Health Checkup

The Changing State of Health Centres in North India

JEAN DRÈZE, REETIKA KHERA, RISHABH MALHOTRA

The findings of a recent survey of public health centres in five north Indian states (Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand and Rajasthan) are presented, in light of earlier surveys in the same areas from 2002 onwards. Contrary to a common narrative whereby public health services in India have "collapsed," there is a general pattern of improving quality and utilisation over time. The pace of improvement, however, is far from adequate. The recent conversion of many health centres into health and wellness centres, in particular, has been largely cosmetic so far. In states like Bihar and Jharkhand, the standards of healthcare in public facilities remain abysmal. Hope lies in the experiences of states that have shown how decent standards of healthcare can be achieved in the public sector, notably Himachal Pradesh. Even in Chhattisgarh and Rajasthan, there have been valuable initiatives in recent years.

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Jean Drèze (*jaandaraz@gmail.com*) is a visiting faculty at the Department of Economics, Ranchi University. Reetika Khera (*reetika@hss.iitd.ac.in*) teaches Economics at the Indian Institute of Technology Delhi. Rishabh Malhotra (*rriishabh@gmail.com*) is a doctoral student at New York University.

India's healthcare system is hardly known for its excellence. Poor public health facilities coexist with a thriving but exploitative private sector. Torn between the two, many patients end up risking their health or their wealth, if not both. Quality healthcare is restricted to a privileged minority—those who are able to demand decent services in the public sector or to pay for them in the private sector.

Having said that, there are signs of hope as well. Slowly if not surely, public health centres are providing a wider range of free services. In states like Kerala, Tamil Nadu and Himachal Pradesh (the usual social-policy leaders), most patients already have a real option of decent healthcare in the public sector. Recent experiences in Chhattisgarh, Odisha, and Rajasthan suggest that it is possible to make similar progress in other states as well. During the COVID-19 crisis, public health services in the entire country rose to the occasion (within its limits). Perhaps India is better placed to make a leap forward in this field than many tend to believe.

This report is an attempt to clarify how things work on the ground, based on a rapid survey of healthcare facilities in five north Indian states (Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, and Rajasthan) in July 2022. The focus is on public health centres in rural areas: community health centres (CHCs), primary health centres (PHCs) and sub-centres, including those known today as health and wellness centres (HWCs). The survey involved unannounced visits to a sample of health centres in each state, some data collection, and interviews with the senior-most health worker in each centre.

The survey sheds some light on the struggles of the healthcare system to improve. This struggle cannot be regarded as successful, but nor is it hopeless. Health centres today have better facilities, dispense more medicines, serve more patients, and provide a wider range of services than they did 10 or 20 years ago. Further, the services are generally free of charge. Health staff also feel that the centres work better than they used to do in many ways.

There is nothing terribly surprising in the fact that public health facilities are improving over time. Government revenue increases year after year and so does public expenditure on healthcare. The passage of time also brings new ideas, initiatives, and technology. If the trend is still worth noting, it is because there is an influential narrative of cynicism (on both sides of the political spectrum) whereby "public health services have collapsed." This is not the case at all.

However, the rate of improvement is very slow. The reach and quality of health services in rural north India are still very

limited, and frankly dismal in states like Bihar and Jharkhand. The local sub-centres, especially, are yet to come to life.

India's public health centres are rudimentary, but they are mostly functional and they have a demonstrated capacity to improve. There is a strong case for accelerated expansion and improvement. Primary healthcare at the local level is a much better way of dealing with most health problems than to let patients loose on larger public hospitals or the private sector.

The Survey

Background: The said survey is a distant offshoot of an earlier study of public health centres in rural areas of Rajasthan by Abhijit Banerjee, Angus Deaton and Esther Duflo (Banerjee et al 2004). That study was based on a 2002–03 survey of 143 health centres in Udaipur district (CHCs, PHCs, sub-centres and "aid posts"). The findings were sobering: health centres were often closed and staff absenteeism was rife; opening hours were unpredictable, discouraging patients from visiting; even when open, health centres provided very limited services; few medicines, let alone diagnostics, were available at the centres; utilisation of public health centres was very low, despite high morbidity rates; and patients were routinely charged for drugs or services at public health centres.

The entire system came across as barely functional. Private practitioners, for their part, were mainly dispensing injections without any tests. The authors concluded on a sombre note that "improving the quality of health care … will not be easy" (p 949).

Twenty years on, there is more reason for hope. In fact, significant improvements had already occurred by 2013, judging from a resurvey of the Udaipur health centres combined with similar enquiries in selected blocks of Bihar, Jharkhand, and Himachal Pradesh (Goel and Khera 2015). The intervening period had seen the launch of the National Rural Health Mission (NRHM) in 2005 and a major increase in public expenditure on health.[1] To get a sense of the more recent changes, in 2022 we revisited the health centres covered by the 2013 survey and added some more, including a sample of health centres in Chhattisgarh.

The sample: Of the 143 public health facilities covered in the original Udaipur study, 94 were part of the resurvey, hereafter health facilities survey 2013–14 (HFS 2013–14). In addition, the HFS 2013–14 included six health centres outside the original sample, taking the Rajasthan total to 100, including 68 sub-centres, 24 PHCs and eight CHCs.

The HFS 2013–14 extended the survey areas to Bihar, Jharkhand, and Himachal Pradesh. Based on considerations of local support, we selected two blocks of Araria district in Bihar, four blocks of Ranchi and Khunti districts in Jharkhand, and two blocks of Shimla and Sirmaur districts of Himachal Pradesh. The initial aim was to cover all health centres (CHCs, PHCs and sub-centres) in the selected blocks, but the coverage often fell short—especially for sub-centres—due to time and resource constraints (the survey was conducted by student volunteers on a shoestring budget). In Bihar, an added difficulty was that some health centres were untraceable. In Himachal Pradesh, the problem was the opposite; many more health centres than the survey team could hope to reach by public transport in the time available (for further details, Goel and Khera 2015).

