5. HealthCare Challenges

Health status of a particular region or state is supposed to be a crucial indicator of overall human development. Better health status enhances capability of people by improving their skills and productivity. It depends on a number of issues. The available health care infrastructure and the socio-economic characteristics of the community determine the nature of utilization of health care in a sub-region. Thus, access to health care, a combined indicator of availability and affordability from supply side and acceptability from demand side, enhances the utilization of institutional health care services. This is expected to automatically improve the health status, generally measured by indicators like Life Expectancy at Birth (LEB) or Infant Mortality Rate (IMR). Following this framework, the chapter will be divided into three broad sub-sections: Health Care Infrastructure, Health Care Utilization and Health Status.

5.1 Health Care Infrastructure

Healthcare, assumed to be a 'merit good' with considerable externality, is expected to be financed and provided by the state in a typical developing country setting. Hence, in this section we will primarily focus on the health care infrastructure provided by the state, especially primary health care. At the state level, the first-tier primary health care services are available in Health Sub-Centres(HSC). As per norm, one HSC is expected to be available per 5000 population and only health workers (not a qualified doctor) in the forms of Auxiliary Nurse Midwife (ANM) and Accredited Social Health Activists (ASHA) are posted here. The next tier is Primary Health Center (PHC), where medical doctors are available. The norm for one PHC is that it should serve at most 30,000 persons. Finally, Community Health Centre (CHC) is the last tier of primary health care services, where specialist doctors (gynecologist, anesthetist, pediatricians etc.) are available. Table 5.1 shows the status of shortfall of HSC, PHC, CHC in Tripura vis-a-vis some other states and overall Indian average. The shortfall is calculated as the difference between requirement as per population norm and actual number functioning at the state levels.

Table 5.1: Shortfall of primary health care infrastructure across states

State/ UT	Shortfall of HSC percent of Requirement	Shortfall of PHC percent of Requirement	Shortfall of CHC percent of Requirement
Manipur	17.29	-6.25	15.00
Meghalaya	44.40	5.26	3.57
Mizoram	-115.12	-128.00	-50.00
Nagaland	12.97	-85.29	-23.53
Sikkim	-30.09	-33.33	50.00
Tamil Nadu	-15.57	-9.43	-23.40
Tripura	-40.67	22.94	33.33
West Bengal	20.84	57.78	35.50
India	15.02	14.72	26.75

Source: GoI,MoHFW, Statistics Division2014

Figures show that in terms of HSC, Tripura has negative shortfall, meaning more HSCs are available than are required, which is commendable. However, the state has many regions dominated by tribal population and hence its requirement norms are higher. Table 5.1 shows only average shortfalls. In comparison, Tripura definitely offers better access to primary health care compared to other small states like Manipur, Meghalaya, Nagaland etc.,which too have significant shares of tribal population. More importantly, Tripura has more HSCs functioning in tribal areas compared to the requirement as per population norm, while that is not true ofmost of the other seven-sister states, namely, Sikkim, Manipur, Meghalaya and Nagaland (GoI,MoHFW, Statistics Division2014). However, in next tiers of PHC and CHC, Tripura has positive shortfalls, indicating lower availability of these facilities compared to the population norm. In both cases, the shortfall is significantly higher than the all-India average. Mizoram and Tamil Nadu, on the other hand, have higher availability compared to requirement in all three tiers of primary health care services.

The picture of relatively better availability of HSC, however, isblurred when we focus on the available infrastructure in these HSCs (Table5.2). In Tripura, out of 972 functioning HSCs, only 20 percent have quarters for ANM, while the corresponding figure for India is 55 percent. Again, only 9 percent of ANM reside at those quarters; which is extremely low compared to the Indian average. Interestingly, West Bengal has even lower shares of ANMs residing in ANM quarters, while in Kerala the figure is as high as 70 percent. It was also noted during field survey that many HSCs do not have any ANM and are run by Male Health Workers.This shortage is likely to affect the ANC procedures adversely.

Similarly, availability of regular water supply, electricity and connectivity to all weather roads are strikingly lower in Tripura in comparison to all India figures and some major states. The figures for Tamil Nadu show that all the HSCs there have these facilities. In short, though general availability of HSC in Tripura is significantly high, the quality of infrastructure is sub-optimal. Additionally, 1.3 percent of HSCs in Tripura do not have any health worker posted; though this figure is considerably lower than the Indian average of 3.2, it is still higher than other small states in the North East, except Manipur. Evidently, manpower crisis is persistent in Tripura as no specialists are found in position in any of its CHCs, which is rather unusual for all states (GoI,MoHFW, Statistics Division, 2014).

