A Paper on Emergent Actions

Based on NFHS-5 First Phase Findings

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Emergent actions based on findings of first phase of NFHS-5

1. About NFHS

The National Family Health Survey (NFHS) is an extensive, multi-round review and survey of a representative and illustrative household samples across the country. The Ministry of Health and Family Welfare (MOHFW), Government of India, designated International Institute for Population Sciences (IIPS), Mumbai, India as the nodal agency, responsible for lending technical guidance and coordination in carrying out NFHS rounds through number of Field Organizations which are further accountable for conducting survey activities in the assigned states covered under NFHS

1.1. Rounds of National Family Health Survey

- The First round of National Family Health Survey (NFHS-1) was conducted in 1992-93. That has collected the wide-ranging information on population, health, and nutrition, focusing on young children and women.
- The findings of Second round of National Family Health Survey(NFHS-2)were released in 1998-99 conducted in 26 states of India. The survey included other aspects this time like health and nutritional status of women including anaemia, reproductive health, family planning services, their domestic treatments including domestic violence, quality of health and services.
- The third round of National Family Health Survey (NFHS-3) was conducted in 2005-06 in 29 states of India. The survey provides the information on numerous fresh and emergent issues, including perinatal mortality, adolescent reproductive health, family life education, high-risk sexual behaviours, diseases like tuberculosis and malaria. Further, unlike the earlier surveys NFHS-3 interviewed all women age 15-49 and all men age 15-54 and related information on nutritional status like prevalence of anaemia is also provided through the findings, is provided in NFHS-3 for women age 15-49, men age 15-54, and young children.
- The Fourth National Family Health Survey (NFHS-4) was conducted in 2014-2015 and has been the first in the NFHS series to collect and analyse data from each of 29 States and 7 Union Territories across the country. And It had been the first time, when NFHS has provided the estimates for most of the indicators for all 640 districts of the country included in the 2011 Census.

1.2. The Fifth National Family Health Survey (NFHS-5)

Ministry of Health and Family Welfare has released the fact sheets from the fifth round of India's National Family Health Survey (NFHS-5, 2019-20) on December 12, 2020. The latest data refers to 17 states and five UTs and, significantly, captures the detailed information on population, health, and nutrition status in these states before the Covid19 pandemic, in phase-I. Besides, phase 2 of the survey, which will cover other states including Madhya Pradesh, Uttar Pradesh, Punjab etc, was delayed pertaining to the pandemic and its results are expected to be made available in May 2021.

2. Through Data lenses: What data speaks?

The findings of National Family Health Survey-5 must be taken profoundly as these numbers are teaching us that there is something fundamentally seriously wrong in our "Development Approach". Also, it is the indication that we are not adaptive to the Human Nature and Gender Centricity in making India a better Place for Women and Children. The SDG Sub-Goals 2.2 stipulates thus: "End by 2030 all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons". Likewise, the SDG Sub-Goal 3.1 seeks to end preventable deaths of new-borns and under-five children, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under 5 mortality to at least as low as 25 per 1,000 live births.

In September 2019, The Lancet published a research paper of India State-Level Disease Burden Initiative Malnutrition Collaborators titled "The Burden of Child and Maternal Malnutrition and Trends in its Indicators in the States of India: The Global Burden of Disease Study 1990-2017." The research informs that malnutrition is the predominant risk factor for death in children younger than 5 years of age in every state of India accounting for 68.2% of the total under-5 deaths. Of the 10.4 Lakh Under-5 deaths in India in 2017, 7.06 Lakh could be attributed to malnutrition. Although, all-cause under-5 death rate in India decreased from 2336 per 1 lakh in 1990 to 801 per 1 Lakh in 2017, the proportion of under-5 deaths attributed to malnutrition changed very marginally from 70.4% in 1990 to 68.2% in 2017. Hence, it may be seen that morbidity arising from malnutrition persists in its vicious role.

In the backdrop of the SDG to which India is a signatory, the analytics into the NFHS-5 results bring out that India and its states (22 States and Union Territories) have a long way to go in realising the Sustainable Development Goals and the targets enshrined thereunder. In fact, it is apprehended that India is likely to miss the target of "Zero Hunger & Malnutrition Elimination". As the following analytical tables across some key indicators show, we have no reason to be complacent about incremental improvements. On the contrary, we must bring about a purposive transformation into the way we govern our Public Health Nutrition System so that a meaningful improvement is brought about in child health and nutritional wellbeing.

2.1. Women getting married before the legal age of 18 years

This indicator of Child Marriage reflects the state of women's reproductive health, their own survival as well as that of the children born to them. It is well known that children born to the younger mothers are at the greatest risk of death in the first weeks of life – newborns whose mothers are less than 20 years old are about 1.5 times more likely to die in their first month of life compared to children of 20–29-year-old mothers.The above demonstrates that situation of women getting married before the age of 18 years has worsened over the last 14 years (2005-06 to 2019-20) in the states of Assam, Manipur and Tripura. Notably, in terms of annual change in percentage points, most of the states appear to be performing poorly in the preceding 4 years as compared to the decade between 2005-06 to 2015-16.

Table -1 : Women Getting Married Before Age 18 Years

S. No.	State	NFHS 3 2005-06	NFHS 4 2015-16	NFHS 5 2019-20	Annual Change in PP over 10 years from NFHS 3 to NFHS 4	Annual Change in pp over 4 years from NFHS 4 to NFHS 5
1	Andhra Pradesh	54.8	33.0	29.3	2.2	0.9
2	Assam	38.6	30.8	31.8	0.8	-0.3
3	Bihar	69	42.5	40.8	2.7	0.4
4	Goa	12.1	9.8	5.8	0.2	1.0
5	Gujarat	38.7	24.9	21.8	1.4	0.8
6	Himachal Pradesh	12.3	8.6	5.4	0.4	0.8

7	Karnataka	41.8	21.4	21.3	2.0	0.0
8	Kerala	15.4	7.6	6.3	0.8	0.3
9	Maharashtra	39.4	26.3	21.9	1.3	1.1
10	Manipur	12.9	13.7	16.3	-0.1	-0.7
11	Meghalaya	24.6	16.9	16.9	0.8	0.0
12	Mizoram	20.6	10.9	8.0	1.0	0.7
13	Nagaland	21.4	13.4	5.6	0.8	2.0
14	Sikkim	30.1	15.0	10.8	1.5	1.1
15	Telangana	NA	26.2	23.5		0.7
16	Tripura	41.6	33.1	40.1	0.9	-1.8
17	West Bengal	54	41.6	41.6	1.2	0.0
18	A & N Islands	NA	16.4	16.2		0.0
19	Daman & Diu	NA	26.8	26.4		0.1
20	Jammu & Kashmir	14.4	8.7	4.5	0.6	1.1
21	Ladakh	NA	4.9	2.5		0.6
22	Lakshadweep	NA	1.9	1.3		0.2

2.2. Maternal Care

Being a necessary intervention bringing about positive impact in the nutritional and healthy being of women and children, annual change in 4 ANC Visits has been computed based on the expectation that there should be progressive increase in this indicator in the latter time period over the preceding one. Hence, differences have been determined between NFHS 4 and NFHS 3 and NFHS-5 and NFHS-4 respectively. 12 out of 22 States shows that proportion of Pregnant Women receiving at least 4 Ante-Natal Checkups has declined and it has direct impacts on Maternal Mortality, Neo Natal Mortality, Low Birth Weight and Stunting.

