#### 2.1 Introduction

Human Resources form the backbone of any healthcare set up. Health Human Resources refers to people who are trained to promote health, prevent and cure disease and rehabilitate the sick and it includes Doctors, Staff Nurse, Paramedical Staff, Auxiliary Nurse Midwife (ANM), Accredited Social Health Activists (ASHAs), trained *dais* and others (occupational Therapy Assistant, Dieticians, etc.).

Having qualified and experienced Human Resources directly impacts the quality of healthcare services provided by the institutions. These IPHS guidelines also prescribe the minimum number of Doctors and Nurses to be available in different hospitals according to the number of sanctioned beds. IPHS guidelines envisage that Doctors and Nurses should be available round the clock in In-patient Department (IPD) to provide due medical care to the in-patients.

#### 2.2 Planning and Assessment of Human Resources

Para 3.3.4 of NHP 2017 initiatives aims for measurable improvements in the quality of health care. Districts and blocks which have wider gaps for the development of infrastructure and deployment of additional Human Resources were to receive focus. Financing additional infrastructure and Human Resources would be based on the needs of outpatient and inpatient attendance and utilisation of key services in a measurable manner. Further for effectively handling medical disasters and health security, the policy recommends that the public healthcare system retain a certain excess capacity in terms of health infrastructure, Human Resources and technology which can be mobilised in times of crisis.

Government was addressed (October 2022) as to whether, any Human Resources policy for the appointment of Specialist Doctors, Medical Officers and other supporting Paramedical staff to meet the requirement of the healthcare facilities according to the IPHS norms had been prepared. Government in its response (August 2023) stated that HR policy of the State was in line with IPHS Standards. Copy of the HR policy was however, not made available to Audit.

#### 2.2.1 **Doctor-Population Ratio**

As per the World Health Organisation (WHO) norms, one Doctor is to be available for every 1,000 persons. The Department had not maintained the data relating to year-wise Doctor-Population ratio. In the absence of this data, Audit had to calculate the Doctor population ratio taking into consideration the projected population of the State and Doctors

registered with the Telangana State Medical Council and AYUSH as per the data available in NHP 2021.

Table 2.1 - Statement showing year-wise Projected Population, Doctors registered and Doctor - population ratio

Year	Projected Population of Telangana	No. of Doctors registered with Telangana State Medical Council	Doctor - population ratio (Allopathy)	No. of AYUSH Doctors registered	Total Doctors available	Doctor - population ratio overall
2017-18	3,67,14,000	5,023	7,309	Not available	Not available	Cannot be calculated
2018-19	3,69,67,000	8,014	4,613	21,672	29,686	1,245
2019-20	3,72,20,000	11,573	3,216	22,063	33,636	1,107
2020-21	3,74,73,000	15,603	2,402	22,539	38,142	982
2021-22	3,77,25,000	19,427	1,942	23,384	42,811	881

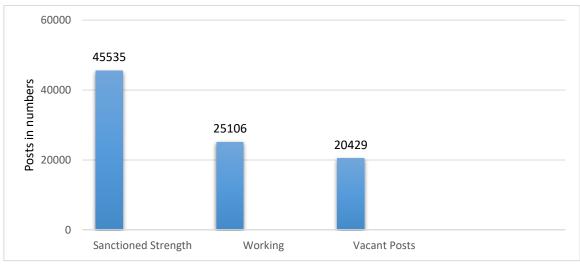
**Source:** National Health Profile India 2020-21, Information furnished by Medical Council & AYUSH Department

- ➤ The availability of Doctors showed an increasing trend from 2017-18 to 2021-22.
- As per the information furnished to a Parliament starred question (26 July 2022), the Doctor-population ratio of India was 1:834 which included Allopathic and AYUSH Doctors, while the same was 1:881 in the State of Telangana.

### 2.2.2 Deployment and availability of sufficient manpower

In the absence of the human resources policy correlating to NHP 2017, Audit was constrained to compare the availability of manpower with the sanctioned posts and actual men in position.

Chart 2.1 - Status of Human Resources (as on March 2022)



Source: Information furnished by the Heads of the Departments

Table 2.2 - Status of Human Resources across the different HOD of Health, Medical and Family Welfare Department as of March 2022

Name of the HOD/Department	Sanctioned strength	Working	Vacant Posts	Vacancy percentage
Commissioner of Health and Family Welfare	6,165	4,028	2,137	35
Director of Public Health	13,769	8,207	5,562	40
Telangana Vaidya Vidhana Parishad	10,822	6,196	4,626	43
Director of Medical Education	11,499	5,052	6,447	56
Drugs Control Administration	198	131	67	34
Department of AYUSH	2,691	1,311	1,380	51
Institute of Preventive Medicine	391	181	210	54
Total	45,535	25,106	20,429	45

Source: Information furnished by the Heads of the Departments Colour code:

Vacancy upto	Vacancy more	Vacancy above	
25%	than 25% and upto	50%	
	50%		

Audit observed that, there were huge gaps between sanctioned posts and the actual persons in position of healthcare staff. The position of sanctioned post vis-à-vis deployment of Human Resources as of the March 2022 in the healthcare facilities under Commissioner of Health and Family Welfare, DOPH and TVVP (manpower position of DME is mentioned separately) which render primary and secondary healthcare services is shown in Table 2.3.

Table 2.3 - Statement showing the HOD wise position of Human Resources as of March 2022

Name of the post	Sanctioned	Men in position	Vacant	Vacancy percentage					
1	2	3	4 (2-3)	5 {(4/2)*100}					
Director of Public Health									
Medical Officer	1,556	1,402	154	10					
CHO/PHN	419	271	148	35					
Multi Purpose Health Educator (MPHE)	3,643	1,102	2,541	70					
Nursing Staff	1,954	1,664	290	15					
Para-Medical	1,353	335	1,018	75					
Pharmacist	781	342	439	56					
Others	4,063	3,091	972	24					
Total	13,769	8,207	5,562	40					
Telangana Vaidya Vidhana Par	ishad (as of Aug	gust 2023)							
Doctors	4,311	1,740	2,571	60					
Nursing Staff	3,583	2,813	770	21					
Para-Medical	1,655	888	767	46					
ANM/MPHA(F)	633	276	357	56					
Others	640	479	161	25					
Total	10,822	6,196	4,626	43					
Commissioner of Health and Family Welfare									
Doctors	147	100	47	32					
Nursing Staff	141	109	32	23					

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MNO	7	5	2	29
MPHA (F)	4,246	2,606	1,640	39
MPHA (M)	76	18	58	76
МРНЕО	122	101	21	17
MPHS (M)	399	277	122	31
MPHS (F)	329	319	10	3
Para-Medical	45	29	16	36
Others	653	464	189	29
Total	6,165	4,028	2,137	35

