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Towards Universal Health Coverage?

Taking stock of two decades of health reforms in India

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A survey of reforms in health policies in India over the past two decades – actually a string of privatisation policies – indicates that we have moved away from and not towards Universal Health Coverage. What then needs to be done?

The Covid-19 pandemic has cast the spotlight on India's public health system and its many weaknesses. The public health system has been stretched beyond its limited resources, struggling to carry out the complex tasks of preventing, testing, and treating millions. The media is replete with heart-rending stories of persons being denied services not only in the overstretched government hospitals but also in well-resourced private hospitals.

India’s claims of pursuing Universal Health Coverage (UHC) that would guarantee quality health care by public and private hospitals to the poorest households through an ambitious set of reforms, including Ayushman Bharat, ring hollow.

1. Introduction

Over the past two decades, India has implemented a wide range of reforms in the health sector. Drawing on existing evidence, this essay argues that these changes have made a limited contribution to making healthcare available and affordable for socially and economically marginalised groups. It concludes by listing the much-needed steps that do need to be taken for India to move anywhere close to UHC.

Where does India stand in terms of achieving UHC? There are three dimensions to UHC: population coverage, services coverage, and financial risk protection. The goal is to make available to 100% of the population a broad-enough range of essential health services that cover 100% of their healthcare needs, and ensure that 100% of the population can receive these services without incurring health expenditure that is more than 10% of the monthly household expenditure.

Three indicators are currently being used globally for assessing a country’s progress to UHC. The first assesses coverage of essential health services, while the second and third indicators assess financial risk protection.[1] (The second and third measures do not capture a large proportion of the population who may have been unable to seek care because they could not afford it.)

India's index of population coverage for essential health services in 2017 stood at 56 and was worse than the global average. About 17% of the population incurred catastrophic health expenditures and 4.2% were impoverished due to spending on healthcare. India's indicators for financial risk protection were also worse than the global averages and the averages for Low and Middle-Income Countries (LMICs) (WHO and IBRD 2017). These national averages mask vast inequalities by socioeconomic status and across states.

2. Major trajectories of recent health reforms in India

Progress towards the UHC goal of service-availability to all would require the government to increase the number of fully-functional health facilities located in rural and other underserved areas. This would call for greater public investment in health infrastructure and human resources.

Likewise, to ensure financial risk protection, countries have to move away from out-of-pocket payments for health, that is, people having to pay for services at the point of service delivery. Instead, health services should be financed by pre-payments, for example, through government tax revenues or through health insurance schemes that are mandatory and cover the entire population (McIntyre et al 2013). Mandatory health insurance schemes usually involve a payroll deduction for all salaried employees, matched by their employers' contributions. They require self-employed persons to pay fixed amounts, while the premiums of those too poor to pay are subsidised or fully paid by the government.

> The growth of the share in service provision of the for-profit private sector and the increase in the cost of healthcare spurred by it appears to be responsible for the high incidence of catastrophic health expenditure in India.

However, health reforms in India have not been characterised by a significant increase in public spending, which could have improved the availability of health services. Public spending on health in India in 2017 was 0.96% of GDP, compared with the average of 2.8% for LMICs. In the same year, India spent $18.8 per capita (current US dollars), which works out to a mere 15% of the average of $130 spent by all LMICs (World Bank 2020a & b).

Policy reforms over the past few decades have chosen to focus on expanding the role of the private sector as a major service provider and implementing voluntary and publicly financed health insurance schemes for low-income households. Neither of these strategies has helped India progress towards UHC.

2.1 Privatisation of the health sector

One of the major trajectories of the health reforms adopted in India is the privatisation of the health sector. Privatisation may be defined as the adoption of deliberate policy measures and mechanisms by national governments as well as international financial institutions and bilateral donors to expand the role of the for-profit private sector in healthcare delivery and of private financing for healthcare services received.

India had a mixed health sector even at the time of independence, wherein private practitioners of western biomedicine and of Indian systems of medicine dominated service delivery (Baru 2006). Stagnation in public spending on health throughout the 1970s and 1980s, when demand for health services was rising, contributed to the growth of the private health sector in service delivery (Baru 2006, Hooda 2015, Chakravarti 2017). From the 1990s, the private health sector received policy support for expansion.

The privatisation of the health sector in India has taken several forms and mainly consists of (a) the provision by governments of several concessions and incentives to encourage private, for-profit, investments, and (b) governments entering into diverse public-private partnerships (PPPs), including contracting out, voucher schemes, and social franchising.