Table 2: Pregnant Women Had At Least 4 ANC Visits

S. No.	State	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years
1	Andhra Pradesh	86.0	76.3	-0.97	67.5	-2.20
2	Assam	36.3	46.4	1.01	50.7	1.08
3	Bihar	16.9	14.4	-0.25	25.2	2.70
4	Goa	95.0	89.0	-0.60	93	1.00
5	Gujarat	64.9	70.5	0.56	76.9	1.60
6	Himachal Pradesh	62.6	69.1	0.65	70.3	0.30
7	Karnataka	79.3	70.1	-0.92	70.9	0.20
8	Kerala	93.9	90.1	-0.38	78.6	-2.88
9	Maharashtra	75.3	72.2	-0.31	70.3	-0.48
10	Manipur	70.1	69.0	-0.11	79.4	2.60
11	Meghalaya	53.4	50.0	-0.34	52.2	0.55
12	Mizoram	57.8	61.4	0.36	58	-0.85
13	Nagaland	31.6	15.0	-1.66	20.7	1.43
14	Sikkim	69.4	74.7	0.53	58.4	-4.08
15	Telangana		74.9	7.49	70.4	-1.13
16	Tripura	58.7	64.3	0.56	52.7	-2.90
17	West Bengal	62.4	76.4	1.40	75.8	-0.15
18	A & N Islands	NA	92.1		83.4	-2.18
19	Dadar & Nagar Haveli and Daman & Diu	NA	71.9		66.2	-1.43
20	Jammu & Kashmir	74.2	81.2	0.70	80.9	-0.07
21	Ladakh	NA	87.5		78.4	-2.28
22	Lakshadweep	NA	42.3		88.3	11.50

2.3. Child Malnutrition

Review of findings of NFHS-5 on indicators relating to undernutrition for 22 States and Union Territories are showcasing the stark situation of children in India. The mostly stagnation of levels or increase in undernutrition shows that India's Economic Development policies do not correspond to the Wellbeing of Children at all. It is not only a matter of defining numbers, but we have reached into a situation, where "Approach of Development" is to be critically examined and definitely it is

not an 'Anti-National" Act, it is in the best interest of India and Indian Society; because for sure Indian Society would not like to sow the seeds of a scrawny and ailing future of the nation.
As many as 13 out of 22 states present a rather dismal picture on child stunting deteriorating over the preceding 4 years. Likewise, child wasting across 11 states and child underweight in 14 states has registered deterioration.

While in the decade between NFHS 3 and 4, there were no negative annual rates in case of stunting across these states, the number of states swelled to 13 during the 4-year interregnum between NFHS 4 and NFHS 5.

In case of wasting number of deteriorating states increased from 6 (in the decade between NFHS 3 and NFHS 4), to 11 during the latest 4 year period.

Likewise, the situation worsened from 4 states to 14 states in case of child underweight.
It is notable that 4 states including Himachal Pradesh, Mizoram, Nagaland and Tripura have performed poorly in terms of negative annual rates of reduction across the two time periods.

Table – 2 : Undernutrition

S. No.	State	Stunting					Wasted					Underweight				
		NFHS 3	NFHS 4	Annual Change in PP over 10 Years	NFHS 5	Annual Change in pp over 4 years	NFHS 3	NFHS 4	Annual Change in PP over 10 Years	NFHS 5	Annual Change in pp over 4 years	NFHS 3	NFHS 4	Annual Change in PP over 10 Years	NFHS 5	Annual Change in pp over 4 years
1	Andhra Pradesh	38.4	31.4	0.7	31.2	0.0	14.9	17.2	-0.2	16.1	0.3	29.8	31.9	-0.2	29.6	0.6
2	Assam	41.1	36.4	0.5	35.3	0.3	16.7	17.0	0.0	31.7	-3.7	35.8	29.8	0.6	32.8	-0.7
3	Bihar	50.1	48.3	0.2	42.9	1.4	32.6	20.8	1.2	22.9	-0.5	54.9	43.9	1.1	41.0	0.7
4	Goa	25.9	20.1	0.6	25.8	-1.4	12.8	21.9	-0.9	19.1	0.7	21.3	23.8	-0.3	24.0	0.0
5	Gujarat	49.2	38.5	1.1	39.0	-0.1	19.7	26.4	-0.7	25.1	0.3	41.1	39.3	0.2	39.7	-0.1
6	Himachal Pradesh	34.3	26.3	0.8	30.8	-1.1	19.9	13.7	0.6	17.4	-0.9	31.1	21.2	1.0	25.5	-1.1
7	Karnataka	42.4	36.2	0.6	35.4	0.2	18.9	26.1	-0.7	19.5	1.7	33.3	35.2	-0.2	32.9	0.6
8	Kerala	26.5	19.7	0.7	23.5	-1.0	15.6	15.7	0.0	15.8	0.0	21.2	16.1	0.5	19.7	-0.9
9	Maharashtra	44	34.4	1.0	35.2	-0.2	17.2	25.6	-0.8	25.6	0.0	32.7	36	-0.3	36.1	0.0
10	Manipur	29.0	28.9	0.0	23.4	1.4	10.8	6.8	0.4	9.9	-0.8	19.5	13.8	0.6	13.3	0.1
11	Meghalaya	47.7	43.8	0.4	46.5	-0.7	31.8	15.3	1.7	12.1	0.8	42.9	28.9	1.4	26.6	0.6
12	Mizoram	35.1	28.1	0.7	28.9	-0.2	9.7	6.1	0.4	9.8	-0.9	14.2	12.0	0.2	12.7	-0.2
13	Nagaland	34.1	28.6	0.6	32.7	-1.0	15.8	11.3	0.5	19.1	-2.0	23.7	16.7	0.7	26.9	-2.6
14	Sikkim	31.8	29.6	0.2	22.3	1.8	12.8	14.2	-0.1	13.7	0.1	17.3	14.2	0.3	13.1	0.3
15	Telangana	NA	28.0		33.1	-1.3	NA	18.1		21.7	-0.9	NA	28.4		31.8	-0.9
16	Tripura	34.1	24.3	1.0	32.3	-2.0	24	16.8	0.7	18.2	-0.4	35.2	24.1	1.1	25.6	-0.4
17	West Bengal	41.8	32.5	0.9	33.8	-0.3	19.2	20.3	-0.1	20.3	0.0	37.6	31.6	0.6	32.2	-0.2
18	A & N Islands	NA	23.3		22.5	0.2	NA	18.9		16.0	0.7	NA	21.6		23.7	-0.5
19	Daman & Diu	NA	37.2		39.4	-0.5	NA	26.7		21.6	1.3	NA	35.8		38.7	-0.7
20	Jammu & Kashmir	33.1	27.4	0.6	26.9	0.1	18.1	12.2	0.6	19	-1.7	24	16.6	0.7	21	-1.1
21	Ladakh	NA	30.9		30.5	0.1	NA	9.3		17.5	-2.1	NA	18.7		20.4	-0.4
22	Lakshadweep	NA	26.8		32	-1.3	NA	13.7		17.4	-0.9	NA	23.6		25.8	-0.6

2.4. Severe Wasting

As UNICEF describes "Severely wasted children are more likely to die because their immunity to infections is weakened by a lack of nutrients. Those who survive may go on to suffer poor growth and development and fail to thrive. The high proportion and number of severely wasted children reflect the poor nutritional status of women during pregnancy, poor breastfeeding and feeding practices, lack of sanitation and hygiene, poor access to quality health services, and food insecurity". According to the NFHS-5, 16 out of 22 States, Severe Wasting has increased, and it means that Malnutrition is becoming a major cause of Child Mortality and Morbidly in the country. Shockingly,

increase of Severe Wasting in economically developed states like Gujarat and Maharashtra is an indication that in the wave of Economic Growth, we must not the careless on Nutrition Security.

Actually, the main problem in this specific context is that, serious discriminatory approach exists in the context of Management of Malnutrition; there has been a need to work out a implementable framework for "Integrated Community based Management of Nutrition, Moderate Acute Malnutrition (MAM) and Severe Acute Malnutrition (SAM)"; but due to external factors, Indian Nutrition Interventions only keep a focus on the Community Based Management of SAM, it means actual services are activated for those, who become SAM, not before that!