Table 5.2: Type of infrastructure available at the HSCs in Tripura and other states

Facilities	Tripura	India	Kerala	Tamil Nadu	West Bengal
Number of HSC Functioning	972	152326	4575	8706	10356
% of HSC with ANM Quarter	20.0	55.0	55.3	76.6	25.6
% of HSC with ANM living in HSC Quarter	9.3	63.5	70.2	37.9	7.9
% of HSC functioning as per IPHS norms	10.2	24.7	0.0	100.0	30.2
%of HSC without Regular Water Supply	57.2	29.1	13.3	0.0	36.7
% of HSC without Electric Supply	57.4	25.9	2.4	0.0	32.0
% of HSC without All-Weather Motorable Approach Road	25.7	11.7	5.0	0.0	17.2

Source: GoI,MoHFW, Statistics Division, 2014

Available information about district level infrastructure posits that availability of HSCs per 5000 population is the highest in South Tripura district, while it is the lowest in West Tripura. Apart from the latter district, all othershave an availability index higher than 1, indicating more HSC per 5000 population than the stipulated norm (Table 5.3).

Table 5.3: Index of availability of infrastructure across districts in Tripura

Infrastructure with population norm	HSC*	PHC^	CHC#
Dhalai	1.74	1.03	0.26
Gomati	1.55	0.75	0.68
Khowai	1.62	0.64	0.61
North Tripura	1.08	1.08	0.24
Sipahijala	1.57	0.68	0.83
South Tripura	1.75	1.32	0.93
Unakoti	1.34	0.76	0.36
West Tripura	0.90	0.39	0.22
Tripura	1.37	0.78	0.49

*per 5000 population, ^per 30000 population, # per 1,00,000 population

Source: GoI,MoHFW, Statistics Division, 2014

In case of availability of PHCs per 30,000 population and CHC per 1,00,000 population, the highest and lowest values continue to be in South Tripura and West Tripura respectively, though in all cases of CHC the index is less than 1. For PHCs, the index is greater than one only in two districts. This again hints that though availability of HSCs is more or less satisfactory in Tripura, there is a serious dearth of health infrastructure in higher tiers of facilities.

The state has 13 Sub-Divisional hospitals (SDH) and 3 district hospitals (DH) as per the latest report from the Government of Tripura. Table 5.4 shows their district-wise breakups. Among sub-divisions, only Dhalai does not have any SDH, while in West Tripura, there is no SDH or DH. This is probably compensated by presence of two Medical College Hospitals, both in West Tripura.

Table 5.4: Availability of SDH and DH (in numbers) across districts in Tripura

Districts	SDH	DH	Population catered per bed in all types of hospitals
Dhalai	3	1	811.65
Gomati	2	1	1029.23
Khowai	1	0	1590.12
North Tripura	2	0	1490.86
Sipahijala	2	0	1521.03
South Tripura	2	0	1025.60
Unakoti	1	1	778.89

West Tripura	0	0	479.73
Tripura	13	3	759.23

Source: GoT, Department of Health & family Welfare,no date, GoT, Directorate of Economics and Statistics, Planning (Statistics) Department, 2014 and Census of India 2011.

This partial imbalance in distribution of resources might pose certain problems in utilization of health care services. West Tripura, owing to the pressure of dense population, has far lower availability of primary health care facilities (already discussed above). This shortage would lead to overcrowding of the two super specialty teaching hospitals in the district, thus compromising the quality of services offered there.

Table 5.5 shows the availability of beds for medical treatment across districts. Clearly, the number is by far the highest in West Tripura, while being lowest in Khowai. However, if we look at the density of beds, we find that on average one bed caters to 759 people in Tripura as a whole (Table 5.4). The worst situation is observed in Sipahijala district, where one bed caters to around 1521 population. The corresponding figure is only 479 in West Tripura, perhaps owing to crowding of private health care institutions in the district.

