

STATUS OF MCH INDICATORS OF FOUR NORTH EASTERN STATES OF INDIA: A COMPARATIVE ANALYSIS OF TRIBAL AND GENERAL POPULATION USING NFHS 4 & 5 DATA

Dissertation Submitted to



The IIHMR University, Jaipur

For the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

In

Hospital and Health Management

By

Dr. Saahil Khandelwal

Under the Supervision and Guidance of

Dr Vinod Kumar SV

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled “STATUS OF MCH INDICATORS IN 4 DISTRICTS OF ARUNACHAL PRADESH: A COMPARATIVE ANALYSIS OF TRIBAL AND GENERAL POPULATION USING NFHS 4 & 5 DATA” is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)

Dr Saahil Khandelwal

Date: 8/05/23

CERTIFICATE

This is to certify that dissertation titled “STATUS OF MCH INDICATORS IN 4 DISTRICTS OF ARUNACHAL PRADESH: A COMPARATIVE ANALYSIS OF TRIBAL AND GENERAL POPULATION USING NFHS 4 & 5 DATA” is a record of the research work undertaken by Dr Saahil Khandelwal in partial fulfillment of the requirements for the award of the degree of MBA Hospital and Health Management from IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide

IIHMR University, Jaipur
Date

School Dean

IIHMR University, Jaipur Date

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ABSTRACT:

Health in a tribal society is understood not as phenomena in isolation but in relation to the magico-religious fabric of existence. Also most tribal communities define health, medical care and aetiology of disease in relation to social context. Studies found that, according to Tribal belief, hostile spirits, ghosts, breach of some taboos, and curse of gods always cause a disease. Therefore, they seek remedies through religious and magical practices to propitiate the supernatural powers. They do not come to avail modern system of medicines and on the other hand, herbal medicine or indigenous medicines are their next preference of treatment, which is obtained through local people. So, the gap is not only to the availability of modern and quality healthcare but also to develop behavior change model to motivate them to use both quality Indian system of medicine with allopathic treatment.

Among the tribes health is understood more in functional terms than clinical (Mahapatra 1994; Kshatriya 2004). This inference is derived from general observed phenomena among them wherein withdrawal from work when they are not well is seen. Thus ill health or affliction by disease among tribes is often taken as incapacitation of an individual from performs his/her normal or routine work, which s/he is expected to carry out in society. This functional understanding of health among tribes make them often neglect symptoms of cough, cold, headache, weakness etc., as not serious since such symptoms often do not hinder them from carrying out their daily activities.

Since 2005, India has experienced an impressive 77% reduction in maternal mortality compared to the global average of 43%. Child health indicators have shown a similar trend. Yet The ST IMR and MMR in India was highest in the world among the indigenous populations, next only to the Federally Administered Area in Pakistan.

This paper looks to delve into why the above phenomenon is seen, with a focus on 4 states of North East India. The reason for choosing the ST population of NE India is simply because the lowest indicators have been seen here. Further, in comparison to the increase in the values of the indicators from NFHS 4 to NFHS 5, these 4 states have shown to have the lease proportion of Increase.

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Table1: Abbreviations

ANC	Ante natal Care
ANM	Auxiliary Nurse Midwife
CHC	Community Health Centre
CS	Caesarean Section
GDP	Gross Domestic Product
IFA	Iron and Folic Acid
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MCP	Mother and Child Protection
MDG	Millennium Development Goals
MHC	Maternal Health Care
MP	Madhya Pradesh
NFHS	National Family Health Survey
PHC	Primary Health Centre
PNC	Post Natal Care
SC	Sub Centre
SC	Scheduled Cast
SDG	Sustainable Development Goals
ST	Scheduled Tribe
WHO	World Health Organization

INTRODUCTION

The Constitution of India recognizes the special status of tribal people -the Scheduled Tribes - and provides safeguards to protect their rights and culture. However, despite their substantial number (104 million according to the Census, 2011), tribal people have remained marginal - geographically, socio-economically, politically, and therefore, in the national psyche. As against 8.6 % of the tribal population in India, Northeastern states constitute around 25.8% of the tribal population from 145 tribal communities. Further, Arunachal Pradesh (69% of the total population), Meghalaya (86.1% of the total population), Mizoram (94.4% of the total population) and Nagaland (86.5% of the total population) hold a tribal predominance and it is fair to say are better representative of the tribal community of North East India.

These 4 states have been chosen to assess how the indicators have fared in tribal dominated states.



