

Public Financing for Nutrition in Bihar



Working Paper 3 | 2017

Fiscal Bottlenecks Constraining Delivery of Nutrition Interventions for Pregnant Women in Purnea, Bihar

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Acknowledgements

In the process of collecting district level information and understanding the fiscal processes involved in delivery of nutrition interventions we benefitted hugely from interaction with a range of stakeholders. We are grateful to Saquib Raza, Purnea, for helping us to gather information about the district from various sources and in conducting field work. Dipak Ganvir, State Programme Officer NIPI- UNDP Newborn Project, for sharing his experience on implementation of nutrition programmes at the district level. District officials of District Health Society, Purnea for their time and insights on the delivery of maternal interventions in the district and for explaining and discussing the fund flow processes for NHM in the district. Block officials of Block Health Society (BHS), Purnea East and Jalalgarh for discussing fund flow processes for schemes and the delivery of maternal health interventions through the BHS.

ANMs of BHS, Jalalgarh and Purnea East for their willingness to discuss implementation of maternal health interventions in the district. They were nodal in building our understanding of the functioning of VHND in the district.

Pregnant and lactating women (of villages in Jalalgarh and Purnea East) for their patience to answer survey questions and sharing their personal experiences of pregnancy with us.

ASHA, AWWs and helpers of Jalalgarh and Purnea East for taking us around the village, introducing us to the beneficiaries and for informing us about the village and functioning of VHND in the village.

Field investigators: Chanda, Babita, Shaheen, Savita and Asha for helping us in conducting the survey in the district.

We are grateful to Dr. Abhijit Ghosh and Dr. Neetu Choudhary, Assistant Professors of Economics, A N Sinha Institute of Social Studies, Patna for review and comments on advanced draft of the paper.



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List of Abbreviations

AHS :	Annual Health Survey	IFA :	Iron Folic Acid
ANC:	Ante Natal Care	JSSK :	Janani-Shishu Suraksha Karyakram
ANM :	Auxiliary Nurse Midwife	JSY :	Janani Suraksha Yojana
APHC :	Additional Primary Health Centre	LBW :	Low Birth Weight
ASHA :	Accredited Social Health Activists	MCH :	Maternal and Child Health
AWC :	Anganwadi Centre	MCP :	Mother and Child Protection Card
AWW :	Anganwadi Worker	MH :	Maternal Health
BHS :	Block Health Society	NFHS :	National Family Health Survey
BMI :	Body Mass Index	NHM :	National Health Mission
BP :	Blood Pressure	PHC :	Primary Health Centre
DH :	District Hospital	PIP :	Programme Implementation Plan
DHAP :	District Health Action Plan	PNC :	Post Natal Care
DHS :	District Health Society	PMSMA :	Pradhan Mantri Surakshit Matritva Abhiyan
DoHFW :	Department of Health and Family Welfare	RCH :	Reproductive and Child Health
ENI :	Essential Nutrition Interventions	ROP :	Record of Proceedings
FMR :	Financial Management Report	SDH :	Sub District Hospital
FY :	Fiscal Year	SHS :	State Health Society
HCS :	Haemoglobin Colour Scale	TT :	Tetanus Toxoid
HMIS :	Health Management Information System	VHND :	Village Health Nutrition Day
HSC :	Health Sub Centre		



Abstract

Introduction

Purnea district in Bihar has high levels of maternal undernutrition. Almost 72% of pregnant women are anaemic, and 39% women of reproductive age have BMI <18.5 (NFHS-4). A set of nutrition interventions during pregnancy can address the high levels of undernutrition among pregnant women. However, the uptake of these interventions remains limited due to various reasons. We attempted to document the nutrition interventions for pregnant women delivered by the health department in Purnea district of Bihar and assess the fiscal and procedural bottlenecks that constrain their implementation and uptake in the district.

Methods

We studied fiscal outlays and expenditures for six nutrition interventions for pregnant women (namely iron folic acid and calcium supplementation, deworming, as per protocol; early registration for inclusion in outreach services; recording and monitoring of nutritional status; quality and full reproductive health and antenatal check-up; and promotion of institutional delivery), delivered by Health department through National Health Mission (NHM). The district

NHM budgets were studied for the following three fiscal years: 2014-15, 2015-16, and 2016-17. The budget analysis was supplemented with interactions with officials of District Health Society (DHS) and Block Health Society (BHS); frontline functionaries, and beneficiaries to understand the issues constraining the uptake of nutrition interventions in the district. The budgets for health-related nutrition interventions for pregnant women were clubbed in the following three categories: ANC, Safe delivery, and micronutrient supplements components to understand the expenditure priorities of the government.

Results

Budgets for health-related nutrition interventions for pregnant women are very low. Within nutrition interventions' budget, a major portion was allocated for the safe delivery component. Budgets for nutrition supplements could not be tracked. While priority for safe delivery is good but minimal funding for ANC is a concern in the district given that coverage of maternal interventions in Purnea are low. No allocations were made for the following services in the last two years, which are intrinsic to provision of ANC: Monthly



VHNDs, Line listing and follow-up of severely anaemic women, and printing of Mother and Child Protection Card (MCP) cards. The funds allocated for the peripheral health facilities, such as HSC, PHC and FRU were low in the three fiscal years. The low levels of fund allocation and utilisation is also reflected in the shortage of health centres in the district. The number of HSC and PHC are below the IPHS norms, thus serving a population more than their capacity.

The services delivered through VHND remains weak. Among the supplements, only IFA was being provided to pregnant women regularly, but the dosage provided was below the recommended amount. The kits and equipment used by ANMs for ANC were either not in working order (e.g. weighing scales and BP machines) or of deficient quality (e.g.

Haemoglobin testing strips).

Overall the fund utilisation for nutrition interventions was 58% in FY 2014-15 which improved to more than 80% in the FYs 2015-16 and 2016-17. Within nutrition intervention budget, the fund utilisation for ANC services was very low.

Conclusion

The issues of underfunding and underutilisation of funds co-exist in the district. Budget outlays for nutrition intervention for pregnant women are low. The underfunding of the NHM programme over the years in the district, has led to a vicious cycle of understaffing and inadequate health infrastructure, leading to underutilisation of limited resources. This in turn has adversely affected the fund allocations for the scheme.



Introduction

Maternal nutrition is important due to its critical but complex association with women's well-being and its implication for child development (Jose & Navaneetham, 2008). Evidence suggests that both macro- and micronutrients deficiencies can cause severe maternal morbidity and mortality (Villar, et al., 2003). For instance, an inverse relationship exists between calcium intake and development of hypertension during pregnancy (Black, et al., 2013). Similarly, iron deficiency anaemia in pregnancy increases the risk of haemorrhage (Results UK, 2016; Stoltzfus, Mullany, & Black, 2004) and maternal mortality (Black, et al., 2013; Stoltzfus, Mullany, & Black, 2004; Villar, et al., 2003; Jose & Navaneetham, 2008). Additionally, nutritional status of a woman before and during pregnancy also impacts foetal development and child malnutrition. Maternal undernutrition can lead to intrauterine growth

retardation, low birth weight (LBW) babies, preterm birth, childhood stunting, and emergence of chronic diseases (Jose & Navaneetham, 2008; Villar, et al., 2003; Vir, 2016). Poor maternal nutrition also results in low energy reserves of mothers which affect their functional outcomes.

A significant proportion of women in India are undernourished, which is reflected in their nutrition indicators as well as that of the children. Some important indicators of maternal undernutrition are maternal short stature (height less than 145 cm), low body-mass index (BMI; a measure of weight to squared height of less than 18.5 kg/m²), and iron deficiency anaemia (<11.9 grams / decilitre of haemoglobin in the blood). Data shows that one in every five women (15-49 years of age) in India has low BMI (IIPS, 2016). However, the percentage of women with low BMI is much higher among the age group 15-19 years (45.5%) (IIPS, 2016). The prevalence of anaemia is also very high, with almost every second woman being anaemic in India. Another important indicator that reflects on poor maternal nutrition is low birth weight babies (<2.5 kg). Almost 18.2% children (IIPS, 2016) in India are born with low birth weight, indicating inadequate care and poor nutrition of women during pregnancy. Improving nutritional status of women during pregnancy in India is thus critical, and will support better inter-generational nutritional outcomes.

Among all the states in India, Bihar has one of the worst maternal nutritional indicators. Almost 30% women in Bihar have low BMI and ~60% women are anaemic.



Based on the evidence provided in Lancet series, UNICEF identified 17 nutrition interventions that are essential during pregnancy for women in India.

1.1. Context for the Study

Among all the states in India, Bihar has one of the worst maternal nutritional indicators. Almost 30% women in Bihar have low BMI and ~60% women are anaemic. Around 39% of the women are married before 18 years of age and consequently teenage pregnancy rates are high (IIPS, 2016) in the state. The state had moved towards a higher economic growth continuum in the first decade of the millennium (Gupta, 2010). Health indicators too have seen an improvement in the last few years (Nagaraj & Pandey, 2013; Singh & Stern, 2013). The period between 2005-06 and 2015-16 experienced decline in infant mortality rate and child mortality rates, a significant increase in institutional deliveries

and immunisation rates, and an improvement in nutritional status of women and children. Yet there remain huge gaps in nutrition, health and well-being of people.