Table 5.5: Availability of medical beds in the state

Item	Districts								Total
	West	Sepahijala	Khowai	Unakoti	North	Gomati	South	Dhalai	
Number of Beds	1914	318	206	355	280	429	420	466	4839
In Hospitals	1782	130	100	275	150	350	150	350	3287
In PHCs/RHs	132	118	106	80	130	142	270	116	1094

Source: GoT, Directorate of Economics andStatistics, Planning (Statistics) Department, 2014

In terms of medical manpower, the state suffers from huge shortages (Table5.6). The biggest shortages are evident for Medical Officer (Allopath), where more than 35 percent sanctioned posts are vacant. Though nurses are available in good numbers, the shortfall is critical in medical support staffs, namely Lab Technicians, Radiographers, Pharmacists and Ophthalmic assistants.

Table 5.6: Shortages in Medical Manpower in Tripura

Medical Staff	Percentage of shortages
Lab Technician	29.71
Radiographer	33.33
Pharmacist	24.41
Nurse	1.39
Medical officer Allopath	35.59
Medical officer AYUSH	31.29
Ophthalmic assistant	24.14

Note: Shortages are defined as percent share of manpower in position out of total sanctioned posts.
Source: GoT, Directorate of Economics and Statistics, Planning (Statistics) Department, 2014

5.2 Health Care Utilization

Given the health care infrastructure and health care reform in the state (in the form of NRHM), the utilization of health care services has increased significantly in Tripura. Comparing figures for DLHS 3 (2007-08) and DLHS 4 (2012-13), we find large increments in utilization of Ante-Natal Care (ANC) (see Table5.7). Share of Institutional Delivery (ID) increased by more than 50 percent, higher than the other two states (Tamil Nadu and West Bengal) with which comparisons are presentedin the same table. Interestingly, out of the total number of mothers delivering babies in hospital, the share of mothers receiving Post Partum Care (PPC) in Tripura increased by almost 100 per cent, far higher than in West Bengal and Tamil Nadu. Improvement in full vaccination status of the children too was impressive, while surprisingly, the figures registered in most of the parameters dropped in Tamil Nadu. The figures related to children put on breast feeding within one hour of birth, however,stagnated in the state.

Regarding childcare, Tripura registered impressive growth in coverage of vaccination, though some comparable states like Tamil Nadu and West Bengal found problems in it. However, early breastfeeding practices could not be improved much in Tripura.

Table 5.7: Utilization of health care services in three states over years

	2007-08 (DLHS 3)			2012-13 (DLHS 4)			Percentage change		
	TRP	TN	WB	TRP	TN	WB	TRP	TN	WB
Mean age at marriage for girls (years)	20.2	21.3	18.5	20.9	22	19.2	3.47	3.29	3.78
Pregnant women who had ANC in first trimester (%)	39.7	76.8	42.4	83.7	90.7	96.2	110.83	18.10	126.89
Pregnant women who had full ANC (%)	13.3	51.8	19.5	36.9	42.3	42.3	177.44	-18.34	116.92
ID (%)	46.3	94.1	49.2	72.7	98.9	74.6	57.02	5.10	51.63
ID at government hospitals (%)	43.2	51.3	38.3	64.6	62.9	54.8	49.54	22.61	43.08
Mothers receiving PPC after 48 hours of ID (%)	29.1	86.3	58.5	57.9	61.6	61.5	98.97	-28.62	5.13
Full Vaccination (%)	38.5	81.2	75.8	48	56.2	79.5	24.68	-30.79	4.88
Child under age of 3 years breastfed within an hour (%)	41.9	77.5	39.3	41.9	70.7	50.4	0.00	-8.77	28.24

Source: GoI, MoHFW& IIPS, 2008& 2013

Table 5.8: Change in maternal health care utilizationacross districts in Tripura

Delivery Care (women who had live/still birth during reference period) (%)	West Tripura		North Tripura		South Tripura		Dhalai	
	2012-13	% change over 07-08 & 2012-13	2012-13	% change over 07-08 & 2012-13	2012	% change over 07-08 & 2012-13	2012-13	% change over 07-08 & 2012-13
Institutional delivery	84.4	26.54	62.6	19.01	69.1	50.87	70.6	62.67
Delivery at government health institutions	70.5	14.45	54.6	16.17	65.5	51.27	67.2	61.93
Delivery at private health institutions	13.9	172.55	8	42.86	3.6	44.00	3.4	78.95
Delivery by Caesarean section at government health institutions	23	76.92	6.9	18.97	9.5	35.71	7.1	51.06
Delivery by Caesarean section at private health institutions	12.6	157.14	4.6	31.43	2.00	53.85	2.4	84.62
Delivery at home conducted by skilled health personnel (out of total deliveries)	4.8	860.00	4.9	276.92	5.00	1566.67	4.1	95.24
Mothers who received post-natal care within 48 hours of Institutional delivery	65.8	93.53	60.7	35.79	42.70	192.47	56.7	45.38
Mothers who received post-natal care within two weeks of Institutional delivery	72.3	89.76	62.1	24.70	47.1	169.14	58.8	40.00