Children under 5 years who are severely wasted (weight-for-height)						
S. No.	State	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years
1	Andhra Pradesh	3.5	4.5	0.10	6	-0.38
2	Assam	4.0	6.2	0.22	9.1	-0.73
3	Bihar	8.3	7.0	-0.13	8.8	-0.45
4	Goa	5.6	9.5	0.39	7.5	0.50
5	Gujarat	5.8	9.5	0.37	10.6	-0.28
6	Himachal Pradesh	5.5	3.9	-0.16	6.9	-0.75
7	Karnataka	5.9	10.5	0.46	8.4	0.53
8	Kerala	4.1	6.5	0.24	5.8	0.18
9	Maharashtra	5.2	9.4	0.42	10.9	-0.38
10	Manipur	2.1	2.2	0.01	3.4	-0.30
11	Meghalaya	19.1	6.5	-1.26	4.7	0.45
12	Mizoram	3.5	2.3	-0.12	4.9	-0.65
13	Nagaland	5.2	4.2	-0.10	7.9	-0.93
14	Sikkim	3.3	5.9	0.26	6.6	-0.18
15	Telangana	NA	4.8		8.5	-0.93
16	Tripura	8.6	6.3	-0.23	7.3	-0.25
17	West Bengal	4.5	6.5	0.20	7.1	-0.15
18	A & N Islands	NA	7.5		4.8	0.68
19	Dadar & Nagar Haveli and Daman & Diu	NA	11.5		4.3	1.80
20	Jammu & Kashmir	4.4	5.6	0.12	9.7	-1.03
21	Ladakh	NA	5.1		9.1	-1.00
22	Lakshadweep	NA	2.9		8.7	-1.45

Being a necessary intervention in bringing about positive impact in the nutritional and healthy being of women and children, annual change in Early Initiation of Breast Feeding, Exclusive Breastfeeding and Initiation of Complementary Feeding from 6 months onwards has been computed based on the expectation that there should be progressive increase in these indicators in the latter time period over the preceding one. Hence, differences have been determined between NFHS 4 and NFHS 3 and NFHS 5 and NFHS 4 respectively.

It is a matter of great shock and dismay that Early Initiation of Breastfeeding (EBIF) within One Hour of Birth has declined in 12 out of 22 States and Union Territories coved in the first phase of NFHS-5. Again EBIF in economically empowered states like Gujarat (declined from 49.9 percent to 37.8 percent) and Karnataka (56.3 percent to 49.1 percent).

It is to be noted with all caution that more than 80% children in 16 states do not receive adequate diet and that there is no substantial increase on this part is clearly visible. There is an urgent call to universalise Maternity Entitlements (Pradhanmantri Matru Vandana Yojana-PMMVY) and eliminate all conditionalities for the sake of survival of Women and Children.

Early Initiation of BF							Exclusive BF					Complementary BF				
S. No.	State	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years
1	Andhra Pradesh	22.4	40.0	1.76	52	1.2	62.7	70.2	0.75	68	-0.55	10.2	7.6	-0.26	9.3	0.43
2	Assam	50.6	64.4	1.38	49.1	-1.53	63.1	63.5	0.04	63.6	0.03	16.1	8.9	-0.72	8	-0.23
3	Bihar	4.0	34.9	3.09	31.1	-0.38	27.9	53.4	2.55	58.9	1.38	23.1	7.5	-1.56	10.9	0.85
4	Goa	59.7	73.3	1.36	61.6	-1.17	17.7	60.9	4.32	61.4	0.13	43.3	10.4	-3.29	21.5	2.78
5	Gujarat	27.1	49.9	2.28	37.8	-1.21	47.8	55.8	0.80	65	2.30	20.5	5.2	-1.53	5.9	0.18
6	Himachal Pradesh	43.4	41.1	-0.23	45.1	0.4	27.1	67.2	4.01	69.9	0.68	39.8	10.9	-2.89	19	2.03
7	Karnataka	35.6	56.3	2.07	49.1	-0.72	58	54.2	-0.38	61	1.70	23.5	8.2	-1.53	12.8	1.15
8	Kerala	55.4	64.3	0.89	66.7	0.24	56.2	53.3	-0.29	55.5	0.55	61	21.4	-3.96	23.5	0.53
9	Maharashtra	51.8	57.5	0.57	53.2	-0.43	53	56.6	0.36	71	3.60	11.3	6.5	-0.48	9	0.63
10	Manipur	57.2	65.4	0.82	53.7	-1.17	61.7	73.6	1.19	70.7	-0.72	40.5	18.8	-2.17	19.6	0.20
11	Meghalaya	58.6	60.6	0.20	78.8	1.82	26.3	35.8	0.95	42.7	1.73	19.5	23.5	0.40	29.8	1.58
12	Mizoram	65.4	70.3	0.49	60.1	-1.02	46.1	61.1	1.50	67.9	1.70	20.9	14.5	-0.64	13.4	-0.28
13	Nagaland	51.5	53.1	0.16	57.9	0.48	29.2	44.3	1.51	43.2	-0.27	22.2	18.8	-0.34	14.5	-1.08
14	Sikkim	43.3	66.5	2.32	33	-3.35	37.2	54.6	1.74	28.3	-6.58	49.4	23.1	-2.63	24.7	0.40
15	Telangana	NA	36.9		37.1	0.02	NA	67		68.2	0.30	NA	10.1		9.2	-0.23
16	Tripura	33.1	44.4	1.13	36.4	-0.8	36.1	70.7	3.46	62.1	-2.15	29.4	5.9	-2.35	13.5	1.90
17	West Bengal	23.7	47.4	2.37	59.4	1.2	58.6	52.3	-0.63	53.3	0.25	28.5	19.6	-0.89	23.4	0.95
18	A & N Islands	NA	41.9		46.9	0.5	NA	66.8		73.3	1.63	NA	14.2		19.5	1.33
19	Dadar & Nagar Haveli and Daman & Diu	NA	50		25.9	-2.41	NA	67.9		79.4	2.88	NA	2.1		10.2	2.03
20	Jammu & Kashmir	31.9	45.7	1.38	55.6	0.99	42.3	65.4	2.31	62	-0.85	26.1	23.5	-0.26	13.6	-2.48
21	Ladakh	NA	60		57.9	-0.21	NA	64.1		70.9	1.70	NA	23.9		24	0.03
22	Lakshadweep	NA	57.7		76.3	1.86	NA	54.8		67	3.05	NA	15.9		19	0.78

1.1. Children and Women Suffering from Anaemia

Anaemia is a condition that is marked by low levels of haemoglobin in the blood. Iron is a key component of haemoglobin, and iron deficiency is estimated to be responsible for half of all anaemia globally. Other causes of anaemia include malaria, hookworm and nutritional deficiencies, chronic infections, and genetic conditions. Anaemia is a serious concern for children because it can impair cognitive development, stunt growth, and increase morbidity from infectious diseases. This is shocking area in NFHS-5 data factsheets as these shows that only 4 states (Meghalaya, A & N Islands, Dadar & Nagar Haveli, and Lakshadweep) have shown some improvements but all other big and developed states are showing increase in anaemia among children.

The bigger increase is seen in Gujarat (62.6 percent to 79.7 percent), Assam (35.7 percent to 68.4 percent), Maharashtra (53.8 percent to 68.9 percent) and in West Bengal (54.2 percent to 69 percent).On the other hand 15 States, including Goa, Gujarat, Kerala, Maharashtra and West Bengal are facing increase in Anaemia among Pregnant Women. In Gujarat 62.6 percent pregnant women are anaemic, and this is higher proportion then the NFHS-3 level. Same trend can be seen in Bihar, where 63.1 percent pregnant women are anaemic and this is higher level then NFHS-3 figure of 60.2 percent.