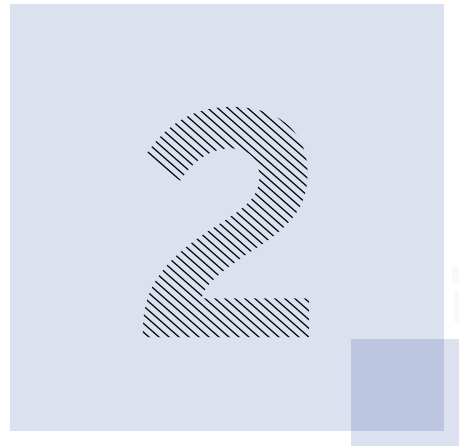
Poor nutritional status is due to multiple causes and women's poor nutrition, in particular, is linked to the gender-based inequities experienced by them (UNICEF, 2009; Bhattacharya, 2015). To address the concerns a host of interventions, including education, agricultural modifications, farming subsidies, social and political changes, land reform, etc. would be required (Bhutta, et al., 2008). At the same time, interventions that address the immediate causes of undernutrition, such as those relating

to micronutrient supplementation to prevent morbidity need to be undertaken on a priority basis. However, the uptake of these interventions remains limited due to various reasons. In this backdrop, this paper attempts to document the nutrition interventions for pregnant women delivered by the health department in Purnea district of Bihar and assess the fiscal and procedural bottlenecks that constrain their implementation and uptake in the district.

1.2. Research Questions:

In order to probe fiscal and procedural bottlenecks that constrain implementation and uptake of nutrition intervention for pregnant women delivered by health department, following research questions have been answered:

1. What is the coverage of health-related nutrition interventions for pregnant women in the district?
2. What are the fund flow and budgeting processes for nutrition interventions at the district level and below?
3. What are the budget outlays for health-related nutrition interventions for pregnant women in Purnea and what has been the extent of fund utilization?
4. What are the issues related to quality and adequacy of human resources, infrastructure, and the procedural challenges in implementation of nutrition interventions at the district level?



Methodology

2.1 Analysis Framework:

Lancet 2013 series suggested a set of interventions for addressing maternal and child undernutrition. These were 'nutrition-specific' interventions for addressing immediate causes, and 'nutrition-sensitive' interventions for addressing underlying determinants, along with building an 'enabling environment' by supporting interventions and programmes that enhance growth and development (Black, et al., 2013). Based on the evidence provided in Lancet series, UNICEF identified 17 nutrition interventions (Fig. 1) that are essential during pregnancy for women in India (UNICEF, 2016).

From these 17 nutrition interventions, we focused on six interventions that are implemented by the health department and are linked to antenatal care (ANC). The interventions included in the present study are as follows:

Out of the 17 nutrition interventions for pregnant women, six health-related nutrition interventions were selected for detailed study.

- Iron folic acid and calcium supplementation, as per protocol;
- Deworming, as per protocol;
- Early registration for inclusion in outreach services;
- Recording and monitoring of nutritional status (pregnancy weight gain);
- Quality and full reproductive health and antenatal check-up; and
- Promotion of institutional delivery.

The analysis in the paper is based on the study of district NHM budgets and fieldwork undertaken in the district.

2.2 Process followed

Mapping Delivery Platforms for health related nutrition interventions in Purnea:

Out of the 17 nutrition interventions for pregnant women (Fig. 1), six health-related nutrition interventions were selected for detailed study. We first mapped the government schemes / programmes delivering these interventions. All these interventions are part of the National Health Mission (NHM) programme of the Government of India and are included in the ANC services provided during pregnancy. Government of India guidelines for each of these interventions were then studied to list out the activities and implementation process for these interventions (Fig. 2). We also listed out the basic ANC activities to be conducted by the Health Department. We limited our study to only normal pregnancy and hence have not included the protocol

for complicated pregnancies.

Collating budget outlays and mapping the fund flow processes:

The planning and budgeting system of NHM was studied in detail to understand the budgeting and fund flow mechanism for the scheme (Ministry of Health and Family Welfare, 2012). For specific information regarding the fund flow for an intervention, we visited the district and block health society offices in Purnea.

In our analysis, based on available data and to understand the expenditure priorities of the government, we have clubbed budgets for nutrition interventions for pregnant women under the following three heads:

- **Provision of supplements:** it includes budgets for distribution of IFA, calcium and albendazole to pregnant women.
- **Safe delivery:** it includes all activities/interventions that promote institutional and safe delivery. The expenditure on promotion of institutional delivery includes allocation for JSY, JSSK (for pregnant women), Maternal Death Review, incentives to ANM / staff to conduct delivery at Health Sub Centre (HSC) and Additional Primary Health Centres (APHC), infrastructure for Maternal and Child Health (MCH) centres, National Mobile Medical Vans and National Ambulance services.

The planning and budgeting system of NHM was studied in detail to understand the budgeting and fund flow mechanism for the scheme



- **ANC:** it includes all those interventions/facilities that are provided to pregnant women by the health department. Budget outlays on ANC includes budgets for Monthly Village Health and Nutrition Days, line listing and follow-up of severely anaemic women, identification of high-risk pregnancy, training and incentives for ASHA, ANM, Mamta for ANC related activities, and IEC-BCC activities for ANC.

We have also assessed the infrastructure and human resources to deliver these interventions. Lastly, we identified gaps in service delivery as observed at the field level.

Gathering information from the district to understand fiscal and procedural bottlenecks in scheme implementation:

Tools used for the survey: Informal semi-structured interviews were conducted with officials of District

Health Society (DHS) and Block Health Society (BHS) and frontline functionaries (FLWs) (see Annexure 1). Frontline functionaries included in the survey were Auxiliary Nurse Midwife (ANM), Anganwadi Worker (AWW), and Accredited Social Health Activist (ASHA). Officials and FLWs linked to BHS of Purnea East and Jalalgarh were consulted to understand the fund flow processes and the system for delivery of services at the block level. This also enabled us to gather their perceptions on issues pertaining to planning and need assessment, budgeting, fund flow, adequacy of human resources and infrastructure and other related fiscal issues. In addition, we interviewed the doctors and ANMs of the PHCs located in these blocks.

A survey was conducted in twenty villages, in the two selected blocks– Jalalgarh and Purnea East– to obtain quantitative information

Informal semi-structured interviews were conducted with officials of District Health Society and Block Health Society and frontline functionaries. A survey of the beneficiaries was conducted in twenty villages of two selected blocks.



Purnea has high levels of undernutrition, where almost every second child under-5 years of age is stunted or underweight and every fifth child is wasted.

and capture perceptions of the beneficiaries on the nutrition services being provided by the health department. We also observed the functioning of VHND in AWCs in some of these villages. The respondents in our survey were women who were either pregnant at the time of survey or were lactating for not more than 6 months. Information was gathered from 100 women through structured and well-designed open-ended questionnaires. Of the total women surveyed, 72% were pregnant and of these almost 43% women were in the third trimester of their pregnancy. More than 90% of the women surveyed were less than 30 years of age, of these 20% were below 20 years of age. The survey results and the number of responses for a given question are presented in Fig. 3b.

District profile:

Purnea district is part of Northern Plain and is one of the 38 districts

of Bihar. The district is divided into 4 sub-divisions, 14 CD Blocks, 251 panchayats and 1,273 villages. There are almost 6.4 lakh households in the district with a population of 32.7 lakh (Census 2011). Predominantly a rural area (district has only 3 towns and 90% of its population lives in rural areas), the district is extremely backward with poor access to basic facilities like education and medical facilities, network of *pucca* roads and power. Purnea has high levels of poverty where of the 5.91 lakh rural households in the district, 80% were considered for deprivation by Socio Economic and Caste Census (Department of Rural Development, 2011). It is also one of the 10 High Priority Districts under NRHM in Bihar. The district is socially vulnerable with large proportion of SCs (11.98%) and Muslim (38.5%) (Census, 2011). Purnea has high levels of undernutrition, where almost every second child under-5 years of age is

stunted or underweight and every fifth child is wasted. Two-thirds of the children in the district are anaemic (IIPS, 2016). High undernutrition levels among children, apart from other factors, can be linked to poor nutritional status of women in the district.

Beneficiary profile:

Of the 15.7 lakh females in the district, 7.6 lakh were ever married women (Census, 2011). Approximately 37% women, married before 18 years of age, and ~1.16 lakh registered for ANC in public health facility in 2016-17 (HMIS, 2017). The nutritional indicators for women are poor. Almost 72% of pregnant women are anaemic, BMI of ~39% women are below normal (IIPS, 2016). The access to pre- and postnatal care of women is also limited (only 4.6% women had full antenatal care and 46.8% of women received some kind of post-natal care from health personnel as per NFHS-4).

2.3 Data Sources and

Timeline:

Coverage of nutrition interventions for pregnant women in the district:

Data from the following three sources was collated to understand the coverage of different interventions: NFHS-4 (2015-16), Annual Health Survey (2012-13) and annual data collated by the Health Department, referred to as Health Management Information System (HMIS). For the study, we used HMIS data of 2016.

Budget data:

Budget outlays and expenditures for the interventions have been collated from Financial Management Report (FMR), prepared under NHM. FMRs were collected from DHS Purnea for three consecutive years: 2014-15, 2015-16, and 2016-17.

Human Resources and Health

Infrastructure data:

Information on health infrastructure and human resources has been taken from Economic Survey of Bihar for 2016-17 (Government of Bihar, 2017). Additional information has been collated from the data shared by DHS Purnea. Budget data regarding health infrastructure has been taken from FMR Purnea (2014-15, 2015-16, and 2016-17).

2.4 Limitations of the Study

- Analysis is restricted to only six of the 17 nutrition interventions for improving nutrition of pregnant women.
- Budget analysis is limited to basic services included in the government's ANC framework provided to all pregnant women in the district. It doesn't include complicated pregnancies which need special care and attention.
- Analysis doesn't include abortion and measures to prevent pregnancies.
- The study is limited for the analysis of maternal interventions to the pregnancy period only and do not include interventions during delivery or post-delivery.

Almost 72% of pregnant women are anaemic in the district, BMI of ~39% women are below normal. The access to pre- and postnatal care of women is also limited (only 4.6% women had full antenatal care).



The delivery of nutrition intervention for pregnant women in the district, although improved during the previous decade, is still poor

- The study is confined to the interventions delivered through NHM only. Budget data and analysis doesn't include any additional budget on these interventions by the health department for the district.
- There is difficulty in obtaining detailed budgets for some schemes within the NHM. For instance, despite attempts to access the disaggregated budget data for JSSK, to know the expenditure on micronutrient supplements for pregnant women, we could not obtain it from the DHS or from SHS, Patna. Also, the budget data from DHS is not audited data, and hence reliability and accuracy of data may be questionable.



