

The rise of government-funded health insurance in India

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Abstract

India has experienced a remarkable proliferation of 48 Government Funded Health Insurance Schemes (GFHIS) from 1997 to 2018. We place the rise of this policy pathway in historical perspective. Under colonial rule, there was considerable importance placed upon public health as a local public good. After independence, the Bhore Committee build a paradigm of public sector health care, and the public health system degraded. In this environment, the political process faced a high disease burden coupled with a weak public health care system. This pressure led to the adoption of GFHIS as a convenient way forward. We identify four areas of concern in this new paradigm of Indian health policy: inefficient lack of focus upon public health, regulatory problems with private health care, weak regulation of health insurance companies, and fiscal risk.

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1 Introduction

A remarkable development in the field of health policy in India is the rise of government funded health insurance programs. These feature purchases of health care services from private health care providers, and purchases of health insurance from health insurance companies.

In this article, we offer fresh insights into these developments by placing them in historical perspective. The roots of Indian health policy lay in the strategies adopted in British India, where the foundations of public health were laid. By and large, the emphasis here was on public health and not on health care. The legislative and institutional apparatus that was established in British India involved a prime focus upon public health, and a major role for sub-national governments (states, cities). When the Constitution of India was drafted, it largely reiterated this design.

The changes after independence came from two sources. While the Constitution envisioned a federal arrangement, in practice, power shifted to the union government. The union government designed programs, and financed state governments to implement these programs. There was a consequent atrophy of policy thinking and execution at state governments and local governments. This had an impact on many aspects of public policy in India. In the present context, there was an adverse impact upon public health, as a large part of the field of public health consists of local public goods.

The Bhore committee (1943) was a very influential document, which shifted focus from public health to health care, and gave a leadership role to doctors in health policy. This document was accepted into the thinking of the Planning Commission, and translated into schemes and outlays in the following decades. There was a large scale attempt at building a public sector health care system.

For many decades, this approach – weaknesses in local government, weaknesses on public health, emphasis on public health care, domination of doctors – constituted the main paradigm of Indian health policy. By the early 1980s, some policy thinkers began questioning this framework. By the 1990s, a great deal of evidence and literature had accumulated, that criticised this approach. Weaknesses in public health were giving a high disease burden. Alongside this, the public sector health care system was not effective. An unregulated private sector health care system sprang up, to respond to the requirements of the citizenry.

While the mainstream health policy establishment proposed intensification of effort within this paradigm, by spending more money on it, politicians became increasingly concerned that the paradigm was delivering poor results. On the ground, it was apparent that private sector health care was the dominant feature of Indian health care. This led to the ideas of public funding for the purchase of private health care, implemented through health insurance companies. This approach was attractive as it appeared to more directly translate fiscal outlays into tangible benefits for citizens. This policy innovation, which began in Maharashtra in 1997, spread rapidly across the country. By early 2018, there were 48 Government Funded Health Insurance Schemes (GFHISs).

We argue that there are four areas of concern with this approach. The first problem is the lack of emphasis on public health. The most effective public policy interventions in health are the public goods of public health. It is an incorrect strategy to have a high disease burden in the first place, and then build a curative layer on top of it.

The second concern is about the conduct of the largely unregulated private health care sector, which yields poor outcomes for citizens. This calls for establishment of a regulatory strategy for the health care industry.

The third concern is about the weaknesses of consumer protection and micro-

prudential regulation of health insurance companies, which yields poor outcomes for citizens. This calls for reforms of the regulation of health insurance companies.

Finally, there are important fiscal risks in this journey. Once voters get used to entitlements, they are politically difficult to withdraw. Population-scale health care is expensive, particularly in the context of weaknesses in public health which are giving a high disease burden. There is a need for greater fiscal analysis, and caution, in the construction of these programs.

2 Health policy in British India

The health system in India reflects a set of incremental modifications upon the policies that began in British India. While there is valid criticism that British health policy decisions in India were focused on the health of colonists in general and the British Army in particular, those decisions shaped health policy in India in following decades. Hence, it is useful to look back at the thought process on curative and preventive health in British policy thinking.