		Children (6 Months to 59 Months)					Pregnant Women				
S. No.	State	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years	NFHS 3 2005-06	NFHS 4 2015-16	Annual Change in PP over 10 Year	NFHS 5 2019-20	Annual Change in PP Over 4 Years
1	Andhra Pradesh	79.6	58.6	2.10	63.2	-1.15	58.2	52.9	0.53	53.7	-0.20
2	Assam	77.3	35.7	4.16	68.4	-8.18	72.0	44.8	2.72	54.2	-2.35
3	Bihar	87.4	63.5	2.39	69.4	-1.48	60.2	58.3	0.19	63.1	-1.20
4	Goa	49.2	48.3	0.09	53.2	-1.23	36.9	26.7	1.02	41	-3.58
5	Gujarat	79.8	62.6	1.72	79.7	-4.28	60.8	51.3	0.95	62.6	-2.83
6	Himachal Pradesh	62.4	53.7	0.87	55.4	-0.42	39.2	50.4	-1.12	42.4	2.00
7	Karnataka	83.9	60.9	2.30	65.5	-1.15	6.4	45.4	-3.90	45.7	-0.08
8	Kerala	56.1	35.7	2.04	39.4	-0.92	33.8	22.6	1.12	31.4	-2.20
9	Maharashtra	72.6	53.8	1.88	68.9	-3.78	57.8	49.3	0.85	45.7	0.90
10	Manipur	52.8	23.9	2.89	42.8	-4.73	36.4	26.0	1.04	32.4	-1.60
11	Meghalaya	71.6	48.0	2.36	45.1	0.73	60.2	56.4	0.38	54.4	0.50
12	Mizoram	54.7	19.3	3.54	46.4	-6.78	51.7	27.0	2.47	34	-1.75
13	Nagaland	NA	26.4		42.7	-4.08	NA	32.7		22.2	2.63
14	Sikkim	64.0	55.1	0.89	56.4	-0.32	62.1	23.6	3.85	40.7	-4.28
15	Telangana	NA	60.7		70	-2.33	NA	48.2		53.2	-1.25
16	Tripura	67.9	48.3	1.96	64.3	-4.00	57.6	54.4	0.32	61.5	-1.78
17	West Bengal	69.3	54.2	1.51	69	-4	62.6	53.6	0.90	62.3	-2.18
18	A & N Islands	NA	49.0		40	2.25		61.4	-6.14	53.7	1.93
19	Dadar & Nagar Haveli and Daman & Diu	NA	82		75.8	1.55	NA	62.3		60.7	0.40
20	Jammu & Kashmir	68.3	53.8	1.45	72.7	-4.73	55.7	46.9	0.88	44.1	0.70
21	Ladakh	NA	91.4		92.5	-0.27	NA	79.3		78.1	0.30
22	Lakshadweep	NA	53.6		43.1	2.63	NA	39		20.9	4.53

In the given context of NFHS-5 data, it is imperative to register some absolute facts. The response of Minister of Women and Child Development (GoI) on 17.09.2020 in Lok Sabha informs that around 70 percent pregnant women are deprived of Maternity Entitlements. It is so, because only 24.6 percent

pregnant women (70.73 Lakh of 2.878 Crore Pregnant Women) and around 5 percent women in formal sector receive entitlements and rest 70 percent are left to live with insecurity, ailments, hunger and high death risks. Women and Children are the biggest immediate suffers of Poverty and Public Policy apathy. According to the Global norms, the C-Section deliveries must not be more than 10 percent of the total deliveries but its 20 percent in India. In States like Telangana (48.9 percent), Kerala (40.8 percent), J & K (43.5 percent), Andhra Pradesh (35.3 percent), Goa (43.3 percent), West Bengal (31.6 percent) one third institutional deliveries are by way of C-Section. This proportion of C-Section delivers is a major cause of reduction in Early Initiation of Breastfeeding.

It is also visible that the maternal malnutrition, lack of maternal care and poverty, household food insecurity is also causing huge number of spontaneous abortions (5.95 lakh) and Still Births (2.63 Lakhs) in the Year 2019-20

Do we really care about Maternity Entitlements and Wellbeing?								
States	Total No. of Pregnancies registered for ANC	Total No. of Institutional Deliveries	Total No. of C-Section Deliveries	Total No. of Still Births	Total No. of Spontaneous Abortions	% of C-Section Deliveries of Total Inst. Deliveries	No. of Beneficiaries enrolled in PMMVY	% of Total No. of Pregnancies enrolled in PMMVY in 2019
India	28787946	20227064	4152335	263342	595593	20.5	7073469	24.6
Maharashtra	2051346	1787203	426292	14614	53288	23.9	814059	39.7
Bihar	3394623	1871440	48916	23110	4230	2.6	919776	27.1
Gujarat	1296148	1145868	207295	12256	26073	18.1	310604	24.0
West Bengal	1621046	1428560	451572	18940	74884	31.6	531282	32.8
Karnataka	1151533	900003	289881	8883	29304	32.2	328319	28.5
Andhra Pradesh	803046	732248	258189	7148	7677	35.3	260501	32.4
Telangana	759098	620665	303610	3403	4171	48.9	-	0.0
Kerala	527626	460383	187797	1712	12502	40.8	169172	32.1
A&N island	4784	3537	1031	61	143	29.1	949	19.8
Assam	685229	554567	130571	12692	25788	23.5	331055	48.3
D&N Haveli	8070	9541	2021	180	657	21.2	2149	26.6
Goa	27969	18419	7969	161	760	43.3	3987	14.3
Himachal Pradesh	110701	82043	19736	993	6466	24.1	40947	37.0
J&K	358624	182865	79457	3530	9036	43.5	58141	16.2
Lakshadweep	1274	869	342	5	60	39.4	284	22.3
Meghalaya	138997	54008	8453	1995	4274	15.7	15908	11.4
Mizoram	23614	18492	3447	156	1161	18.6	4183	17.7
Nagaland	39462	17112	3197	306	401	18.7	15307	38.8
Sikkim	9343	7065	2938	113	291	41.6	2121	22.7
Tripura	67065	48904	13146	850	1424	26.9	22773	34.0
Source - https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx								

2. Summary: Overview of findings

The NFHS-5 demonstrates detailed information on population, health, and nutrition 17 States and 5 Union Territories. However, data on poverty, food security, ICDS coverage indicators, reach of Social safety programmes is yet awaited.

2.1. Positive deviation

- Trends in coverage of preventive interventions in early childhood has shown **increase in the status of childhood immunization** across 14 states/UTs (full immunization) and **increase in the status of Vitamin A doses** in 17 of 22 states/UTs.
- Health service indicators shows improvement like there has been a**decline in mortality** including neo-natal mortality (14 States/UTs), infant (17 States/UTs) and under-five mortality (17 States/UTs). The greatest decline in NMR is shown in Sikkim, Ladakh, and Jammu & Kashmir; IMR and MMR in Mizoram, Sikkim and Jammu & Kashmir
- There has been the substantial **increase in the sex-ratio** of the total population (females per 1000 males) in 17 states/UTs.
- **The Total Fertility Rate (TFR) has declined** over the last two rounds and there has been increase in the usage of contraceptives in almost all the States/UTs surveyed as shown in NFHS-5
- **Increase in the exclusive breastfeeding** is seen in 16 against 6 States and UTs where there is a remarkable decrease is seen. Maharashtra, Lakshadweep and Dadra & Nagar Haveli& Daman & Diu have shown the highest increase.
- **Rise in institutional birth** is observed in 20 out of 22 States and UTs whereas Sikkim and Kerala have shown no change, while the highest is observed in West Bengal, Assam and Nagaland.

2.2. Concerning deviation

2.2.1. Hunger ringsalarming bell

The findings out of NFHS-5 expresses a disquieting rise in underweight, stunting and wasting in under-5 children in 17 states and five UTs in India from the year 2016 to 2019. This has backpedalled the improvement in the nutritional status as demonstrated by NFHS-4 over NFHS -3 in a decade on several key indicators.