**Source:** Information furnished by the Directorates Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

#### Scrutiny revealed the following:

- ➤ Shortage is particularly evident in the institutions operating under the administrative control of Telangana Vaidya Vidhana Parishad (TVVP), which are responsible for providing primary and secondary healthcare services to the population. These institutions are experiencing significant vacancies of Doctors (60 per cent), ANM/MPHA (56 per cent), Para-Medical (46 per cent), Nursing Staff (21 per cent) and other staff (25 per cent).
- ➤ Similarly, health institutions under the administrative control of the Director of Public Health (DOPH) are also facing shortage of staff. Shortage of staff is comparatively less in DOPH under the cadres of Medical Officers (10 per cent) and Nursing Staff (15 per cent). Acute shortages were observed in the cadres of Community Health Officers (35 per cent), MPHE (70 per cent), Pharmacist (56 per cent), Para-Medical (75 per cent) and other staff (24 per cent).
- ➤ In addition, in the health institutions under the administrative control of the Commissioner, Health & Family Welfare, shortage of staff is comparatively less in the cadre of Nursing Staff (23 per cent). The Department is however struggling with an overall shortage of Doctors (32 per cent), Para-Medical and other staff (29 per cent) and ANM/MPHA/Midwives/Nursing Orderlies (36 per cent).

Government in its response stated (August 2023) that, massive recruitment drive had been taken up by the State Health Department and that regular recruitment had commenced for over 12,000 posts and would be completed soon. It was also stated that new Medical Colleges were proposed to be established in all Districts and hence all the District Hospitals are converted to Government General Hospitals/Medical Colleges. Further, the process of reorganistion was taken up in secondary level hospitals and adjustments of doctors and staff would be done as per IPHS norms.

Though Government issued (June 2022 onwards) the notifications for recruitment of healthcare manpower in various cadres, the actual number of vacancies filled up were not furnished.

Consequently, the shortage of healthcare personnel has had a significant impact on the delivery of healthcare services to the general public.

#### 2.2.3 **Human Resources under National Health Mission**

The aim of the National Health Mission besides providing accessible, affordable, accountable, effective and reliable healthcare facilities to the people of the country is also to implement the Centrally sponsored health schemes. In order to achieve the above goals, the State Government sanctions and fills the posts under various categories. The details of Human Resources under National Health Mission are given below:

Table 2.4 - Human Resources under National Health Mission as of August 2023

Name of the post	Sanctioned	Men in position	Vacant	Vacancy percentage
Medical Officers <sup>1</sup>	5,038	4,284	754	15
Nursing Staff	3,960	2,971	989	25
Paramedical Staff	962	708	254	26
ANM/MPHA/Mid Wives	5,352	5,198	154	3
Others	5,430	4,199	1,231	23
Total	20,742	17,360	3,382	16

Source: Information furnished by the Directorates Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

As seen from the above, the overall shortage of staff under NHM was 16 per cent. Shortage of staff was minimal in the cadre of ANM/MPHA/Mid Wives (3 per cent). Shortages were observed in the cadres of Medical Officers (15 per cent), Paramedical Staff (26 per cent), Nursing staff (25 per cent) and others (23 per cent).

Government in its response stated (August 2023) that, the overall shortage of staff under NHM was only 16 per cent at present. It was indicated that in the cadre of MOs, against a sanctioned strength of 3,206, men in position were 3,084 which was resulting in vacancy of only four per cent. It was further stated that, due to cadre restructuring in UPHCs, the Medical Officers positions were being filled by the Regular Civil Assistant Surgeon (CAS) and that these posts were dropped from NHM. It was assured that the vacancies of Paramedical Services would also be taken up from time to time for filling up.

Government also stated that massive recruitment drive had been taken up by the State Health Department and that regular recruitment had commenced for over 12,000 posts and would be completed soon.

In the absence of the cadre-wise details of the sanctions, final position with regard to menin-position, the vacancies cadre-wise could not be analysed.

<sup>&</sup>lt;sup>1</sup> Includes Specialists (Sanctioned 502/MIP 334); Medical Officers (sanctioned 1122/MIP 765); Mid-Level Health Providers (Sanctioned 3020/MIP 2933); Medical Officers (AYUSH) (Sanctioned 394/MIP 252)

#### 2.2.4 Status of Human Resources in Test checked DHs under TVVP

Details of availability of manpower in the DHs of the State are given in the table 2.5:

Table -2.5 - Status of Human Resources in District Hospitals as of May 2023

Cadre	SS	MIP	Vacancy percentage
Doctors	801	382	419 (52)
Nursing Staff	638	397	241 (38)
Pharmacists	85	49	36 (42)
Total	1,524	828	696 (46)

Source: Information furnished by the District Hospitals

Colour code:

Vacancy upto	Vacancy more	Vacancy above	
25%	than 25% and upto	50%	
	50%		

Audit observed shortages in the cadre of Doctors (52 per cent), Pharmacists (42 per cent) and Nursing Staff (38 per cent) in the DHs under TVVP.

Following Abbreviations are used for the Names of the District Hospital in this chapter and entire Report. BOD-Bodhan (Nizamabad District), GAD-Gadwal (Jogulamba Gadwal District)- GAJ-Gajwel (Siddipet District), HYD-Hyderabad (Hyderabad District), KDP- Kondapur (Rangareddy District), MDK-Medak (Medak District), MED-Medchal (Medchal –Malkajgiri District), MUL-Mulugu (Mulugu District), NRY-Narayanpet (Narayanpet Disrict), NRS-Narsampet (Warangal District), PED-Peddapalli (Peddapalli District), TDR-Tandur (Vikarabad District), UT- Utnoor (Adilabad District) and YB - Yadadri (Yadadri Bhuvanagiri District).

