Chapter-1

Introduction

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The focus of India's National Health Policy 2017 is to strengthen the trust of the common man in the public healthcare system by making it predictable, efficient, patient-centric, affordable and effective, with a comprehensive package of services and products that meet immediate healthcare needs of most people. At the global level, the Sustainable Development Agenda aims to ensure healthy lives and promote well-being for all at all ages by 2030 as per Sustainable Development Goal (SDG) 3.

In this context, the performance of the public healthcare system in the State of Uttar Pradesh (UP), the most populous State in India with more than 20 crore population, would be one of the most critical factors in achieving goals of National Health Policy and SDG 3 for the country as a whole. This assumes even more importance as the health indicators in UP lag much behind the national average as shown in **Table 1**.

Table 1: Health Indicators

Sl. No.	Health Indicator	Uttar Pradesh		India	
		2011	2016	2011	2016
1	Birth Rate (in *per cent*)	27.8	26.2	21.8	20.4
2	Death Rate (in *per cent*)	7.9	6.9	7.1	6.4
3	Total Fertility Rate (number of births per woman)	3.4	3.1	2.4	2.3
4	Institutional Deliveries (as *per cent* of total deliveries) [2]	56.7	67.8	67.0	78.9
5	Maternal Mortality Rate (MMR) (*per* lakh live births)[3]	292	201	178	130
6	Infant Mortality Rate (IMR) (*per* 1000 live births)	57	43	44	34

(Source: National Family Health Survey-4, Sample Registration System, Annual Health Survey-3, GoI)

National Family Health Survey-4, 2015-16 (NFHS-4) reported that in UP only about 20 *per cent* (the lowest among all States in India) of households generally use a government health facility as compared to 45 *per cent* average for India; more than three-fifths of the surveyed households in UP cited '*poor quality of care'* as a reason for not generally using a government health facility, while '*no nearby facility'* and '*waiting time too long*' were also reported as reasons by around 48 *per cent* and 36 *per cent* of the surveyed households, respectively.

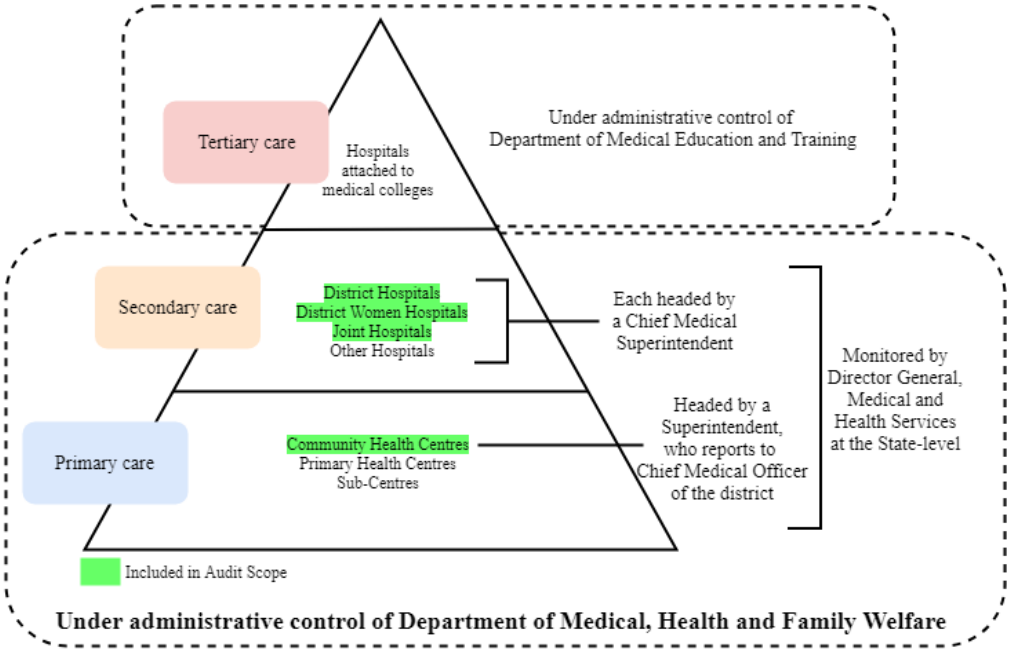
1.1. Public healthcare facilities in the State

The landscape of public healthcare facilities in Uttar Pradesh is structured into three levels in the State for providing primary care, secondary care and tertiary care. While tertiary healthcare is administered by the Department of Medical Education and Training, the secondary and primary healthcare is administered