Delivery attended by skilled health personnel	89.2	32.74	67.5	25.23	74.1	60.74	74.7	64.18

Source: GoI, MoHFWand IIPS, 2008and 2013, DLHS 3 (2007-08) and DLHS 4 (2012-13)
Note: DLHS 3 and4 reports figures for erstwhile four districts of the state only

Moving to similar analysis across districts faces a challenge. DLHS 3 and 4 do not report data about the newly formed districts. Confining ourselves toanalysis of changes only in erstwhile four districts, Table 5.8 depicts interesting features. Itshows that institutional delivery increased its share in all districts, the highest change being ain West Tripura. Shortages in primary health care facilities (discussed in an earlier section) weremore than compensated here by mushrooming presence of large numbers of private hospitals, nursing homes and clinics in and around Agartala. 172 percent increase in delivery in private health institutions strongly supports this view. West Tripura performed well in other indicators of maternal care too.

Table 5.9: Health care utilization in all districts in 2013-14

	% 1st Trimester registration to Total ANC Registrations	% ID to Total Reported Deliveries	% Women receiving PPC within 48 hours of delivery to Total Reported Deliveries
Dhalai	71.6	86.4	88.7
Gomati	54.8	82.4	73.2
Khowai	77.0	83.6	84.2
North Tripura	46.3	63.4	75.5
Sipahijala	65.6	78.8	87.0
South Tripura	53.2	82.6	90.6
Unakoti	38.9	76.0	86.0
West Tripura	54.5	95.3	84.5

Source: NHM and NationalHealth Systems Resource Centre, 2014

From Table 5.9 we find the latest picture in terms of maternal health care utilization as per Health Management Information System (HMIS) sources. Clearly, Khowai, West Tripura and South Tripura perform the best in terms of timely intake of ANC, ID and PPC respectively. Unakoti and North Tripura perform the worst in respective indicators. Further disaggregation of data suggests that among four health sub-divisions in Dhalai district, Gandacherra performs the best in terms of ANC, Longtharai Valley performs the best in ID, while Ambasa has the highest share of mothers receiving PPC within 48 hours of delivery. In Gomati district, Udaipur health sub-division performs better than Amarpur in terms of allthree crucial aspects of maternal health

care. In North Tripura, Kanchanpur has higher ANC and ID shares, while Dharmanagar performs better in terms of PPC.

Table 5.10: Utilization of child-care facilities

	% children receiving Vit A dose 1 out of live births	% children given Vit A dose 9 out of those receiving dose 1	FV% of live births	Measles% of live births
Dhalai	76.4	25.2	88.77	94.8
Gomati	74.3	13.5	75.96	81.1
Khowai	121.2	42.8	144.50	138.7
North Tripura	99.4	31.5	105.28	126.9
Sipahijala	140.8	31.4	170.89	178.2
South Tripura	95.6	15.2	111.81	128.4
Unakoti	129.5	26	96.10	110.8
West Tripura	57.6	18.6	60.16	75.7