About 13 of the surveyed states/UTs have seen rise in stunting cases, troublingly in well-doing states like Gujarat, Maharashtra, Kerala, Goa and Himachal Pradesh. Interestingly CNNS showed high prevalence of stunting among children aged 0–4 years In Meghalaya (40.4) and Bihar (42.0) however NFHS-5 shows a significant decline in stunting in both the state by 5.5 and 5.4 percentage points, respectively. Steepest rise in Tripura (8pp), Telangana (5), Ladakh (5.2), Kerala (3.0) are points of concerns

Likewise, the proportion of wasted children has also risen in 12 States/UTs whereas that of underweight in 16 of 22 States and UTs surveyed. The condition is not improvised rather stagnated or worsened in majority of the states/UTs surveyed.States/UTs including Tripura, Telangana, Nagaland, Mizoram, Ladakh, Kerala, Himachal Pradesh are those states which have shown vertical rise in all the anthropometric indicators – stunting, wasting and underweight.

The inconsistent picture is shown by the overweight indicator which has been reported to have been risen in 20 out of 22 surveyed States and UTs except for Dadra and Nagar Haveli and Goa where the districts have seen the decline

2.2.2. IYCN Indicators

On one hand where nutrition indicators are going downhill as suggested by NFHS-5, the same way, inadequate infant and young child feeding practices are taking up the larger shape. The data clearly states the decline in the early initiation of breastfeeding in 12 against 10 States and UTs and timely introduction of solid foods. Lakshadweep, Meghalaya, Andhra Pradesh and West Bengal have shown highest increase in early initiation of breastfeeding.

Maharashtra indicates the highest exclusive breastfeeding increase with percentage point of 14.4 followed by Lakshadweep (12.2) and Dadra (11.5). Contrary to this sharpest decline is seen in exclusive breastfeeding in Sikkim with about 26.3 percentage point.

Complementary feeding has been shown a rise in 9 states and decline in 9 states. Both rise and decline has a wide range of disparity between them where the highest rise is seen in Tripura (39.5) followed by Dadra and Nagar Haveli (23.7), West Bengal (19.6) while the sharpest decline is observed in Manipur (11.3). Simultaneously 17 of 22 have shown increase in the intake of adequate diets also reportedly highest, is seen in Goa, Dadra & Nagar Haveli& Daman & Diu and Himachal Pradesh have highest increase. Meghalaya with 29.8 percent has the highest rise (6.3pp) whereas Gujarat with 5.9 has the lowest percent of children fed with adequate diet.

2.2.3. Underlying determinants

NFHS-5 has shown the marked progresses in WASH and better access to fuel. The data has shown the consistent improvements on drinking water and sanitation coverage, and high levels of coverage achieved over time, especially for drinking water. Notably (double-digit) gains in most states for sanitation coverage is shown for all the states except for Sikkim with a decline of 2.4 percentage point. All the states have shown improved drinking water except for Karnataka with no change and Sikkim with a decrease of 5 percentage point.

Positive and upwards trends are also shown on maternal well-being indicators including education. Assam (1pp), Manipur(2.6pp) and Tripura(7pp) still shows a significant higher rise of child marriage whereas West Bengal and Meghalaya has shown no change in the status against 17 of 22 states and UTs surveyed.

2.3. Interpretation and connections

Researches and studies have shown the connection between the early initiation of breastfeeding and institutional delivery status wherein the contraindication in the data of both the indicators mark a serious question. The effect of rise in institutional delivery and is connection with rates of increased early initiation of breastfeeding is dependent on quality of the services provided and the health status of mother during birth (c-section delivery for instance).

Evidently it has been proven that improper nutritional care during first 1000 days may have serious repercussions on a child's growth and development and may affect its development milestones.

The increase in the exclusive breastfeeding is also not promising and has risen with only marginal percentage points in majority of the states. The decline in the adequate diet is seen in five out of 22 States/UTs where, Jammu and Kashmir with maximum percentage point of 9.9 has seen the highest decline followed by Mizoram (4.3) and Nagaland, Telangana and Assam.

Consistent improvement in maternal well-being across states, but small, in women's education and age at marriage where the gaps remain and, in some states, both major drivers of child growth perform poorly. Maternal education reflects some investments however there is no significant improvement shown. It is evident that early marriage which is a very important driver in determining the nutritional status of both mother and children needs more policy push.

NFHS-5 phase-I data shows nothing about poverty, food insecurity or inequalities while a very generic picture of the coverage is demonstrated requires a clarity on the interpretation further. The coverage as presented in the data fact sheet has shown the positive trends in most of the indicators.

The second edition of the Sustainable Development Goals (SDG) India Index released in December 2019 by *NitiAyog* shows the improvement in composite score of India from 57 in 2018 to 60 in 2019 and is seen in six SDGs including SDG 6, SDG7 and SDG 9 apart from SDG-2 where the India's composite score is the lowest amongst all the SDGs, clearly indicates its slothful performance in achieving the Zero-Hunger by 2030. In addition, Global Hunger Index 2020, positions India at 94th across 107 countries. India is even positioned at 116th in 174 countries in the Human Capital Index 2020.These performances across the globe

The double whammy of progressing further to meet the Sustainable Development Goals for ending hunger and making malnutrition free nation with efforts in securing food and nutrition security owing to the pandemic and ogling poverty, has made achieving SDGs in any time sooner, a distant dream.

Findings from NFHS 5 that infers lag in improvement in indicators like stunting, wasting and underweight which over a pro-longed duration may impact the well-being of the child and will have a severe consequence on poverty, equity and human capital. This infers the need for the robust thrush on policies and initiatives focusing more at the ground and governance levels

3. Emergent Actions

3.1. Where things are falling behind? Missing pieces

NFHS-5 findings show the positive deviation and improvement in the immunization, increase in Vitamin-A dosages,increase in sex-ratio, increase in exclusive breastfeeding, improvements in coverage indicators, water sanitation, access to fuel and safe drinking water. This further have shown decline in mortality (IMR, NMR and U5MR), Total Fertility rate.
However, in majority of the positive pointers, the progress shown is marginal and cannot be seen in isolation and are linked with other aspects and indicators including food security, poverty, inequalities which are not yet demonstrated in the factsheet.Contrary to this, the most crucial findings derived from NFHS-5 is focused on child nutrition. When compared with NFHS-4 over NFHS-3 the improvement shown over the years are seemingly reversed. This threatens the child and maternal health and nutritional status further.

3.1.1. Highlights

Establishing of NitiAyog in the year 2015 focuses primarily on the digital India, Aadhar linkages, sanitation mission despite nutrition failed to make its place in the primary agenda. Corresponding to which NitiAyog in 2017 has released full fledged National Nutrition Strategy, that primarily focused on the underlying issues of malnutrition but NNS couldn't gain much popularity on policies implementation premises where the good convergence plan failed to get assembled on the state and further in the district as none of the department like agriculture or rural could recognise the importance of nutrition and its connection with other departments.

Similarly, Nutrition Mission was introduced in 2018 and has a strapping emphasis on sanitation and health while important underlying issues like food and nutrition insecurities, livelihood and poverty remain untouched, which are the powerful drivers of undernutrition. Furtherance, Nutrition Mission in the coming years strongly highlighted the Behavior change campaign, links of sanitation and health, awareness spread still scrambled on nutrition as the leading card.

Importantly nutrition has always been the preeminent concern since the implementation and inception of ICDS from the year 1971 and it's been 50 years till date, the conditions of women and children are not making up the desired place on the nutritional and health graphs. Reasons when chart out states the poor priority actions at both policy and implementation level where focusing the nutrition and the driving force which would chariot the whole process on the fields are completely missing out from the loop.