[2] Data for institutional deliveries pertains to 2012-13 and 2015-16
[3] Combined figures for Uttar Pradesh and Uttarakhand

by the Department of Medical, Health and Family Welfare, Government of Uttar Pradesh (GoUP), as shown below:

Figure 1: Public healthcare facilities in Uttar Pradesh



1.1.1. Funding for hospitals and CHCs

The District Hospitals (DHs), District Women Hospitals (DWHs), Joint Hospitals (JHs) and Community Health Centres (CHCs) (through Chief Medical Officers of the districts) receive funds from the State budget. Apart from the State budget, financial assistance under the National Health Mission (NHM) is also received from the Government of India (GoI) with corresponding share of the State Government.

1.1.1.1. Funds under State budget

Year-wise allotment and expenditure of the funds during 2013-18 pertaining to the Department of Medical, Health and Family Welfare was as shown in **Table 2.**

Table 2: Budget provision and expenditure during 2013-18

(₹ in crore)

Year	Budget Provision	Expenditure	Savings
2013-14	6,095.00	5,080.03	1,014.97
2014-15	6,710.63	6,036.24	674.39
2015-16	7,456.89	6,423.27	1,033.62
2016-17	8,080.13	6,938.01	1,142.12
2017-18	8,726.82	7,782.89	943.93
Total	**37,069.47**	**32,260.44**	**4,809.03**

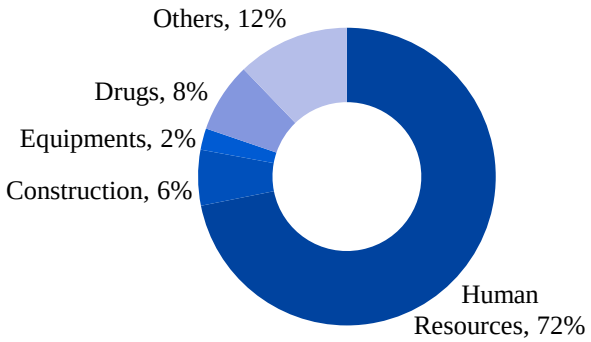
(Source: Budget document)

Table 2 indicates that expenditure incurred on medical, health and family welfare by the State Government increased by 53 *per cent* from 2013-14 to

2017-18. Component-wise break-up of the expenditure incurred during 2013-18 is presented in

1.

Chart 1: Component-wise expenditure during 2013-18



(Source: Budget Document)

Further, in respect of savings, provision for human resources accounted for 58 *per cent* of the total savings and the Government explained that these savings occurred on account of a significant number of posts remaining vacant due to multiple reasons. Equipment and construction activities accounted for further 20 *per cent* of the savings, while other services accounted for the remaining 22 *per cent*.

1.1.1.2. Funds under NHM

During 2013-15, the ratio of the GoI and GoUP share in respect of NHM funds was 75:25, which changed to 60:40 during 2015-18. The amount of funds received under NHM was as shown in **Table 3.**

Table 3: Receipt and expenditure under NHM during 2013-18

(₹ in crore)

Year	Opening balance	Interest earned	Receipt during the year	Expenditure	Closing balance
2013-14	2139.48	96.49	2654.28	1796.32	3093.93
2014-15	3093.93	76.12	2277.19	2363.03	3084.21
2015-16	3084.21	33.15	2979.20	2903.36	3193.20
2016-17	3193.20	34.65	3453.85	3184.99	3496.71
2017-18	3496.71	27.64	3769.28	4402.21	2891.42
Total		**268.05**	**15,133.80**	**14,649.91**	

(Source: State Project Management Unit, NHM, UP)

Thus, 84 *per cent* of the funds available under NHM in the State during 2013-18 were utilised.

1.2. Planning and execution of Performance Audit

1.2.1. Audit objectives

The Performance Audit of Hospital Management in Uttar Pradesh was undertaken to assess whether:

1) Policy framework was robust enough to improve the quality of healthcare.

2) Adequate provisions for line services such as out-patient services, in-patient services, emergency services, maternity services, *etc*. were made and these services were delivered in an efficient and effective manner.

3) Efficient support services with regards to diagnostic services, maintenance of equipment, storage of drugs, dietary services, laundry services, upkeep of facilities, *etc*. were present in hospitals.

4) Hospitals had adequate resources, *viz.* human, infrastructure, drugs, consumables, equipment *etc*. as per prescribed norms and utilised those resources efficiently and effectively.