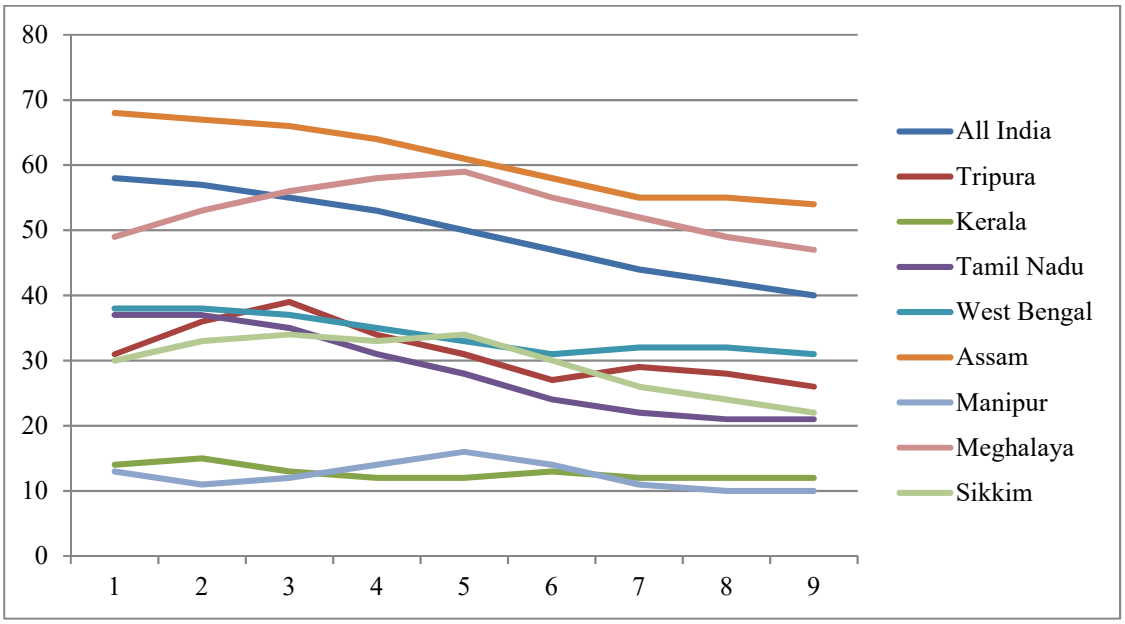
Source: NHMand National Health Systems Resource Centre, 2014

In terms of child health care, HMIS data show that four districts, namely, Khowai, North Tripura, Sipahijala and South Tripura have all children receiving all nineessential vaccinations. The worst performance was found inWest Tripura. This figure is quite surprising because institutional delivery assumes the highest share in this district. However, figures more than 100 percent in Table5.10 cast serious doubts on the accuracy of data collected and reported.

5.3 Health status

Given the above mentioned analysis of health infrastructure and health care utilization, we now turn towards the final health status of the state of Tripura. For this purpose we deal with two main indicators, namely, Infant Mortality Rate (IMR) and Nutritional status, captured by the prevalence of anemia among children and women in reproductive age. Both of these are expected to represent the overall health of population, as well as public health of the economy.

Figure 5.1: Trends of IMR of selected states during 2005-2013



Source: GoI,MoHA, Registrar General, India, no date, SRS Bulletins

Figure 5.1 and Table5.11explain that Tripura enjoyed considerably lower IMR compared to the overall Indian figure. It had IMR values of 31 and 26 respectively in 2005 and 2013, thus registering a fall of 16 percent. For analysis, the choice of the period is not exactly arbitrary. It represents the period, which can be called thepost-health sector reform under National Rural Health mission (NRHM). Identical centre-controlled policies were introduced across the states, enabling a similar scenario of comparability. During the above mentioned period, India registered a fall from 58 to 40, indicating a reduction by 31 percent. Therefore, it becomes clear that though Tripura enjoyed better IMR figures, compared to the Indian average, the rate of reduction of IMR in the state has been comparatively lower. Critics might argue that this rate of reduction depends crucially on the initial level of IMR at the base period. For that, we compare four states, which had similar IMRs (in the range of 30-38) at the base period of 2005. These are Tripura, Tamil Nadu, West Bengal and Sikkim. Among these states, Tamil Nadu undoubtedly performed the best by reducing IMR by a whopping 43 percent. Sikkim, too, was successful in reducing IMR by 27 percent. Between West Bengal and Tripura, two states sharing some

similarities in demographic contour and political legacy, Tripura performed relatively worse than West Bengal.[1]