Table 2.6 -District Hospital-wise Manpower position as of May 2023

		Docto	ors		Nurs	es	]	Pharma	cists
District Hospital	SS	MIP	Vacancy percentage	SS	MIP	Vacancy percentage	SS	MIP	Vacancy percentage
BOD	52	27	48	32	31	3	4	4	0
GAD	87	28	68	73	29	60	0	0	0
GAJ	61	34	44	42	33	21	11	6	45
HYD	51	28	45	77	58	25	8	7	13
KDP	55	24	56	33	29	12	5	4	20
MDK	65	31	52	38	25	34	9	5	44
MED	35	28	20	15	12	20	4	1	75
MUL	78	35	55	79	25	68	12	5	58
NRY	66	32	52	71	31	56	7	5	29
NRS	26	12	54	17	15	12	2	2	0
PED	59	29	51	19	16	16	4	2	50
TDR	69	27	61	90	46	49	11	4	64
UT	34	15	56	17	15	12	2	0	100
YB	63	32	49	35	32	9	6	4	33
Total	801	382	52	638	397	38	85	49	42

Source: Information furnished by the District Hospitals

SS-Sanctioned Strength; MIP-Men In Position

Colour code:

coloni con					
Vacancy u	ıpto	Vacancy more	Vacancy	above	
25%		than 25% and upto	50%		
		50%			

100 87 90 78 80 69 89 99 9 70 63 Number of Doctors 61 61 60 54 52 51 51 49 48 45 50 44 40 34 30 20 10 DH. Tadadri ahuranasiri OH, Medetal Malkaderi DH.Hyderabad DH Kondapur OH, MUIUEN DH, Narasampet DH. Peddabally OHGadnal OHGajnel

Chart 2.2 Doctors position in District Hospitals as of May 2023

Source: Information furnished by the District Hospitals

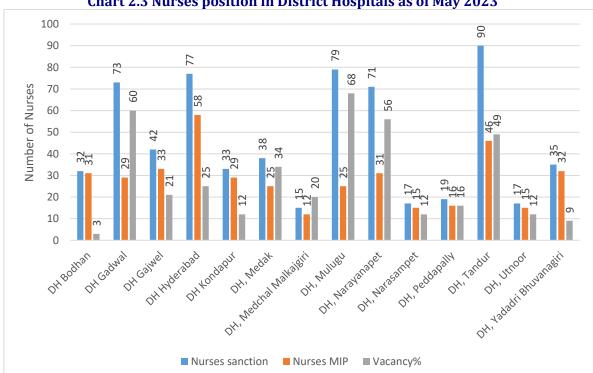


Chart 2.3 Nurses position in District Hospitals as of May 2023

■ Doctors MIP

■ Doctors sanction

Source: Information furnished by the District Hospitals

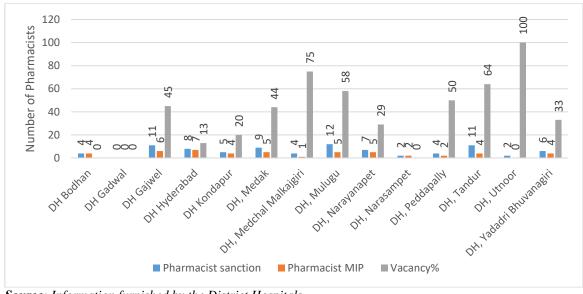


Chart 2.4 Pharmacist position in District Hospitals as of May 2023

Source: Information furnished by the District Hospitals

As seen from the above, the overall shortage of manpower in the DHs was to the extent of 46 per cent with 696 out of the sanctioned 1,524 posts remaining vacant. The vacancy in the cadre of Doctors was 52 per cent with 419 out of 801 posts remaining vacant and that of the Nursing Staff was 38 per cent with 241 out of the sanctioned 638 posts remaining vacant. Severe shortage of staff was observed in DHs, Jogulamba Gadwal, Medak, Mulugu, Narayanpet and Tandur with vacancies ranging from 64 per cent (DH Jogulamba Gadwal) to 24 per cent (DH Medchal Malkajgiri). There were no sanctioned posts of Pharmacists in DH Jogulamba Gadwal.

Government in its response (August 2023) stated that, it was establishing new Medical Colleges in all the Districts. Hence, all the District Hospitals are converted to Government General Hospitals/Medical Colleges and the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

## 2.2.5 Status of Human Resources in Test checked AHs and CHCs under TVVP

Details of sanctions, men in position and vacancies in test checked health institutions in respect of Specialist Doctors and other staff in the Area Hospital Malakpet and AH Golconda, CHCs Amberpet, Badepally and Wardhannapet were as follows:

Table 2.7 - Details of sanction of Human Resources in Test checked AHs and CHCs under TVVP as of March 2022

		Area H	Iospitals	<b>Community Health Centres</b>		
Cadre	SS	MIP	Vacancy (percentage)	SS	MIP	Vacancy (percentage)
Specialist Doctors <sup>2</sup>	105	68	37(35)	80	36	44(55)
Nursing Staff	66	52	14(21)	36	30	6(17)

<sup>&</sup>lt;sup>2</sup> Includes Civil Surgeon Specialist, Civil Surgeon (RMO), Deputy Civil Surgeon, Civil Assistant Surgeon, Deputy Dental Surgeon and Dental Assistant Surgeon

Para-Medical & other staff	92	60	32(35)	40	27	13(33)
ANM/MPHA/Mid wives/ Nursing Orderly	26	17	9(35)	18	11	7(39)
Total	289	197	92(32)	174	104	70(40)

**Source:** Information furnished by the test checked health institutions Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

- In the Area Hospital, Golconda, it was observed that there was shortage of Specialist Doctors (39 per cent), Nursing Staff (24 per cent), Para-Medical & other staff (45 per cent) and ANM/MPHA/Mid wives/ Nursing Orderly (43 per cent).
- In the Area Hospital, Malakpet, it was observed that there was shortage of Specialist Doctors (32 per cent), Nursing Staff (18 per cent), Para-Medical & other staff (27 per cent) and ANM/MPHA/Mid wives/ Nursing Orderly (25 per cent).
- In the CHC, Amberpet it was observed that there was shortage of Specialist Doctors (47 per cent), Nursing Staff (10 per cent) and Para-Medical & other staff (20 per cent).
- In the CHC, Badepally, it was observed that there was shortage of Specialist Doctors (50 per cent), Nursing Staff (8 per cent), Para-Medical & other staff (20 per cent) and ANM/MPHA/Mid wives/ Nursing Orderly (50 per cent).
- In the CHC, Wardhannapet, it was observed that there was a shortage of Specialist Doctors (60 per cent), Nursing Staff (31 per cent) and Para-Medical & other staff (70 per cent).

Government in its response (August 2023) stated that, the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

In the absence of specific details about the filling up of vacancies pursuant to the notifications issued, the hospital-wise vacancies cannot be analysed by Audit.

### 2.2.6 Status of Human Resources in PHCs and Sub Centres of test checked institutions of DOPH

As per the IPHS norms relating to PHCs, an MBBS qualified Doctor is to be provided in every PHC.

In response to an audit enquiry about the sanctioned manpower in respect of UPHCs, it was stated by the DMHO, Hyderabad, that UPHCs were not having regular Medical Officer sanctioned posts due to the non-finalisation of redeployment of staff under rationalisation of health institutions. In the absence of this vital information on sanctioned staff, Audit could not quantify the vacancy of staff in UPHCs.