Results

3.1 Coverage of maternal nutrition interventions in the district

The delivery of nutrition intervention for pregnant women in the district, although improved in the previous decade, is still poor (see Fig. 3a).

Only a third of the pregnant women registered during the first trimester as per NFHS-4 and only 4.6% received full ANC¹. The number of women who received three ANC is higher (67.1%, (HMIS, 2017)). From our field survey of the two blocks, we observed that among the respondents, only 67% registered in the first trimester (see Fig. 3b). However, the data on number of ANC visits by a pregnant woman reveal that, only 17% and 4% had three ANC visits and four ANC visits respectively. Moreover we found that the MCP card was made for 88% of the pregnant women in the sample.

Although 60% of the registered pregnant women are given 100 IFA tablets as per health department (HMIS 2016), only 9.6% consumed them (IIPS, 2016). At present, no survey collects information on maternal calcium and deworming, and hence they have not been reported here. However, from the survey data we collected it was found that among the respondents calcium tablets were received by 54% women and albendazole by 48% of women.

ANC guidelines include checking of BP and haemoglobin levels in blood (for anaemia), and conducting ultrasound during the first and third trimester. However, this data is not reported in HMIS and the only data available for these interventions is in Annual Health Survey (AHS) 2012-13 (Ministry of Home Affairs,

2013). This shows that only 26% of women had undergone ultrasound and haemoglobin test; and only 38% pregnant women had their BP checked during ANC. However, there has been an increase in institutional deliveries from 58.5 % in 2012-13 (AHS) to 61.5 % in 2015-16 (IIPS, 2016). Even in our survey, we found institutional delivery rates to be high (78%).

Another issue that is of importance in Purnea is early marriage of girls (i.e. before legal age of 18 years; 36.8% (IIPS, 2016)), and consequently early pregnancy (12.3% teenage pregnancy reported in NFHS-4). High rates of undernutrition among adolescent girls in Bihar (45.2%, RSOC 2013) suggest that most of them start pregnancy with poor nutrition. During the survey we found that women often conceal their age at the time of registration for ANC or during delivery, as the health facilities are not available for underage women. This makes it difficult to identify teenage pregnancy. It is necessary to understand that teenage pregnancy is a social problem and alienating adolescent pregnant girls from ANC services will only deprive women of facilities due to them, without any impact on the issue of child marriage. Steps therefore need to be taken to reach out to them and improving their access to health services.

During the survey we found that women often conceal their age at the time of registration for ANC or during delivery, as the health facilities are not available for underage women.

1. Full ANC include four ANCs, at least one TT dose, and IFA tablet for 100 or more days.

3.2 Delivery of health-related nutrition intervention for pregnant women is weak

Nutrition intervention for pregnant women form part of basic ANC services provided to pregnant women by the Health Department of the state. ANC services are provided at health facilities as well as through outreach activities in villages. The two main outreach activities for ANC are Village Health and Nutrition Day (VHND)² and *Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)*³. As the health infrastructure is weak, the delivery of ANC services is largely done through outreach services only.

While VHND has been successful in reaching out to women in villages, building a better interface between the FLW and the pregnant women, and increasing awareness levels among women regarding the services due to them (Kumar, 2015), the services delivered through VHND remains weak. From the field work we found that the kits and equipment used by ANMs for ANC were either not in working order (e.g. weighing scales and BP machines) or of deficient quality (e.g. Haemoglobin testing strips). At the same time these activities do not always make use

of the best technology for accurate results. For instance, haemoglobin colour scale is used for screening for anaemia, however their efficacy has remained questionable (Critchley & Bates, 2005; Anand, Mir, & Saxena, 2009) and available quality not always up to the mark (as was shared by ANMs in the district). Often, routine lab tests were done in private facility as these facilities are not available in village and block level health facilities (NHM, 2016). Additionally, non-availability of doctors for ANC may be the reason for women choosing to go to a private facility for ANC. While, it was a general perception that the private health facilities are better than the government, each visit to a private facility on an average costed them around INR 2,000 to 3,000, including tests and doctor's fees. Also, check-ups in a private health facility entailed long distance travel using local transport, such as tempo.

3.3 Planning and budgeting process for nutrition interventions

NHM follows a bottom-up approach for planning and budgeting (Fig. 4).⁴ The funds for nutrition interventions are budgeted under the Reproductive and Child Health Programmes (RCH)

While VHND has been successful in reaching out to women in villages, the services delivered through VHND remains weak.

2 It is conducted on a fixed day at AWCs in each village to provide ANC services to pregnant women. The activities included are: registration of pregnant women, laboratory test (such as BP & Hb. estimation, Urine, albumin), vaccination, and counselling. Nutrition supplements (such as IFA tablets, calcium, albendazole, etc.) are also provided to pregnant women during the day. All the information with respect to pregnant women (such as age, haemoglobin, weight, etc.) are recorded in MCP Cards by ANM on this day.

3 The programme was launched in mid-2016 to provide fixed day quality ANC services to women in their 2nd / 3rd trimesters of pregnancy. These services are provided on the 9th day of every month at designated health facilities by Obstetricians / medical officers.

4 The process begins at the block level, where Block Health Action Plans (BHAPs) are to be prepared based on inputs / discussions with the implementing units. These are then sent to district, which prepares District Health Action Plans (DHAPs). All DHAPs are to be compiled to prepare State Programme Implementation Plans (SPIPs). The SPIP is sent to Government of India for approval. The approved budget of the state is called Record of Proceedings (ROPs), based on which, funds are released to the state by the Union Government. The state is supposed to disburse funds to District Health Societies (DHS) in accordance with the requirements stated in respective DHAPs. The districts in turn, disburse funds to the blocks which further disburse funds to various implementing units (CHCs / PHCs / HSCs / VHSNCs) for programme implementation activities (Ministry of Health and Family Welfare, GoI, 2012).



and Mission Flexi-Pool component of NHM. Budget demands for nutrition intervention for pregnant women for the ensuing year for the district are to be generated using various parameters, such as number of expected pregnant women in the year (estimated through eligible couple survey conducted by ASHA), payments (such as beneficiary payment, ASHA incentives, courier services for VHSND), consumables required during the year, etc. However, during our discussions with FLWs we found that their inputs were hardly ever taken for planning and subsequently for budgeting. The DHAP does not include inputs from the blocks or the villages (CAG, 2015), and the SPIPs do not consider DHAPs in their plans (NHM, 2016). As a result, the budget allocations are not as per the needs of a district. This creates backlog of requirements at the district level and leads to sub-optimal functioning of health facilities

and poor delivery of services. For instance, ANMs during field visits shared that they were always short in supply of equipment (such as BP instrument, weighing machine, etc.), and kits were not replaced easily even though repeated requests are made.

The approval of NHM budgets and release of funds also are delayed. SPIPs and DHAPs are to be approved by Union and State government in the month of February and March, respectively. The state NHM budget for FY 2015-16, 2016-17 and 2017-18 was approved in September, November and August of the respective years. Moreover, after approval it takes time for funds to reach the district, which in turn adversely affects scheme implementation. Transfer of funds from the state treasury to SHS can take up to 60-65 days against the prescribed maximum period of 15 days (NHM, 2016), from where they

The budget allocations are not as per the needs of a district. This creates backlog of requirements at the district level and leads to sub-optimal functioning of health facilities and poor delivery of services.



The total budgets for maternal nutrition interventions in the three study years were low and have decreased in the last two years.

take another month or so to reach the district. Our analysis of district budgets found that maximum funds are released to the district in the third quarter (Fig. 11). District officials shared that in case of delay of funds, temporary diversion of funds between different NHM components (or sub-programmes within NHM) was a common practice to meet the current expenditure requirements. Training programmes for ANMs and ASHAs is one component that the district functionaries believed, was most affected due to delayed fund release. The training programmes which are supposed to be held round the year have to be clubbed in the last quarter, which impacts the quality of training as well.

3.4 Budgets for nutrition interventions for pregnant women

Budgets for health-related nutrition

intervention for pregnant women are presented in Fig. 5. The total budgets for maternal nutrition interventions in the three study years were low and have decreased in the last two fiscal years. Total budget allotted for the six interventions included in the study was INR 2,083 lakh for each of the FYs 2015-16 and 2016-17, which were below the allocation for FY 2014-15 (INR 2,504.6 lakh). Per capita spending on nutrition intervention for pregnant women for the three consecutive years were INR 1,462, INR 1,748 and INR 1,431 for FYs 2014-15, 2015-16 and 2016-17, respectively. This in effect is equivalent to the funds required for payment of JSY incentive only, if all registered women had received the incentive.

Within budgets for nutrition intervention for pregnant women, a major portion of expenditure is incurred under the safe delivery

component and this has increased in the last 3 years. Almost 92% of total funds for nutrition intervention for pregnant women were spent on institutional delivery in FY 2014-15, which increased to 95% in 2015-16 and 2016-17. Expenditure on JSY and JSSK constitutes about 98% of expenditure under the safe delivery head. We have included JSSK in our analysis as the budgets for IFA tablet, Folic Acid, and Calcium supplementation and albendazole for pregnant women are reported under it as per the government directive.

Budget outlays under the ANC head have been reduced significantly in the last two years (INR 84.8 lakh for both FYs 2015-16 and 2016-17), compared to FY 2014-15 (INR 198.2 lakh). Even low cost investments such as distribution of supplements⁵ are not undertaken effectively. A large portion of funds for ANC activities is incurred on ASHA training (around 60-80%). It was INR 125.7 lakh in FY 2014-15, and INR 75.5 lakh in FYs 2015-16 and FY 2016-17.