Table 5.11: IMR of selected states along with the percent of change

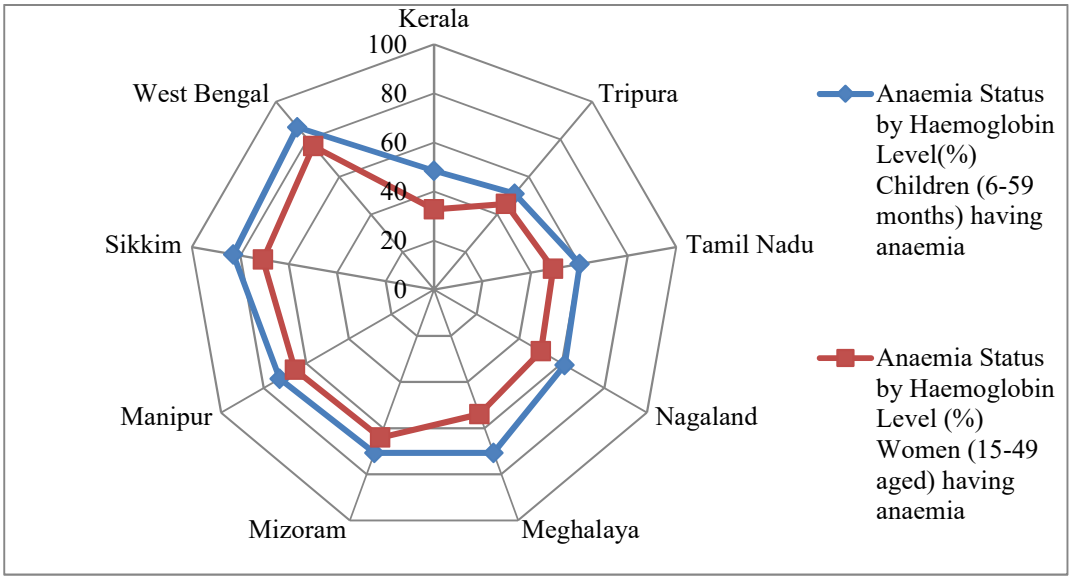
States	IMR in 2005	IMR in 2013	Change in points between 2005 & 2013	% Change between 2005 & 2013
All India	58	40	18	31.03
Tripura	31	26	5	16.13
Kerala	14	12	2	14.29
Tamil Nadu	37	21	16	43.24
West Bengal	38	31	7	18.42
Assam	68	54	14	20.59
Manipur	13	10	3	23.08
Meghalaya	49	47	2	4.08
Sikkim	30	22	8	26.67

Source: GoI,MoHA, Registrar General, India, No date, SRS Bulletins

On the contrary, population of Tripura reported relatively better nutritional status, as indicated by prevalence of anemia. In fact, DLHS 4 state factsheets show that Tripura has the second lowest prevalence of anemia both among children of 6-59 months and women in the reproductive age (15-49 years), only after Kerala. Figure 5.2 posits that Tripura has better nutritional status compared to other North Eastern states, as well as major states like West Bengal and Tamil Nadu. In fact, West Bengal is found to have highest prevalence of anemia both among children and women among all states.District-wise data depict that prevalence of anemia is the lowest in South Tripura, while being alarmingly high in West Tripura (Table5.12).

Figure 5.2: Prevalence of anemia among children and women in selected states

[1] "It is alarming to note that according to the factsheets of NFHS – 4 the IMR of Tripura has increased to 31 deaths per 100 live births as compared to 27 per 1000 live births reported in NFHS – 3. This compares quite unfavourably with the performance of some of its neighbor such as Meghalaya that has witnessed a big decline in IMR by 14 points, coming down from 44 per 1000 live births in NFHS – 3 per 1000 live births to 30 in NFHS – 4."



Source: GoI, MoHFWand IIPS, 2013, DLHS 4 (2012-13)

Table 5.12: Prevalence of anemiaamong districts of Tripura

Districts in Tripura	Anemia Status by Haemoglobin Level (%) among Children (6-59 months) having anemia	Anemia Status by Hemoglobin Level (%) among Women (15-49 aged) having anemia
West Tripura	69.7	64.0
Dhalai	50.7	44.0
North Tripura	47.4	41.7
South Tripura	41.1	39.5

Source: GoI, MoHFWand IIPS, 2013, DLHS 4 (2012-13)

Note: DLHS 4 reports figures for erstwhile four districts of the state only

Quantitative data on food intake is rare. The earlier HDR of the state finds that that there were major differences between the tribal and the non-tribal villages. Among tribal households, the intake of cereals and millets, leafy vegetables and other vegetables was above the recommended daily allowance. Primary survey for this report finds that miniscule shares of tribal population of the state consume protein based food, including eggs, meat, fish and pulses everyday. These figures are significantly different from other social classes. The regular consumption of vegetables and fruits too are lower compared to high caste people.