During the HFS conducted in July 2022 (HFS 2022), we revisited all the blocks covered by the HFS 2013–14. We also expanded the survey area to Chhattisgarh—two blocks of Jashpur district. For all blocks, we obtained the latest list of all public health facilities. In each block, the 2022 survey covered: (i) all health centres covered under the HFS 2013–14; (ii) a random sample of other PHCs and sub-centres; and (iii) all CHCs. By the end of this, we had covered most of the CHCs and PHCs in the sample blocks, but a significant shortfall remained for sub-centres. In short, the HFS 2022 sample is a mix of revisited health facilities and randomly sampled health facilities, with a total of 241 facilities including 26 CHCs, 65 PHCs and 150 sub-centres (Table 1).

Table 1: Number of Health Centres in the HFS 2022 Sample*

	Districts	CHCs	PHCs	Sub-centres	Total
Bihar	Araria	2	9 (7)	12 (10)	23 (17)
Chhattisgarh	Jashpur	2	8	26	36
Himachal Pradesh	Shimla, Sirmaur	5	20 (4)	20 (7)	45 (11)
Jharkhand	Khunti, Ranchi	4 (2)	6 (2)	27 (3)	37 (7)
Rajasthan	Udaipur	13 (8)	22 (19)	65 (65)	100 (92)
All states		26 (10)	65 (32)	150 (85)	241 (127)

* Figures in brackets refer to number of facilities in the "panel" (see text), if any.

We shall use the terms "full sample" to refer to all the health facilities that were surveyed in 2022 and "panel" to refer to health facilities that: (i) were surveyed in 2013–14 as well as 2022 and (ii) were of the same type (CHC, PHC or sub-centre) in both years. The panel excludes a few facilities that were "upgraded" between 2013–14 and 2022, for example, from PHC to CHC. Thus, it may understate improvements over that period, insofar as some improvements happen by upgrading. As Table 1 indicates, however, there are few health centres in the panel for individual states except Rajasthan. Our main focus, therefore, is on the full sample and the Rajasthan panel.

For Rajasthan, we would have liked to extend the panel to 2002–03, making it three reference years instead of two. However, it proved very difficult to "link" the 2002–03 dataset with our own survey data for 2013–14, so we gave up. The 2013–14 and 2022 surveys are reasonably well-linked, and it also helped that some field investigators participated in both surveys.

Following Goel and Khera (2015), we shall pool the data for Bihar and Jharkhand ("twin" states in many ways) in most of the tables. In the text, the term "Bihar–Jharkhand" refers to the two states combined.

Table 2 (p 36) presents some basic indicators of utilisation of public health services in the sample states and India as a whole. The proportion of households whose members generally use a government health facility when they are sick has increased substantially in recent years, from about one-third in 2005–06 to one half in 2019–21 at the all-India level. India's healthcare system is still one of the most privatised in the world, but the public sector is not a minor part of it anymore.

However, the role of the public sector varies widely across states. In Himachal Pradesh, most people use government health facilities as a matter of course, and this was already true in 2005–06. In Jharkhand and especially Bihar, by contrast, the utilisation of public health facilities is still very low, except for specific services such as deliveries and vaccination. Chhattisgarh stands out as a state that has achieved a radical expansion in public provision of healthcare in recent years.

Table 2: Public Healthcare in the Sample States

	Proportion (%) of Households Whose Members Generally Use a Government Health Facility When They Are Sick			Proportion (%) of Institutional Deliveries in the Public Sector, 2019–21	Government Sare (%) of Hospitalisation Cases (excluding deliveries), 2017–18
	2005–06	2015–16	2019–21		
Bihar	7	22	20	75	38
Chhattisgarh	36	50	70	82	54
Himachal Pradesh	83	81	83	81	77
Jharkhand	22	28	38	75	41
Rajasthan	70	65	74	81	50
Unweighted average for five sample states	44	49	57	79	52
India	34	45	50	70	42

Sources: Use of government health facilities: IIPS (2022a), Table 11.17, IIPS (2017), Table 11.17 and IIPS (2007), Table 13.13, based on NFHS data. Deliveries: IIPS (2022a), Table 8.13 and IIPS (2022b), Table 51, based on NFHS data. Hospitalisation: National Statistical Office (2019), Table A.13, based on National Sample Survey data. IIPS = International Institute for Population Sciences.

Primary Health Centres

A PHC is meant to be a facility of some importance, with a catchment population of 20,000 to 30,000 according to official guidelines, and much more in states like Bihar and Jharkhand. In most states, it is the lowest rung of the public healthcare system where the "three Ds" (doctors, diagnostics and drugs) can be found. Not so long ago, in 2007, eminent demographer Ashish Bose described them as follows in an informal interview (Kumar 2007):

> The primary health centre in India is the greatest symbol of how little things have changed for the poor in India … Even today, after 60 years, the condition of PHCs is the same. No doctors, nurses, medical equipment and people walking for miles to get substandard treatment. It is the greatest failure of the Indian state.

Sweeping as it was, this statement had a ring of truth, at least for the large north Indian states (known then by the unflattering BIMARU acronym, coined by Ashish Bose himself). Indeed, it was not inconsistent with the impressions that had emerged a few years earlier from the Udaipur survey. Today, it would be a caricature.

To see this, let us focus on Rajasthan to start with, since the Rajasthan baseline goes back to 2002–03. As Table 3 illustrates, much has changed there, mostly for the better. Some improvements were already visible by 2013, as discussed in Goel and Khera (2015). The intervening period saw the launch of the NRHM (in 2005), and also of a free medicine-distribution scheme in Rajasthan (in 2011). Compared with 2002–03, PHCs in the Rajasthan panel had better infrastructure, medicine stocks, and diagnostic facilities. They were also better staffed. Patient utilisation had risen, but it was still very low. Absenteeism also continued.

By 2022, three further improvements are visible. First, free healthcare became the norm—very few patients at PHCs reported being charged for any service. This is a big step forward; in 2013, patients at more than half of the sample PHCs reported being charged for services, and in 2002, fees were the norm in all the sample PHCs. Second, there was a further expansion of diagnostic facilities, declared free in another scheme initiated in 2013. Third, and most importantly perhaps, there was a major increase in patient utilisation: the "patient utilisation rate" (defined as the number of patients served in the preceding seven days, not counting deliveries, divided by the total catchment population in thousands) roughly doubled between 2013 and 2022.