Health insurance that permits the use of both public and private sectors for services also contributes to privatisation and is discussed later below.

Policy measures to facilitate the growth of the private and implications for UHC

A range of policy measures was implemented by the government of India to encourage private investment in health. For example, in 2000, 100% foreign direct investment in the hospital sector was permitted by the Reserve Bank of India. Private equity funding to promote health care infrastructure was also permitted. The Health Policy of 2002 recommended private sector participation at the primary, secondary, and tertiary care levels. Hospitals and health care institutions were conferred ‘infrastructure’ status in the union budget of 2002–03, which made long term capital and loans cheaper for the private health sector. The budget of 2003–04 gave industry-status to private hospitals and provided benefits to financial institutions for long-term loans to private hospitals. In 2005, the government amended visa rules to encourage medical tourism. The Finance Act of 2008 gave a five-year 100% tax exemption to newly established hospitals with 100 beds or more that were located outside the eight urban agglomerations (Hooda 2015). Other measures included exemptions from import duty for rehabilitative and assistive devices and an increase in depreciation rates for essential equipment from 25% to 40%, which gives considerable tax savings to private health care institutions. The National Health Policy of 2017 envisaged a major role in service delivery for the private health sector, including ‘strategic purchasing’ of health services from the private for-profit and not-for-profit sectors, and encouraged private investment in the health sector (GoI 2017, 19).

There has also been a significant push by international development agencies and multilateral financial institutions to encourage the private health sector's growth. The International Finance Corporation (IFC), a member of the World Bank Group, and CDC Group, the development finance institution of the United Kingdom, have played an important role in promoting the growth of the for-profit private health sector in India. The IFC has made equity investments in, or given loans to, several private health companies in India. The CDC Group has made direct investments in the expansion of ventures to many tier II and III cities. The CDC Group has also invested in several funds that have invested in healthcare companies in India (Chakravarty 2017).

> Public-private partnerships may contribute little to UHC and may not represent the best use of the limited resources available for investing in health services.

Deliberate policy measures to expand the private sector's role in health, along with an increasing demand for healthcare, have resulted in the rapid growth of private health facilities and beds, especially since 1991. Between 1971–80 and 2001–10, the number of private health enterprises increased 15-fold, to 630,088 from 39,749 (67th Round of NSS). For-profit enterprises dominate the private health sector and constituted 98.4% of all health enterprises in 2010–11 (67th Round of NSS). The private health sector's nature has changed from one dominated by individual practitioners, small-scale clinics, and nursing homes to an organised industry attracting huge investments (Chakravarty 2017).

The private health sector in India is largely unregulated. The Clinical Establishment Act, 2010 has been implemented only in 10 states and union territories and has had little impact on the regulation of the private health sector. Other states have various regulatory policies and little is known about their effectiveness. Health facilities are not legally obliged to adopt standard treatment guidelines, and have weak protocols and accountability mechanisms.

The dominance of a private health sector characterised by large players with a significant market share and a weak regulatory system has led to substantial increases in healthcare costs. In 1986–87, hospitalisation in a private health facility cost 2.3 times and 3.1 times more than public facilities in rural and urban areas, respectively. In 2017–18, the corresponding ratios were 6.4 and 8.0, respectively (Hooda 2015; 75th Round of NSS, Table 8).

Thus, the growth of the share in service provision of the for-profit private sector and the increase in the cost of healthcare spurred by it appears to be responsible for the high incidence of catastrophic health expenditure in India. Private health facilities with qualified human resources are concentrated in the economically more prosperous states and urban areas, where effective demand is higher than in rural areas. They provide curative services for which there is higher demand than for preventive and promotive services.

The role of public-private partnerships in health in expanding population and service coverage and providing financial protection

The government of India and international donors have pursued PPPs in health as an essential strategy for harnessing the considerable human and financial resources available with the private sector towards achieving national health goals and UHC.