Table 5.13: Shares of population by caste consuming specific food everyday

caste	Vegetable	Egg/Meat/ Fish	Milk	Fruits	Pulses
SC	80.96	11.81	31.33	2.41	49.28
ST	81.39	6.55	8.99	2.58	14.77
OBC	86.17	14.42	29.08	6.5	58.75
Others	83.96	15.27	35.16	5.32	50.17

Source: Pratichi HouseholdSurvey 2015

Child Nutrition and Anganwadi Centers (AWC)

The Integrated Child Development Services (ICDS) scheme has been in place in Tripurasince 1975. The state has expanded its ICDS network significantly. In 2013-14 they had 9911 Anganwadi centres as compared to the network of 3,902 centres in 2006 or 6122 centres in 2007.

Table 5.14: Availability of ICDS infrastructure across districts, 2013-14

Item	Districts								Total
	West	Sepahijala	Khowai	Unakoti	North	Gomati	South	Dhalai	
Project	6	6	6	8	8	8	8	6	56
Anganwadi Centers	1282	1257	658	1325	1291	1773	1042	1283	9911
Anganwadi workers	1282	1257	658	1325	1291	1773	1042	1283	9911
Anganwadi Helpers	1282	1257	658	1325	1291	1773	1042	1283	9911

Source: GoT, Directorate of Economics and Statistics, Planning (Statistics) Department, 2014

Tripura's investment in the AWCs for improving child nutrition related services is also borne from the findings of the Rapid Survey on Children 2013-14 carried out by UNICEF and published recently by the Ministry of Women and Child Development of the Government of India. The table at 5.15 below provides the status of infrastructure of the AWC centres of Tripura in comparison to the national average as well as two of the better performing states, viz., Kerala and TamilNadu. The status of infrastructure of West Bengal, a state with which Tripura had some socio–political commonality has also been included in the table. The infrastructural

arrangement of AWC in Tripura is not only considerably better than that of the national average or West Bengal, but in many respects they surpass those of Keral and Tamil Nadu also. There is,however,an element of concern in the fact that about 40 percent of the centers remain open for less than four hours. This gap needs to be urgently addressed.

Table 5.15: Infrastructure Facilities at Anganwadi centers: an interstate comparison

	India	**Tripura**	Kerala	Tamil Nadu	West Bengal
A. AWC functioning in					
1. Own ICDS building (%)	40.5	**94.4**	86.8	72.1	40.3
2. Rented building (%)	21.3	**1.9**	8.4	14.0	11.8
3. Panchayat/ school building (%)	49.8	**0.8**	4.8	7.8	16.0
4. Other (%)	11.1	**2.9**	0.00	6.1	32.0
B. Various infrastructure facilities in AWCs					
1. Separate kitchen (among those centres which are cooking supplementary food in the AWC) (%)	52.7	**86.1**	93.6	83.0	50.0
2. Cooking supplementary food in the same room where PSE sessions are conducted (%)	15.9	**3.2**	4.8	8.3	8.1
3. Cooking supplementary food in open space (%)	19.9	**4.5**	0.0	6.2	26.4
4. Barrier free access for physically challenged children (%)	25.3	**25.7**	34.2	3.7	21.4
5. Having toilet facility (%)	43.4	**73.3**	87.0	58.2	47.1
6. Access to drinking water					
i) Within the premises of AWC (%)	44.7	**54.5**	50.8	50.1	42.5
ii) Outside the premises of AWC but within 50 meters of AWC (%)	62.9	**29.7**	52.7	64.0	67.3
7. Having electricity connection (%)	32.4	**11.3**	54.0	82.7	14.1
8. Percentage of AWCs open for at least for 4 hours per day (%)	93.1	**59.1**	100.0	100.0	81.1

Source: GoI, Ministry of Women and Child Development, 2014

The AWCs in Tripura are utilized more optimally by the people compared to the national average, as well as with better off states like Kerala or Tamil Nadu, or state with similar socio-political characteristics like West Bengal, as would be evident from Table 5.16 below. Agreater

proportion of AWCs are offering all the six services than the other states. Except for the indicator relating to'proportion of lactating mother using the centres', the AWCs are better utilized.