One important qualification is that there has been little reduction in staff absenteeism. The absenteeism figures, however, are not easy to interpret, because some health workers have legitimate reasons for being frequently away from the PHC, when their work consists of outreach activities. The fact remains that staff attendance ought to be higher. Attendance

Table 3: Primary Health Centres—Rajasthan Panel

	2013	2022
Observations	19	19
Average population served	25,230	22,585
Doors closed on arrival (%)	24	16
Number of staff appointed	9.3	9.5
Proportion of staff present (%)	36	52
Number of doctors appointed	1.1	1.6
Proportion of doctors present (%)	29	44
Patients were being attended on arrival (%)	53	74
OPD cases in the last seven days	135	242
Patient utilisation rate (weekly OPD per 1,000 population served)	5.3	10.7
Fees were being charged (%)	53	5
Availability of basic infrastructure (%)	.	.
Running water	79	89
Regular electricity supply	74	47*
Functional toilet	79	95
Water, electricity and toilets (all)	68	42*
Steriliser	79	89
Cold storage	79	89
Residential facility	42	37
Microscope	84	84
Availability of basic facilities and services (%)		
Basic equipment (1)	94	98
Basic services (2)	89	98
Vaccination services (3)	100	98
Diagnostics (4)	87	92
Basic medicines (5)	93	97
Other medicines (6)	59	95
Contraceptives (7)	88	100

* Lower than usual due to monsoon factor.

(1) Average availability (%) of the following: Malaria test kit, stethoscope, blood pressure instrument, thermometer, syringes, torchlight, gloves, adult weighing scale, infant weighing scale, drip stand. (2) Average availability (%) of the following services: first aid, stitching of wounds, changing of wound dressing, Incision of abscess/ boils, prenatal care, postnatal care, normal delivery. (3) Average (%) for the following vaccines: BCG (children), DPT (children), polio (children), measles (children), tetanus toxoid (pregnant women), hepatitis B. (4) Average availability (%) of the following diagnostics: haemoglobin (Hb), Blood type calculation, Urinalysis, Pregnancy test, Faeces exam, First Sputum test, follow-up sputum tests. (5) Average availability (%) of the following medicines: antibiotic, analgesic, antipyretic, antifungal, anti-malaria, skin disease, anti-dehydration (ORS/IV fluids), pre-natal care (IFA, vitamin A). (6) Average availability (%) of the following medicines: anti-depressant, anti-asthmatic, muscle relaxants, anti-venom, anti-diabetic. (7) Average availability (%) of the following: condoms, oral contraceptives, IUD.

is not difficult to monitor anymore, it is mainly a question of reducing the tolerance of absenteeism.

Table 4 presents a "snapshot" of PHCs in 2022 for the sample states, based on the full sample. This snapshot suggests that there is nothing special about what Rajasthan has achieved. Rajasthan stands out on two parameters, both related to state-specific schemes: absence of user fees and availability of diagnostics. On most other counts, it is not the best-performing state by any means.

Table 4: Primary Health Centres, 2022 (full sample)

	RJ	HP	BI+JH	CH	Average over All PHCs	Average of State Averages
Observations	22	20	15	8	65	65
Average population served	20,145	6,625	59,762	18,854	23,864	26,346
Doors closed on arrival (%)	23	5	7	0	11	8.6
Number of staff appointed	8.9	3.6	9.3	8.0	7.2	7.4
Proportion of staff present (%)	49	73	48	88	60	64
Number of doctors appointed	1.5	1.0	1.7	1.0	1.3	1.3
Proportion of doctors present (%)	39	76	23	83	52	56
Patients were being attended (%)	68	75	60	88	71	73
OPD cases in the last seven days	248	110	129	152	168	160
Patient utilisation rate (weekly OPD per 1,000 population served)	12.3	16.6	2.2	8.1	7.0	6.1
Fees were being charged (%)	5	10	60	75a	28	37
Availability of basic infrastructure (%)						
Running water	82	85	40	100	75	77
Regular electricity supply	45	95	80	100	75	80
Functional toilet	91	85	67	100	85	86
Water electricity and toilets (all)	41	80	33	100	58	64
Steriliser	86	85	60	100	82	83
Cold storage	82	85	40	88	74	74
Residential facility	36	70	20	75	48	50
Microscope	77	15	13	88	45	48
Availability of basic facilities and services[b] (%)						
Basic equipment	97	85	88	100	92	93
Basic services	94	81	80	96	87	88
Vaccination services	98	94	87	90	93	92
Diagnostics	90	50	31	46	59	54
Basic medicines	92	89	79	93	88	88
Other medicines	90	77	32	78	71	69
Contraceptives	95	73	100	100	90	92

a Nominal registration fees mainly—see text (note 2).
b For details, see Table 3.
Source: HFS (2022). "Average over all PHCs" is an unweighted average over all PHCs in the full sample, where Rajasthan is disproportionately represented (Table 1). "Average of state averages" gives equal weight to each state, and equal weight to each PHC within each state.

Looking at the last column, where each state gets an equal weight, there is some evidence of functionality in PHCs—the centres are generally open during working hours, patients are being treated, basic facilities (not more) are in place, and healthcare is more or less free except in Bihar.[2] However, the centres are grossly underutilised: staff absenteeism is high, and the number of patients per day is low. Services are also limited, and quite likely, of poor quality.

In Appendix Table 1 (p 43), we present similar averages for 2013 and 2022, restricted to the panel. This must be taken with a pinch of salt since state-specific sample sizes are small (except for Rajasthan). Salt and all, the picture that emerges is not very different from the more reliable one we had found in Rajasthan—modest improvements on many fronts, qualified by continued staff absenteeism. The patient utilisation rate, in particular, has increased in all states except Bihar.[3] It is possible that the COVID-19 crisis contributed to a sustained increase in patient utilisation; many health workers mentioned that this crisis had been a period of rising confidence in public health facilities.