FIG 1: CONCENTRATION OF ST POPULATION ACROSS VARIOUS STATES OF NORTHEAST INDIA (AS % OF TOTAL POPULATION OF STATE)

It was assumed that tribal people have the same health problems, similar needs and hence the uniform national pattern of rural health care would be applicable to them as well, albeit with some alteration in population: provider ratio. The different

terrain and environment in which they live, different social systems, different culture and hence different health care needs were not addressed. Not surprisingly, health and healthcare in tribal areas remain unsolved problems.

The tribal community lags behind the national average on several health indicators, with women and children being the most vulnerable. Total Fertility Rate is 2.5% and only 15% complete their ANC visits. The children having full immunization coverage are only 56%, which reflects in IMR as 44.4 per 1000 live births and the Underfive Mortality Rate as 57.2, compared to the national average of 30 deaths per 1000 live births and an Under-Five mortality of 35.

Demographic characteristics of States in Northeast India

	Arunachal Pradesh	Meghalaya	Mizoram	Nagaland
Land Area (sq. km.) ¹	83743	22429	21081	16579
Total population in million ¹	1.38	2.97	1.10	1.98
Population size—% of national population ¹	0.1	0.2	0.1	0.2
ST Population (As % of state population)	68.8	86.1	94.4	86.5
0–5 (% of state	29.03	16.43	5.08	17.55

population) ¹				
Female literacy rate (%) ¹	57.7	72.9	89.3	76.1
Sex ratio—Females per 1000 males ¹	938	989	976	931
Birth rate ²	20.5	24.5	17.1	16.8
Death rate ²	5.9	7.9	4.5	3.6
Infant mortality rate ²	31	55	37	23

Sources: 1- Census of India, 2011, 2- Sample Registration System, 2011

LITERATURE REVIEW:

Title of the Study	Sample Size	Objective	Key Findings
“Are Young Mothers in India Deprived of Maternal Health Care Services? A Comparative Study of Urban and Rural Areas” (N. Kavitha, 2015)	NFHS-4 data	• “To study the effect of age of women at birth on the use of maternal health care services separately for urban and rural areas using data from the National Family Health Survey”	• In both urban and rural sites, women who provided birth during adolescence were less likely to use maternal health facilities.
“Pro-poor policies and improvements in maternal health outcomes in India” (M. Bhatia, L. K. Dwivedi, K. Banerjee, A. Bansal, M. Ranjan, and P. Dixit)	NFHS-4 and NFHS-5	• “To estimate the maternal deaths using the different sample surveys conducted in India”	• MMR has reduced in all regions of the country, from 1997 to 2017. This improvement is also observed with respect to maternal health indicators. • Low access to maternity health services is an important barrier, especially for the poor, in reducing maternal mortality in many low income settings • Pro-poor policies and conditional cash transfers, on the other hand, have been essential in reducing the financial barriers to access • Incentivisation in the form of various national cash transfer schemes such as JSY has increased use of public health facilities

“Determinants of nutritional status among scheduled tribe women in India” (Sourav Biswas, Chandan Kumar Hansda, Nirmal Singh, Venkata Raja Malla, Anil Kumar Pal)	NFHS-5	• Association of the various socio-demographic factors with nutritional status among Indian Scheduled Tribe reproductive women.	• The most prominent factor in determining the health of a ST women has come out to be ‘wealth’, followed by religion, place of residence and educational status. • Concentrating on improving regional and community based methods will help promote holistic healthcare practices.
Family Planning Practices among Tribal women: An insight from Northeast India (Mithun Mog, Shekhar Chauhan, Ajit KUMAR Jaiswal, Arobindo Mahato)	NFHS-4	• To assess the prevalence of contraception among the different social groups in North-East India and its association with various socio-demographic factors.	• Use of FP methods are in NE India by large are phenomenally low. This problem is compounded by inaccessible terrain and scattered settlements. • Use of modern contraception higher than use of traditional methods • A significant gap between knowledge and use of contraception presents in tribal and non-tribal women alike.

3. RESEARCH QUESTION: a. What are the differences between the service uptake for MCH services of Tribal population of the selected northeastern states in comparison with the General population?

b. Is there a correlation between the observed trends and socio-demographic characteristics in these states?