PPPs in India have mainly taken the form of contracting and to a much smaller extent, social franchising.PPPs with the for-profit private sector seem to have made their appearance in health policy during the 1990s and early 2000s. The various state-level Health Systems Development Projects funded by the World Bank have actively promoted PPPs. Contracting out of non-clinical services in hospitals — laundry, cleaning services, dietary services, among others — was a feature of all the seven World Bank-funded State Health Systems Development Projects (Ravindran 2010).[2]

In 2005, under the National Rural Health Mission (NRHM), PPPs were adopted as a useful strategy for meeting the massive requirement for resources, workforce, and management capacity. A wide range of PPP arrangements was entered into by state governments and included contracts for the provision of MRI and CT scan services in public hospitals (Andhra Pradesh and Rajasthan); provision of drugs (Rajasthan); voucher-schemes for the provision of maternal and child health and family planning services in private clinics, and so on (Venkataraman and Bjorkman 2009). The Chiranjeevi Yojana in Gujarat, where the government entered into contracts with private obstetricians and gynaecologists for providing free delivery care to women from low-income households, is perhaps the best-known and much-discussed example of PPPs in India.

> There is an inadequate availability and skewed distribution of public and private hospitals and qualified healthcare providers; there is non-coverage of ambulatory care and a high cost of medicines...

PPPs have reappeared as a strategy in the National Health Policy 2017 to meet the gap in financial and human resources in health. The latest move in this regard is the Niti Aayog's plan to enter into PPPs with the for-profit private sector to set up and maintain medical colleges. These private entities will have the licence and authority to provide health services through the district hospitals for a minimum of 60 years as per the terms and conditions in the model agreement.

The USAID and DFID aid agencies are major players promoting and supporting private provider networks and social franchises in reproductive health in Bihar, Jharkhand, Rajasthan, Uttar Pradesh, and Uttarakhand. A social franchise in health is a network of for-profit private health practitioners linked through contracts to provide socially beneficial services under a common brand. Some of the well-known franchises include Janani, Merrygold Network, and Sky Network.

There are few robust evaluations of PPPs in India, except those of Chiranjeevi Yojana, Merrygold, and Sky. The overall picture that emerges is that PPPs have no significant population-level impact on expanding coverage to those who were not hitherto covered, or in increasing the range of services available. They often do not reach the most impoverished populations and could even raise the average out-of-pocket expenditures. Thus, PPPs may contribute little to UHC and may not represent the best use of the limited resources available for investing in health services.

The Chiranjeevi Yojana in Gujarat was hailed as a success in its initial years in increasing the uptake of maternal health care and institutional deliveries. However, later evaluations identified several limitations. During 2005–2010, five years into the programme, the scheme had not contributed significantly to the probability of an increase in institutional deliveries. Spending on institutional delivery had also not declined significantly for users of the scheme (Mohanan et a 2014). Women from Scheduled Tribes and poor women were three times more likely not to use the scheme, often because they did not have the documentation to show that they were eligible. Women who utilised Chiranjeevi Yojana paid more overall than women who delivered in the free public facilities. The reasons for high out-of-pocket expenditure included the long distances the women had to travel to use a facility registered under the scheme; and the inability of many contracted providers to provide caesarian sections or blood transfusions, forcing patients to seek care from far-away facilities, including city-based private hospitals (Yasobant et al 2016).

As for the PPPs to run public hospitals that are currently in the pipeline, as per the Niti Aayog, there are no evaluations of past experiences in India. However, case studies of two PPPs in Sweden and Lesotho suggest that the Niti Aayog's proposed plan may be risky and involve a significant loss to the public exchequer.

> Privatisation in healthcare, which has increased the extent of out-of-pocket expenditure, is antithetical to the UHC goal of financial risk protection.

In Sweden, the government entered into a 30-year PPP arrangement in 2010 with the Swedish Hospital Partners to build and manage the Nya Karolinska Solna hospital. The government intended to ensure the project's timely completion, stay within the budget, and maintain and run the hospital in a cost-effective manner. The completion of the project took more years than planned, and the cost to the government doubled. The hospital is now known as 'the most expensive hospital in the world.'

The Queen Mamohato Memorial Hospital in Lesotho was set up by the government in partnership with the Tsepong Consortium in 2008. IFC was the transaction advisor for the PPP. According to the terms of the contract, Tsepong provided services to the required performance standards and was paid an annual service payment. If more patients were served than the agreed threshold, the government had to pay a higher amount. Costs escalated for many reasons, including a higher number of patients . It cost the government 41% of its health budget and became an albatross weighing down Lesotho's entire healthcare system (Eurodad 2018).