There is an important gap in this picture; Chhattisgarh is off the panel, in the absence of any baseline data for 2013. And Chhattisgarh may well be the state where health centres have improved most in the recent past, among the sample states. As Table 4 illustrates, the sample PHCs in Chhattisgarh are doing relatively well on most counts. They were all open at the time of the survey, most of the staff were present and all of them had running water, functional toilets and regular power supply. This is all the more interesting as these PHCs are located in a relatively marginalised area of Chhattisgarh (Jashpur district). There were only eight in the sample, but this hint of positive change is consistent with other recent evidence of Chhattisgarh's steady progress in healthcare (see for example, Nambiar and Sheikh 2016; WHO 2020) and also with the recent surge of public healthcare utilisation there (Table 2).

As discussed below, factual indicators of improvement are consistent with the subjective perceptions of PHC health workers—most of them feel that their work environment has significantly improved in recent years, for example, in terms of infrastructure, basic equipment, diagnostics, medical supplies and other facilities. A majority also report that the "work culture" has improved. The work environment and the work culture seem to improve hand in hand—an important ground for hope in the possibility of further, more radical improvements in health facilities.

Substandard Sub-centres

The sub-centre is the lowest rung of India's healthcare facilities, closest to front-line workers such as auxiliary nurse midwives (ANMs) and accredited social health activists (ASHAs). Anganwadis are even closer, but we are not counting them as healthcare facilities in this report.

A typical sub-centre has one or two ANMs and covers a population of 3,000–5,000. ANMs are quite different from the unfavourable image many tend to have of government employees in India. Most of them are quite busy, indeed kept busy by top-down orders and an increasingly demanding public. The best ones were a joy to meet—competent, motivated and hard-working. Many take obvious pride in their work and have a good rapport with the public. Their dedication is reflected, for instance, in extra home visits, on-call assistance and personal contributions to the maintenance of health centres. Of course, all this varies a lot; we also met ANMs who had no interest in their work and were doing the minimum. In some cases, their initial interest was sapped by difficult work conditions, long distances, safety issues or a strained rapport with the community.

The ANMs are supposed to spend a lot of time in the field, for activities related to child vaccination, family planning,

antenatal care, malaria control, menstrual hygiene, school health, screening for non-communicable diseases and so on. At the sub-centre, they help people with minor ailments, give them advice, dispense essential medicines and perform the odd delivery. It is not always clear how they are supposed to divide their time between outreach activities and presence at the sub-centre, which are often closed because ANMs are in the field, or because the sub-centre infrastructure is so poor that there is little for them to do there. The unpredictable opening hours of sub-centres, in turn, lead to low utilisation.

It is partly to address this issue that many sub-centres have recently been upgraded to HWCs under the Ayushman Bharat programme.[4] Central to this upgrade, according to the operational guidelines (GoI 2018), is an additional post of community health officer (CHO), which makes it easier to keep the sub-centre open and active. CHOs have four sets of responsibilities—curative care, health promotion, administrative and referral. The HWC upgrade was also meant to facilitate the provision of 12 services, going well beyond the traditional focus on maternal and child health. This upgrade could help to modify the role of sub-centres, or perhaps to activate a role they have failed to play so far. Until now, sub-centres were little more than "base camps" for ANMs, whose main work was in the field. They were unable to attract many patients due to unpredictable opening hours and poor facilities. With the HWC upgrade, it is possible for a sub-centre to turn into a local dispensary of sorts. Initial studies of HWCs and CHOs suggest that the upgradation of existing sub-centres and PHCs had a positive impact (Kotwani et al 2021; Brar et al 2022; National Health Systems Resource Centre 2022; WHO 2022). According to these studies, the upgrade tends to be appreciated by the community.

Table 5 presents some indicators of the condition of sub-centres in the sample states based on the survey data. It also includes a tentative comparison between HWCs and other sub-centres. The main difference between the two is that most of the HWCs were open on arrival (this was true of only half of other sub-centres). HWCs also have more staff, as expected, and lower absenteeism.

Aside from the additional CHO posting, the HWC upgrade is also supposed to include better infrastructure, availability of medicines, services, diagnostics and a host of digitisation and community outreach activities. From the survey, the HWCs do have a relatively attractive look—they are brightly painted and often slightly better maintained. As Table 5 indicates, however, the sample HWCs are only marginally better than other sub-centres when it comes to better facilities, services or medicine stocks, and the differences are not statistically significant. Seen in this light, the conversion of sub-centres into HWCs appears partly cosmetic so far.[5]

One reason for this is that about half of the HWCs (in Table 5) were upgraded in 2021 or 2022, and they may need more time to reinvent themselves. Another reason, more important perhaps, is that very little has been spent on HWCs so far. According to the operational guidelines, HWCs have recurrent expenditure requirements of ₹7.3 lakh per year for upgraded sub-centres and ₹4.3 lakh per year for upgraded (rural) PHCs, aside from non-recurrent expenditure of ₹9.7 lakh and ₹5.6 lakh, respectively (GoI 2018: 56–57). Based on these norms, cumulative expenditure on HWCs should have been more than ₹26,000 crore by 31 March 2022.[6] Actual cumulative expenditure on HWCs by then (four years into their launch) was only around ₹6,000 crore—a colossal shortfall of 77%.[7]

Table 5: Condition of Sub-centres, 2022

	RJ	HP	BI+JH	CH	All States[a]		
					HWCs	Other Sub-centres	All Sub-centres
Number of sub-centres	65	20	39	26	57	93	150
Average population served	4,956	1,895	7,406	3,085	4,870	4,617	4,716
Doors closed upon arrival (%)	54	40	38	23	25*	54	43
Number of staff appointed	1.8	1.0	2.5	2.3	2.3*	1.8	2.0
Proportion of staff present (%)	50	71	40	90	68*	50	57
Patients were being attended when team arrived (%)	25	25	33	38	37	25	29
Number of patients in past week	38	22	79	49	52	41	46
Patient utilisation rate (weekly OPD per 1,000 population)	7.6	11.8	17	15.9	10.8	8.9	9.7
Fees were being charged (%)	2	5	15	12	10	5	7
Walls were clean (%)	54	72	64	85	75*	58	65
Opening hours were displayed (%)	12	10	16	67	28	18	22
Availability of basic infrastructure (%)							
Running water	28	50	31	81	46	38	41
Regular electricity supply	20	70	36	73	53*	32	40
Functional toilet	63	55	49	58	63	54	57
Water, electricity and toilets (all)	14	45	23	42	32	22	25
Steriliser	15	25	13	46	30	16	21
Availability of basic facilities and services[b] (%)							
Basic equipment	78	69	79	92	83	78	80
Basic services	66	61	68	89	74	67	70
Vaccination services	80	95	82	94	86	84	85
Diagnostics	49	44	31	38	40	44	42
Basic medicine	74	62	63	78	73	68	70
Contraceptives	81	82	86	95	83	86	85

(a) Unweighted average over all sub-centres. (b) See Table 3.
* Significantly different from other sub-centres at 5% level.