There have been no allocations for the following activities in the last two years: Monthly Village Health and Nutrition Days, Line listing and follow-up of severely anaemic women, and printing of MCP cards. These three activities are intrinsic to provision of ANC in the village. MCP card is the basic requirement for recording

details of health and nutrition status of pregnant women and the ANC provided, yet no allocations have been made for it. DHAP 2014-17 had proposed around INR 34 lakh / year for monitoring of VHND; against which there was expenditure of INR 4.5 lakh in FY 2014-15 (NRHM, n.d.). This however was not approved in the last two years. The other expenses (such as logistic support and IEC services) for the outreach service were to be incurred through VHSNC / HSC untied funds. In FY 2014-15, INR 26.78 lakh were allocated for 'capacity building of VHSND staff', of which close to 86% funds were utilised, however no allocations were made in subsequent years.

As the budgets for micronutrient supplements are reported under JSSK, the detailed budgets of which could not be procured from the DHS, the allocations for IFA, deworming, and calcium tablets for pregnant women could not be tracked.

3.5 Fund Utilisation for nutrition intervention for pregnant women

Overall the fund utilisation for nutrition intervention for pregnant women was 58% in FY 2014-15 which improved to more than 80% in the FYs 2015-16 and 2016-17 (Fig. 5). Within nutrition interventions budget, the fund utilisation for safe delivery was much higher than ANC. In case of

Almost 92% of total funds for nutrition intervention for pregnant women were spent on institutional delivery in FY 2014-15. Budget outlays under the ANC head have been reduced significantly in the last two years.

5. For instance, it is estimated that if all registered pregnant women (~1.16 lakh as per HMIS 2016-17) in the district are given 4 packs of calcium (400 tablets) and 2 packs of IFA (200 tablets), it would cost the district less than INR 1 crore (at the rates finalised by the SHS Bihar) (SHS, 2012). This is <2% of the total NHM budget of the district.

shortage or a delay in release of funds, the expenditure are first used for payment of JSY beneficiaries, which explains the higher fund utilisation for the programme, which was more than 90% in the last two fiscal years. Better fund utilisation levels under JSY, which constitutes bulk of safe delivery budget, pushes up the overall fund utilisation for safe delivery.

Fund utilisation for ANC services is very low. It was 30%, 36%, and 12% in the FYs 2014-15, 2015-16 and 2016-17, respectively. No expenditure was incurred for identification of high risk pregnancy and timely referral for treatment in the years 2014-15 and 2015-16 and only about INR 0.2 lakh was spent in FY 2016-17. Even for training of ASHAs, which receives the majority share in ANC head, expenditure is quite poor. It was 21% and 3% in FYs 2014-15 and 2015-16, respectively and none in FY 2016-17. During our survey, it was pointed out that the training component was often adversely affected due to delayed fund release.

3.6 Procurement and distribution of nutrition supplements for pregnant women

In Bihar, the State Health Society (SHS), a state-level agency for National Health Mission (NHM), is supposed to function as the procurement agency for drugs and equipment (Chokshi, Farooqui, Selvaraj, & Kumar, 2015). As per mandate, all the medicines in

Bihar are now being procured through Bihar Medical Services and Infrastructure Corporation (BMSICL), under the aegis of the Department of Health and Family Welfare (DoHFW) (CAG, 2015). However, interactions with officials at the SHS and DHS revealed that since last 2-3 years, procurement of most drugs, especially the nutrition supplements for pregnant women, is being done by the districts themselves, using the JSSK funds. The drugs procured by the district are then released to the health facilities (Fig. 6). Due to inadequacy and delay in supply of medicines (such as IFA), ANMs ration the supplements while distributing it to the beneficiaries.

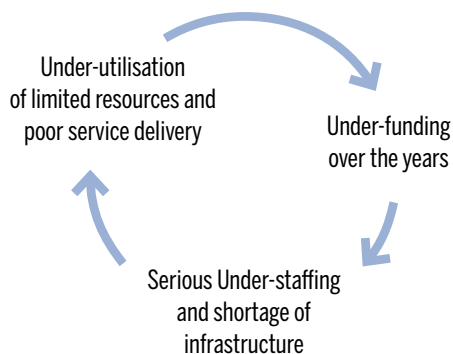
3.7 Budgets for infrastructure and human resources to deliver nutrition interventions

In Purnea, the number of public health facilities are as follows (Fig. 7): 1 District Hospital, 2 Referral Hospitals, 3 Sub District Hospitals, 14 PHCs, 38 APHCs and 334 HSCs (Government of Bihar, 2017). The number of HSCs and PHCs are below the IPHS norms, thus serving a population more than their capacity. Each HSC serves a population of 10-12,000 whereas the norm is 5,000 per HSC. Similarly, PHC serves about 2,60,000 people, against the norm of 1,00,000 / PHC. The funds allocated for the peripheral health facilities, such as HSC, PHC and FRU were low in the three fiscal years (Fig. 8). Moreover, the fund utilisation for

Fund utilisation for ANC services is very low. It was 30%, 36%, and 12% in the FYs 2014-15, 2015-16 and 2016-17, respectively

HSCs and Non-24*7 PHC was also low. Only half of the budget allotted for HSCs was spent in FY 2016-17. This includes budget outlays for human resource (ANM), rent and contingencies, expenses incurred through untied grants. Expenditure on ANM constitutes more than 90% of the total expenditure for HSC.

The key functionaries for tracking and providing ANC services are ANM and ASHA workers, who are linked to a HSC and PHC, closest to the village (Department of Health and Family Welfare, n.d.). There is a huge shortage of staff in health centres (Fig. 9). Vacancy for permanent ANMs was about 57% as of September 2016 and the appointment of contractual ANMs was half the requirement. Even for Grade A nurses and doctors the



vacancies were as high as 72% and 60%, respectively. There were no gynaecologists in the health facilities at the block level. These shortages in critical personnel, forced the pregnant women to travel to district headquarter for advice in case of any complications or difficulty.



Discussion

Maternal nutrition interventions are an integrated set of services that require adequate physical infrastructure, well-trained staff, and regular supply of drugs and supplements. However, underfunding of the NHM programme over the years in the district, has led to a vicious cycle of understaffing and shortage of infrastructure, leading to underutilisation of limited resources, which in turn has adversely affected the fund allocation for the scheme. This is discussed in more detail in the paragraphs below.

The budget allocations for NHM for the district, within which the nutrition intervention budget for pregnant women are included, have decreased in the last three years (Fig. 10). This is in contrast to state allocations for NHM in the respective years, which have seen a constant

Underfunding of the NHM programme over the years in the district, has led to a vicious cycle of understaffing and shortage of infrastructure, leading to underutilisation of limited resources.

Underfunding of the scheme has been accompanied by other procedural/budgetary lapses that undermine the functioning of the programme in the district.

increase (from INR 1,581 crore in 2014-15 BE to 3,713 crore in 2016-17 BE). However, overall even at the state level (as has been noted in paper 1) there is gross underfunding for NHM. This is the general trend that has been observed in other studies as well, where the funds for the health sector have been reduced on the pretext of poor performance of the sector (Chakravarthi, Roy, Mukhopadhyay, & Barria, 2017) or poor capacity of the state to spend the resources (Sundaraman, Mukhopadhyay, & Muraleedharan, 2016). Underfunding of the scheme has been accompanied by other procedural/budgetary lapses that undermine the functioning of the programme in the district. These include inadequate or weak planning for nutrition interventions for pregnant women, delay in budget approval and release of funds for these interventions, shortage of staff and weak infrastructure. Nutrition interventions, such as monitoring progress through regular check-ups, anaemia management, birth planning, etc., warrant an effective health delivery infrastructure. However, the HSCs and PHCs are lacking in basic facilities (such as pathology lab) and amenities (like running water supply, toilet, electricity, ANM residence) (NRHM, 2013). Yet we observe that the spending for health system strengthening had almost dried in the district (Fig. 8). Moreover, most HSCs have only one OPD day in a week, for

the other five days it remains closed as ANM travels either for outreach services or is posted at PHC for duty.

Similarly, health workforce, which is central to delivery of health services (Campbell, et al., 2013), is inadequate in the district. WHO (2010) suggested a minimum threshold of ~435 persons per skilled health personnel (including doctors, nurses and midwives) for delivery of essential maternal and child health services. In Purnea, if we include ANMs, doctors, and Grade A nurses, both contractual and permanent, then in rural areas there is only one health worker employed for every 4,620 people and one health worker sanctioned for a population of 1,900 (Fig. 9). At the same time, high levels of vacancies for ANMs results in tight weekly schedule⁶ of employed ANMs and irregularity in functioning of HSCs. Most of these ANMs are contractual employees and often not trained in maternal health care. There are other issues as well, such as ANMs not receiving salary/incentive on time, no mobility support to ANMs and ASHAs even though their job requires lot of travel, and lack of residence and amenities for ANMs at the PHC.

The above mentioned issues have an impact on fund utilisation as well. Fund utilisation, as we know, is related to fund transfer, proper planning and availability of adequate human resources (Indranil

6. ANMs in the two blocks told us that only on Mondays they work at HSC or provide OPD services. On Tuesday, they attend weekly meeting at PHC, Wednesday and Friday are reserved for VHND. On Thursdays and Saturday they have a duty at PHC. Apart from this, one night duty at PHC has to be done by ANM. Sometimes they work for 36 hours at a stretch.



& Agarwal, 2009). It has been pointed out that fund utilisation for ANC services are low in the district. Implementation of ANC services require adequate manpower, regular supply of consumables, and proper infrastructure, which we know is weak. Also, we observe that spending on scheme components is irregular in the district. For instance there are components for which funds are allocated in a given year, but funds are utilised only in subsequent years. For instance, while INR 4.3 lakh was allocated for printing of MCP card in FY 2014-15, the only expenditure reported is INR 0.1 lakh in FY 2016-17. This activity is intrinsic to provision of ANC services, yet the expenditures are not incurred on it.