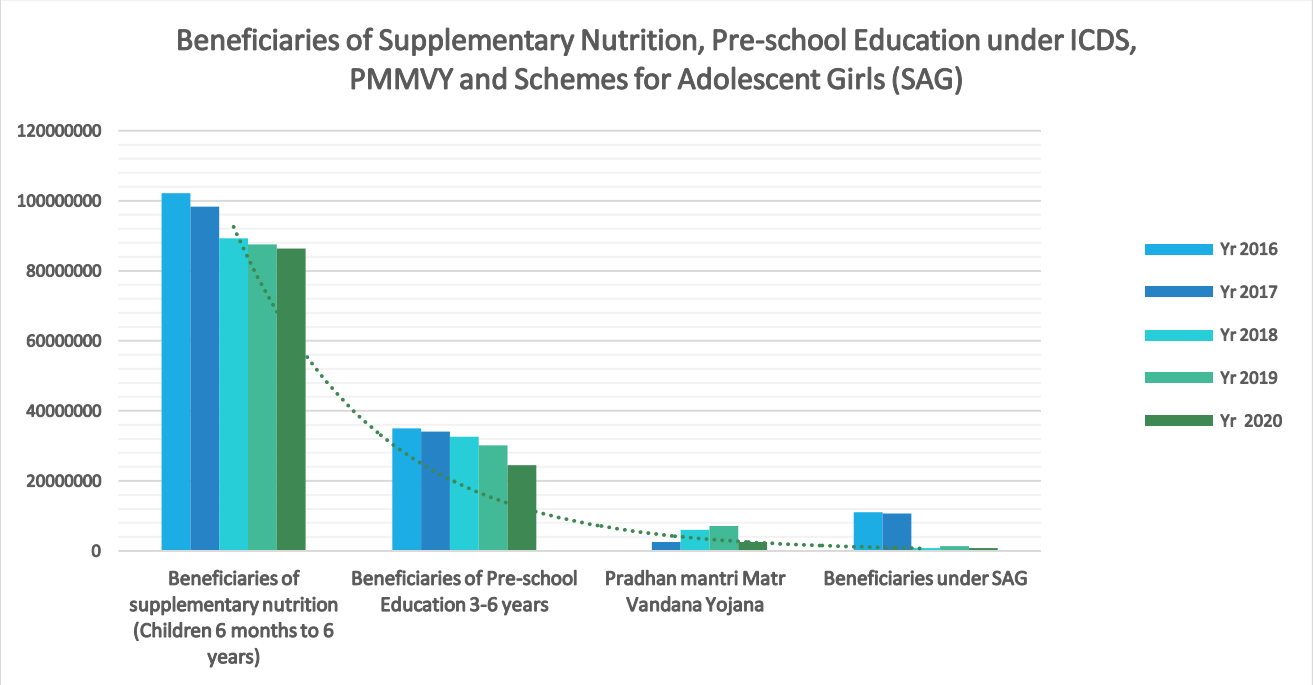
3.1.2. Glimpses of Unstarred questions: A look at what Rajya Sabha speaks of?

3.1.2.1. Major Welfare Schemes

The major welfare schemes being implemented by the Ministry of Women and Child Development hold true for Anganwadi services, Poshan Abhiyan, Pradhan Mantri Matru Vandana Yojana, Schemes for Adolescent Girls, Child Protection Scheme, National Creche Scheme. At the same time as, Schemes specific for women and girls include Schemes implemented under Nirbhaya Fund, *BetiBachaoBetiPadhao, SwadharGreh, Ujjawala*, Working Women Hostel and *Mahila Shakti Kendra.*

Interestingly the graph shown below depicts the constant decline in the number of the beneficiaries under any of the categories viz. Supplementary Nutrition, Pre-school Education under ICDS, PMMVY and

Schemes for Adolescent Girls (SAG) over the span of last five years. Vertical decline is shown in number of SAG's beneficiaries from 2017 to 2018 which was continued in later years.



The constant turndown in number of beneficiaries over the years raises question on **the quality of the services provided**

Although there is a surge reported in the number of beneficiaries of PMMVY but this has been declined in the current year perhaps due to pandemic time, which infers the outreach and access of the services during pandemic times.

3.1.2.2. Nutrition Resource Centers under National Nutrition Mission

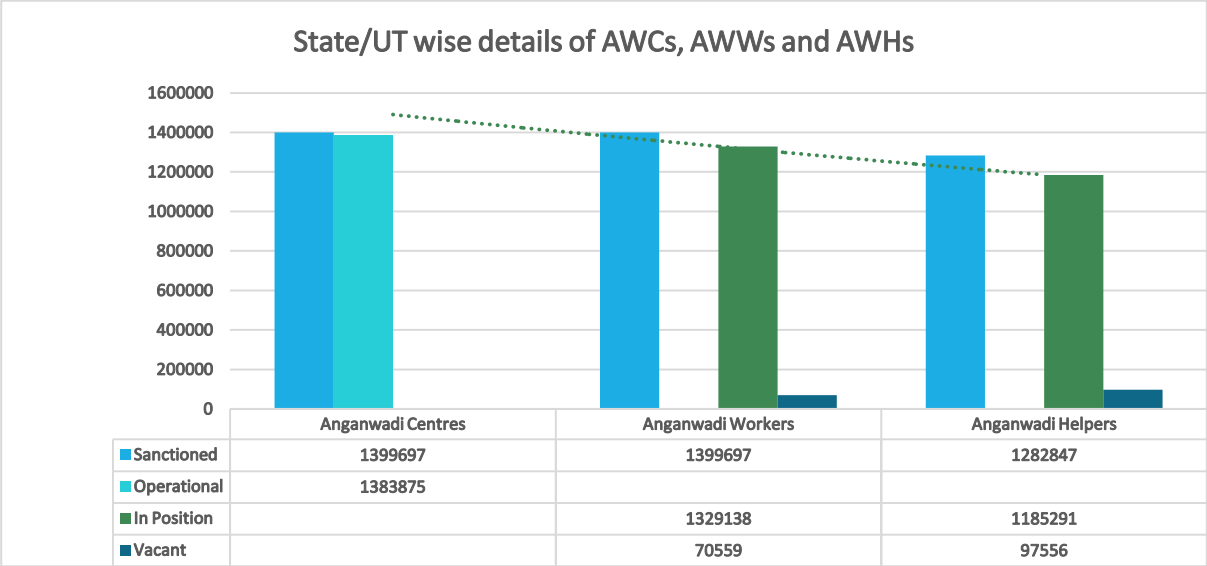
There is a provision of State Nutrition Resource Centre (SNRC) at State level for implementation of *Poshan* Abhiyan along with provision of two staffs exclusively meant for carrying out the services at District and well block level. The answer provided by Rajya Sabha states the establishing of SNRC in all the States/UTs except for Ladakh and West Bengal. **This however seems to have been established on paper merely as no trace of its existence is found physically in states like Madhya Pradesh, Bihar etc.**
The total central funds utilized under Poshan Abhiyan is 157607 lakhs under Poshan Abhiyan on IEC, comprehensive communication plan, mass media campaign

3.1.2.3. Access to Nutrition Food

Rajya Sabha in its answer to unstarred question 3430 states of having received no proposal on Balanced diet under *Poshan* Abhiyan. On access to nutritious food, the answer states that, having realized theimportance of dietary diversification government has focused on the use of locally available food, while promoting nutrition/kitchen gardens and states/UTs have been advised to include millets and coarse grains in the recipes to enhance the nutrition quality of food provided under SNP. On answer to question number 4562 asking for the number of Anganwadis growing organic vegetables, Minister, WCD states of having no separate proposal to implement the kitchen garden initiatives.

3.1.2.4. Anganwadi Centers, Anganwadi Workers and Helpers

The graph below depicts, the total workforce including Anganwadi worker and helper against the number of operational anganwadi centers in all the States/UTs. With a total workforce (in position) counts to 25 lakhs, the status of the beneficiaries is still questionable.
Also, the Poshan Abhiyan focus on the capacity building of front-line workers (9.94 lakh field functionaries) on Incremental Learning Approach only, fails to make a mark on the quality of the services provided by these field functionaries who undoubtedly are the pivots of the whole ICDS programme.