Looking at all sub-centres together (HWCs and other sub-centres), the impression that emerges is one of poor utilisation of resources. ANMs are capable women who could do a lot to nip people's health problems in the bud. Quite likely, their skills and motivation can be vastly promoted. With a staff of three (CHO and two ANMs), an upgraded sub-centre has the capacity to be a vibrant local health centre. But this opportunity is only partly used as things stand. The fact that to this day, only a small minority of sub-centres and even HWCs have running water, electricity and a functioning toilet (all three) speaks volumes about the environment in which ANMs are forced to work.

Perceptions of Health Workers

We asked the respondents (the senior-most person in each health centre) how they felt about the changes they had seen in their centre during

the preceding five years. Their responses are summarised in Table 6a for PHCs and CHCs combined.

In all the sample states, a large majority of respondents felt that there had been some overall improvement. On two areas of improvement, there was virtual unanimity—patient utilisation and the range of medicines being provided free of cost. The perceived improvements were the least when it came to budgets and staff appointments. Chhattisgarh emerged as the stronghold of positive change—100% of the respondents there felt that there had been overall improvement. In fact, the responses suggest across-the-board improvements in Chhattisgarh, except for budgets. This is consistent with our own impressions based on regular visits to Chhattisgarh in the last 20 years. In Himachal Pradesh, the sense of improvement was relatively weak, but partly because the situation there was good to start with (Goel and Khera 2015).

Table 6a: Health Workers' Perceptions of Change Over Time (PHC and CHCs)

	RJ	HP	BI+JH	CG	Average over All PHCs/CHCs*	Average of State Averages*
Proportion (%) of respondents who feel that the following have improved in the preceding five years:						
Number of patients seeking health services	72	73	94	100	80	85
Infrastructure	53	77	62	100	68	73
Range of functional services (for example, lab tests)	59	32	31	80	49	51
Regularity of medicine supplies	66	50	81	90	68	72
Range of medicines provided free of cost	69	77	81	100	77	81
Budgets for the facility	63	25	44	29	43	40
Number of staff sanctioned	53	32	47	50	46	45
Number of staff appointed	47	36	44	70	46	49
Work culture	58	52	88	90	67	72
Proportion (%) of respondents who feel that "overall" things have:						
Improved	66	73	84	100	76	81
Not changed much	19	14	5	0	12	9
Deteriorated	16	14	11	0	12	10
Number of facilities	32	22	19	10	83	83

* See Table 4.

Base: Full sample, excluding centres where no one had been posted there for at least five years. In each centre, the respondent for this module was the senior-most health worker among those who had been posted there for at least five years.

When we enquired about the main areas of improvement, many respondents referred to the improved range and more regular supply of free medicines. Other frequently mentioned areas of improvement include better facilities and the supportive role of ASHAs. Interestingly, many respondents also mentioned improvements in public trust. Perhaps the reactivation of health facilities during the COVID-19 crisis contributed to this.

In Rajasthan and Himachal Pradesh, a significant minority of respondents (35% and 28%, respectively) felt that there had been no overall improvement or even some deterioration in the preceding five years. In many cases, their frustrations were related to staff shortages. Some respondents also mentioned issues with the flow of funds or a deterioration of infrastructure, sometimes due to poor maintenance.

Table 6b presents similar information for sub-centres. Here again, there is a general pattern of positive change—taking all sub-centres together, a large majority (70%) reported some overall improvement. However, the improvements are patchy, and restricted to a minority of sub-centres in some dimensions (for example, budgets). Of course, one may not expect an all-round improvement over a short period of just five years. Another concern is that perceptions of change did not differ much between HWCs and other sub-centres. This is consistent with our earlier discussion of the partly cosmetic nature of the HWC upgrade so far.

Table 6b: Health Workers' Perceptions of Change over Time (Sub-centres)

	RJ	HP	BI+JH[a]	CG	All States[b]		
					HWCs	Other Sub-centres	All Sub-centres
Proportion (%) of respondents who feel that the following have improved in the preceding five years:							
Number of patients seeking health services	70	50	80	87	75	71	73
Infrastructure	35	25	40	70	58*	32	42
Range of functional services (for example, lab tests)	50	38	60	61	48	56	53
Regularity of medicine supplies	41	44	80	78	68	52	58
Range of medicines provided free of cost	54	69	80	78	62	71	68
Budgets for the facility	23	14	56	10	25	25	25
Number of staff sanctioned	62	12	44	45	55	40	46
Number of staff appointed	49	19	37	30	40	35	37
Work culture	54	40	68	74	64	56	60
Proportion (%) of respondents who feel that "overall" things have:							
Improved	72	56	65	83	76	67	70
Not changed much	21	19	15	17	12	23	18
Deteriorated	8	25	20	0	12	11	11
Number of sub-centres	39	16	20	23	41	57	98

a Mainly Jharkhand (in Bihar, few health workers had been posted at the sample sub-centre for at least five years).

b Unweighted average over all sub-centres/HWCs.

* Significantly different from "other sub-centres" at the 5% level.

Base: Full sample (Table 6a).

We also asked health workers about the problems they face. The responses are summarised in Table 7, for PHCs and sub-centres separately. Clearly, health workers have plenty of problems. Their main complaint is a lack of staff; if not medical staff, then maintenance or administrative staff. Lack of transport, accommodation, drugs or equipment are also considered serious problems by a large majority. Other common complaints include irregular flow of funds, lack of toilet facilities, the growing burden of both online and on-field work, and lack of functional

Table 7: Main Problems Reported by Health Workers*

	PHCs	Sub-centres
Lack of staff	83	72
Lack of drugs or equipment	60	65
Irregular flow of funds	41	53
Harassment by superiors	12	9
Lack of transport facilities	65	69
Lack of staff accommodation	65	67

* Percentage of respondents (senior-most health workers) who replied in the affirmative when they were asked whether the said issue was "a serious problem" at their health centre.