Another issue that demands attention is the coordination between departments for programmatic

overlap. For instance, VHND, a programme of the health department, is delivered through AWCs, which is a set-up under Women and Child Development Department. During the field work it was found that most AWCs lacked basic materials such as chair, table, carpet, etc. to conduct VHND. Unless proper infrastructure is created and minimum basic amenities provided, the services provided through AWCs will remain weak. In this context, it is not only necessary that the frontline workers function in coordinated manner at the field level, at the same time there needs to be coordination at the higher levels to ensure creation of requisite infrastructure for effective service delivery.

Poor resource allocation for the health sector in general, and for nutrition interventions for pregnant

Implementation of ANC services requires adequate manpower, regular supply of consumables, and proper infrastructure, which is weak in the district.



While at the state level budget and NHM documents are available in public domain, the district budget documents are not publically available.

women in particular, has created a situation in the district where out-of-pocket expenditure on ANC services is high and dependence on private healthcare has increased. There is, therefore, a need to significantly scale-up budgets for health system in the district.

At the same time, a major challenge while studying budgets at the district level is the difficulty in accessing budget documents. While at the state level budget and NHM documents are available in public domain, the district budget documents are not publically available. The SHS, Bihar⁷ publishes the State PIP, ROP, Financial Guidelines, FMR, district-wise allocations for each head, etc., but not the district PIPs or FMR. These have to be collected from the DHS,

which too are sometimes incomplete. Regular availability of budget documents will not only inform policy better but will make the governments more transparent and accountable in their functioning.



Conclusion

Women's physiology, at the time of pregnancy, has considerable influence

7. Website address of SHS, Bihar: <http://164.100.130.11:8091/>

on the growth and development of the foetus and also on women's own well-being. There is enough evidence to show that nutrition interventions during pregnancy have positive impact on maternal nutrition. Yet, their implementation and coverage remains low in Purnea district, Bihar. As discussed in the paper, this is largely due to low budgets for health interventions, weak service delivery infrastructure, and serious staff shortage. At the same time, the problem is compounded by procedural issues, such as delay in approval of funds and release of funds to the district for scheme implementation. These in turn have adversely affected fund utilisation for

ANC services in the district.

The delivery of maternal nutrition interventions can be improved effectively only if the overall health delivery system is improved. This would entail enhancing budgets for NHM, addressing the procedural challenges pointed out in the paper (such as delay in fund flow etc.), recruiting adequate number of skilled health personnel, improving infrastructure, and providing 24x7 accessible health facilities. Health service delivery system is at the core of maternal nutrition interventions, strengthening them will go a long way in improving the health of women in the district.



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Figure 1: Essential nutrition interventions during pregnancy

(Entries in bold indicates the interventions selected for the study)

Essential intervention 1: Improved food and nutrient intake (both in quantity and quality)

- 1 Access to generalized household food ration (Public Distribution System)
- 2 Access to fortified supplementary foods (Integrated Child Development Services)
- 3 Access to knowledge on local diet diversity and production, preventing food adulteration, and entitlements

Essential intervention 2: Preventing micronutrient deficiencies and anaemia

- 4 **Iron folic acid supplementation, as per protocol**
- 5 Universal use of iodized salt
- 6 **Calcium supplementation and deworming, as per protocol**
- 7 Access to information for prevention and treatment of malaria and fluorosis
- 8 Access to knowledge to stop using alcohol and tobacco products during pregnancy

Essential intervention 3: Improving access to basic health services and special care for most vulnerable

- 9 **Early registration for inclusion in outreach services**
- 10 **Recording and monitoring of nutritional status (pre-pregnancy weight, pregnancy weight gain monitoring)**
- 11 **Quality and full reproductive health and antenatal check-up**
- 12 **Promotion of institutional delivery**

Essential intervention 4: Improving hygiene and sanitation practices and access to safe drinking water

- 13 Sanitation and hygiene education (including menstrual hygiene)
- 14 Access to low-cost/contextualized safe drinking water and improved sanitation facilities

Essential intervention 5: Preventing pregnancies too early, too many and too soon

- 15 Delaying age at first pregnancy beyond 19 years through counselling, access to family planning methods
- 16 Delaying repeated pregnancies through counselling and access to family planning methods
- 17 Promoting community support system by ensuring male and family participation

Source: UNICEF (2016)

Figure 2: Key programmes, protocol and activities to be undertaken by health department for each maternal intervention

Intervention: Iron folic acid supplementation as per protocol

Key Programme: National Iron Plus Initiative (NIPI)

Fund flow within NHM: NIPI and JSSK

Guidelines:

- Folic acid (400 mcg) during first 12 weeks.
- Tab. IFA (100 mg. iron with 0.5 mg folic acid) once daily for 100 days.

Activities:

- Compulsory Hb estimation by Cyanmeth-haemoglobin method at 14-16 weeks, 20-24 weeks, 26-30 weeks and 30-34 weeks of pregnancy for all pregnant mothers (min. four Hb estimations).
- Provide IFA tablets to the pregnant women as per Guidelines
- Diet counselling
- Filling of all the information (Hb level, weight, IFA supplementation, etc.) in MCP cards
- Line listing of severely anaemic pregnant women

Intervention: Calcium supplementation and deworming, as per protocol

Key Programme: Calcium supplementation in pregnancy

Fund flow within NHM: JSSK

Guidelines:

- 360 tablets (500 mg elemental calcium and 250 IU Vit. D3) twice daily from 14 to 40 weeks).
- One tablet of Albendazole 400mg between 14-16th week.

Intervention: Early registration for inclusion in outreach services

Key Programme: RCH component of the NHM

Fund flow within NHM: RCH and Mission Flexi-pool

Guidelines:

- The first visit or registration of a pregnant woman for ANC should take place as soon as the pregnancy is suspected. Ideally, the first visit should take place in the first trimester.

Activities:

- Tracking of eligible couples to know the expected number of pregnancies
- MCP card should be duly completed for every pregnant woman registered and record her medical and obstetric history
- Assess the health status of the pregnant woman and obtain baseline information on BP, weight, Hb, etc.
- Screen for complications.

Figure 2 (Continued)

Intervention: Quality and full reproductive health and antenatal check-up

Key Programme: RCH component of the NHM, PMSMA

Fund flow within NHM: RCH and Mission Flexi-pool

Guidelines:

- Min. four ANC check-ups and provision of complete package of services
- 1st ANC (<12 weeks), 2nd ANC (16 -20 weeks), 3rd ANC (20-28 weeks), 4th ANC (28-36 weeks)
- Monitor the progress of pregnancy through regular check-ups
- Give drugs and injections as per protocol

Activities:

- Providing IFA, calcium, and deworming tablets, injection TT etc.
- Ensure updation of all details in the MCP card, including weight gain, BP, Hb in every ANM visit on VHND.
- Min. laboratory investigations like pregnancy testing & confirmation Hb testing, Blood group detection, urine albumin, and sugar, etc.
- Line listing of severe anaemic pregnant women, referral for treatment & follow up with recording of progress.
- Organizing appropriate referral and provide referral transport to the pregnant mother
- Nutrition and health counselling
- Identification of high risk pregnancies / appropriate management

Intervention: Promotion of institutional delivery

Key Programme: JSY

Fund flow within NHM: JSY

Guidelines:

- Cash assistance to eligible pregnant women for giving birth in a government or accredited private health facility.

Activities:

- Identify pregnant woman from BPL families as a beneficiary of the scheme
- Bring women to the sub-centre/PHC for registration
- Provide and / or help the women to receive at least three ANC
- Counsel for institutional delivery and fix before 7th month of pregnancy the place of delivery.

Figure 3a: Coverage of selected maternal nutrition interventions in Purnea

(Values in %)

Indicators	AHS (2012-13)	NFHS-4 (2015-16)	HMIS (2016)
Intervention: Early registration			
Mothers who had antenatal check-up in the first trimester	46.9	35.5	45.2
Intervention: ANC			
Mothers who had at least 3 antenatal care visits	27.9	-	67.1
Mothers who had at least 4 antenatal care visits	-	12.2	-
Mothers who had full antenatal care ¹	7.0	4.6	-
Mothers whose last birth was protected against neonatal tetanus ²	84.3	91.7	88.2
Mothers whose Blood Pressure (BP) taken	38.0	-	-
Mothers whose Blood taken for Hb	26.9	-	-
Mothers who underwent Ultrasound	26.0	-	-
Intervention: Supplements			
Pregnant women given 100 IFA tablets	-	-	60.2
Mothers who consumed IFA for 100 days or more when they were pregnant	17.4	9.6	-
Intervention: Institutional delivery			
Institutional births	58.5	61.5	63.0

¹ Full ANC includes at least four antenatal visits, at least one TT injection and IFA tablets or syrup taken for 100 or more days.

² Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections at any time prior to the last birth.