After transfer of power to the Crown, health policy in India was focussed on preventive services. Public health was understood in the traditional sense of providing public goods in health like the statistical system, sanitation and vaccination. The devolution of responsibilities to local legislatures led to a reduced role of the British government in public health. However, till independence in 1947, there was a separate vertical of public health in the health administration which dealt with preventive issues of sanitation and vaccination.

2.1 Early interventions

Mushtaq, 2009, notes that while the early health interventions in British India were primarily curative services through medical officers attached to British ships in the

1600s, the medical departments serving both the army and civilian populations were formed in 1785 in the Bengal, Madras and Bombay presidencies. Crawford, 1914, states that the first health departments were formed in 1764 as the Bengal Medical Service, the Madras Medical Service and the Bombay Medical Service. These organisations served the troops and servants of the East India Company, and formed a part of the Royal Indian Army (Mushtaq, 2009).

After the transfer of power in India from the East India Company to the Crown in 1857, the focus remained upon the health of soldiers. The British government formed the Royal Commission of 1859 to inquire into the rates of sickness and mortality amongst troops (native and European) in the Indian Army and the *class of diseases* which cause such sickness and mortality in India. The commission was asked to look into both preventive and curative steps that could reduce sickness amongst the troops.¹

2.2 The Royal Commission

Though the terms of reference for the commission did not require it to look into issues for the civilian population, the commission dwelled upon the relationship between military and civilian populations. The commission noted that the health of the troops *is indissolubly associated with the health of the population of the country which it occupies*. The Commission argued that there needed to be a greater emphasis upon prevention rather than cure. It noted:

*Native hospitals are almost altogether wanting in means of personal cleanliness or bathing, in drainage or water-supply, in everything in short, **except medicine**.*

(emphasis added)

¹The complete terms of reference is available at pp. xxiii-xxiv Herbert et al., 1864.

It recommended the appointment of a ‘Commission for public health’ for each presidency. In addition to advising the government on improvements for barracks, hospitals, seats of government and military stations, public health commissioners would advise on the:²

...sanitary improvement of native towns, prevention and mitigation of epidemic diseases, and generally to exercise a constant oversight on the sanitary condition of the population, European and native;...

The *Royal Commission Report*, 1864 became the guiding document for public health policy in British India. It represents the beginning of public health thinking in India.

One reason that the commission took five years to formulate its report was the lack of statistics about health and mortality.³ This led to the first systematic approach to recording births, deaths and cause of death, which started in the 1870s.⁴ This spawned a number of committees, departments and officers dedicating themselves to researching the causes and ways of preventing communicable diseases through statistical analysis. For example; cholera research was performed by government’s chief adviser on epidemic cholera in 1860s and the Cholera committee was formed in 1868.⁵

Based on the suggestions of the *Royal Commission Report*, ‘Commissions of Public Health’ were set up in Madras, Bombay and Bengal provinces.⁶ Public health staff in towns and districts were trained and a cadre of central and local ‘Sanitary Commissioners’ were set up.⁷ These departments maintained a much

²See recommendation 35 of the Herbert et al., 1864, at pp. 128-129.

³The commission noted problems about gathering data in multiple locations. See, Herbert et al., 1864, at pp. 1-2.

⁴See, Hunter, 1909, at pg. 505.

⁵See, Mushtaq, 2009, at p. 10.

⁶See, Health Survey and Development Committee, 1946a, at pg. 23.

⁷See, Health Survey and Development Committee, 1946a, at pg. 23.

higher level of contact with the local population than the medical services. Hence the (predominantly medical) *vaccination department* was merged with the (predominantly engineering) office of Sanitary Commissioners to form the ‘Sanitary Department’ in 1870 (Mushtaq, 2009). Their role included early detection of outbreaks, tracing their source and quick elimination of these outbreaks.