4. OBJECTIVES:

- To compare service uptake and utilization of the General vs. Tribal population of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland
- To correlate these findings with the socio-demographic characteristics of the areas identified.
- Desk review of Public + Private intervention programs for Child Mortality, Maternal Health, Literacy, Nutritional Status in Arunachal Pradesh, Meghalaya, Mizoram and Nagaland

5. HYPOTHESIS: Service uptake and utilization of the tribal population of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland is much lesser than their General counterparts thus leading to poor socio-demographic indicators in those areas.

6. MATERIAL AND METHODS:

6.1 STUDY DESIGN: Descriptive Study, based on desk review using secondary data derived from NFHS 4 & NFHS 5 reports and factsheets. In addition, review of appropriate research publications and reports was done to generate corroborative evidence and relationships.

6.2 SETTING: Arunachal Pradesh, Meghalaya, Mizoram and Nagaland

STUDY POPULATION

6.3 DURATION OF THE STUDY: Three months i.e., from 1st of March to 31st of May 2023.

6.4 SAMPLE SIZE: = The NFHS (4/5) data has been obtained from a sample size of 74,26,324 subjects (as per Census 2011)

6.5 SAMPLING TECHNIQUE: Inclusion of all the participants.

DATA COLLECTION PROCEDURE:

7. MODE OF DATA COLLECTION: Data used is of NFHS 4/5 which was obtained by officials who surveyed each and every household.

8. DATA ANALYSIS PLAN: Analysis will be carried out using MS Excel.

9. ETHICAL CONSIDERATIONS: De-identified respondent available in the public domain has been used and therefore the risk of disclosure of the personal information of the respondents is avoided.

10. IMPLICATIONS OF RESEARCH: Will help in understanding why the socio-demographic characteristics of the identified areas are lagging than the state average and what effect interventional programs and the primitive practices of the tribals of the identified areas have had on these indicators.

RESULTS:

The Government of India adopted the Reproductive, Maternal, New-born, Child and Adolescent Health (RMNCH+A) framework in 2013. It essentially aims to address the major causes of mortality and morbidity among women and children. This framework also helps to understand the delays in accessing and utilizing health care services

Based on the framework, comprehensive care is provided to women and children through five pillars or thematic areas of reproductive, maternal, neonatal, child, and adolescent health. The programmes and strategies developed by various divisions are guided by central tenets of equity, universal care, entitlement, and accountability to provide 'continuum of care' ensuring equal focus on various life stages.

The indicators chosen to assess the maternal health in the 4 states are as follows:

1. Percentage who had four or more ANC visits: % of women aged 15 – 49 years with a live birth in the past 2 years who received antenatal care at least 4 or more times from any provider.

Requirement: A range of health problems experienced by pregnant women and their babies can be prevented and detected through frequent antenatal checks by skilled or unskilled providers. The indicator therefore assesses the proportion of women who attended the recommended number of antenatal visits.

2. Percentage with an ANC visit in the first trimester of pregnancy: % of women aged 15 - 49 years who were attended during their last pregnancy that led to a live birth at least once by skilled health personnel

Requirement: A range of health problems experienced by pregnant women and their babies can be prevented, detected and treated during antenatal care provided by skilled health personnel (doctor, midwife or a nurse with midwifery skills). The indicator, therefore, assesses the proportion of women who had at least one antenatal health check provided by skilled health personnel.

3. Percentage who took IFA for at least 100 days: % of mothers of children aged 0-11 months who consumed the recommended number of iron/ folic acid supplements during pregnancy

Requirement: The indicator assesses the proportion of mothers who during their last pregnancy consumed the number of iron/ folic acid supplements recommended by the local Ministry of Health and its local health facilities. Their consumption is essential for preventing the risks associated with anemia, such as premature birth, low birth weight and maternal mortality.

4. Percentage who had full antenatal care:

The sample selected is of women with a live birth in the last 5 years preceding the survey receiving various types of ANC.

The data is as follows:

Maternal Health Indicators	India		Arunachal Pradesh		Meghalaya		Mizoram		Nagaland	
	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5
Percentage who had four or more ANC visits	51.2	58.1	26.7	36.5	50	52.2	61.7	58	15	20.7
Percentage with an ANC visit in the first trimester of pregnancy	52.6	70	36.9	53.1	53.3	53.9	65.7	72.7	24.9	49.5
Percentage who took IFA for at least 100 days	77.7	44.1	8.3	23.8	36.2	43.1	53.8	61.9	4.4	10.2
Percentage who had full antenatal care	30.3		56.6		23.5		38.5		2.4	
Number of Women	184,641		3,888	4,748	3,077	4396	3,379	1734	3,105	1985

