

Appendix 2.1

(Referred to in Paragraph 2.4.2)

District wise manpower position for doctors, nurses, paramedics and other staff in both the districts as on 31 March 2022

			Doctors				
Hospitals	Name of District	No. of Hospitals	Required as per IPHS	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
District Hospitals	North Goa	1	50	80	61	19	44
	South Goa	1	58	90	66	24	48
Sub-District Hospitals	South Goa	2	48	93	59	34	30
Community Health Centres	North Goa	4	42	73	39	34	34
	South Goa	2	22	30	16	14	11
Primary Health Centres	North Goa	12	12	52	43	9	79
	South Goa	16	16	84	72	12	88
			Nurses				
Hospitals	Name of District	No. of Hospitals	Required as per IPHS	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
District Hospitals	North Goa	1	135	149	139	10	21
	South Goa	1	180	217	205	12	22
Sub-District Hospitals	South Goa	2	82	140	127	13	18
Community Health Centres	North Goa	4	44	60	52	8	10
	South Goa	2	22	38	33	5	7
Primary Health Centres	North Goa	12	36	31	28	3	14
	South Goa	16	48	55	52	3	30
			Paramedics				
Hospitals	Name of District	No. of Hospitals	Required as per IPHS	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
District Hospitals	North Goa	1	66	51	36	15	65
	South Goa	1	81	65	41	24	36
Sub-District Hospitals	South Goa	2	108*	34	21	13	45
Community Health Centres	North Goa	4	44	150	122	28	51
	South Goa	2	22	66	60	6	21
Primary Health Centres	North Goa	12	60	191	155	36	106
	South Goa	16	80	313	247	66	123
			Others				
Hospitals	Name of District	No. of Hospitals	Required as per IPHS##	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
District Hospitals	North Goa	1	21	238	190	48	15
	South Goa	1	26	270	189	81	18

Hospitals	Name of District	No. of Hospitals	Required as per IPHS	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
Sub-District Hospitals	South Goa	2	30	186	132	54	4
Community Health Centres	North Goa	4	52	209	170	39	14
	South Goa	2	26	99	66	33	5
Primary Health Centres	North Goa	12	48	360	305	55	45
	South Goa	16	64	442	342	100	53

(Source: Directorate of Health Services)

*Includes 14 posts of electrician (2), plumber (2) and safai karamchari (10)

Only administrative posts included.

Appendix 2.2

(Referred to in Paragraph 2.4.4)

Department wise manpower position for doctors, nurses, paramedics and other staff in
GMCH as on 31 March 2022

Departments	Doctors						Nurses			
	SS	MIP	Vacancy	Vacancy Percentage	Vacancy filled up by Contract	Total Vacancy Percentage	SS	MIP	Vacancy	Vacancy Percentage
ENT	10	5	5	50.00	1	40.00	11	11	0	00.00
General Medicine	34	20	14	41.18	0	41.18	240	232	8	03.33
Paediatrics	22	13	9	40.91	0	40.91	108	108	0	00.00
General Surgery	30	17	13	43.33	4	30.00	380	373	7	01.84
Ophthalmology	14	5	9	64.29	2	50.00	15	15	0	00.00
Obstetrics and Gynaecology	23	11	12	52.17	2	43.48	103	94	9	08.74
Orthopaedics	21	12	9	42.86	0	42.86	45	37	8	17.78
Dermatology & Venereology	8	4	4	50.00	0	50.00	10	10	0	00.00
Anaesthesia	31	13	18	58.06	3	48.39	130	125	5	03.85
Radiology	30	10	20	66.67	2	60.00	0	0	0	NA
Pathology	40	16	24	60.00	2	55.00	0	0	0	NA
Microbiology	23	11	12	52.17	3	39.13	0	0	0	NA
Forensic Specialists	25	11	14	56.00	1	52.00	0	0	0	NA
Biochemistry	26	10	16	61.54	4	46.15	5	5	0	00.00
Geriatric Medicine	3	1	2	66.67	0	66.67	24	20	4	16.67
Transfusion Medicine	8	3	5	62.50	0	62.50	0	0	0	NA
Physiology	23	13	10	43.48	0	43.48	0	0	0	NA
Pharmacology	18	11	7	38.89	0	38.89	0	0	0	NA
Community Medicine	34	15	19	55.88	4	44.12	0	0	0	NA
Respiratory Medicine	13	9	4	30.77	2	15.38	16	10	6	37.50
Neurosurgery	11	9	2	18.18	0	18.18	26	16	10	38.46
Neurology	9	3	6	66.67	1	55.56	18	10	8	44.44
Nephrology	9	3	6	66.67	1	55.56	18	10	8	44.44
Endocrinology	10	3	7	70.00	1	60.00	4	4	0	00.00
Paediatric Surgery	16	3	13	81.25	2	68.75	18	10	8	44.44
Plastic Surgery	15	4	11	73.33	0	73.33	12	12	0	00.00
CVTS	14	0	14	100.00	5	64.29	30	20	10	33.33
Cardiology	20	0	20	100.00	7	65.00	30	20	10	33.33
Medical Oncology	7	0	7	100.00	1	85.71	16	6	10	62.50
Surgical Oncology	3	1	2	66.67	0	66.67	16	6	10	62.50
Radiation Oncology	6	0	6	100.00	1	83.33	16	6	10	62.50
Anatomy	23	9	14	60.87	2	52.17	0	0	0	NA
Urology	15	2	13	86.67	2	73.33	28	18	10	35.71
Emergency Medicine	33	14	19	57.58	0	57.58	20	6	14	70.00
Cardiac Anaesthesia	12	1	11	91.67	3	66.67	6	2	4	66.67
Phy. Medical. Rehab.	3	0	3	100.00	0	100.00	4	0	4	100.00