We use the Sky social franchising network as an illustrative example of the impact of social franchises on UHC. The Matrika social franchise of the Sky network in Uttar Pradesh is a network of private providers and facilities aiming to increase coverage and the quality of maternal, newborn, and reproductive health services. Three years into the programme, there was no significant increase in the proportion of institutional deliveries (Tougher et al 2018). The scheme had low coverage, was not well-known among the intended target groups, and the quality of care was reported to be unsatisfactory across the board (Penn-Kekana et al 2018). A majority of franchise users belonged to the higher socioeconomic groups within the low to lower-middle income settings, and only 10–20% were from the lowest two socioeconomic status quintiles. The poorest women could not afford to pay even the modest fee charged by the franchises. The most impoverished areas did not have health facilities that could be included in the franchising networks (Haemmerli et al 2018). These findings regarding social franchises hold across the world (Ravindran and Fonn 2011).

2.2. Publicly-financed health insurance schemes for low-income populations

In India, policymakers view publicly-financed health insurance schemes for low-income populations as a primary strategy for achieving UHC, as evidenced in the announcement of the ambitious Ayushman Bharat launched in 2018. The Ayushman Bharat Scheme includes

the Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) or National Health Protection Scheme funded by the Government of India and state governments. The scheme aims to cover 100 million poor and vulnerable households (500 million beneficiaries) with a benefits package of Rs 5 lakh per household per year for secondary and tertiary care hospitalisation in public and empanelled private health facilities. The AB-PMJAY subsumes the Rashtriya Swasthya Bima Yojana — the nationwide publicly funded health insurance scheme (PFHIS) implemented during the previous decade — and many of the state-government-sponsored PFHISs. As of January 2020 all but four states — Delhi, Orissa, West Bengal, and Telangana — were implementing the scheme.

What is the evidence on the extent to which PFHISs for low-income populations contribute to UHC? While it is too early to assess the UHC impact of PM-JAY, there are numerous studies of the PFHISs implemented by the national and state governments during the decade of 2008–2018.

The first decade of PFHIS in India (2007–2018)

In 2008, following the example of other LMICs, India introduced the nationwide Rashtriya Swasthya Bima Yojana (RSBY). The scheme covered only the costs of hospitalisation for specific conditions, up to a maximum of Rs 30,000 for five members of each household living below the poverty line. Services could be availed from public hospitals and private hospitals that chose to be empanelled in the scheme. The RSBY did not cover outpatient care or the cost of medicines.

In the final edition of the RSBY, states had the freedom to adapt and modify the scheme to suit their needs. Governments implemented the RSBY in 520 districts (83.2% of all the districts) in 23 different states during 2008–2018. Besides, nine state-government sponsored PFHISs were introduced at various points between 2003 and 2017.[3]

Population coverage

According to the RSBY website, around 37.7 million BPL families were enrolled in the RSBY scheme nationwide in 2018 (Philip 2018), representing only 15% of the estimated 250 million BPL households. There were wide variations in population coverage, with district-level coverage ranging from as high as 90% in some districts of Punjab to around 22% in Maharashtra (Thakur 2014). While low levels of awareness of the schemes were one reason for low enrolment in some areas, there were also reports of exclusion of eligible households due to the discrepancies in BPL data (Philip et al 2016). Poor districts within a state and the poorest households among the BPL were often left out (Narayana 2010; Philip et al 2016).

Service Coverage

Service coverage is assessed by the morbidities covered by the PFHISs as a proportion of all morbidities experienced by the households enrolled. A prospective community-based study in Kerala and Tamil Nadu of 600 low-income urban households in each state found that even when households were enrolled in the PFHISs, only a fraction of the hospitalisation episodes in these households were covered by the insurance scheme. In Kerala, only 12% of enrolled households had all episodes of hospitalisation for all members covered by the scheme over nine months, and 57.6% of insured households had to pay out-of-pocket for all the hospitalisation episodes of all enrolled members. In Tamil Nadu, the comparable figures were 9.4% and 81.9%.

> Studies of the performance of AB-PMJAY during 2018–19 carried out by the National Health Authority show significant inequalities in access to and utilisation of the scheme.

Some of the reasons why households could not be covered for all the hospitalisation episodes were that the patient could not be admitted to an empanelled hospital because of the distance to be travelled from home, or the condition was not a part of the benefits package and the empanelled hospital charged for some parts of the treatment. However, an important reason was the low level of financial coverage of Rs 30,000. Any household with more than one episode of hospitalisation had to incur out-of-pocket expenditure (Philip 2018).