5) Norms and practices for hygiene, infection control, employee and patient safety were followed within the premises of hospitals.

1.2.2. Audit criteria

To evaluate the subject matter in pursuit of the above mentioned audit objectives, the criteria were sourced from the various guidelines on health care services issued by GoI and GoUP, Indian Public Health Standards (IPHS), legal Acts and Rules, and policies, orders and manuals issued by GoUP. The list of sources of criteria is given in ***Appendix-I.***

1.2.3. Audit scope and methodology

An entry conference was held on 09 July 2018 with the Secretary, Medical, Health and Family Welfare Department (Department) and other officers wherein the audit objectives, scope, criteria, *etc*. were discussed and the inputs of the Department were obtained and thereafter the field audit was commenced.

The audit scope covered public health facilities of secondary care (District-level Hospitals) and primary care (CHCs) and involved scrutiny of records for the period 2013-18.

The audit examination included records maintained at the office of the Principal Secretary, Medical, Health and Family Welfare Department, office of the Director General of Medical and Health Services (DGMH), office of the Director General of Family Welfare (DGFW[4]), State Project Management Unit (SPMU) of National Health Mission (NHM), offices of the Chief Medical Officers (CMOs), 19 District-level Hospitals and 22 CHCs in eight districts across the four geographical regions[5] of the State.

Audit methodology was in accordance with the CAG's Auditing Standards 2017 and involved scrutiny and analysis of records/data as per the audit objectives, scope and criteria, evidence gathering by scanning records, joint physical inspection of various facilities of the test-checked hospitals and by taking photographs, issuing questionnaires/audit observations and obtaining replies, *etc*.

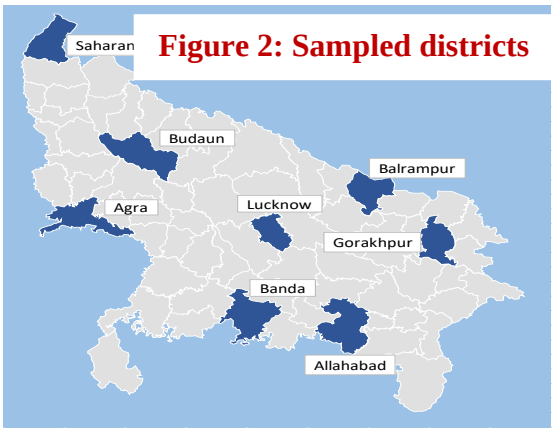
[4] DGFW is responsible for implementation of family welfare schemes, including maternity services in the State.
[5] Bundelkhand Region- Banda, Central Region- Balrampur and Lucknow, Eastern Region- Allahabad (Prayagraj), and Gorakhpur, Western Region- Agra, Budaun and Saharanpur

Further, numerous records vital for efficient and effective management of hospitals and CHCs were not/partially maintained, as detailed in ***Appendix-II***. The non/partial maintenance of essential records was symptomatic of the malaise – a mal-functional system and scant remedial action by the concerned authorities, consequently limiting the scope of audit and inferences thereof.

The draft Report of the Performance Audit was sent to the State Government for its comments on 09 April 2019. Subsequently, an exit conference was held on 03 May 2019 with the Principal Secretary of Medical, Health and Family Welfare Department. The views/replies of the State Government were received on 23 May 2019 and have been duly considered and incorporated in the Report.

1.2.3.1. Sampling methodology

Figure 2: Sampled districts



Sampling was done in two stages. In the first stage, the sample size of eight districts was allocated to the four regions of UP in the proportion of the number of districts in each region and the districts were selected in each region by using Simple Random Sampling Without Replacement (SRSWOR). Thus, geographical representation was factored into the sample. In the second stage, the various district-level hospitals[6] (hospitals) within each selected district were sampled.

To choose hospitals in the selected districts, the sample for regions was further redistributed as per the risk-based classification of the hospitals. Following the sample allocation across regions, the hospitals were selected using SRSWOR in each of the eight chosen districts. For each selected district, two or three CHCs[7] were chosen using SRSWOR as shown in **Table 4**.