Departments	Doctors						Nurses			
	SS	MIP	Vacancy	Vacancy Percentage	Vacancy filled up by Contract	Total Vacancy Percentage	SS	MIP	Vacancy	Vacancy Percentage
Medical Gastroent.	4	0	4	100.00	0	100.00	4	0	4	100.00
Surgical Gastr Ento	4	0	4	100.00	0	100.00	4	0	4	100.00
TOTAL	650	262	388	59.69	56	51.08	1357	1186	171	12.60

Departments	Paramedics						Other staff			
	SS	MIP	Vacancy	Vacancy Percentage	Vacancy filled up by Contract	Total Vacancy Percentage	SS	MIP	Vacancy	Vacancy Percentage
ENT	2	1	1	50.00	1	0.00	6	6	0	0.00
General Medicine	15	12	3	20.00	3	0.00	105	105	0	0.00
Paediatrics	2	1	1	50.00	1	0.00	24	20	4	16.67
General Surgery	0	0	0	NA	0	NA	95	90	5	5.26
Ophthalmology	0	0	0	NA	0	NA	12	10	2	16.67
Obstetrics and Gynaecology	4	4	0	0.00	0	0.00	60	55	5	8.33
Orthopaedics	20	20	0	0.00	9	(-)45.00	60	42	18	30.00
Dermatology & Venereology	1	1	0	0.00	0	0.00	8	6	2	25.00
Anaesthesia	19	1	18	94.74	9	47.37	40	32	8	20.00
Radiology	35	35	0	0.00	0	0.00	42	30	12	28.57
Pathology	16	16	0	0.00	0	0.00	63	56	7	11.11
Microbiology	31	31	0	0.00	0	0.00	32	26	6	18.75
Forensic Specialists	5	5	0	0.00	0	0.00	15	15	0	0.00
Biochemistry	0	0	0	NA	0	NA	43	34	9	20.93
Geriatric Medicine	0	0	0	NA	0	NA	24	22	2	8.33
Transfusion Medicine	0	0	0	NA	0	NA	5	0	5	100.00
Physiology	0	0	0	NA	0	NA	6	6	0	0.00
Pharmacology	0	0	0	NA	0	NA	6	6	0	0.00
Community Medicine	0	0	0	NA	0	NA	12	8	4	33.33
Respiratory Medicine	0	0	0	NA	0	NA	32	28	4	12.50
Neurosurgery	0	0	0	NA	0	NA	42	38	4	9.52
Neurology	0	0	0	NA	0	NA	32	27	5	15.63
Nephrology	0	0	0	NA	0	NA	40	34	6	15.00
Endocrinology	0	0	0	NA	0	NA	8	6	2	25.00
Paediatric Surgery	0	0	0	NA	0	NA	32	27	5	15.63
Plastic Surgery	0	0	0	NA	0	NA	40	36	4	10.00
CVTS	0	0	0	NA	0	NA	52	46	6	11.54
Cardiology	0	0	0	NA	0	NA	56	49	7	12.50
Medical Oncology	0	0	0	NA	0	NA	5	4	1	20.00
Surgical Oncology	0	0	0	NA	0	NA	5	1	4	80.00
Radiation Oncology	0	0	0	NA	0	NA	5	1	4	80.00
Anatomy	0	0	0	NA	0	NA	5	5	0	0.00