In other studies, utilisation rates were associated with the caste-status of the insured person, and less advantaged castes had the lowest utilisation rates, presumably owing to lack of information about how and where to use the scheme (Prinja et al 2017). The other issue was that the most impoverished districts had few or no empanelled hospitals.

Financial Risk Protection

All PFHISs claim that financial risk protection to poor households is their primary goal. However, most studies have reported no reduction in out-of-pocket expenditure among enrolled households after the health insurance schemes were implemented. No study showed any decrease in the incidence of catastrophic health expenditure. On the other hand, studies that measured catastrophic health expenditure as a measure of financial risk protection showed an increase in the incidence of catastrophic health expenditure headcount (Philip et al 2016; Prinja et al 2017). Findings on catastrophic health expenditure based on NSS surveys show that during the decade when PFHISs were implemented, at the all-India level there was no reduction in catastrophic health expenditure or the proportion of households impoverished as a consequence of out-of-pocket expenditure in health (Pande et al 2018).

Prognosis for AB-PMJAY

The evidence on PFHISs in India shows that they have neither expanded population/service coverage nor provided financial risk protection. In what way is the AB-PMJAY different, to succeed where the previous schemes failed?

There have been important changes in the design of the AB-PMJAY. First, coverage is extended beyond the BPL population to other vulnerable and marginalised households identified through the Socio-Economic and Caste Census (SECC). Second, there is no upper limit on the number of members to be enrolled in a household, which had, in the past, led to the exclusion of the least powerful household members. Third, the financial coverage has been increased substantially, to Rs. 500,000 from Rs 30,000, a 16-fold increase. Fourth, the membership in the scheme is portable across Indian states.

But other problems remain. There is an inadequate availability and skewed distribution of public and private hospitals and qualified healthcare providers; there is non-coverage of ambulatory care and a high cost of medicines; and there is a lack of information among enrollees on empanelled hospitals and eligible conditions. Perhaps the most significant will be the challenges in engaging with an unregulated and powerful private health sector, and the low-levels of public investment in healthcare. In the absence of regulation, the AB-PMJAY may mean escalating treatment costs without any significant improvement in health outcomes (Keshri and Gupta 2019).

> There is poor understanding of the diverse challenges faced by different health workforce cadres and there have been few efforts to address them.

Studies of the performance of AB-PMJAY during 2018–19 carried out by the National Health Authority show significant inequalities in access to and utilisation of the scheme. For example, states with the highest needs — in terms of the proportion of people living below the poverty line and disease burden — had enrolled fewer beneficiaries and had much lower utilisation rates for AB-PMJAY than the better-off states (NHA 2019a). The 115 ‘aspirational districts,' which are economically the least developed, had fewer hospitals empanelled, lower claim volumes and lower average claim sizes (NHA 2019b). While private hospitals accounted for 61% of all claims by volume and 66% of all claims by value, they accounted for 82% and 81%, respectively, of all claims above Rs 100,000 (NHA 2019c).

The budgetary allocations for AB-PMJAY in the past years have been a minuscule fraction of estimated needs. The amounts allocated in the three budgets (2018–19, 2019–20, and 2020–21) are Rs 3,200 crore, Rs 6,400 crore, and Rs. 6,400 crore, respectively. Revised estimates for AB-PMJAY for 2019–20 were only Rs 3,200 crore, half the original allocation. Keshri and Gupta (2019) point out that even if only 5% of the 100 million beneficiary families claimed 20% of Rs 500,000 that they are entitled to, the estimated expenses would be Rs 50,000 crore per annum, without accounting for the running cost of the scheme.

Unless these unresolved problems are addressed, the AB-PMJAY does not appear to hold promise for ushering India towards UHC.

3. The Way Forward

From this survey of India's health reforms, it may be seen that the trajectory has not been towards UHC but perhaps away from it. Privatisation in healthcare, which has increased the extent of out-of-pocket expenditure, is antithetical to the UHC goal of financial risk protection. Nor have the publicly-funded health insurance schemes increased access to healthcare for the low-income groups that they intended to reach. What then is the way forward?

The examples of LMICs that have been successful in progressing towards UHC suggest some definite dos and don'ts for countries intending to achieve UHC.

1. The starting point for universal health coverage is the political will and commitment to make substantial public investments in healthcare consistently. Between 2000 and 2017, government expenditure on health as a proportion of GDP grewto 2.85% from 1.7% in Thailand and to 2.7% from 1.7% in Vietnam. The comparable figures for India are 0.83% and 0.96% (World Bank 2020c). This was despite India's high GDP growth rates for several of the years during 2000–2017. In per capita terms, government health expenditure (current US dollars in 2017) was $188 and $63 in Thailand and Vietnam, respectively, as compared to $18.8 in India (World Bank 2020d).