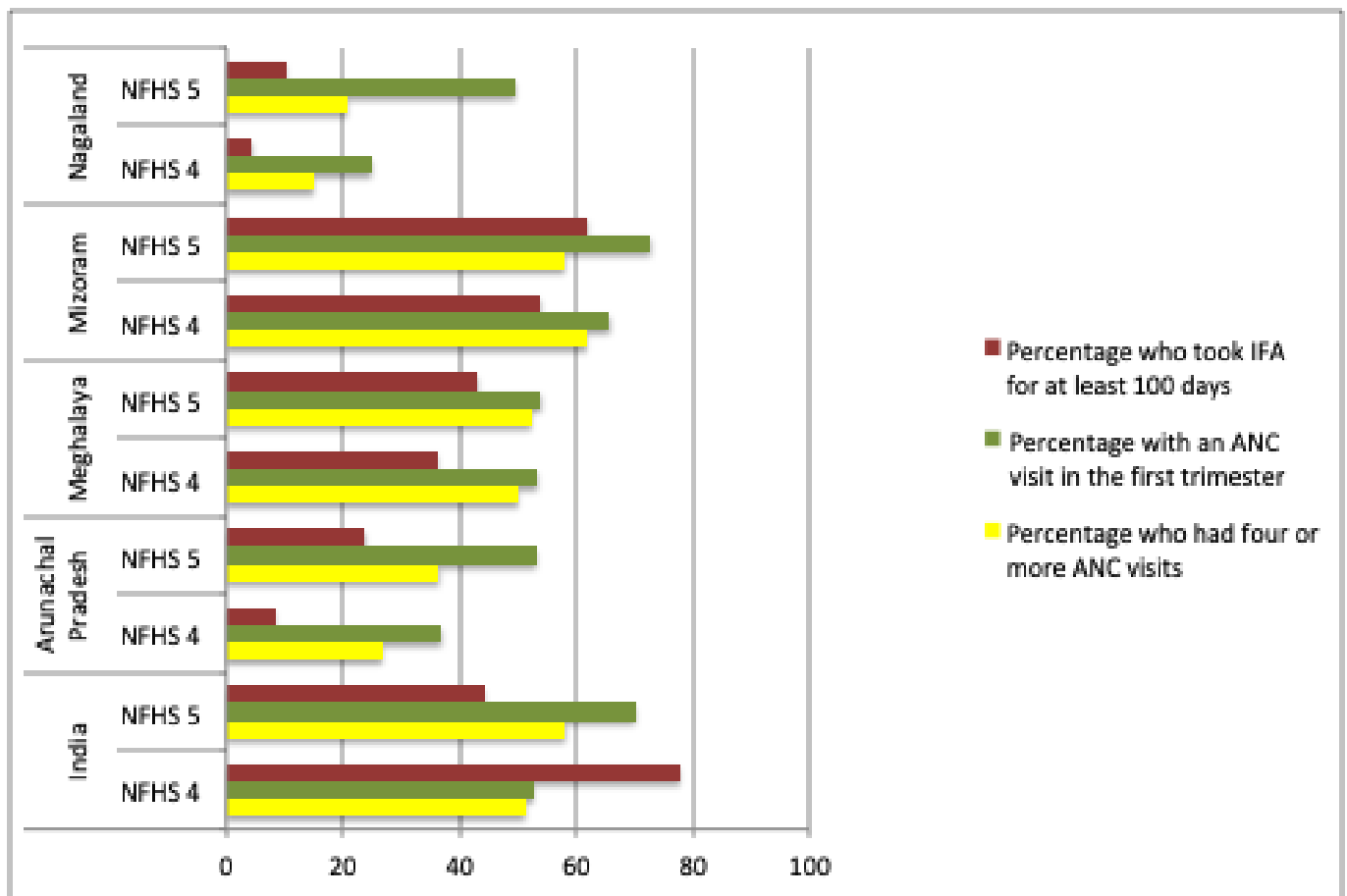


FIG 2: Bar graph depicting a comparative view of maternal health indicators

CHILD HEALTH INDICATORS:

The indicator looks at last-born children born in the past 2 years, under age five years classified as malnourished according to three anthropometric indices of nutritional status:

1. height-for-age(stunting)
2. weight-for-height(wasting)
3. weight-for-age(overweight)

An additional indicator taken is of Children having anaemia i.e. children under 5 years of age having hemoglobin levels less than 11.0 g/dl.