Base: Full sample (unweighted averages over all health centres).

testing equipment. Of course, even in well-functioning health centres, many employees are likely to aspire to better staff and facilities. But the litanies of complaints we heard were more a reflection of basic deficiencies than of idealistic aspirations.

Neglected Factors

Running a functional health centre that provides quality health services requires much more than buildings with equipment and staff. This section flags some of the neglected factors that affect the functionality of health centres.

Poor access: The survey suggests that while physical accessibility has improved in distance terms (with the growing density of health centres), it remains an issue on account of the inconvenient location of many health centres and poor transport facilities. These affect patient footfall as well as staff attendance, for example, when a health centre is located at the top of a hill with no access road, even for an ambulance. Poor transport services to public health centres also mean that some patients end up going to further-off but more accessible private health facilities.

Lack of residential facilities for staff: This has serious consequences for the presence of medical staff. In Rajasthan, several ANMs had moved away from the sub-centre after their children reached school-going age because they wanted to be closer to a school. The complementarity between various public services—public transport, health and education—often emerged from the survey.

Digitisation hurdles: This is also becoming an issue, as more and more records are expected to be uploaded (National Health Systems Resource Centre 2022). There were occasional issues of connectivity, duplication, unreliable apps, etc. WhatsApp harassment (by way of excessive communication and constant surveillance) was another occasional complaint. Of course, there are also significant benefits from new communication technologies, including mobile phones.

Issues related to funds: The erratic flow of funds and inflexible expenditure norms have a range of effects including reduced availability of medicines, staff motivation (when salaries are delayed) and ability to hire maintenance personnel. Key posts such as cleaning staff and security personnel have vanished, so finding funds for contractual appointments is an issue. Rigid expenditure norms sometimes mean that essential expenses (for example, on maintenance or security) are shelved while other, less urgent expenses (for example, "capital expenditure") are bloated. Lack of security led to complaints of vandalism and affected safety, especially for female health workers. This problem was particularly common in Bihar.

Missing services: Hardly any health facility (even at the CHC level) had an in-house kitchen for patients, except in Chhattisgarh. Canteens at CHCs and perhaps even PHCs would benefit patients and caregivers. Ambulances are not always available on demand, especially in remote areas (this is partly due to low reimbursement rates). Sometimes, ambulances charge money against the rules of free service.[8]

Poor maintenance: Like many other public premises, health centres have dismal standards of routine maintenance. The monsoon, when premises are often battered by rain for weeks, is a particularly trying period. Health centres need much better maintenance funds, norms, staff and arrangements to avoid the colossal waste associated with dilapidated premises. Unfortunately, the budget share of infrastructure maintenance under the National Health Mission has declined sharply in recent years.[9]

Social discrimination: As with many other public services, the functioning of health centres is often hampered by social inequality and discrimination. For instance, we came across cases of upper-caste doctors having disparaging attitudes towards marginalised communities, upper-caste families lacking respect for a Dalit ANM, and even a Dalit CHO being ill-treated by upper-caste ANMs. Tensions of this sort can easily ruin the work of a health centre and the morale of health workers.

State Contrasts

There were remarkable contrasts between the sample states in the functioning of health centres. Predictably enough, Bihar was the laggard and Himachal Pradesh the trailblazer. But there were some new insights too. For instance, if we focus on recent improvements instead of taking a static view of the system today, Chhattisgarh looks best. In fact, Himachal's standards of healthcare seem to be well within reach in Chhattisgarh. This is encouraging, because it shows that the ability to provide quality health services is not confined to "usual-suspect" states like Himachal Pradesh.

Bihar and Jharkhand: Our expectations of Bihar were very low, but the ground realities were even worse. Consider this: 15 out of 29 health centres in Bihar could not be traced at all (in HFS 2013–14, 13 sub-centres could not be traced). The main reason is that many sub-centres had no building; they boil down to one or two ANMs engaged in field activities. The health centres that do have a building have little to offer. The huge population load of health centres in Bihar (Tables 4 and 5) does not help. Another shock was to discover that many sub-centres in Bihar are still trapped in the old pattern where ANMs focus mainly on family planning targets and "motivating" people—mainly women—for sterilisation.

Even in this grim environment, many ANMs and ASHAs in Bihar were striving to do a good job. Their skills and goodwill were crying to be well-used. Unfortunately, the system seemed to be in much the same disorganised and irresponsible state as the HFS 2013–14 had found 10 years earlier.

The situation was better in Jharkhand, but not a lot better. The functionality of health centres there varied widely, from virtually nil in some remote locations to fairly high in a few centres that made a good impression on the survey team, like the CHC in Angada block. Here again, ANMs and other frontline

health workers tend to perform much better than the system in which they work.

One intriguing feature of health facilities in rural Jharkhand is that PHCs have been more or less sidelined. ANMs are directly accountable to CHCs and that is also where patients tend to go in the event of significant illness. The CHCs we surveyed were in reasonably good shape, but the PHCs were grossly neglected.

Rajasthan: As discussed earlier, public health facilities in the Rajasthan sample, surveyed thrice (in 2002–03, 2013–14 and 2022), paint a picture of slow yet steady progress on different fronts including physical infrastructure, basic equipment and accessibility. Better access combined with the "free diagnostics" and "free medicines" initiatives in the state (first announced in late 2011), have probably contributed to the patient utilisation rates for PHCs more than doubling between 2013–14 and 2022. The effectiveness of a three-tier pyramidical structure for the healthcare system was beginning to reveal itself.

The battle against absenteeism and poor work culture continues—only around half of the appointed staff were present at the time of the visit (Tables 3–5). Reaching late or leaving early seemed to be the norm.

The timing of the 2022 survey (during the monsoon) exposed serious quality and maintenance issues with the physical infrastructure—leaky roofs, musty walls, cracked ceilings and other defects often rendered health facilities difficult to use. Sometimes even roads were badly damaged by the rain, making the health facility inaccessible.

