under OHSNP to help scale up CLTS generally reflect accepted international good practice⁴⁹ and are as follows:

- Demonstration through pilots in strategic or convenient locations
- Integration of CLTS within Odisha's flagship Shakti Varta programme
- Recruiting specialist CLTS NGOs
- Training CLTS trainers, resource people and facilitators
- Conducting CLTS campaigns and promoting media coverage
- Encouraging friendly rivalry between communities seeking ODF status
- Deploying a pool of trainers and facilitators to districts
- Organising cross visits between communities
- Promoting champions and natural leaders
- Motivating self-help groups and school children
- Stimulating local markets for the supply of hardware items
- Establishing effective monitoring to verify ODF status and support planning
- Harmonising and simplifying sanitation incentives through

Several issues need to be considered for review to inform the scaling up process. These include ensuring that the external facilitators resist the temptation to 'mechanise' the CLTS process. Community context, in all its richness and diversity, needs to determine the exact form that CLTS takes so that community members are empowered to make their own decisions on actions to be taken. The quality of CLTS resource people, in particular, needs to be safeguarded to ensure that triggering is facilitated by experienced facilitators having socially empowering outlooks and not inexperienced individuals lacking relevant skills and insights. Other potential obstacles include the

⁴⁹ Chambers R., Going to Scale with Community-led Total Sanitation: Reflections on Experience, Issues and Ways Forward, IDS Practice Paper 1, March 2009

opposition of senior officials, institutional inertia, big budgets under pressure to be spent quickly, vested interests and too rapid a pace of scale-up planned.

Innovations in mechanisms for measurement and accountability

Community monitoring enhances user accountability

As reported, community self-monitoring of ODF status is an integral part of the CLTS process and regarded as an effective tool for tracking and enforcing compliance. Here, vigilance committees are formed in each village to spot ODF violators. Additional activities include the posting of public notices to reinforce the importance of ODF behaviours and the fines to be paid for any breaches.

Accountability during toilet construction is also enforced by the committee. An example may be drawn from Rayagada where the committee visited all householders resisting toilet construction to ascertain their personal circumstances, find out if additional help was needed, and then lobbied to comply with construction.

Claiming household incentives may raise accountability concerns

Accountability mechanisms in relation to CLTS implementation tend to be community focused since the process neither depends on government inputs nor is affected by their absence. This may change following implementation should householder efforts to claim government sanitation incentives prove unsuccessful. Coping with growing demand for CLTS may present accountability concerns in the future for DWSSMs as they strive to mobilise and deploy resource people in a rational and transparent manner.

Media coverage raises awareness and demand for services

An important factor in accountability relations is seen to be the degree of media interest shown in a topic which frequently mirrors public and political interests. To date, ODF successes under OHNSP have been widely reported by local, state and, most recently, national level media⁵⁰. Journalistic coverage to date has been broadly positive and can reasonably be expected to raise public awareness of the importance of ODF communities and government commitment to provide the support needed.

Widespread media coverage also suggests that sanitation is now a relatively hot political topic. The increased attention being paid by RDD to sanitation programming and procedures, stakeholder meetings, requests for TA support and resource allocations for CLTS and related training supports this view and would appear to open the way for improved voice-accountability relations between sanitation users and government in the medium term.

⁵⁰ "No toilet, no marriage: K'mal girls show the way. Times of India, 16th April, 2015

Actions to strengthen future policy and strategy

- 1. Increase policy attention and programme resources to community empowerment as a** means of tackling underlying social determinants such as women's empowerment, and generating demand for services and improved health behaviours. This is especially important for populations and areas that are vulnerable and lagging behind.
- 2. Continue funding Shakti Varta's convergent approach** through DWCD, Mission Shakti, DHFW and RDD with implementation and technical support from non-state actors.
- 3. Maintain the innovative training, supervision and monitoring systems** established by Shakti Varta, and look for how benefits and learning from their design can inform and support equivalent government health and nutrition systems.
- 4. Develop an efficient, competitive and transparent system for procuring support from non-state actors** at state and district level which adheres to due diligence but is sufficiently flexible to avoid delays in implementation.
- 5. Systematically integrate actions to ensure inclusion** of the most vulnerable and excluded populations in community mobilisation programmes and develop tailor made community mobilisation approaches for conflict-affected areas.
- 6. Further develop and refine the CLTS approach** to improve the ability of facilitators to fully contextualize the approach:
 - Develop a strategic approach to predicting and managing demand for the training of CLTS stakeholders including facilitators requested by SWSM, GPs, SHG Federations and others.
 - Formulate an expanded, decentralised state training plan for CLTS that matches training capacity with demand linked to a phased CLTS scale up plan. Introduce quality standards for facilitators and consider establishing an accreditation system and members network.
 - Support SWSM and DWSMs prepare phased and prioritised CLTS roll out plans at district level linked to available resources. This should include guidelines on the deployment and assessment of facilitators, implementation and monitoring.
 - Increase opportunities to improve voice-accountability relations around sanitation at local, district and state levels. This might include an annual state level meeting of district officials on CLTS-based process learning with the Secretaries of Rural Development and Panchayat Raj
- 7. Advocate to promote and institutionalise the concept of sanitation champions** at state, district, block, GP, ward and community levels with appropriate public recognition and incentives. Include here the award of Nirmal Gram Puraskar prizes.
- 8. Work with DWSMs and private sector suppliers** to improve district level demand forecasting for sanitation hardware materials and explore the development of new supply

chain models and points of sale e.g. sanimarts for sanitation hardware through government, private sector, SHG Federations and others as appropriate.