Table 4: List of sampled hospitals/CHCs

District	Hospital		CHC
Agra	District Hospital	DH Agra	Baroli Ahir
	District Women Hospital	DWH Agra	Jaitpur Kalan
			Kheragarh
Allahabad	District Hospital	DH Allahabad	Baharia
	District Women Hospital	DWH Allahabad	Handia
	T B Sapru Hospital	DH-II Allahabad	Meja
Balrampur	District Hospital	DH Balrampur	Gaisandi
	District Women Hospital	DWH Balrampur	Pachperwa
	Joint Hospital	JH Balrampur	
Banda	District Hospital	DH Banda	Kamasin

[6] Include District Hospitals (DHs), Joint Hospitals (JHs) and District Women Hospitals (DWHs)
[7] If the number of CHCs in the selected district was less than 10, two CHCs (Balrampur and Banda) were selected using SRSWOR, else three CHCs (Agra, Allahabad, Budaun, Gorakhpur, Lucknow and Saharanpur) were selected.

District	Hospital		CHC
	District Women Hospital	DWH Banda	Naraini
Budaun	District Hospital	DH Budaun	Asafpur
	District Women Hospital	DWH Budaun	Sahaswan
			Samrer
Gorakhpur	District Hospital	DH Gorakhpur	Campiarganj
	District Women Hospital	DWH Gorakhpur	Pali
			Pipraich
Lucknow	District Hospital	DH Lucknow	Gosaiganj
	District Women Hospital	DWH Lucknow	Mall
	LBRN Hospital	JH Lucknow	Sarojini Nagar
Saharanpur	District Hospital	DH Saharanpur	Behat
	District Women Hospital	DWH Saharanpur	Deoband
			Nagal

Keeping in mind the limitation of resources, the sampling strategy was designed to capture and evaluate appropriate amounts of unbiased data to ensure that the Performance Audit was able to pick up variations across the entire audit period. Thus, the questionnaire designed for the audit captured data at different frequencies- yearly, monthly and weekly.

To ensure the variations/coverage in the data recorded on monthly basis, different months of the five-year audit period were covered. For this, each year was divided into four quarters and the middle month of each quarter was selected for capturing the data for indicators reported at monthly frequency. Following this, to capture weekly frequency, the first week was picked out for the selected months to maintain consistency.

For instance, the data in respect of the patient load and availability of hospital beds was taken on yearly basis; monthly data was captured in respect of essential drugs, equipment, human resources, diagnostics, maternity services including labour room records, laundry and sterilisation services; and weekly data pertaining to Bed Head Tickets for evaluating outcome indicators.

1.2.4. Acknowledgement

Audit acknowledges the co-operation extended by the Department of Medical, Health and Family Welfare and the sampled district-level hospitals and Community Health Centres in conduct of the Performance Audit.

1.2.5. Structure of the report

This report of the Performance Audit has been structured on the basis of various services and resources available in a hospital and consists of seven themes, *viz.* Out-Patient (OPD) Services, Diagnostic Services, In-Patient (IPD) Services, Maternity Services, Infection Control, Drug Management and Building Infrastructure.

While the above themes discuss in detail the audit findings with respect to the concerned hospital services, the following section covers the policy framework related to the provisioning of resources, *viz.* human resources, drugs, consumables and equipment for the hospitals, and services rendered to patients.

1.3. Policy framework for healthcare services

Delivery of quality and efficient healthcare services in public health facilities plays a significant role in improving the health indicators of the public at large. Thus, it was incumbent upon the Department of Medical, Health and Family Welfare of the Government of Uttar Pradesh (GoUP), which was responsible for providing and managing the healthcare (primary and secondary care) facilities in UP, to carry out comprehensive and outcome-based planning so that essential resources were provided to the public hospitals as well as resources available utilised optimally in the short, medium and long-term.

Audit, however, observed that the policy framework under which the planning was to be done was significantly inadequate, as discussed in the succeeding paragraphs:

1.3.1. Standardisation of services and resources

For ensuring efficient operation of public sector hospitals, it is essential to prescribe standards/norms for providing various resources in the hospitals. On the basis of these standards/norms, requirement of resources should be assessed and provisions should be made accordingly.

Audit, however, observed that the Department did not prescribe standards/norms in respect of type and quantum of resources and services for the hospitals as discussed in **Table 5** and detailed in subsequent chapters.