Child Health Indicators	India		Arunachal Pradesh		Meghalaya		Mizoram		Nagaland	
	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5	NFHS 4	NFHS 5
<u>Height-for-age</u> Percentage below–2 SD3	38.4	35.5	29.4	28	46.5	43.8	28.9	28	32.7	28.6
<u>Weight-for-height</u> Percentage below–2 SD3	21.0	19.3	17.3	13.1	12.1	15.3	9.8	6.1	19.1	11.3
<u>Weight-for-age</u> Percentage below–2 SD3	35.8	32.1	19.4	15.4	26.6	28.9	12.7	11.9	26.9	16.7
Percentage of children having any anaemia (<11.0 g/dl)	58.6	67.1	50.7	56.6	45.1	40.7	46.4	19.3	42.7	26.4

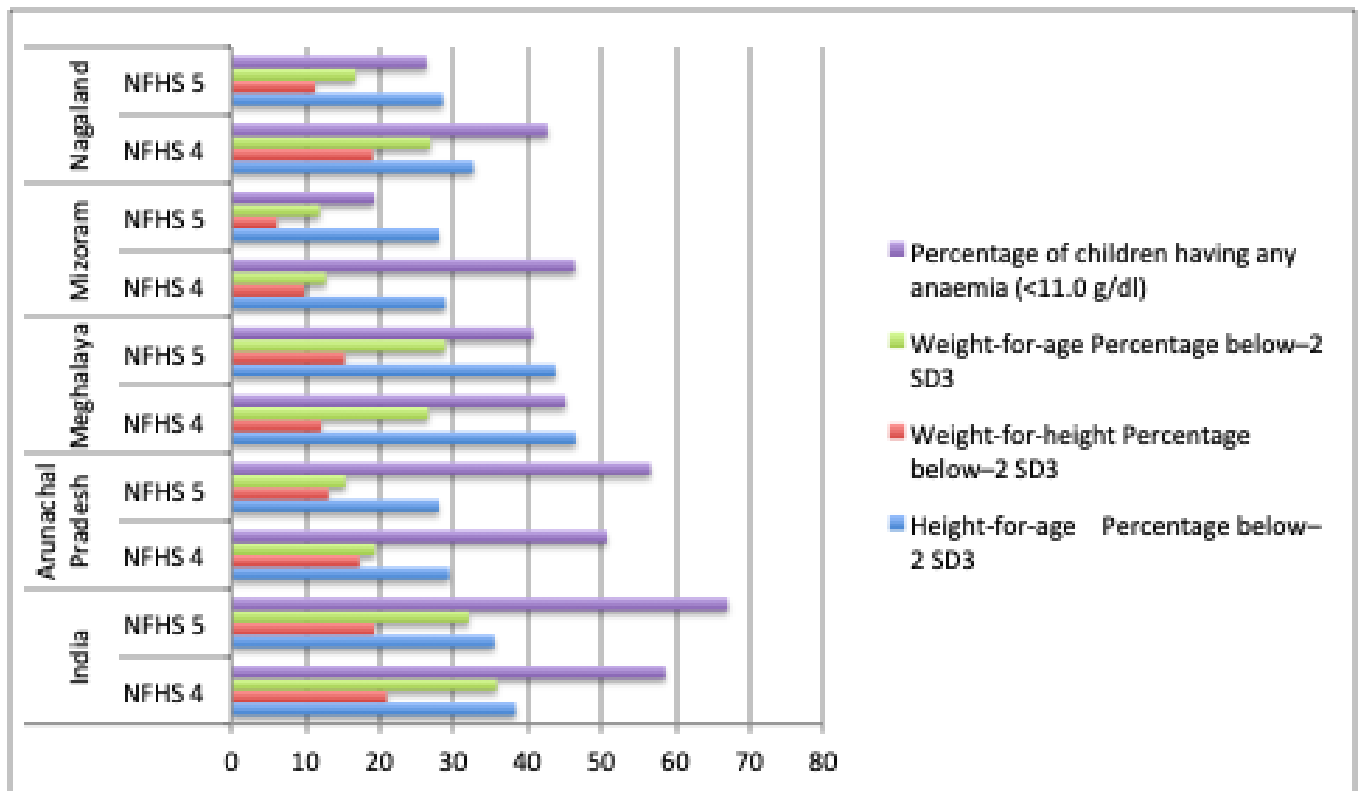


FIG 3: Bar graph depicting a comparative view of child health indicators

DISCUSSION:

MATERNAL HEALTH INDICATORS:

- As can be seen from the data above, all the 4 Northeastern states in all the 4 indicators are falling behind the national average but showing a significant increase from NFHS 4 to NFHS 5.
- In most of the indicators we can see Mizoram performing the best among the 4 states, but an area of concern is the decline in the no of women (who were surveyed) from NFHS 4 to NFHS 5, which can also be seen in the increase in MMR from 2015-16 to 2019-2020 (according to the NHM-HMIS reports)
- The full ANC coverage remains poor, particularly for the tribal women. RSoC data shows that while 81.8% ST women had received at least one ANC, only 15% had received full ANC, the lowest among all social groups
- Access to healthcare also decreased, with women receiving ANCs in the first trimester dipping by 7 percentage points, and those who received at least four ANCs by 16 percentage points. This is attributed to the unfriendly attitude of health workers, language and understanding gap and the lack of trust in an alien system. Maternal health services provided by the government are often not in tune with the health beliefs and practices of the tribal people.
- Rashtriya Kishor Swasthya Karyakram (RKSK) success in Mizoram is evident as it has lead to a massive increase in all maternal health indicators from NFHS 4- NFHS-5. Also the increase in CHCs, PHCs and SCs in NHM has helped provide services to the remotest of areas. This is evident through a decrease in the shortfall of health facilities as can be seen in the Health Dossier Report of Mizoram.
- This result, and India's impressive performance with respect to maternal health outcomes, can be attributed to the various pro-poor policies and cash incentive schemes successfully launched in recent years. Community-level involvement with pivotal role played by community health workers has been one of the major reasons for the success of many ongoing policies.
- The hilly terrain of Nagaland is among the major concern in enabling rapid expansion of health infrastructure. This is reflected in terms of wide inter-state variations in these two elementary indicators of maternal and child health.

- Such stark inter-district disparities are reflective of elementary developmental challenges including education, human resources, infrastructure as well as barriers both geographical as well as conflict-related.

CHILD HEALTH INDICATORS:

- In comparison to the national average, it can be seen that 4 Northeastern states are fairing better. This is because in some states such as Rajasthan and Orissa the indicators are much lesser, bringing down the national average.
- Tribal communities in remote areas in the more sparsely populated states (As can be seen from the data of Nagaland and Mizoram) have a higher prevalence of childhood malnutrition. This is due to limited access to basic amenities including healthcare and a lack of timely resource mobilization.
- States' performance on other factors influencing wasting and increased BMI was mixed. For instance Meghalaya, which has the higher percentage of overweight children, saw factors like women's access to healthcare improve.
- Similarly, in Meghalaya almost all the factors associated with under-nutrition have improved since NFHS-4. The percentage of women who had at least four ANC visits and level of education of caregivers also slightly increased.
- A direct consequence of the improved antenatal indicators is reflected in the health of the children. This is also due to better breastfeeding practices, lower anaemia levels and higher consumption of Vitamin A rich food.
-

CONCLUSION:

India has been able to drastically reduce its maternal mortality and improve maternal health outcomes in recent years. This impressive performance can be attributed to the various policies and cash incentive schemes launched during the launch of National Rural Health Mission in 2005. Yet, the maternal health situation in all the 4 States (Arunachal Pradesh, Meghalaya, Mizoram and Nagaland) suggests that there is a need to indulge more in maternal and child health-related activities.

In order to achieve its maternal and child health goals, a greater degree of progress is required all sectors of healthcare provision. This includes an improvement in the public health facilities, greater participation of CHWs to improve community level engagement, better accessibility of services in isolated terrains and lesser political disruptions. Furthermore, since the schemes are in place, a focus on their targeted implementation presents as a need of the hour.

As for Nagaland in specific, owing to it having the poorest indicators, it needs a more enhanced socio-political vision on health governance. In this respect, two areas are of utmost priority:

First, the state should ensure availability of adequate health personnel in designated health centres in each of the districts. With improvements in human resources for health the state can conceive plans for uplifting the quality of medical care and diagnostic services at public health facilities.

Second, women empowerment is critical to achieve the transition from a demand side perspective. Most of the well-performing states have high levels of female literacy whereas in Nagaland only one in every three women in the reproductive age group (15-49) has completed 10 or more years of schooling. Such poor educational profile is further associated with a high total fertility rate and huge unmet need for family planning services.

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