2. Coverage of the population with an adequate number of health facilities with an optimal mix of health workers is the foundation on which the journey towards UHC is premised. As of 2016, India had only 169 physicians, nurses, and midwives per 100,000 population (including AYUSH doctors but excluding Auxiliary Nurse Midwives), as against a WHO benchmark of a minimum of 445. Not a single state in India met the benchmark requirements.[4] Strengthening coverage of primary health care is imperative. Low public investment in health hampers the expansion of healthcare to the entire population.

3. Bold and innovative policies sustained over a long period are needed to train and retain a skilled health workforce. Since 1972, Thailand has enforced compulsory rural service of two to three years for all newly graduating doctors, nurses, dentists, and pharmacists. A range of policies, including the posting of staff in their home district, and financial and non-financial incentives for those working in remote and difficult areas not engaging in private practice and staying on in service, have contributed to retaining staff in government health services (Tangcharoensathien 2018).

4. Tax-based financing, supplemented by a single mandatory social health insurance scheme for those employed in the formal sector, that is collected in a single pool of revenue, as in Thailand and Vietnam, offers the most feasible route to UHC in settings with a large informal sector. India has several fragmented sources of financing health care, such as tax funding and small-scale mandatory social insurance schemes (like the CGHS for central government employees), private insurance, and tax-financed government health services. However, because the government health services are severely underfunded in India, the majority end up paying out-of-pocket for healthcare in private health facilities. In comparison, only 2.2% of the population in Thailand and 9.4% in Vietnam experienced catastrophic health expenditure (2017). The comparable figure for India was 17.4%, not accounting for those who had to forego services (WHO and IBRD 2017).

5. The range of services available at no cost at the point of service needs to be comprehensive, covering both outpatient and inpatient care and the cost of drugs. This has been possible in Thailand because of its efficient management of the health system, including stringent regulation of the private sector, cost-containment measures in the procurement of drugs and supplies, and stringent health technology assessments before the adoption of new technologies and procedures (Tangcharoensathien 2018).

6. Publicly financed social insurance schemes for low-income populations such as the RSBY, do not succeed in expanding population coverage to universality. Also, there is no evidence to suggest that the engagement of an unregulated and powerful private health sector helps move towards UHC.

Most of these lessons are well-known and have been widely written about. There is, however, no sign that India's UHC policies are taking cognisance of the evidence. There is poor understanding of the diverse challenges faced by different health workforce cadres and there have been few efforts to address them. We have barely begun the discussion on financing reforms needed to consolidate the multiple and fragmented funding pools or on the best ways of engaging with a heterogeneous private health sector.

The intention in this review is not to portray a picture of gloom and hopelessness. If it encourages us to take a hard look at reality and begin to debate the challenges, it would have achieved its purpose.

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Footnotes:

1 The indicator of service coverage is a unitless index ranging between 0 and 100, with 100 being the desired value. The indicators of financial risk protection are (a) the proportion of the population with large (10% or more) household expenditure on health as a share of total household expenditure or income; and (b) the proportion of households impoverished by out-of-pocket spending on health. 0% is the desired value for both indicators (UNSD 2020b).

2 The seven projects were in Andhra Pradesh, Karnataka. Maharashtra, Orissa, Punjab, Tamil Nadu, Uttar Pradesh.

3 These included the Andhra Pradesh's Rajiv Arogyasri (2007), Comprehensive Health Insurance Scheme (CHIS) of Kerala (2008), Karnataka's *Yeshasvini* Cooperative Farmers Health Care Scheme (2003) and Vajpayee Arogyashri Scheme (2009), Himachal Pradesh's RSBY-plus Scheme, Tamil Nadu's Chief Minister's Comprehensive Health Insurance Scheme (2012), Maharashtra's Rajiv Gandhi Jeevandayee Arogya Yojana (2012), and the Mukhyamantri Swasthya Bima Yojana in Uttarakhand (2015) and Chhattisgarh (2017) (Prinja et al 2017).

4 Computed based on the total number of healthcare providers available from the National Health Profile 2019 and population estimates for 2018. The densities were calculated after deducting 20% from the number of registered doctors, as is done by the Medical Council of India.

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