Table 5: Standardisation of services and resources in hospitals/CHCs

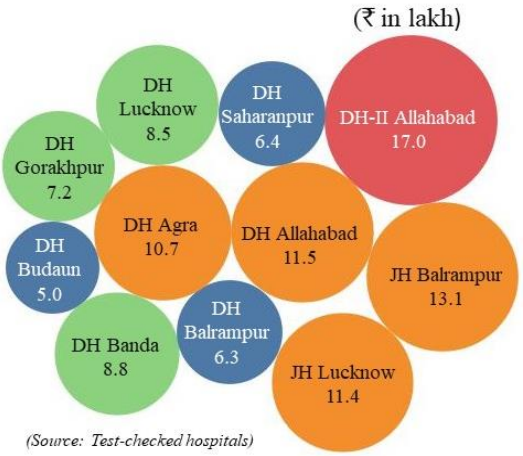
Services/ Resources	Availability of State Government norms	Other norms/standards	Remarks
OPD and IPD services	No	NHM Assessor's Guidebook, IPHS	The State Government did not adopt the standards of various OPD and IPD services prescribed in the GoI guidelines/IPHS.
Diagnostic services	Norms for X-ray and Ultrasonography services available for DHs and CHCs, however, no norms for pathological services	NHM Free Diagnostics Service Initiative, IPHS	The State Government did not adopt the GoI guidelines/IPHS norms/standards for pathology investigations for hospitals and CHCs.
Human resources	No	NHM Assessor's Guidebook, MNH Toolkit IPHS	The State Government did not adopt the norms prescribed in the GoI guidelines/IPHS. Further, the basis of sanctioned strength of human resources for hospitals were not found on records.
Drugs and consumables	Essential Drugs List, Drug Procurement Policy	NHM Assessor's Guidebook, MNH Toolkit, Free Drug Initiative of GoI, IPHS	The Essential Drugs List was not updated regularly as no formularies were prepared in hospitals.
Equipment	Equipment Procurement Policy, however, no standardisation of the types and number of equipment required for hospitals/CHCs.	NHM Assessor's Guidebook, IPHS	The State Government did not adopt the GoI guidelines/IPHS norms/standards for equipment for hospitals and CHCs.
Hospital beds	No	NHM Assessor Guidebook, IPHS	The State Government did not adopt norms of hospital beds prescribed in the GoI guidelines/IPHS.

Further, facility development plans comprising of components such as infrastructure, equipment, human resources, drugs and supplies, quality assurance systems and service provisioning were to be prepared for each hospital[8]. These plans were to be prepared on the basis of analysis of gaps in the health facilities *vis-à-vis* the norms/standards.

[8] As per NHM Framework 2012-17

Audit, however, observed that the gap analysis to ascertain the requirement of resources and service provisioning in the hospitals was not done in the absence of norms/standards as discussed in Table 5 above. Consequently, a meaningful budgetary exercise for ascertaining demands/need of resources and funds requirement from the CMOs and CMSs for consolidation at the State level could not be carried out, and the planning exercise remained limited to allocating the budgeted funds to the CMOs and CMSs on an *ad hoc* basis.

Chart 2: Average annual expenditure per bed in hospitals (2013-18)



This lack of rigour in the planning exercise is exemplified by the inequity in availability of financial resources[9] in the 11 test-checked district hospitals during 2013-18, as shown in **Chart 2**.

The inequity also adversely impacted the availability of various out-patient and in-patient services, and other support services in the test-checked hospitals and CHCs, as discussed in subsequent chapters of the report.

The Government replied (May 2019) that the standardisation of availability of resources and services had been provided by the State Government and efforts were being made to first fulfil the State's own norms and IPHS norms would be adopted depending upon availability of financial resources.

The reply is general in nature, which does not address the issue of non-standardisation of either State specific or IPHS standards/norms in respect of OPD and IPD services, pathological services, human resources and hospital beds.

1.3.2. Policies for acquisition of resources

1.3.2.1. Human resources

Since public hospitals in the State on the whole were suffering from persistent shortage of doctors, ranging between 30 and 40 *per cent* during 2013-18[10]; therefore, structural policy initiatives[11] were required to address the substantial shortages, as suggested in the NHM Framework 2012-17.

Audit observed that to offset the shortage of doctors in the State, in addition to the normal recruitment process through Uttar Pradesh Public Service Commission (UPPSC), the Department in June 2017 took a decision to hire

[9] Provisioning of resources and services in a hospital are done on the basis of number of beds.

[10] As on March 2018, 6,021 posts of doctors were vacant against the sanctioned strength of 18,382 doctors in the Department of Medical, Health & Family Welfare.

[11] Such as expeditious recruitment (e.g. taking recruitment of doctors out of purview of State Public Service Commission); alignment of recruitment rules to the needs of human resources, opportunities for career progression and professional development; effective skills utilization; stability of tenure, *etc*.