Table 5.16: Utilisation of AWCs in Tripura

	India	**Tripura**	Kerala	Tamil Nadu	West Bengal
Supplementary food					
Children aged 6-35 months	49.2	**70.0**	43.2	42.3	71.9
Children aged 36-71 months	44.2	**78.4**	36.4	26.5	69.6
Pregnant women	40.7	**60.0**	23.0	45.7	55.6
Lactating mothers	42.4	**27.2**	15.0	30.5	46.5
AWCs providing services					
Supplementary nutrition	96.7	**99.8**	100.0	98.3	96.5
Pre-School Education	90.6	**91.5**	99.1	88.8	87.4
Immunization	82.1	**99.2**	71.1	76.9	42.9
Nutrition and health education	64.7	**85.6**	89.8	77.6	40.0
Health check-up	60.8	**94.2**	56.2	65.1	51.0
Referral	43.1	**75.1**	31.4	57.6	27.7
Four or more services	71.5	**95.9**	86.8	76.6	44.0
All six services	29.3	**62.4**	11.8	38.3	7.9

Source: GoI, Ministry of Women and Child Development, 2014

Nutritional status of children

The Rapid Survey on children 2013-14 had found the nutritional status of the children in Tripura to be closer to the national average and somewhat below the other states with whom we have been attempting to compare the health status of this state. But the level of any of the manifestations of malnourishment of the tribal population is comparable with the state average and in some cases, is even marginally better. (We have noted a similar phenomenon in respect of education also). The level of malnourishment of the tribal children on the whole is comparable to the average of the general population, in marked contrasts to the other states where the tribal children appear to be in a disadvantageous position.

Table 5.17: Nutritional Status of Children

Percentage of children aged 0-59 months	India		Tripura		Kerala		Tamil Nadu		West Bengal	
	Total	ST	Total	ST	Total	ST	Total	ST	Total	ST
Stunted (Height for age below -2SD)	38.7	42.3	31.0	31.0	19.4	20.7	23.3	25.5	34.7	40.5
Severely stunted (Height for age below -3SD)	17.3	19.5	15.0	15.2	8.0	8.3	9.3	7.7	12.8	13.7
Wasted (Weight for height below -2SD)	15.1	18.7	17.1	16.3	15.5	28.0	19.0	26.5	15.3	18.9
Severely wasted (Weight for height below -3SD)	4.6	5.3	7.0	7.2	5.4	14.1	6.3	7.8	3.9	1.4
Underweight (Weight for age below -2SD)	29.4	36.7	30.5	29.6	18.5	21.9	23.3	22.7	30.0	39.7
Severely underweight (Weight for age below -3SD)	9.4	13.0	16.8	16.5	5.7	6.3	6.1	8.2	8.9	8.3

Source: GoI, Ministry of Women and Child Development, 2014

Some idea of the progress made by the state in providing quality nutrition related services to all children could be obtained by comparing the status reported in NFHS 3 (2005-06) with those

available in the recently published NFHS 4 (2015-16) factsheet for the state. We note that the proportions of stunted, wasted and underweight children in Tripura havedecreased considerably.

Table 5.18: Change in nutritional status of children in Tripura between NFHS 3 and NFHS 4

Indicator	NFHS 3 (2005-06)	NFHS 4 (2015-16)
Stunted (Height for age below -2SD)	35.7	24.3
Wasted (Weight for height below -2SD)	24.6	16.8
Severely wasted (Weight for height below -3SD)	8.6	6.3
Underweight (Weight for age below -2SD)	39.6	24.1

Source: GoI, MoHFWand IIPS, 2006 and 2016

Even though the fieldwork for NFHS 4 was held between 2nd February to 2nd August 2015, the district wise factsheets have been published on the basis of the four older districts only. Thus, we have not been able to ascertain the status of child malnourishment across the new districts. The distribution across the old districts, however, indicates that extent of child malnourishment in the old districts of North Tripura, South Tripura and Dhalai are higher than the state average. Considerably higher proportion of malnourished children in the tribal district of Dhalai particularly is of serious concern.

Table 5.19: Nutritional status of childrenacross districts

Percentage of children aged 0-59 months	West Tripura			North Tripura		South Tripura		Dhalai		Tripura
	Urban	Rural	Total	Rural	Total	Rural	Total	Rural	Total	Total
Stunted (Height for age below -2SD)	15.0	22.5	19.5	29.4	29.0	26.3	25.0	33.8	32.5	24.3
Wasted (Weight for height below -2SD)	13.3	14.9	14.2	16.1	14.8	21.5	21.5	24.7	23.3	16.8

Severely wasted (Weight for height below -3SD)	6.3	5.9	6.1	5.1	4.3	6.4	6.1	12.6	12.1	6.3
Underweight (Weight for age below -2SD)	18.4	19.4	19.0	30.4	30.7	25.8	25.8	27.2	27.2	24.1

Source: GoI, MoHFWand IIPS, 2016, NFHS 4 (2015-16)