Departments	Paramedics						Other staff			
	SS	MIP	Vacancy	Vacancy Percentage	Vacancy filled up by Contract	Total Vacancy Percentage	SS	MIP	Vacancy	Vacancy Percentage
Urology	0	0	0	NA	0	NA	42	38	4	9.52
Emergency Medicine	0	0	0	NA	0	NA	32	28	4	12.50
Cardiac Anaesthesia	0	0	0	NA	0	NA	24	22	2	8.33
Phy. Medical. Rehab.	0	0	0	NA	0	NA	8	2	6	75.00
Medical Gastroent.	0	0	0	NA	0	NA	8	2	6	75.00
Surgical Gastr Ento	0	0	0	NA	0	NA	8	2	6	75.00
Other Departments										
(i) Medical Rec. Dept.	0	0	0	NA	0	NA	148	125	23	15.54
(ii) DEAN Office	0	0	0	NA	0	NA	176	142	34	19.32
(iii) Med. Supd. Office	0	0	0	NA	0	NA	110	109	1	0.91
(iv) Administration GMCH	0	0	0	NA	0	NA	130	107	23	17.69
TOTAL	150	127	23	15.33	23	0.00	1698	1448	250	14.72

(Source: Information provided by Goa Medical College and Hospital)

(The contract staff details in Nurses and Other Staff cadres was not provided by GMCH)

Appendix 3.1

(Referred to in Paragraph 3.3.1)

Details of Patient per day per Registration Counter and OPD cases per day per Doctor in North Goa District Hospital (NGDH) and selected CHCs

Year	NGDH								
	Total number of Patients	Increase/decrease in number of patients wrt 2016-17	Percentage of increase/decrease wrt 2016-17	No of registration Counters	Patients to be registered per counter per day, (NHM Assessors' Guidebook, 2013 ¹)	No of Working days in the Year	Patient per day per Registration Counter	No of Doctors	Patients per day per Doctor
2016-17	109437	-	-	4	54 to 90	310	88.26	19	18.58
2017-18	234295	124858	114.09	4	54 to 90	310	188.95	19	39.78
2018-19	233152	123715	113.05	4	54 to 90	310	188.03	19	39.58
2019-20	256522	147085	134.40	4	54 to 90	310	206.87	19	43.55
2020-21	101955	-7482	-6.84	4	54 to 90	310	82.22	19	17.31
2021-22	105627	-3810	-3.48	4	54 to 90	310	85.18	19	17.93
Total	1040988	-	-	4	-	1860	139.92	19	29.46

(Source: Information furnished by the NGDH, Mapusa)

Details of Patient per day per Registration Counter and OPD cases per day per Doctor in Selected CHCs

Year	CHC Canacona								
	Total number of Patients	Increase/decrease in number of patients wrt 2016-17	Percentage of increase/decrease wrt 2016-17	No of registration Counters	Patients to be registered per counter per day, (NHM Assessor's Guidebook, 2014 ²)	No of Working days in the Year	Patient per day per Registration Counter	No of Doctors	Patients per day per Doctor
2016-17	53244	-	-	1	54 to 90	310	171.75	3	57.25
2017-18	58031	4787	8.99	1	54 to 90	310	187.20	3	62.40
2018-19	56608	3364	6.32	1	54 to 90	310	182.61	3	60.87
2019-20	52036	(-)1208	(-)2.27	1	54 to 90	310	167.86	3	55.95
2020-21	37093	(-)16151	(-)30.33	1	54 to 90	310	119.65	3	39.88
2021-22	45324	(-)7920	(-)14.87	1	54 to 90	310	146.21	3	48.74
Total	302336	-	-	1	-	1860	162.55	3	54.18

(Source: Information furnished by the CHC Canacona)

¹ (Case paper registration counter open hours in a day) 4 hours and 30 minutes X 12 (NHM Assessors' Guidebook, 2013, average time taken for registration, 12-20 patients per hour/counter) = 54-90.

² (Case paper registration counter open hours in a day) 4 hours and 30 minutes X 12 (NHM Assessors' Guidebook, 2014, average time taken for registration, 12-20 patients per hour/counter) = 54-90.