Himachal Pradesh: Public health facilities are popular in Himachal Pradesh; according to NFHS-5 (2019–21) data, 83% of Himachali households generally go to a public facility for healthcare (Table 2). In the HFS 2013–14, Himachal Pradesh stood out as a state with excellent healthcare facilities, at least by Indian standards (Goel and Khera 2015).

Himachal Pradesh has a dense network of functional PHCs. These PHCs, with a catchment population of just a few thousand, have facilities and provide services similar to those of PHCs that serve a population 10 times as large in Bihar–Jharkhand (Table 4). These PHCs generally made a good impression on the HFS 2022 survey teams. Some were even described as "a delight." However, the survey also found hints of stagnation or even deterioration in the condition of health facilities. Surprisingly, several health facilities reported that basic equipment (such as thermometers, infant weighing machines, and BP instruments) was missing, medicine supplies were irregular, and staff were not appointed.

In particular, the lack of staff was severely affecting the functioning of these facilities. Elimination of certain posts by the state government and delays in appointments (for example, when people retire) were major reasons for these gaps. Staff were used to a good working environment, but are now having to make it without essential support staff (for example, some doctors reported having to do data entry). Overall, there was little evidence of another leap forward from Himachal's strong base 10 years earlier.

Chhattisgarh: The situation in Chhattisgarh was quite hopeful in many ways. There has been sustained action at the state level to strengthen public health services and the results were visible on the ground. For instance, all PHCs were open at the time of the visit, all had all three basic facilities (electricity, running water and a functional toilet), staff attendance rates were high, and staff motivation was often palpable.

The Chhattisgarh survey included one block with a difficult terrain, and that posed barriers to the work of the health staff. Lack of roads, scant public transport and the hilly terrain meant that the ANMs and ASHAs had to put in a lot of effort to complete their tasks.

In Chhattisgarh more than elsewhere, the survey teams felt that the HWC upgrade had helped to breathe life into health facilities.[10] Better infrastructure, better equipment, better systems for medical supplies, more staff, a wider range of health services, more OPD visits, and more health screening especially of NCDs—these were some of the improvements they associated with the upgrade. Also of possible interest is the fact that all the sample PHCs in Chhattisgarh had been empanelled in PMJAY, India's centrally sponsored health insurance scheme (see below). Quite likely, this worked as a helpful source of additional financing for the better-utilised PHCs.

The Gender Factor

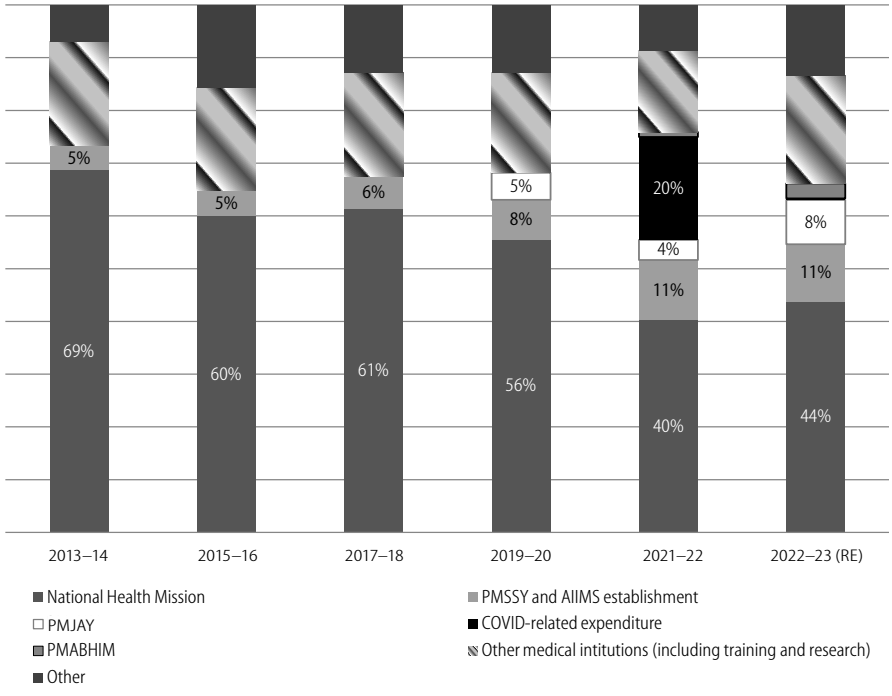
Before concluding, we share one more impression of India's healthcare services; they have a strong gender dimension. Simplifying a little, the base of the system consists largely of female frontline workers—anganwadi workers, ASHAs and ANMs. In health centres, the bulk of the work tends to be done by female staff in junior positions. It is not uncommon to find that even a district hospital is run largely by female nurses. Men tend to occupy the more senior positions—doctor, radiography, lab technician and so on. Doctors, mostly men, tend to take advantage of their seniority to set their own rules as far as presence at the health centre is concerned.

Women health workers often give the impression of being more committed, responsible and caring than male workers. If true, this would not be so surprising, since Indian women tend to be socialised to take care of others (siblings, husband, children, parents and so on) from childhood. But we present this as a guess for now, since the survey data has too little gender-specific information to probe this matter.

The female health workers come across as an undervalued resource. Not all of them are strongly motivated as things stand, but many are, and more would rise to the occasion with better support. Their skills, quite likely, can be developed way beyond current standards. Some sort of "promotion ladder" (enabling a good anganwadi worker, for instance, to become a nurse and a good nurse to become a CHO) might help in this respect.

The cost of hiring frontline health workers is very small as things stand. The entire ICDS programme, with its 14 lakh anganwadis and roughly similar numbers of anganwadi workers and helpers, costs less than 20,000 crore a year (less than 0.1% of GDP). Assuming an average salary of 30,000 per month, India's roughly 2 lakh ANMs cost even less—just 7,200 crore for

Figure 1: Percentage Distribution of the Department of Health's Budget between Different Budget Heads



Source: Union Budget documents. Figures pertain to health expenditure of the central government.

the lot. These are tiny budgets for a veritable army of valuable health workers. Even with enhanced salaries and benefits, both well-deserved, the financial cost would still be very modest. There is every reason to invest more in this tremendous resource.