Government in its response (August 2023) stated that, the process of cadre re-organisation was taken up in secondary level hospitals and adjustments of Doctors and staff will be done as per IPHS norms.

Table 2.8 - Status of Human Resources in PHCs and Sub Centres of test checked institutions of DOPH as of March 2022

Cadre			alth Centres HCs)	Sub Centres		
Caure	SS	MIP	Vacancy (Percentage)	SS	MIP	Vacancy
Doctors	3	3	0			
Medical Officers	9	6	3 (33)	Not Applicable-		
Community Health Officers (CHOs)	4	3	1(25)			
Nursing Staff	6	6	0			
Para-Medical & other staff	31	19	12(39)			
ANM/MPHA/Mid wives/ Nursing Orderly	69	43	26(38)	16	22	No vacancy
Total	122	80	42(34)	Not Applicable		

Source: Information furnished by test checked health facilities

Colour code:

Vacancy upto	Vacancy more	Vacancy above	
25%	than 25% and upto	50%	
	50%		

In the test checked PHCs, the Men in position of CHOs was nearly equal to the sanctioned strength. Severe shortages of Medical Officers (33 *per cent*), Para-Medical & other staff (39 *per cent*) and ANM/MPHA/Mid wives/Nursing Orderly (38 *per cent*) were observed. In the test checked SCs, the men in position of ANM/MPHA/Mid wives/Nursing Orderly was in excess of the sanctioned strength.

## 2.2.7 Status of Human Resources in the test checked Super Speciality Hospitals

Scrutiny of the availability of Human Resources in the Super Speciality Hospitals vis-à-vis sanctioned strength revealed the following:

Table 2.9 - Status of Human Resources in the test checked Super Speciality/Teaching Hospitals as of March 2022

Niloufer Hospital, Hyderabad							
Designation	SS	PIP	Vacancy	% of vacancy			
Specialist Doctors	178	111	67	38			
Medical officers	4	4	0	0			
Nursing staff	416	125	291	70			
ANM	87	16	71	82			
Para-Medical & other staff	330	106	224	68			
Total	1,015	362	653	64			
Osmania Genera	l Hospital, Hyderaba	ıd					
Specialist Doctors	66	45	21	32			
Nursing staff	387	259	128	33			
ANM	234	142	92	39			
Para-Medical & other staff	764	273	491	64			
Total	1,451	719	732	50			
MNJ Institute of Oncology & 1	Regional Cancer Cen	tre, Hyderal	oad				
Specialist Doctors	103	51	52	50			
Nursing staff	230	116	114	50			
Para-Medical & other staff	376	167	209	56			
Total	709	334	375	53			
Overall shortage of Manpower in	test checked Super S	peciality Ho	spitals				
Specialist Doctors	347	207	140	40			

Medical Officers	4	4	0	0
Nursing staff	1,033	500	533	52
ANM	321	158	163	51
Para-Medical & other staff	1,470	546	924	63
Total	3,175	1,415	1,760	55

Source: Information furnished by test checked health facilities

Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

- In the Niloufer hospital, there was no vacancy in the cadre of Medical Officers.
- ➤ In the three test checked Super Speciality hospitals, there was shortage of Specialist Doctors (40 per cent), Nursing Staff (52 per cent), Para-Medical & other staff (63 per cent) and ANM/MPHA/Mid Wives/Nursing Orderly (51 per cent).
- ➤ In the test checked Niloufer hospital, there was shortage of Specialist Doctors (38 per cent), Nursing Staff (70 per cent), Para-Medical & other staff (68 per cent) and ANM/MPHA/Mid Wives/Nursing Orderly (82 per cent).
- ➤ In the test checked Osmania General hospital, there was shortage of Specialist Doctors (32 per cent), Nursing Staff (33 per cent), Para-Medical & other staff (64 per cent) and ANM/MPHA/Mid Wives/Nursing Orderly (39 per cent).
- ➤ In the test checked MNJ Institute of Oncology & Regional Cancer Centre, Hyderabad, there was shortage of Specialist Doctors (50 per cent), Nursing Staff (50 per cent) and Para Medical & other staff (56 per cent).

No specific response has been furnished by the Super Specialty Hospitals for the vacancies.

Government in its response stated (August 2023) that, the recruitment of 852 Assistant Professors in various specialities are filled in DME institutions, 193 Associate Professors promotions issued, 59 Professors promotions ordered. For recruitment of staff Nurses for various institutions, tests have been completed and would be filled in shortly.

Hospital-wise details of the filling up of these staff were however not furnished as a result of which actual shortage of staff after these recruitments could not be assessed.

# 2.3 Human Resource availability against sanctioned strength in all Districts

The Audit noticed that the Department of Health and Family Welfare had not maintained a centralised database of sanctioned strength, actual personnel in positions and District-wise deployment data of Doctors, nurses and other paramedical staff in healthcare facilities across the state. Due to this limitation, the Audit relied on Health Management Information System (HMIS) data for AHs, CHCs, PHCs and Sub Centres.

Furthermore, for District Hospitals, field visit data was obtained as HMIS data for DHs did not fully cover all the existing DHs. The findings of the audit regarding the availability of staff in various posts under Primary and Secondary Healthcare are as follows:

Chart 2.5: Distribution of Human Resources across the Districts in Primary and Secondary Care Health facilities as of April 2023