Figure 3b: Findings from the survey conducted by the study team in two blocks of Purnea district

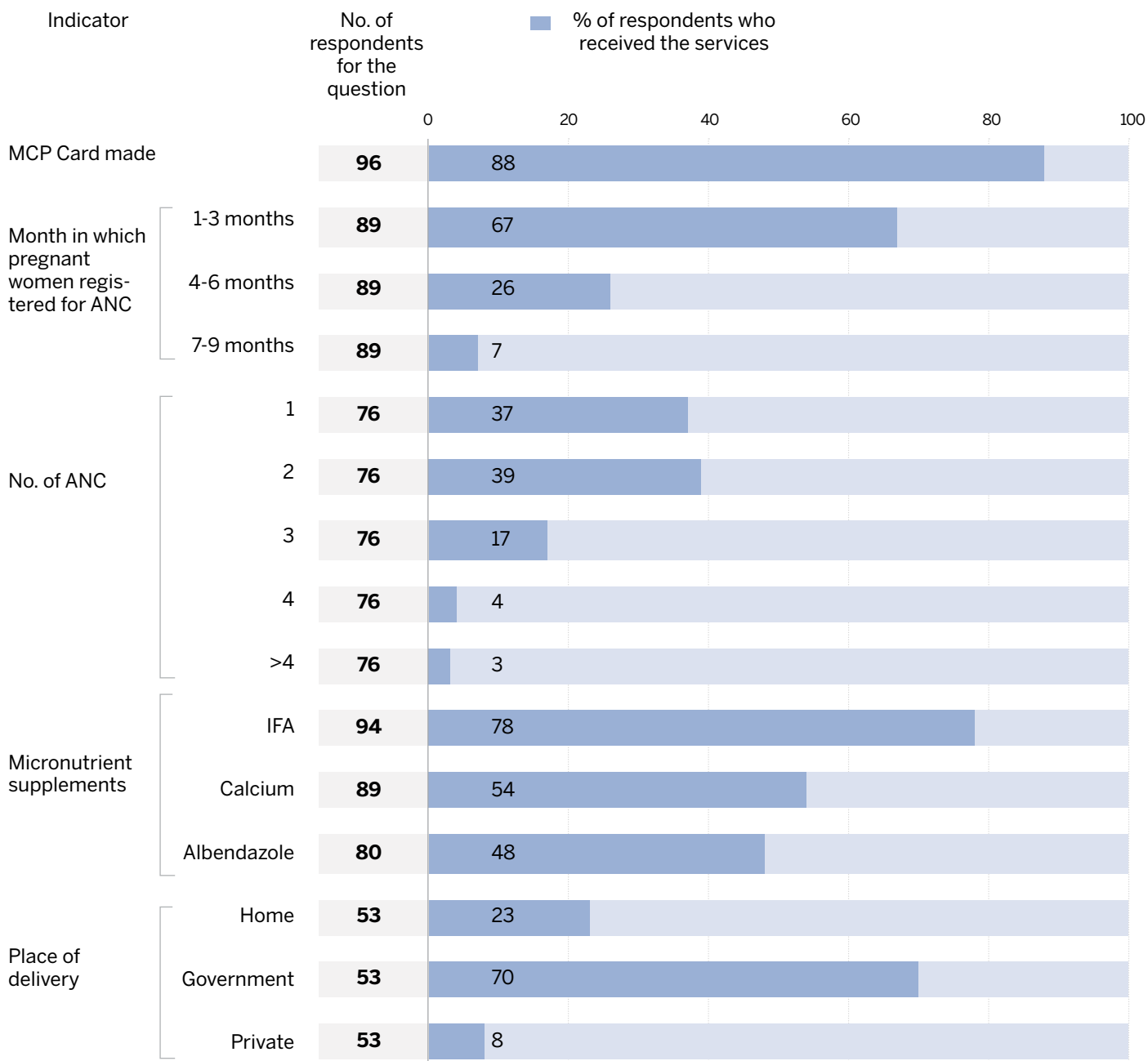
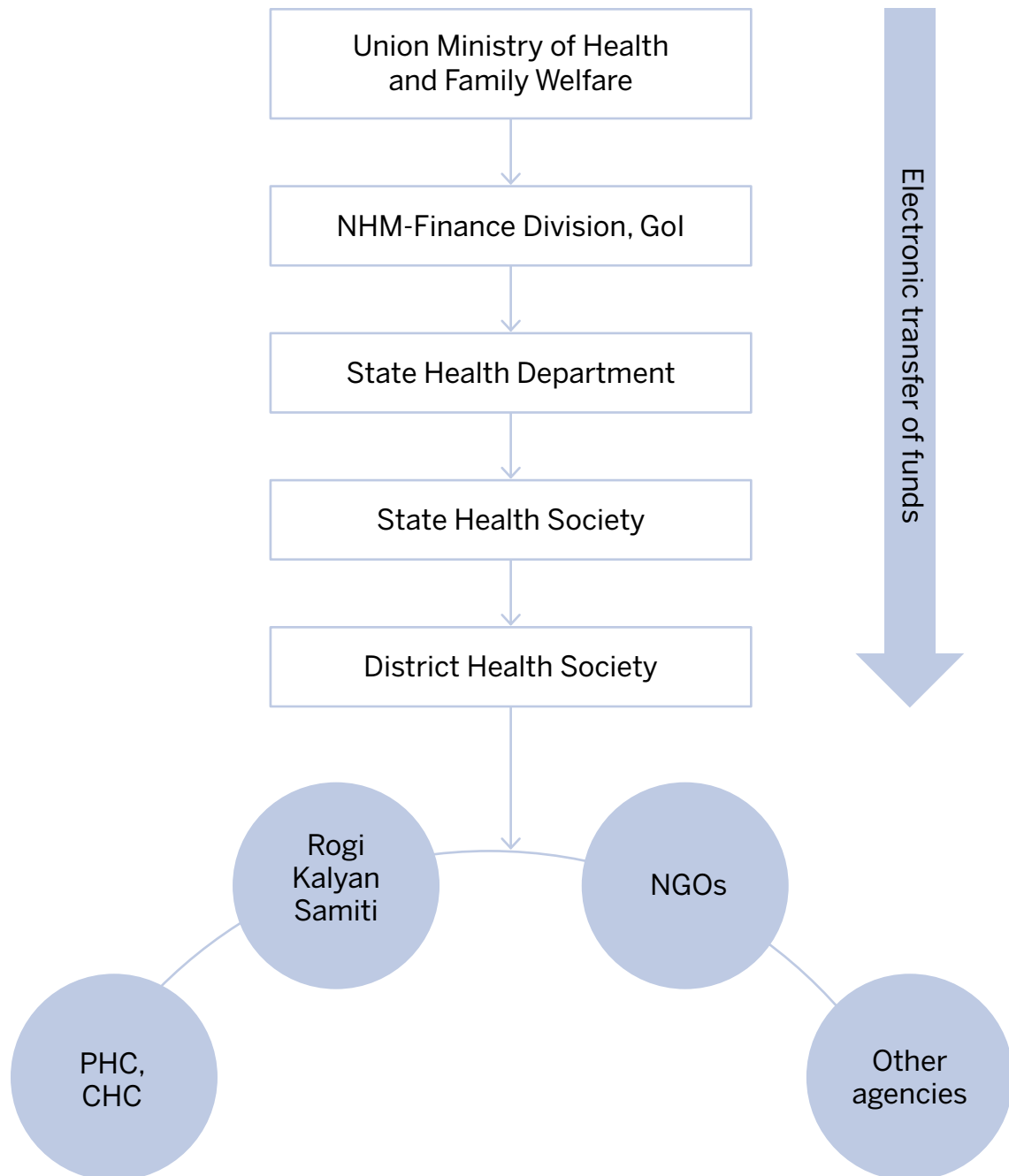


Figure 4: Fund flow process of NHM



Source: Ministry of Health and Family Welfare (2012); NRHM (2012-13)

Figure 5: Budget outlays and expenditures for maternal nutrition interventions in Purnea

(Values in INR lakh; Figures in parenthesis shows actual expenditure as percentage of allotted funds)

Strategy/Activities	2014-15		2015-16		2016-17	
	Budget Allotted	Actual Expenditure	Budget Allotted	Actual Expenditure	Budget Allotted	Actual Expenditure
I. Safe delivery	2,306.3	1,401.9 [60.8]	1,998.6	1,779.4 [89.0]	1,998.6	1,653.4 [82.7]
1. Janani Suraksha Yojana (JSY)	1,684.4	1,387.3	1,467.6	1,377.0	1,467.6	1,325.5
2. Maternal Death Review (In Institutions & Community)	0.3	0.1	0.3	0.1	0.3	0.3
3. JSSK (for Pregnant Women)	497.7	0.0	500.5	384.6	500.5	267.9
4. Incentive for ANM to conduct deliveries at APHCs & HSCs	6.9	0.0	6.9	5.2	6.9	0.7
5. Incentive proposed for HSC team for improving a set of indicators*	4.9	-	4.9	-	4.9	-
6. National Mobile Medical Vans and Ambulances	28.8	0.0	4.8	0.0	4.8	0.0
7. Infrastructure for MCH Centres (L-1, L-2, L-3)	83.3	14.6	13.6	12.5	13.6	59.0
II. ANC	198.2	59.4 [29.9]	84.8	30.2 [38.7]	84.8	1.6 [12.3]
8. Monthly VHND	-	4.5	-	-	-	-
9. Line listing and follow-up of severely anaemic women	-	-	-	-	-	-
10. Identification of high risk pregnancy and timely referral for treatment	6.7	-	6.7	-	6.7	0.2
11. Capacity Building of FLHW (ANM, AWW, ASHA & VHSNC Chairman)	26.8	23.2	-	-	-	-
12. Refresher Training of Mamta	-	-	2.1	-	2.1	1.2
13. ASHA Training	138.6	29.4	75.5	2.5	75.5	0.1
14. Procurement and replenishment of ASHA Drug Kit	13.4	-	0.0	14.8	0.0	0.0
15. ASHA incentive Under MH (ANC/PNC)	-	-	-	-	-	-
16. Mobility Costs for ASHA and Bicycle for ASHA Facilitator	7.3	2.3	0.0	12.8	0.0	0.0
17. IEC Activities for PMSMA	0.2	0.0	0.5	0.0	0.5	0.0
18. Printing of MCP cards, safe motherhood booklets etc	4.3	-	-	-	-	0.1
19. Monitoring for quality MCH service delivery through front line workers	1.0	-	-	-	-	-
20. Sub-centre strengthening	-	-	-	-	-	-
III. Supplements						
21. IFA tablets	NA	NA	NA	NA	NA	NA
22. Calcium and Albendazole	NA	NA	NA	NA	NA	NA
Total Maternal Interventions	2,504.6	1,461.3 [58.3]	2,083.4	1,809.7 [86.7]	2,083.4	1,655.0 [79.9]

Source: DHS Purnea

*It includes identification, line listing, and treatment of severe anaemia in PW; identification and timely referral of high risk pregnancies; Home deliveries by SBA trained ANMs in notified villages; Institutional delivery; C-sections at sub-district CHC, FRUs, District Hospital; ASHA incentive for reporting of maternal death cases; Composite Indicator at sub-centre level; Any other Incentive.