	Anganwadi Centres	Anganwadi Workers	Anganwadi Helpers
Sanctioned	1399697	1399697	1282847
Operational	1383875		
In Position		1329138	1185291
Vacant		70559	97556

These answers clearly define the priorities of the schemes and programmes being implemented which fails to take Nutrition as a serious docket.

3.2. What needs to be done? Action Point

3.2.1. Quality of services

The challenge of child mortality and undernutrition demands considerable prioritized actions. The focus should move beyond awareness campaigns. It's high time to bear in mind that communities, mothers, and families have become aware of the importance of immunization, sanitation, and safe drinking water all these years, but need a more focused approach on consumption of locally available food, use of THR solely for the beneficiaries, importance of essential Anganwadi Services as the community is not motivated enough to realize the importance of consuming and using THR solely by the beneficiaries. The government needs to realize that it still is not in a position to address the demand for all these services that too with quality. **Rather than misutilization of resources on other trainings, if front line workers would be trained on communication strategies (which have been lagging out big time) to be utilized as a tool for counselling it would add elements to the services.**

3.2.2. Universalized Maternity Entitlements

The government unwillingness towards taking convergent actions raised questions on maternity entitlements especially when it comes to centrally sponsored PMMVY scheme. This puts an anti-women and illogical condition that maternity benefits will only be provided to the first live birth while providing zero benefits for the second or third child birth. The government is leaving no stone unturned for punishing women to bear a second issue provided the fact they do not hold any decisive power over

reproductive choices. On the other hand, States are making expanded provisions by implementing their own maternity entitlement schemes, for example, in Madhya Pradesh, Mukhya Mantri ShramikPrasutiSahayataYojna makes provision of Rs. 16000 up to 2 childbirths. Odisha is running Mamata Scheme since 2011 and Tamil Nadu Government gives Rs. 180000 and 2 nutritional kits to the beneficiaries under Dr.Muthulakshmi Maternity Benefit Scheme and covers 2 live births.

The decline in early initiation of breastfeeding and stagnation in exclusive breastfeeding proves the fact that India must universalize Maternity Entitlements. Pradhan Mantri Matru Vandana Yojna provides a meagre amount of Rs. 5000 limited to first live birth and this too is an achievement if received in the bank account on time. Maternity Entitlement has a priority for minimizing maternal and child death as well as for ensuring reduction in Stunted Growth. Women especially during their pregnancy, post pregnancy and while breastfeeding their children need adequate nutrition and care, including health care. They need skilled counselling to initiate the breastfeeding within the first hour. For maintaining the exclusive breastfeeding and provide child care for the first six months of their child, they need to stay close to their children, at the risk of losing their wages. Wherefore it becomes necessary to have them provided with maternity entitlements.

Giving partial cash incentives for women to help them cover for their wage loss so that they can receive enough rest before and after the birth of their first child.i (As the provision of PMMVY and MMSPSY says). The health-seeking behavior of PW & LM can be improved by the compensation that is provided to them. (As the provision of PMMVY and MMSPSY says). Adequate nutrition during pregnancy and lactation, including good quality supplementary nutrition for pregnant and lactating mothers through the ICDS,adequate access to quality health care services, adequate access to skilled counselling and support for early initiation of breastfeeding and exclusive breastfeeding are the keys to resolve the issues.

Importance of Maternal and Child undernutrition is placed in Box -1

3.2.3. Exclusive Breastfeeding for children up to six months and Skilled counselling

The Global Strategy for Infant and Young Child Feeding, adopted by WHO Member States at the World Health Assembly in 2002, is a comprehensive approach to improving breastfeeding and complementary feeding practices (WHO, 2003). ICDS and the Health System should mainstream providing skilled counselling and support for women to practice exclusive breastfeeding for six months through adequate training of frontline workers such as ASHA, anganwadi workers and ANMs using the communication strategies to deal with the different issues in the community including the caste.

Promotion of breastfeeding, and counselling for complementary feeding, were the interventions most frequently implemented at national scale in all regions as stated in Global Policy review by WHO[ii]. However, these policies and programmes do not appear to have been translated into practice, because the rate of exclusive breastfeeding at 6 months was low in most regions.This raises the question of the quality of the techniques used for promotion and counselling. Multiple strategies are required to protect, promote and support breastfeeding and timely introductions of complementary feeding. In a life-course perspective of nutrition, appropriate infant and young child feeding is crucial to prevent all forms of malnutrition. It should be done by anadequately skilled and trained person at the family level, and supported by a “specialist counsellor in IYCF” at the cluster level to help solve the difficult problems that a mother may face.[iii]

Box 1 : Importance of maternal and child nutrition as per Lancet Series

- Maternal and child undernutrition has long-term consequences for intellectual ability, economic productivity, reproductive performance and susceptibility to metabolic and cardiovascular disease (Black et al., 2008; Victora et al., 2008). There are evidence informed interventions that, when implemented effectively, can dramatically reduce the rate of malnutrition (WHO, 2013a).
- The nutritional status measures—underweight, stunting, and wasting—were treated as risk factors whose exposures and relative risks applied to all children in the age group 1–59 months, and intrauterine growth restriction-low birthweight only for the first month of life
- Infectious diseases are important determinants of stunting.[iv] Although there can be contributions to growth faltering from respiratory illnesses or malaria, the role of diarrhea seems to be particularly important, perhaps because of its association with malabsorption of nutrients, as well as anorexia and catabolism.[v]
- Lancet series paper 1 states that Maternal and child undernutrition is extremely widespread in low-income and middle-income countries, resulting in substantial surges in mortality and overall disease burden. It estimates that stunting, severe wasting, and intrauterine growth restriction together were responsible for 2·2 million deaths, deficiencies of vitamin A and zinc were estimated to be responsible for 0·6 million and 0·4 million deaths, respectively. Iron deficiency as a risk factor for maternal mortality 0·4% of global total DALYs and Suboptimum breastfeeding was estimated to be responsible for 1·4 million child deaths [6]
- Lancet series Paper 2 provided the association that indices of maternal and child undernutrition (maternal height, birthweight, intrauterine growth restriction, and weight, height, and body-mass index at 2 years according to the new WHO growth standards) are related to adult outcomes (height, schooling, income or assets, off spring birthweight, body-mass index, glucose concentrations, blood pressure).[vi]
- It further establishes that -
    - Poor fetal growth or stunting in the first 2 years of life leads to irreversible damage, including shorter adult height, lower attained schooling, reduced adult income, and decreased off spring birthweight
    - Children who are undernourished in the first 2 years of life and who put on weight rapidly later in childhood and in adolescence are at high risk of chronic diseases related to nutrition
    - There is no evidence that rapid weight or length gain in the first 2 years of life increases the risk of chronic disease, even in children with poor fetal growth
    - The prevention of maternal and child undernutrition is a long-term investment that will benefit the present generation and their children
- Lancet series Paper 3 reviewed interventions that affect maternal and child undernutrition and nutrition-related outcomes. These interventions included promotion of breastfeeding; strategies to promote complementary feeding, with or without provision of food supplements; micronutrient interventions; general supportive strategies to improve family and community nutrition; and reduction of disease burden. It states that[vii] –
    - Effective interventions are available to reduce stunting, micronutrient deficiencies, and child deaths.
    - Improvement of complementary feeding through strategies such as counselling about nutrition for food-secure populations and nutrition counselling, food supplements, conditional cash transfers, or a combination of these, in food-insecure populations could substantially reduce stunting and related burden of disease
    - interventions for maternal nutrition (supplements of iron folate, multiple micronutrients, calcium, and balanced energy and protein) can improve outcomes for maternal health and births, but few have been assessed at sufficient scale
    - Elimination of stunting will also require long-term investments to improve education, economic status, and empowerment of women
- Lancet series Paper 4 assessed the actions addressing undernutrition in the countries with the highest burden of undernutrition, drawing on systematic reviews and best-practice reports.[viii] It clears that –
    - The period from pregnancy to 24 months of age is a crucial window of opportunity for reducing undernutrition and its adverse effects.
    - Programme efforts, as well as monitoring and assessment, should focus on this segment of the continuum of care. In addition to health and nutrition interventions, economic and social policies addressing poverty, trade, and agriculture that have been associated with rapid improvements in nutritional status should be implemented
- Lancet series Paper 5 argued to have a system capable to deliver in four functional areas: stewardship, mobilization of financial resources, direct provision of nutrition services at times of natural disaster or conflict, and human and institutional resource strengthening.[ix]
- Above arguments thusly proves the cruciality of the child care component both at the policy and intervention levels.