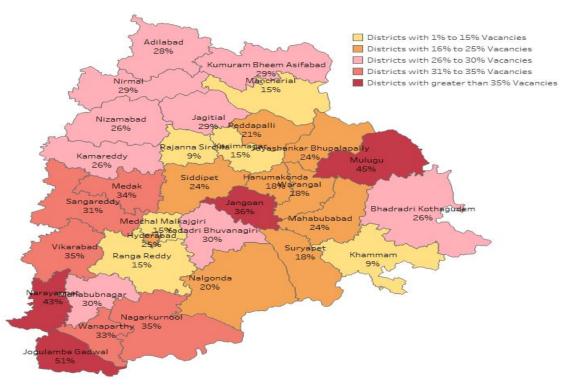


Chart 2.6 - Percentage of Vacancy in Doctors Cadre as of April 2023

Percentage of Vacancy in Doctors' Cadre

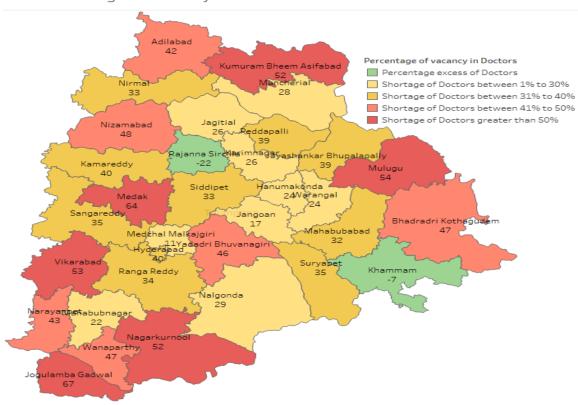


Chart 2.7 - Percentage of vacancy in Nurses Cadre as of April 2023

Percentage of Vacancy in Nurses' Cadre

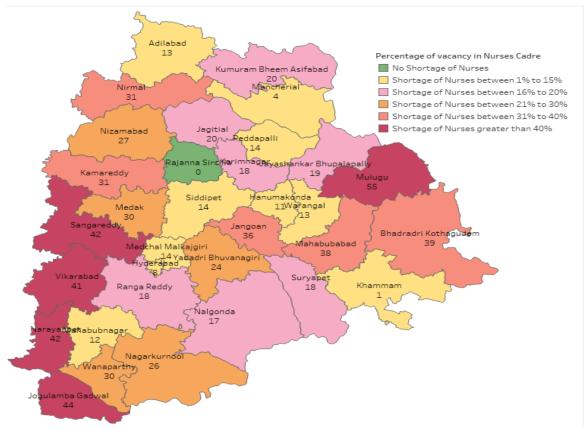
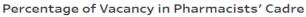
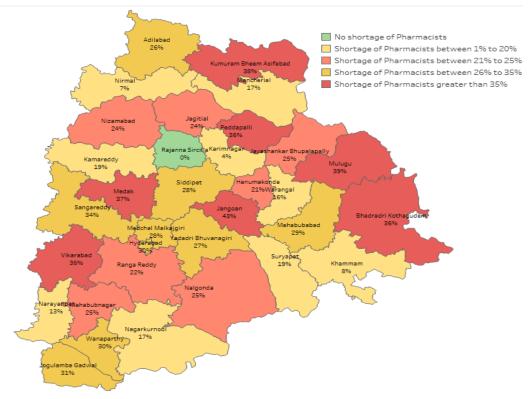


Chart 2.8 Percentage of Vacancy in Pharmacists Cadre as of April 2023





Source: HMIS and information from District Hospitals

Government in its response stated (August 2023) that TVVP dealt with Secondary healthcare facilities and that the distribution of Human Resources across the District was on the basis of patient load. However, no specific details were furnished with regard to primary health care.

Non-provision of a requisite number of Doctors, Nurses and Pharmacist affects the day-to-day functioning of these health institutions and affects the delivery of medical services to people. There is an urgent need for strengthening the cadres where there are huge vacancies.

#### 2.4 Human Resources under Directorate of Medical Education

#### 2.4.1 Status of Human Resources under DME

Institutions under the administrative control of the Directorate of Medical Education (DME) are governed by the provisions of The Indian Medical Council Act, 1956 and the rules, regulations and standards made thereunder. The Indian Medical Council, now known as the National Medical Commission, has prescribed minimum requirements for posts and other necessities such as infrastructure and equipment in Medical Colleges and Associated Hospitals. The delivery of quality healthcare services in hospitals largely depends on the adequate availability of manpower, especially in the cadres of Doctors, Staff Nurses, Para-medical personnel and other supporting Staff.

When the Audit called for details of the State-level policy, short-term, medium-term and long-term goals set in the State for Human Resources, the Doctor population, Doctor-Patient ratio, Nurse population, Doctor-Nurse ratio etc., DME only provided the consolidated manpower position without presenting health institution and college-specific data on sanctioned strength, personnel in position, vacant posts, patient load, etc.

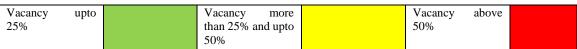
In the absence of this data, Audit is unable to ascertain and confirm the availability of a sufficient number of Teaching staff, Doctors, Para-Medical personnel and Nursing staff in its Medical Colleges and Teaching Hospitals to adequately serve the patients.

Table 2.10: Status of Human Resources under DME as of March 2022

Category	Sanctioned Posts	MIP	Vacancy	Vacancy percentage
Doctors	2,975	1,715	1,260	42
Nurses	4,831	2,112	2,719	56
Paramedics	1,412	286	1,126	80
Others	2,281	939	1,342	59
Total	11,499	5,052	6,447	56

Source: Information furnished by the DME

Colour code:



Audit observed an overall shortage of 56 *per cent* in the cadre strength of health institutions under the control of DME. Shortages were also observed in the cadre of Doctors (42 *per cent*), Nurses (56 *per cent*) and Paramedics (80 *per cent*).

#### 2.4.2 Availability of Medical Colleges and intake capacity in State

Adequate healthcare infrastructure with trained medical human resources is a prerequisite for providing equitable access to affordable, accountable and quality healthcare to the citizens. Medical education contributes significantly to make available services of Doctors including specialists in Government as well as private hospitals to cater to the health needs. The National Medical Commission<sup>3</sup> is the Regulatory authority for Medical Education.

Table 2.11 - Year-wise details of Medical Colleges and in take capacity as of March 2022

Year	Course	Government Medical colleges			e Medical leges	Total	
1 ear	1 ear Course		Intake capacity	No. of colleges	Intake capacity	No. of colleges	Intake capacity
2016-17	Undergraduate	7	1,100	18	2,600	25	3,700
2021-22		10	1,765	23	3,650	33	5,415
2016-17	Postgraduate	3	532	10	697	13	1,229
2021-22		7	905	18	1,301	25	2,206
2016-17	Super Specialty	2	74	4	11	6	85
2021-22		2	92	5	21	7	113

Source: Information furnished by the Department

#### 2.4.2.1 Undergraduate (UG) Courses

During the period 2016-22, three new Government Medical Colleges<sup>4</sup> and five Private Medical Colleges were opened whereby intake capacity was increased by 1715 seats (46 *per cent*).

#### 2.4.2.2 Post Graduate (PG) Courses

To mitigate the shortage of specialists, it was essential to increase the PG seats. During the period 2016-22, the intake capacity in these new colleges was increased by 977 seats.

When Audit enquired with the DME as to whether any comprehensive plan to bridge the gaps to achieve the Doctor-Population ratio was conducted, it was replied that gap analysis was done. However, supporting document regarding gap analysis was not produced to Audit.