Figure 6: Procurement and distribution of drugs under NHM

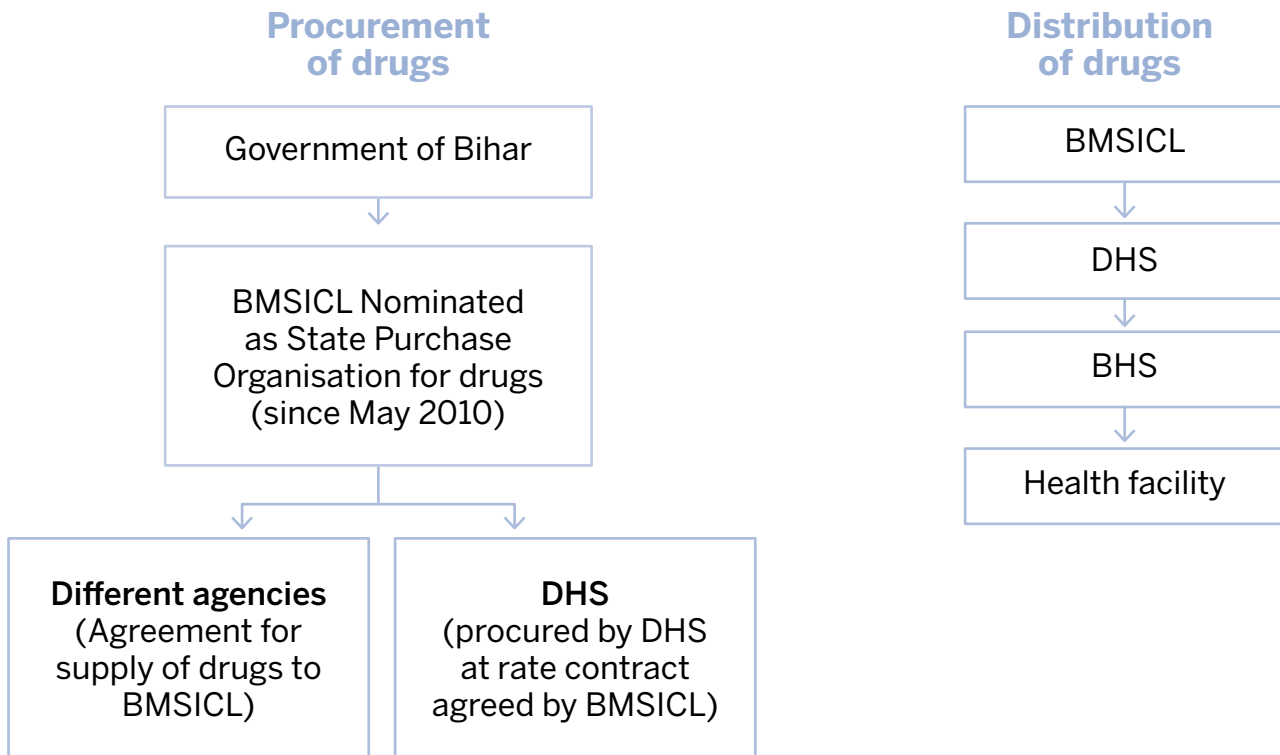
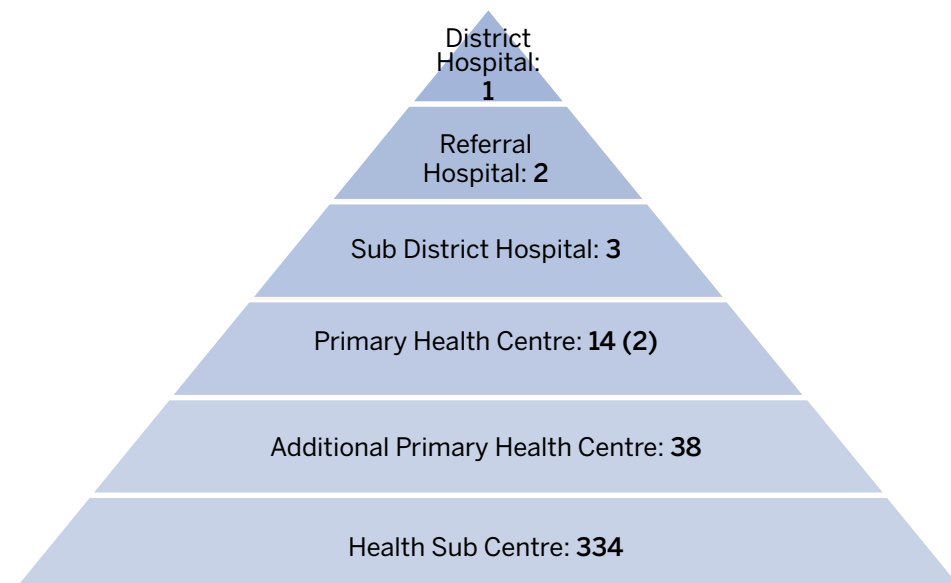


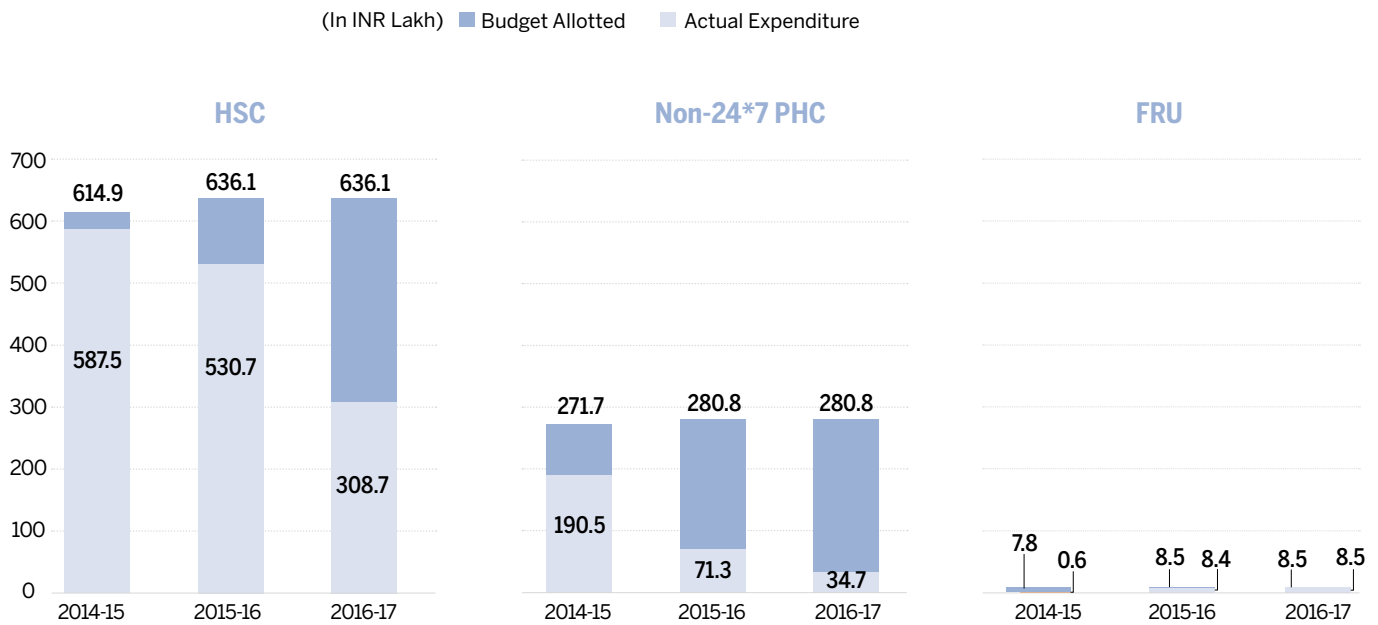
Figure 7: Number of health institutions in Purnea



Health Institutions (As on Sept. 2016)

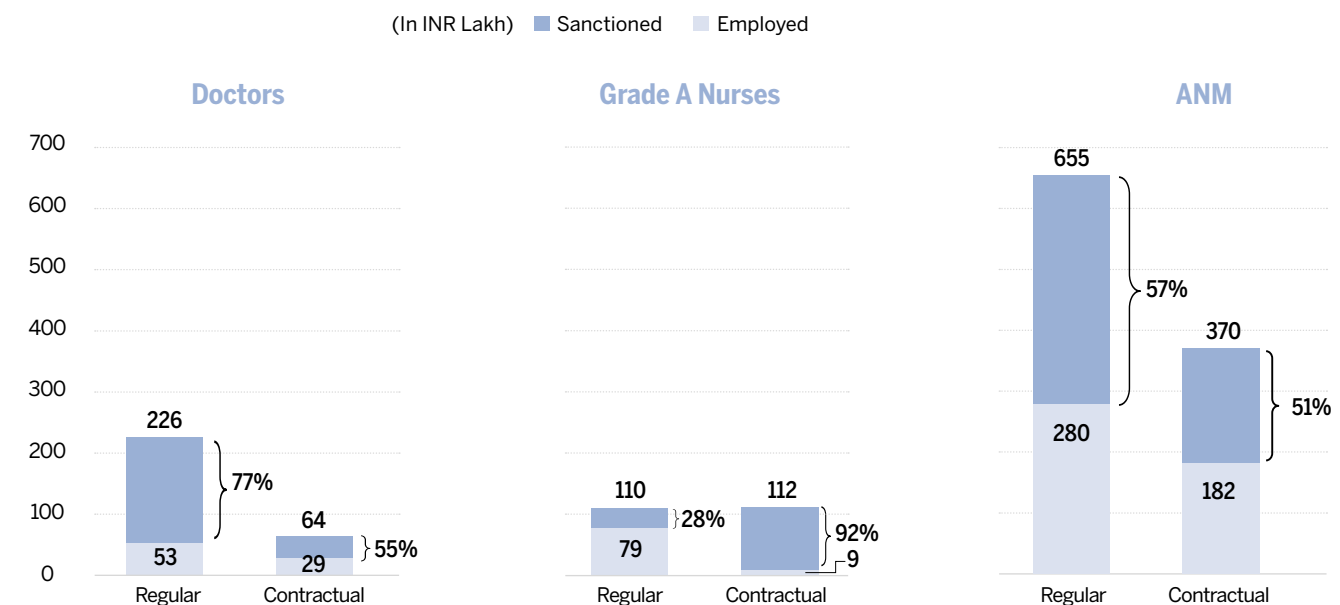
Source: Economic Survey Bihar, 2016-17; NHM PIP Purnea 2012-13. Note: Figs. in parenthesis represent upgradation of PHC to CHC (30 bedded).