Year	CHC Pernem								
	Total number of Patients	Increase/decrease in number of patients wrt 2016-17	Percentage of increase/decrease wrt 2016-17	No. of registration Counters	Patients to be registered per counter per day (NHM Assessors' Guidebook, 2014)	No of Working days in the Year	Patient per day per Registration Counter	No of Doctors	Patients per day per Doctor
2016-17	46350	-	-	1	54 to 90	310	149.52	3	49.84
2017-18	47259	909	1.96	1	54 to 90	310	152.45	3	50.82
2018-19	54171	7821	16.87	1	54 to 90	310	174.75	3	58.25
2019-20	35365	(-)10985	(-)23.70	1	54 to 90	310	114.08	3	38.03
2020-21	37593	(-)8757	(-)18.89	1	54 to 90	310	121.27	3	40.42
2021-22	50792	4442	9.58	1	54 to 90	310	163.85	3	54.62
Total	271530	-	-	1	-	1860	145.98	3	48.66

(Source: Information furnished by the CHC, Pernem)

Appendix 3.2

(Referred to in Paragraph 3.3.4)

Details of Maternity and Childcare Services along with availability of Beds in both North Goa and South Goa Districts Hospitals

Neonatal Intensive Care Unit of North Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	114	5
2017-18	116	5
2018-19	100	5
2019-20	89	5
2020-21	65	5
2021-22	63	5

Maternity cases of North Goa District Hospital

Year	No. of Cases	No. of Beds
2016-17	3280	59
2017-18	3538	59
2018-19	3724	59
2019-20	3742	59
2020-21	2314	59
2021-22	1992	59

Neonatal Intensive Care Unit of South Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	361	5
2017-18	377	5
2018-19	400	5
2019-20	377	5
2020-21	323	5
2021-22	378	6

Maternity cases of South Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	3552	57
2017-18	3879	49
2018-19	3763	51
2019-20	3641	51
2020-21	3382	67
2021-22	3877	88

(Source: - Information furnished by the Hospitals)

Appendix 4.1

(Referred to in Paragraph 4.3.2)

10 test-checked medical equipment procurements.

Sl. No.	Year & Month of tender	Year & Month of installation	Name of the equipment	Amount (₹ in crore)	No. of bidders
1	November 2016	August 2017	CT scanner	2.11	Two
2	June 2020	July 2021 to January 2022	Bio-medical waste automatic autoclave (4 numbers)	0.65	Two (one bidder was disqualified as the specifications were not matching)
3	September 2019	August and September 2020	Color Doppler (2 number)	0.75	One
4	-*	March 2020	200 ICU Ventilators at GMCH	16.31	For COVID-19 through direct purchase.
5	-#	February 2020	High end echocardiography	0.57	One
6	February 2019	July 2021	LAB scan 3D system	0.76	One
7	October 2018	May 2020	Multipara monitors (7 numbers)	0.61	One
8	August 2018	January 2020	New advanced ventilators under buyback offer	2.17	Two
9	November 2016	July 2018	Conventional and high frequency neonatal ventilators	1.36	Two (one bidder was disqualified as the EMD amount was not deposited in ITCGL account)
10	August 2018	March 2020	Operating microscope	0.78	One

(Source: Information collected from GMCH and DHS)

* No tender date as it was a direct purchase.

No tender date as the purchase order was issued as additional order to the previous supplier/vendor.

Appendix 7.1

(Referred to in Paragraph 7.2.1(iii))

Availability of equipment, consumables and miscellaneous supplies in test-checked HWCs (SCs)

Type of equipment, consumables and miscellaneous supplies	IPHS Norms	Name of Sub-Centres									
		Ambelim	Betalbatim	Colva	Veling	Nanoda	Sal	Nagargao	Piligao	Siolim	Cola
Clinical material, Tools and Equipment	Required	65	65	65	65	65	65	65	65	65	65
	Available	19	25	22	20	30	32	22	12	15	20
	Per cent unavailable	71	62	66	69	54	51	66	82	77	69
Linen, Consumables and Misc.	Required	37	37	37	37	37	37	37	37	37	37
	Available	19	19	20	20	22	21	25	20	19	17
	Per cent unavailable	49	49	46	46	41	43	32	46	49	54
Diagnostic material and reagents for screening	Required	19	19	19	19	19	19	19	19	19	19
	Available	06	07	07	05	07	05	05	05	05	04
	Per cent unavailable	68	63	63	74	63	74	74	74	74	79

(Source: Information furnished by Sub-centres)

Appendix 7.2

(Referred to in Paragraph 7.2.1(iv))