#### 2.4.2.3 Availability of seats under AYUSH

Under AYUSH, Medical colleges were established to impart quality education at the Graduation and Post-Graduation level through Ayurvedic, Unani, Homeopathy and Naturopathy systems of medicine. Number of colleges and availability of seats in this system to the end of March 2022 are as follows:

Table 2.12 - Availability of Colleges and seats under AYUSH

Sl.No	System	Colleges	UG seats	PG seats
1	Ayurveda	2	126	48
2	Unani	1	94	45
3	Homeopathy	1	125	38
4	Naturopathy	1	60	0
	Total	5	405	131

Source: Information Furnished by the Department

<sup>&</sup>lt;sup>3</sup> National Medical Commission (NMC) is an Indian regulatory body of 33 members which regulates medical education and medical professionals. It replaced the Medical Council of India on 25 September 2020

<sup>&</sup>lt;sup>4</sup> Including ESI Medical College, a college run by ESI Corporation

Audit observed that, there was no increase in the number of Colleges and seats.

#### 2.4.2.4 Cancellation of Diplomate of National Board (DNB) Seats

To increase the number of qualified specialists in peripheral areas, National Board of Examinations<sup>5</sup> (NBE) accredits institutions/hospitals having adequate infrastructure, facilities, faculty and patient load as per stipulated accreditation norms for the training of candidates in various approved medical specialities. The main criteria for seeking accreditation for DNB was the bed strength of the applicant hospital. All District Hospitals above 100-bed capacity can apply for DNB courses and should have a Memorandum of Undertaking (MoU) with existing Medical Colleges.

Accordingly, the Telangana Government had submitted (2015) a proposal to NBE for the introduction of DNB courses in the District Hospital, King Koti Hyderabad in five<sup>6</sup> specialties which are the basic Departments needed at the peripheral level, especially for the Mother and Child Health Centres (MCH). The Superintendent, District Hospital, King Koti, Hyderabad entered (April 2015) into an MoU with the Principal, Osmania Medical College (OMC)<sup>7</sup>, Hyderabad to acquire the Human Resources and to utilise the facilities/infrastructure. Based on the application and after conducting inspection, NBE granted accreditation to the District Hospital, King Koti, Hyderabad for operating the Post Graduate training facility for DNB seats during July 2016 to July 2017 for the following specialities.

Table 2.13 - Details of Post Graduate seats under DNB quota

Sl No	Name of the Department	Accreditation valid upto	No of seats
1	General Medicine	July 2016 to June 2021	02
2	Anesthesiology	July 2016 to June 2021	01
3	Obstetrics and Gynaecology (OB&GY)	January 2017 to December 2021	02
4	Paediatrics	January 2017 to December 2021	01
5	General Surgery	July 2016 to June 2021	01

Source: Information furnished by the Department

Scrutiny revealed that, NBE has withdrawn its accreditation on 03 July 2018 for all 7 (seven) DNB seats. The withdrawal of the seats was attributed (July 2018) by the National Board of Examinations to the receipt of complaints regarding inadequate thesis guidance support, non-payment of stipend regularly, inadequate research support etc. It was also directed by NBE to District Hospital, King Koti, Hyderabad to relieve all ongoing DNB trainees by issuing provisional DNB training completion certificates.

Due to the non provision of stipends timely, the seats sanctioned by NBE were withdrawn (July 2018) resulting in the loss of seven PG seats.

Government in its response stated (August 2023) that, there was no need for DNB courses in secondary level hospitals as State Government was establishing new Medical Colleges

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<sup>&</sup>lt;sup>5</sup> Which was established in 1975 for improving the quality of Medical Education by establishing high and uniform standards of postgraduate examinations in postgraduate and post-doctoral fellowship examinations in approved disciplines leading to the award of Diploma of National Board (DNB) and Fellow of National Board (FNB)

<sup>&</sup>lt;sup>6</sup> Obstetrics and Gynaecology (OBG), Paediatric, Anesthesiology, General Medicine and General Surgery

<sup>&</sup>lt;sup>7</sup> which is annexed to the nearest Government Medical College in the vicinity

in all the Districts. Hence, all the District Hospitals were converted to Government General Hospitals/Medical Colleges.

The reply is not acceptable as the DNB courses are PG Diploma courses whereas Medical Colleges cater to Under Graduate courses.

#### 2.4.3 Availability of Human Resources in nine Medical Colleges

Scrutiny of the sanctioned strength, men in position and vacancy in respect of the nine<sup>8</sup> existing Medical Colleges revealed the following:

Table 2.14 - Vacancy position in respect of nine Medical Colleges as of March 2022

S.No	Name of the post	Sanctioned Strength	MIP	Vacancy	Vacancy percentage
1	Professor	323	267	56	17
2	Associate Professor	524	270	254	48
3	Assistant Professor/ Tutor	1,531	921	610	40
Total:		2,378	1,458	920	39

**Source:** Information furnished by DME

Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto 50%	Vacancy above 50%	
	3070		

The aforementioned Medical Colleges were having an overall shortage of Professors (17 *per cent*), Associate Professors (48 *per cent*) and Assistant Professor/Tutor (40 *per cent*).

The sanctioned strength and men in position in the test checked Medical Colleges were as follows:

Table 2.15 - Vacancy position in the Test checked Medical Colleges as of March 2022

S.No	Name of the post	Sanctioned Strength	MIP	Vacancy	Vacancy percentage						
	Osmania Medical College										
1	Professor	81	76	5	6						
2	Associate Professor	121	69	52	43						
3	Assistant Professor/Tutor	304	201	103	34						
Total:		506	346	160	32						
	Ka	katiya Medical Colleg	ge								
1	Professor	34	28	6	18						
2	Associate Professor	71	38	33	46						
3	Assistant Professor/Tutor	145	100	45	31						
Total	•	250	166	84	34						
	Government Medical College, Mahabubnagar										
1	Professor	20	18	2	10						
2	Associate Professor	34	26	8	24						

<sup>&</sup>lt;sup>8</sup> Osmania Medical College; Gandhi Medical College; Kakatiya Medical College; RIMS, Adilabad; Government Medical College, Nalgonda; Government Medical College, Siddipet; Government Medical College, Mahabubnagar; Government Medical College, Suryapet; Government Medical College, Nizamabad

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3	Assistant Professor/Tutor	79	77	2	3
Total:		133	121	12	9

 $\textbf{Source:} \ Information \ furnished \ by \ the \ test \ checked \ colleges$ 

Colour code:

Vacancy upto	Vacancy	more	Vacancy above	
25%	than 25% a	and upto	50%	
	50%			

- In the test checked Osmania Medical College, Hyderabad shortage in the cadres of Associate Professors (43 *per cent*) and Assistant Professors/Tutors (34 *per cent*) was observed.
- In the test checked Kakatiya Medical College, Warangal shortage in the cadres of Associate Professors (46 *per cent*) and Assistant Professors/Tutors (31 *per cent*) was observed.
- In the test checked Government Medical College, Mahabubnagar, shortage in the cadre of Associate Professors (24 *per cent*) was observed.