1000 doctors on contractual basis through walk-in interviews for a period of one year[12], with differentiated salary structure for different zones of the State. Till March 2018, 247 doctors had been hired under this policy. Also, in May-June 2017 the retirement age of doctors was increased 60 to 62 years, along with re-appointment of 1000 superannuated doctors till the age of 65.

Further, in the test-checked hospitals, Audit noticed that the sanctioned strength of doctors did not correlate with the size of the hospital in terms of number of beds and/or case load, as suggested in NHM Framework 2012-17. The Department, however, did not undertake any exercise to re-work the number of sanctioned posts in the hospitals/CHCs based on current levels of utilization/demand from the public.

The Government replied that to improve the availability of human resources it had taken various initiatives such as increasing the superannuation age of existing doctors, hiring doctors and nurses on contract basis, imparting specialised training to the health personnel, *etc*. and a proposal of providing five *per cent* incentive for the doctors posted in remote areas was under process. It added that to address the needs of an increasing population and morbidity pattern, sanctioned posts would be revised as per the bed strength of the hospitals.

Although these policy initiatives of the Government are expected to lessen the deficit in the availability of doctors in the short term, they need to be buttressed by a more effective and sustainable solution towards building a high-quality workforce with the right skills mix.

1.3.2.2. Drugs and consumables

The patients in the government hospitals in the State were to be provided drugs free of cost[13]. The Department addressed drug management issues through various Government Orders, including the revised Drug Procurement Policy (DPP) in 2012 for procurement of drugs for the hospitals. However, the following important aspects were not addressed in these Government Orders/DPP:

- CMOs and CMSs were authorised by the DPP, in case of non-availability of drugs on Rate Contracts (RCs) of GoUP, to procure drugs and consumables from the firms listed in the RCs of the other State Governments and the GoI but did not have any authority to recommend action against the firms for any defaults.
- The DPP merely stipulated that quality testing may be carried out any time through sampling without specifying sampling norms, criteria and periodicity for quality testing of drugs. Further, provision regarding modalities to be followed by CMOs and CMSs for quality assurance in such local purchases of drugs and consumables was overlooked.
- Prescription audit[14] was not stipulated by the Department.

[12] Extendable by two years on the basis of good performance (GoUP Order, June 2017).
[13] GoUP Order, April 2012.
[14] Prescription audit by each hospital, as required under the NHM framework, is a mechanism to assess the consumption pattern and actual specification of drugs.

The Government responded that in the absence of an agreement with the firms listed in the RCs of other State Governments and GoI, it was unable to undertake any action on default; local purchases of drugs were regulated through the Government Orders issued in 1986 and 2003 and prescription audit could not be initiated due to lack of resources.

The Government, despite accepting the shortcomings, did not provide any details on the corrective measures proposed to be taken in this regard. Further, in respect of local purchase of drugs, Government Orders of 1986 and 2003 did not address the vital issue of quality assurance.

1.3.2.3. Equipment

Availability of essential functional equipment in all hospitals/CHCs, regular needs assessment, timely indenting and procurement, identification of unused/faulty equipment, regular maintenance, competitive and transparent bidding processes are the significant components of equipment management. The State Government promulgated a revised Equipment Procurement Policy (EPP) in 2012 which stipulated procedures for procurement of equipment but did not cover certain key issues as under:

- EPP did not standardise the types of equipment needed in the district-level hospitals to perform various types of surgical and medical interventions in the hospitals.
- There was no forethought in the EPP in respect of maintenance of equipment.

The Government assured that the list of essential equipment as per the need of hospitals of varying bed strength would be standardised. It was also informed that the Department had proposed an increase in the budget provision in the year 2019-20 for procurement of equipment, while a private agency had been engaged (June 2018) for maintenance and calibration of equipment in all hospitals of the State in 2018-19.

The fact remains that the stipulated procedures for the maintenance of equipment should be built into the EPP itself in order to ensure its sustained implementation in the hospitals/CHCs

***To sum up**, the policy framework for hospital management in the State had significant limitations. The Department, for the most part, neither prescribed its own norms nor adopted the norms/standards suggested by the GoI in respect of resources and services for hospitals and CHCs. This was exacerbated by the absence of gap analysis and need assessment in the planning process, with a concomitant adverse impact on the availability of resources and service provisioning as discussed in the subsequent chapters.*