Figure 8: Budget allotted and expenditure on health centres through NHM



Note: This includes budget outlays for human resource (ANM), rent and contingencies, expenses incurred through untied grants.
Source: DHS Purnea

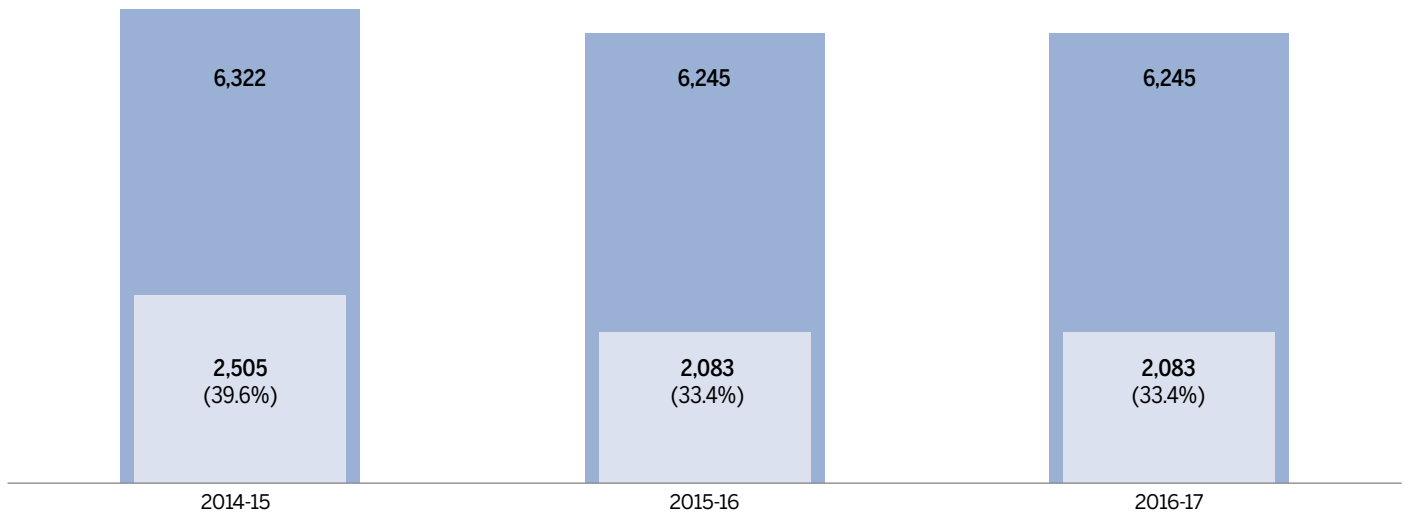
Figure 9: Shortage of employees for various health posts (April-September 2016)



Source: DHS Purnea

Figure 10: Budget allocations for maternal nutrition interventions as proportion of NHM budget

(Values in INR lakh. Figures in parenthesis shows share of maternal intervention budget in NHM) ■ NHM ■ Maternal Interventions

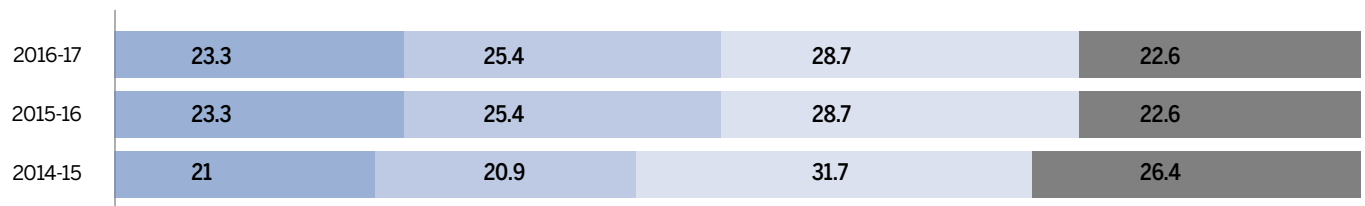


Source: DHS Purnea

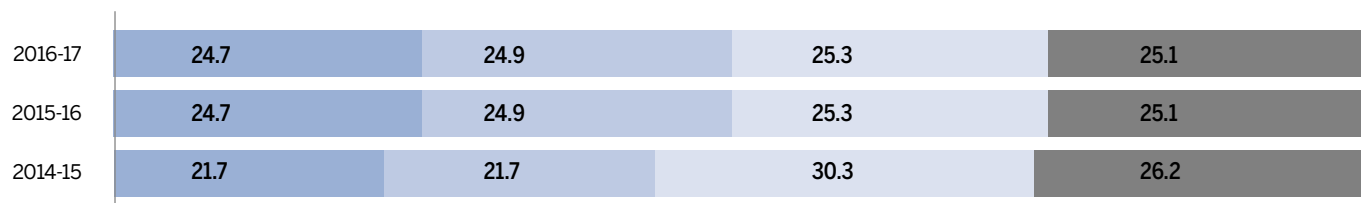
Figure 11: Budgets allotted for NHM and maternal nutrition interventions in various quarters

(Values in %) ■ Quarter 1 ■ Quarter 2 ■ Quarter 3 ■ Quarter 4

NHM

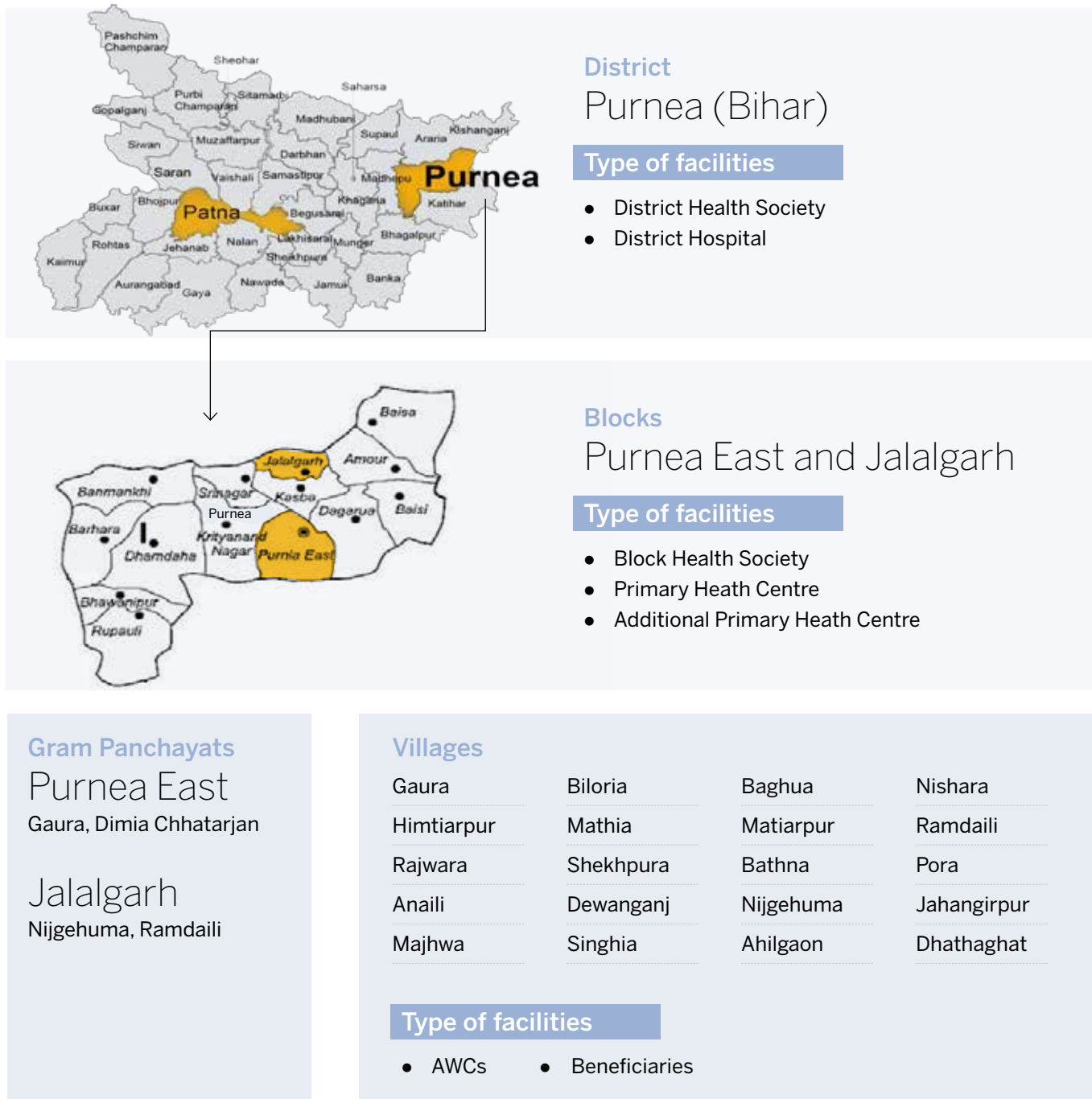


Maternal nutrition Interventions



Source: DHS Purnea

Annexure 1: Institutions and villages visited





Photos: UNICEF India

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