Government in its response stated (August 2023) that, 852 Assistant Professors in various specialities are recruited recently in DME institutions, promotion orders issued to 193 Associate Professors and 59 Professors.

Hospital-wise details of the filling up of these staff were however not furnished as a result of which actual shortage of staff after these recruitments could not be assessed.

The vacancies in the positions of Associate Professors and Assistant Professors have an impact on the quality of education provided to medical students.

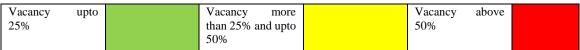
#### 2.5 Human Resources under AYUSH

Table 2.16: Human Resources under AYUSH as of March 2022

Category	Sanctioned Posts	Working Strength	Vacancy	Vacancy percentage
Doctor	777	451	326	42
Nurse	417	196	221	53
Pharmacist	581	230	351	60
Para-Medical & other staff	916	434	482	53
Total	2,691	1,311	1,380	51

Source: Information furnished by the Department

Colour code:



Audit observed overall shortage of 51 *per cent* in the Department of AYUSH. Shortages in the cadre of Doctor (42 *per cent*), Nurse (53 *per cent*) and Pharmacist (60 *per cent*) and Para-Medical & other staff (53 *per cent*) were noticed in the Health institutions under the control of Department of AYUSH.

Table 2.17: Status of Human Resources in some specific posts under AYUSH

Department as of March 2022

Category	Sanctioned Posts	Working Strength	Vacant Post	Vacancy percentage
Professors	164	79	85	52
Lecturers	79	29	50	63
Medical Officers	534	343	191	36
Lab technicians	61	18	43	70
Pharmacist (Ayurveda)	249	113	136	55
Pharmacist (Homeo)	106	52	54	51
Pharmacist (Unani)	165	47	118	72
Total	1,358	681	677	50

Source: Information furnished by the Commissioner AYUSH

Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

Shortages in the cadre of Professors (52 per cent), Lecturers (63 per cent), Medical Officers (36 per cent), Lab Technicians (70 per cent) and Pharmacist (Ayurveda) (55 per cent) Pharmacist (Homeo) (51 per cent) and Pharmacist (Unani) (72 per cent) were noticed in the Health institutions under the control of Department of AYUSH.

### 2.5.1 Availability of Human Resources in upgraded AYUSH Health and Wellness Centres

Table 2.18: Status of Human Resources in AYUSH Health and Wellness Centres as of May 2023

No. of HWCs upgraded upto Nov. 2021	No. of Yoga instructors to be deployed @ 2	No. of HWCs having Yoga instructor	No . of ASHAs to be deployed @5 per HWCs	No. of ASHAs deployed in actual in HWCs	No. of ANMs to be deployed @2 per HWCs	No. of ANMs deployed in actual in HWCs
421	842	0	2,105	1,780	842	0

Source: Information furnished by the Department

Audit observed that, of the 421 HWCs upgraded, there were no Yoga Instructors and ANMs in any of the upgraded HWCs. Shortages in the deployment of ASHAs was to the extent of 15 *per cent*.

Table 2.19 Status of Human Resources in the AYUSH Department in Districts as of May 2023

Sl.			AYUSH Dept.			Ayurvedic Medical Officer		
No.	District Name	Sanction ed	worki ng	Vacancy (Percentage)	Sanction ed	Worki ng	Vacancy (Percentage)	
1	Adilabad	42	18	24(57)	8	2	6(75)	
2	Bhadradri Kothagudem	51	30	21(41)	8	4	4(50)	
3	Hyderabad	0	0	0	0	0	0	

Sl.			AYUSI	H Dept.	Ayurvedic	Medical O	fficer
No.	District Name	Sanction	worki	Vacancy	Sanction	Worki	Vacancy
110.		ed	ng	(Percentage)	ed	ng	(Percentage)
4	Jagtial	18	7	11(61)	5	0	5(100)
5	Jangaon	33	21	12(36)	5	2	3(60)
6	Jayashankar Bhupalpally	21	14	7(33)	5	4	1(20)
7	Jogulamba Gadwal	21	10	11(52)	5	1	4(80)
8	Kamareddy	57	28	29(51)	8	1	7(88)
9					3	3	
10	Karimnagar	36	30	6(17)	13	5	0
10	Khammam Kumuram Bheem	54	42	12(22)		3	8(62)
11	Asifabad	30	16	14(47)	3	0	3(100)
12	Mahabubabad	30	20	10(33)	4	2	2(50)
13	Mahabubnagar	24	19	5(21)	3	2	1(33)
14	Mancherial	30	16	14(47)	4	2	2(50)
15	Medak	42	33	9(21)	7	5	2(29)
16	Medchal Malkajgiri	27	20	7(26)	3	2	1(33)
17	Mulugu	21	8	13(62)	6	2	4(67)
18	Nagarkurnool	42	25	17(40)	7	1	6(86)
19	Nalgonda	60	45	15(25)	8	3	5(63)
20	Narayanpet	15	12	3(20)	1	1	0
21	Nirmal	36	23	13(36)	8	3	5(63)
22	Nizamabad	75	51	24(32)	14	1	13(93)
23	Peddapalli	27	16	11(41)	5	3	2(40)
24	Rajanna Sircilla	21	10	11(52)	4	1	3(75)
25	Rangareddy	78	50	28(36)	16	6	10(63)
26	Sangareddy	69	60	9(13)	10	6	4(40)
27	Siddipet	42	27	15(36)	8	2	6(75)
28	Suryapet	36	29	7(19)	6	3	3(50)
29	Vikarabad	45	22	23(51)	7	2	5(71)
30	Wanaparthy	15	12	3(20)	1	0	1(100)
31	Warangal Rural	33	28	5(15)	3	3	0
32	Hanumakonda	21	16	5(24)	4	3	1(25)
33	Yadadri Bhuvanagiri	30	21	9(30)	7	1	6(86)
Tota	l	1182	779	403(34)	199	76	123(62)

Source: Information furnished by the Department

Colour code:



Audit observed that the overall vacancy in the AYUSH Department was to the extent of 34 *per cent*. Shortage in the cadre of Ayurvedic Medical Officer was to the extent of 62 *per cent*.