3.2.4. Day Care Centers or Crèches

Women across the country work long hours at paid and unpaid work, often starting to work very soon after delivery. They need support to provide adequate care and attention to their children. They need safe places or crèches, close to their work sites, run by trained workers, where they can keep their infants, and where their older children will receive hot cooked meals and health care. Crèches must be designed to meet the varying needs of children of different age groups. Infants 0-6 months need to be breastfed on demand. Children 6mths-3years of age need 5-6 small but nutritious and energy dense meals a day. Children 3-6 years of age need 3-4 small but nutritious meals a day.All these children also require organized play and learning in areas that are safe, to help them develop adequate motor and learning skills appropriate to their age, acquire concepts, language, habits and develop relationships with peers and adults.To begin with a model of anganwadi-cum-crèches to be introduced to provide this service in the village. This would be mean that these centers are open full-time, with adequate staff, training and infrastructure.

3.2.5. Diet Diversity

Given the fact that India lags behind on dithery diversity and 60 to 70 percent of Children's food plate is filled only with carbohydrate, a tiny amount of good quality protein and fat and a very small proportion of vegetables, fruits and animal products.

Dietary diversification interventions are interventions that change food consumption at the household level, such as increasing the consumption of animal-source foods (Gibson and Anderson 2009; Gibson, Perlas, and Hotz 2006). In most resource-poor settings, starch-based diets with limited access to meats, dairy, fruits, or vegetables, are the dominant diets. The objective in changing household diet is to increase the variety and quantity of micronutrient-rich foods, to decrease micronutrient deficiencies, including animal-source foods (Nair, Augustine, and Konapur 2016; Gibson 2014).
This objective will be achieved through social and behavior change activities, but can also include increased production of nutrient-rich foods and improved access to diverse foods by promoting locally available food through growing of organic food in Angawadicentres' backyard, nutrition and kitchen gardens. This is needed to keep a focus on micronutrient like mineral and vitamins along with Protein and Fat through Food Diversity.

One of the challenges in most of the parts of India is political resistance towards the distribution of eggs in nutrition programs. The rich and upper caste, overfilled stomach communities use their influence for restricting the expansion of nutrition program from plant and cereal-based nutrition to animal products. The irony is that policymakers give more value to the fundamentalist political-economic interest than the children's need and scientific approaches.

3.2.6. Promotion of Locally available food/ coarse millets:

Take Home ration stand alone is not the right strategy having the prepared meals devoid of coarse millets itself. Decentralization of preparation of Take-Home ration along with Hot cooked Meals with mandatory use of nutri-cereals and coarse grains including Jwar, Bajra, Ragi etc, locally available/diverse/wild/cultivated/uncultivated/ fruits and vegetables to be mandated.

3.2.7. Activating Nutrition Governance model

Although there have largely been numerous researches on nutrition, however a comparatively very few appear to address 'nutrition governance which is a significantly absent mileage in the march towards nutritional improvement. The Lancet framework suggests that the secondary causes of malnutrition require an extensive approach to nutrition[1]. This has imperative implications on nutrition governance, in terms of the proper organization and coordination between different stakeholders and government. Such interventions determine which component or stakeholders may demand focus on nutrition as well as the nature of that focus.[2]

Establishing Integrated Management of Moderate Acute Malnutrition and Severe Acute Malnutrition along with a committed framework of Nutrition Governance and further –

1. Activate programmes and approaches inter-related with Nutrition directly or indirectly including agriculture, horticulture, MNREGA and food security, Social Safety Nets, early child development (ensuring IYCN and proper growth monitoring), maternal mental health, women's empowerment, water and sanitation and health.
2. Prioritizing evidence-proven activities that focus on combination of sectors where nutrition sensitive work can be tracked (agriculture, health, social protection, early child development, education, and water and sanitation)
3. Addressing underlying determinants of nutrition like poverty, food security, existence of an access to resources such as health care and clean water
4. Establishing role of PRIs andLocal Bodies and should be given central authority (along with Capacity Building, Funds, Functionary Management, and freedom to promote production management) in the malnutrition management framework.
5. National Food Security Act, 2013 categorically makes Vigilance Monitoring and Social Audit of food and nutrition programs mandatory, but none of the states have taken any step towards community-centric (not the expert agency centric) institutional reforms as per the motives of NFSA.

This fact should not be missed that COVID19 is going to leave a long-lasting negative impact on Malnutrition and Child Mortality in India. It is estimated that around 2.2 million women underwent pregnancy in the fearful time of COVID19 pandemic and either Health and Welfare system was busy in managing the pandemic or it was hiding from its role in the challenging times.According to the findings of The Lancet Global Health, the report indicates that under-5 mortality and wasting will witness a steep rise of around 50 percent and may cause around 600000 additional child deaths in one year in India as there is a reduction of 39 to 50% in key health and nutrition services, like family planning, immunization, pre and postnatal care, nutrition support etc.

3.2.8. Discouraging Fortification

There is a serious challenge that is imposed is influencing the universalization of fortification in ICDS, PDS, MDM, and in open supplies as well. Provided the evidences and statistics from various studies and meta-analysis, fortification is not the core solution. In fact, fortification of rice with iron alone or in combination with other micronutrients may make little or no difference in the risk of having anaemia. Fortification of rice with iron and other micronutrients such as vitamin A or folic acid may make little or no difference in the risk of having vitamin A deficiency or on the serum folate concentration as

1https://www.thelancet.com/pb/assets/raw/Lancet/stories/series/nutrition-eng.pdf
2https://scalingupnutrition.org/wp-content/uploads/2013/05/SUN_Framework.pdf

concluded in 17 studies in 4 continents.[3] Bran which is lost during processing and polishing in rice is the major contributor to Vitamin B complex and Vitamin E and minerals and must be promoted. Rather than pushing fortification, addressing household food and nutrition security with Nutrition-rich diverse varieties of crops with priority focus on increasing access to fat and protein by providing eggs, millets, and local food in ICDS and Pulses and Edible Oil in PDS is the key to unlock nutrition security and boost immunity

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3. [iii]BPNI : Strategies for Children under Six working Group on children under six
4. [iv] Scrimshaw NS, Taylor CE, Gordon JE. Interactions of nutrition and infection. Geneva: World Health Organization, 1968.
5. v Maternal and child undernutrition: global and regional exposures and health consequences Robert E Black, Lindsay H Allen, Zulfi qar A Bhutta, Laura E Caulfi eld, Mercedes de Onis, Majid Ezzati, Colin Mathers, Juan Rivera, for the Maternal and Child Undernutrition Study Group*
6. vi Maternal and child undernutrition: consequences for adult health and human capital Cesar G Victora, Linda Adair, Caroline Fall, Pedro C Hallal, Reynaldo Martorell, Linda Richter, Harshpal Singh Sachdev, for the Maternal and Child Undernutrition Study Group*
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[3] https://sunbusinessnetwork.org/about/governance/