Shortfall in manpower in test-checked HWCs (Sub-centres)

Name of the post	IPHS Norms	Name of Sub Centres									
		Ambelim	Colva	Betalbatim	Veling	Cola	Sal	Nanoda	Nagargao	Piligao	Siolim
ASHA	Required	7	8	4	7	3	3	3	3	8	8
	MIP	0	0	0	0	0	0	0	0	0	0
	Shortfall	7	8	4	7	3	3	3	3	8	8
Mid-Level Health Provider	SS	1	1	1	1	1	1	1	1	1	1
	MIP	0	0	0	0	0	0	0	0	0	0
	Shortfall	1	1	1	1	1	1	1	1	1	1
Multi-purpose Worker (Male)	SS	1	1	1	1	1	1	1	1	1	1
	MIP	1	1	1	1	1	1	1	1	0	0
	Shortfall	0	0	0	0	0	0	0	0	1	1
Multi-purpose Worker (Female)	SS	2	2	2	2	2	2	2	2	2	2
	MIP	1	1	0	1	2	1	1	1	2	2
	Shortfall	1	1	2	1	0	1	1	1	0	0

(Source: Information furnished by the sampled Sub-Centres)

Appendix 9.1

(Referred to in Paragraph 9.5)

Performance of Goa

SDG Target No.	No. of Indicators	Indicators	Target	Achievement
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 1,00,000 live births	1	3.1.1 Maternal Mortality Ratio (Per 1,00,000 live births)	70	73.64
	2	3.1.2 Percentage of births attended by skilled health personnel (Period 5 years)	100	99.10
	3	3.1.3 Percentage of births attended by skilled health personnel (Period 1 year)	100	99.96
3.2 By 2030, end preventable deaths of new borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and U-5 mortality to at least as low as 25 per 1000 live births	4	3.2.1 Under-five mortality rate (per 1000 live births)	25	10.60
3.3 By 2030, end the epidemic of AIDS, TB, malaria and neglected tropical disease and combat hepatitis, water-borne diseases and other communicable diseases	5	3.3.1 Number of new HIV infections per 1000 uninfected population	0.0007	0.07
	6	3.3.2 Tuberculosis incidence per 1,00,000 population by 2025	242	134.00
	7	3.3.3 Malaria incidence per 1000 population	0.00064	0.001
	8	3.3.5 Dengue: Case Fatality Ratio	0.23	0.23
	9	3.3.6 Proportion of grade-2 cases amongst new cases of Leprosy, (Per million population)	0.00	0.00
	10	3.3.7 Percentage of blocks reporting < 1 Kala Azar case per 10,000 population out of the total endemic blocks	100	100.00
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health well being	11	3.3.8 Percentage of districts reporting < 1% Microfilaria rate (MF) out of Targeted endemic districts	100	100.00
	12	3.4.1 Suicide mortality rate (per 1,00,000 population)	3.50	19.50
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	13	3.5.2 Number of persons treated in de-addiction centres (in number)	500.00	500.00
3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	14	3.6.1 People killed/injured in road accidents (per 1,00,000 population) (similar to 11.2.2) by 2020	5.81	14.49
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including	15	3.7.1 Percentage of currently married women aged 15-49 years who have their need for family planning satisfied with modern methods, 2015-16	100	60.10

SDG Target No.	No. of Indicators	Indicators	Target	Achievement
for family planning, information and education, and the integration of reproductive health into national strategies and programmes	16	3.7.3 Percentage of institutional Births (5 years/1 year) 2015-16	100	99.95
	17	3.7.4 Percentage of currently married women (15-49 years) who use any modern family planning methods	100	60.10
	18	3.7.5 Percentage of women aged 15-19 years who were already mothers or pregnant	0.01	2.80
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all	19	3.8.1 Percentage of currently married women (15-49 years) who use any modern family planning methods	100.00	60.10
	20	3.8.3 Percentage of people living with HIV currently receiving ART among the detected numbers of adults and children living with HIV	100.00	83.44
	21	3.8.7 Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	100.00	80.30
	22	3.8.8 Total physicians, nurses and midwives per 10,000 population	45.00	57.54
3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines	23	3.b.1 Percentage of children aged 12-23 months fully immunised (BCG, Measles and three doses of Pentavalent vaccine)	100.00	91.00
3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing states	24	3.c.1 Total physicians, nurses and midwives per 10,000 population, in percentage	45.00	57.54

(Source: GOA SDG INDEX-2023 published by DPS&E, Government of Goa)