#### 2.6 Human Resources under Drugs Control Administration (DCA)

Table 2.20: Manpower position under DCA as of April 2023

Name of the Post	Sanction	Working	Vacancy	Vacancy percentage
Director / Assistant Director	21	20	1	5
Administration	48	25	23	48
Drug inspector	71	53	18	25
Analyst	13	4	9	69
Scientific Officer	5	5	0	0
Vigilance officer	1	0	1	100
Lab technician	2	2	0	0
Driver	4	0	4	100
Others	33	22	11	33
Total	198	131	67	34

Source: Information furnished by the DCA

Colour code:

Vacancy upto 25%	Vacancy more than 25% and upto	Vacancy above 50%	
	50%		

Shortages were observed in the cadre of Analysts (69 *per cent*) and Drug Inspectors (25 *per cent*) under the control of Drugs Control Administration

#### 2.7 Accredited Social Health Activist (ASHA)

Accredited Social Health Activist (ASHA) is a health activist in the community whose responsibility includes creating awareness on health and its social determinants and mobilising the community towards local health planning and increase utilisation and accountability of the existing health services. Besides, ASHA is also entrusted with the responsibility of informing about the birth and death in the village and any unusual health problems/disease outbreaks in the community to the Sub-Centres/Primary Health Centres. ASHA must be primarily a woman resident of the village, 'Married/Widow/Divorced' and preferably in the age group of 25 to 45 years. ASHA should have effective communication skills and leadership qualities and should be able to reach out to the community. She should be a literate woman with formal education up to Eighth Class.

Table 2.21 - District-wise shortfall (%) in availability of ASHAs as per IPHS norms as of August 2023

District	Required	Available	Vacancy	Vacancy percentage
Adilabad	1,100	1,006	94	9
Bhadradri Kothagudem	1,560	1,440	120	8
Hanumakonda	765	636	129	17
Hyderabad	1,913	1,913	-	-
Jagtial	890	751	139	16
Jangaon	542	521	21	4
Jayashankar Bhupalpally	446	420	26	6

Jogulamba Gadwal	658	623	35	5
Kamareddy	898	773	125	14
Karimnagar	929	649	280	30
Khammam	1,452	1,353	99	7
Kumuram Bheem Asifabad	849	753	96	11
Mahabubabad	985	892	93	9
Mahabubnagar	915	875	40	4
Mancherial	755	663	92	12
Medak	762	564	198	26
Medchal Malkajgiri	1,273	1,273	-	-
Mulugu	490	484	6	1
Nagarkurnool	1,039	887	152	15
Nalgonda	1,540	1,464	76	5
Narayanpet	610	591	19	3
Nirmal	624	568	56	9
Nizamabad	1,308	1,207	101	8
Peddapalli	626	507	119	19
Rangareddy	1,385	1,385	-	-
Sangareddy	1,212	937	275	23
Siddipet	925	848	77	8
Rajanna Sircilla	505	481	24	5
Suryapet	1,068	1,035	33	3
Vikarabad	885	712	173	20
Wanaparthy	615	572	43	7
Warangal	745	673	72	10
Yadadri Bhuvanagiri	759	704	55	7
Total	31,028	28,160	2,868	9

Source: Information furnished by the Department

#### Colour code:

Vacancy upto 25%	tl	Vacancy more han 25% and upto	Vacancy above 50%	
	5	50%		

Scrutiny of the District-wise information revealed the following:

- ➤ Out of 33 Districts, the shortage in 12 Districts was ranging from 10 per cent (Warangal) to 30 per cent (Karimnagar).
- ➤ In respect of data furnished to the end of 13 September 2022, Audit observed that, out of the 26,573 available ASHA workers, 7,274 workers (27 *per cent*) had a qualification below 8<sup>th</sup> class and 11,906 workers (45 *per cent*) were aged more than 45 years. Detailed District-wise breakup of ASHA workers with qualification less than 8<sup>th</sup> class and more than 45 years of age was not furnished by the Department in respect of 2021-22.

Government in its response stated (August 2023) that, as per population norms and ASHA guidelines, there was a requirement of 31,028 ASHAs and that the actual ASHAs in position was 28,160. It was confirmed that, the vacancy position of ASHAs in Warangal District remained at 10 *per cent*. However, the vacancy position of Medchal Malkajgiri has

been addressed and 100 *per cent* ASHAs were in position. It was assured that the State was taking steps to fill up the vacancies as per the requirement.

#### 2.8 Conclusion

Department had not furnished Human Resources policy for the appointment of Specialist Doctors, Medical Officers and other supporting Paramedical staff to meet the requirement of the healthcare facilities according to the IPHS norms though it was stated to had been prepared. Department had also not maintained a centralised database of sanctioned strength, actual persons in position and District-wise deployment data of Doctors, nurses and other paramedical staff in the healthcare facilities across the State.

The availability of Doctors showed an increasing trend from 2017-18 to 2021-22 and was 1:881 in the State of Telangana.

There were huge gaps between sanctioned posts and the men-in- position of healthcare staff with the overall vacancies being 45 per cent. As against 10,822 sanctioned posts in the Telangana Vaidya Vidhana Parishad only 6,196 staff were in position with vacancies ranging up to 43 per cent. In the case of Institute of Preventive Medicine, as against 391 sanctioned posts only 181 staff were in position with vacancies ranging up to 54 per cent. In the Department of AYUSH, as against 2,691 sanctioned posts, only 1,311 staff were in position with vacancies ranging up to 51 per cent.

The overall shortage of manpower in the District Hospitals was to the extent of 46 per cent with 696 out of the sanctioned 1524 posts remaining vacant. The vacancy in the cadre of Doctors was 52 per cent with 419 out of the 801 posts remaining vacant and that of the Nursing Staff was 38 per cent with 241 out of the sanctioned 638 posts remaining vacant.

Acute shortages of teaching staff were observed in nine Medical Colleges with overall vacancies in the cadre of Associate Professors (48 per cent) and Assistant Professors/Tutors (40 per cent). Vacancies in the positions of Associate Professors and Assistant Professors have an impact on the quality of medical education.

There was no increase in the number of Colleges and seats under AYUSH stream. Huge vacancies were noticed in the Department of AYUSH in the cadres of Doctors (42 per cent), Nurses (53 per cent), Pharmacist (60 per cent) and Para-Medical & other staff (53 per cent). Besides these, vacancies were also observed in the cadre of Professors (52 per cent) and Lecturers (63 per cent) which impacted the quality of medical education imparted under AYUSH. Yoga instructors and ANMs have not been posted in any of the 421 upgraded HWCs.

#### 2.9 Recommendations

State Government should formulate a Human Resource Policy with emphasis on short, medium and long term goals to address the shortage of Human Resources in various cadres.

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- > State Government should review the availability of manpower in all the health institutions and ensure availability of staff as per the IPHS norms.
- ➤ Government should develop a Human Resource Management System (HRMS) to know the deployment of staff in all health facilities across all HODs on real time basis.