- 9. Develop a range of appropriate personal financing mechanisms** to enable householders to invest in household toilets without destabilising domestic finances.
- 10. Review and strengthen SWSM sanitation monitoring** to better capture coverage including disaggregation by social group and support District Collectors to use and report on data captured.

6. Conclusion

This paper has examined five important thematic areas under OHSNP and related lessons for future policy and strategy. The areas discussed are, Intersectoral convergence for health, nutrition and WASH ; Equity driven strategy and implementation; Priority health reforms ; Re-positioning child nutrition programming ; Demand-side models for community mobilisation/empowerment

These themes have been highlighted as they encapsulate the special endeavour of OHSNP to adopt a truly holistic public health approach, in terms stronger convergence between the health, nutrition and WASH sectors; and balanced attention to both supply and demand side approaches.

The elements of OHSNP have been developed over the duration of the DFID support, progressing from health systems strengthening, to convergent approaches between health and nutrition and encompassing water, sanitation and hygiene as key determinants, during the last 3 years. The demand-side models for community mobilisation were also introduced during this phase of the programme.

The programme has achieved many of its objectives, with notable progress on coverage of health services for pregnant women and children. High coverage for the MCH indicators has been realised through effectively increasing access by the most vulnerable people (ie women and children living in high burden districts which includes KBK, Scheduled Tribes and Schedules castes). There is now high coverage across key MCH services across all groups and areas in the state, enabled through enhanced resources and a long period of health systems strengthening. The evidence suggests that this has had a positive impact on maternal, infant and child mortality, though on-going improvement to the quality of delivery will accelerate further reduction in mortality.

Nutrition coverage is similar across all groups, which demonstrates benefits of targeting, but coverage of the direct interventions is too low across for all. The targets for reducing stunting, wasting and underweight of children have not yet been met. Appreciating some of the reasons for differences in the health and nutrition impacts helps map the future course for policy:

The evidence-based for health has been developed globally and in India over many decades, with high investment in increasing access to proven interventions such as immunisation and emergency obstetric care. By contrast there were decades of global and national stagnation around evidence-based interventions for nutrition, which were over reliant on food supplementation for pre-school and school going children. This has been true In Odisha and is reflected in the very recent financial and technical engagement of development partners in the nutrition sector in the State.

Over the last few years, the evidence base for tackling under-nutrition has been established. Odisha has already developed a reputation for innovation and leadership in nutrition⁵¹ and the Nutrition Operational Plan under OHSNP has helped re-align nutrition programming with the latest evidence base. The State can build on this experience to fill in the gaps in provision of proven interventions and invest for high coverage.

⁵¹ <http://poshan.ifpri.info/2015/02/10/odishas-open-spaces-for-nutrition-innovation/>

More generically, health improvements are often event-related interventions (eg. pregnancy and birth), and the benefits quickly visible. These are relatively easier to deliver from a supply perspective, and to recognise and utilise from a user perspective. Direct nutrition interventions rely to a large extent on consistent practices at home over long periods (for example infant and young feeding and hygiene practices), which are constrained by multiple factors including knowledge, motivation, time and financial resources. And as discussed, the conditions for stunting are set before a child is born and can take a generation to change.

Support for households and communities to improve the quantity and quality of the diet for infants and young children is an essential part of nutrition programming. Odisha has introduced training on interpersonal communication skills for front line workers in relation to the 1000 day window of opportunity to reduce and prevent stunting; the Mamata conditional cash transfer scheme to increase financial resources to women during pregnancy and their infants, and community empowerment through the Shakti Varta model. All of these are in a positive direction but as discussed, need to be sustained at scale and evaluated.

This paper has also repeatedly highlighted the complex pathways to good nutrition which necessitates a multi-sectoral approach. This has begun in Odisha, especially with increased attention to supply-side and community-based models for improving sanitation, with early lessons from community-based sanitation reviewed in this paper. The standard of living index applied in CCM II survey found 43% of all households fell in to the lowest category (45% medium and 12% high), highlighting the underlying challenge for improving child nutrition for these families, with poverty reduction strategies in the state needed to underpin the multi-sectoral approach.

Odisha is on the right path and benefits from strong administrative and political leadership for health, nutrition and WASH. The investment in capacity building of the technical staff to deliver quality services and empowerment of communities to increase their control towards healthier lives, needs on-going support by government. The most urgent policy initiatives are a Multi-sectoral Nutrition Policy and a Convergent Solid and Liquid Waste Management Policy.