Take-off Awaited

India has a long way to go to achieve universal healthcare, read as a guarantee of quality healthcare for "all members of the community irrespective of their ability to pay," as the Bhore Committee report put it as early as 1946. In recent decades, many countries—not only among the richer ones—have made rapid progress in that direction, but India is yet to see a major initiative in this regard.

There are different ways of achieving UHC, but experience suggests that all of them include the creation of a strong network of local PHCs. This is essential to deal with the bulk of routine illnesses in a cost-effective manner, and also for effective prevention work. In principle, India is committed to this critical task. In practice, it has neglected it decade after decade.

Almost 20 years ago, it looked like a leap forward might happen under the NRHM. The United Progressive Alliance government, at that time, had promised to raise public expenditure on health to 2% or 3% of GDP, well above the measly 1% that had been the norm. The promises of NRHM, however, did not quite materialise (Rao 2017). The mission did lead to a substantial investment in and improvement of public health centres, but the initial hopes of radical change were dashed. And public expenditure on health continued to hover around the old "1% of GDP" norm, to this day.

The National Democratic Alliance (NDA) government created its own pretence of a leap forward with Ayushman Bharat, launched with huge fanfare in 2018. This new programme has two major components—a health insurance component (PMJAY) and a public provision component in the form of HWCs.[11] The PMJAY budget, however, was just ₹6,400 crore in 2022–23, and as we saw, the "creation" of lakhs of HWCs is yet to go beyond a minor upgrade of existing sub-centres and PHCs.

The NDA regime (2014 onwards) was also a period of significant reorientation in health expenditure by the central government. The share of health expenditure in the Union Budget was more or less the same in 2013–14 (1.7%) as in 2022–23 (1.9%), but there were major changes in its composition. The share of the National Health Mission shrank drastically (from 69% to 44%), mainly in favour of health insurance (especially PMJAY) and the creation of regional AIIMS hospitals under Pradhan Mantri Swasthya Suraksha Yojana (Figure 1). In 2022–23, the central government spent about 10 times as much on PMJAY and PMSSY as on HWCs. In short, there are signs of a significant shift of focus from primary to tertiary healthcare.

Both NRHM and Ayushman Bharat can be seen as a useful but very limited demonstration of the possibility of improving PHCs. The time is ripe for a much bigger initiative that would bring the standards of healthcare to a new plane across the country.

Meanwhile, some state governments are making valuable efforts on their own. For quite a few years now, Himachal Pradesh has set an example for all the north Indian states. Chhattisgarh seems to be well on its way to achieving similar standards. Rajasthan has also launched some major initiatives, including the recent enactment of a Right to Health Care Act that creates extensive entitlements to free healthcare in the public sector. Major support from the centre, beyond the current tokenism of Ayushman Bharat, would make it much easier for the poorer states to emulate these initiatives.

NOTES

1 This increase was largely driven by the rapid growth of GDP in that period. As a ratio of GDP, government expenditure on health (for centre and states combined) increased marginally from an abysmal base of 0.7% in 2004 to 1% or so in 2019, just before the COVID-19 crisis (source: *World Development Indicators*).

2 In Chhattisgarh, many centres were found to charge user fees, but mainly in the form of nominal registration fees (just ₹10); these have recently been waived, according to the state's health department.

3 This is unlikely to reflect seasonal effects: the 2013 and 2022 surveys took place around the same time of the year (except in Rajasthan, where the 2013 survey took place in December).

4 According to official data, 1.5 lakh HWCs had been "created" by the end of 2022, most of them at the sub-centre level (ab-hwc.nhp.gov.in). The term "created" is misleading since HWCs are just upgraded sub-centres or PHCs.

5 This conclusion would not necessarily hold if it were the case that sub-centres selected for upgrade were those with poorer facilities in the first place. Official guidelines, however,

suggest the opposite (National Health Systems Resource Centre 2022: 18).

6 This estimate is based on annual numbers of AWCs (2018–19 to 2021–22) from GoI (2022: 20). The split of HWCs between sub-centres, rural PHCs and urban PHCs is assumed to remain constant at 68%–27%–5%, the split reported by the MoHFW in a reply to the Rajya Sabha on 21 December 2021 (GoI 2021).

7 This cumulative estimate is based on Budget Papers for relevant years.

8 In Rajasthan, a doctor hinted that the ambulance contract had been given to the chief minister's son and that this was part of the problem.

9 From 17% (in 2003–04) to 9% (in 2022–23) of the total expenditure on health. (Source: Budget documents.)

10 In the Chhattisgarh sample, all eight PHCs are HWCs and 18 out of 26 sub-centres are also HWCs.

11 A third component, Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) was added after the COVID-19 crisis for the purpose of filling "critical gaps in health infrastructure, surveillance and health research."

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Appendix Table 1: The PHC Panel

	Average over Panel PHCs		Average of State Averages	
	2013	2022	2013	2022
Observations	32	32	32	32
Average population served	37,198	37,976	35,358	39,238
Doors closed on arrival (%)	20	13	15	14
Number of staff appointed	7.8	9.1	6.2	7.8
Proportion of staff present (%)	42	49	46	46
Number of doctors appointed	1.1	1.7	1.0	1.5
Proportion of doctors present (%)	31	37	24	34
Patients were being attended (%)	56	69	56	63
OPD cases in the last seven days	127	204	117	166
Patient utilisation rate (weekly OPD per 1,000 population served)	3.4	5.4	3.3	4.2
Fees were being charged (%)	47	25	36	28
Availability of basic infrastructure (%)				
Running water	56	84	51	85
Regular electricity supply	63	69	65	82
Functional toilet	69	84	66	79
Water, electricity and toilets (all)	50	50	48	58
Steriliser	69	72	71	61
Cold storage	53	81	38	82
Residential facility	34	41	30	53
Microscope	53	53	32	32
Availability of basic facilities and services* (%)				
Basic equipment	84	92	81	88
Basic services	83	89	81	83
Vaccination services	88	93	85	90
Diagnostics	62	71	46	60
Basic medicines	84	90	79	85
Other medicines	43	71	36	58
Contraceptives	76	99	75	97

* For details, Table 3.

Source: HFS (2022).