The *Royal Commission Report*, 1864 initiated some of the first legislative interventions in public health. The *Act No. XXII of 1864* was passed to regulate cantonments. One objective of the law was “*protecting the public health within the limits of Military Cantonments*”. The details found in these laws about the subjects on which local governments had to make subordinate legislation demonstrate a high degree of understanding of public health concerns and covered most of what modern municipalities and local governments are required to execute in order to maintain public health.⁸

One additional source of impetus at the time on questions of public health was concerns grounded in international trade. The East India Company and thereafter, the British government rapidly increased India’s interconnections with the world economy through movement of labour and goods. This created new concerns about public health. As an example, CBC News, 2008, found that six out of the seven cholera pandemics since 1817 had originated in British India. Starting from the Bengal, each of these pandemics spread rapidly to parts of the world

⁸The law requires the local government to make rules on: (i) maintaining the cantonment *in a proper sanitary condition*, (ii) *conservancy and drainage*, (iii) *for the regulation and inspection of public and private necessaries, urinals and cess-pools, drains and all places in which filth or rubbish is deposited; of slaughter houses, public markets, burial and burning grounds and all offensive or dangerous trades and occupations*, (iv) *supervision and regulation of water sources for public use*, (v) *registration of deaths, and for making and recording observations and facts important for the public health and interests*. Violations of the rules were punishable by fines up to 50 Rupees or imprisonment up to eight days, with or without labour.

communicating with the British empire. This created negative externalities from the main British strategy of obtaining gains from trade between all the territories under the control of the British Empire. This also created constraints on the trade between the British empire and the rest of the world. As an example, the Ottoman empire imposed quarantines in areas it controlled including areas of pilgrimage like Mecca and key commercial hubs like Istanbul (Bulmus, 2012). Legislations to deal with outbreaks like *The Epidemic Diseases Act, 1897*, were enacted to authorise the government to take actions to respond to public health emergencies.⁹

The Royal Commission and the actions taken by the colonial government were successful when judged by their own objectives, even when there is valid criticism on their focus on the Army and the British population. Before the Royal Commission, mortality amongst British troops in India was between 30 to 70 per 1000. Mackie, 1941, notes that this fell to 18 per 1000 by 1874. In the similar time frame of 1864 to 1874, the death rate of British troops in the UK had fallen to 8.8 from 10 per 1000 (Rosenbaum, 1990).

2.3 Devolution under the British Rule

The next major change in public health in India was the enactment of the Reforms Act, 1919. This law was made by the British to allow elected representatives of the people to have a say in government and was intended to be a stepping stone to self-government in India in the long run.¹⁰ It classified the functions of government into central and provincial subjects. The central subjects came under the purview of the governor-general and his executive council, while the provincial subjects were administered by nominated ministers among the elected members of

⁹See generally, *The Epidemic Diseases Act, 1897*.

¹⁰See, *The Govt. of India Act 1919, Rules Thereunder & Govt. Reports, 1920, 2017*, at pp. i-iv.

the legislative council. Public health, sanitation and vital statistics were identified as local public goods and classified as provincial subjects.¹¹

Following the devolution of powers, provincial/state legislatures passed specialised laws. These were primarily written into local municipal laws, like the *The Calcutta Municipal Act, 1923*. In other instances, states made specific legislations on public health. *The Tamil Nadu Public Health Act, 1939* was one of the first state/provincial legislation made for advancing public health in the country. This act set up a controlling body called the ‘Public Health Board’ in the state and ‘Public Health Establishments of Local Bodies’. The main functions of these authorities were to ensure good quality of water supply, drainage, sanitary conveniences; abatement of nuisance; prevention, notification and treatment of diseases; maternity and child welfare; mosquito control; maintenance of sanitation and buildings; food control and arrangements of fairs and festivals. This law is still applicable in the state of Tamil Nadu.

The British regime developed a public health system in India. India, thus, inherited a clear distinction between public health and health care governance at independence. Recording of vital statistics of births, deaths and likely cause of deaths started in this period which led to better understanding of the diseases prevalent in the country. The British were also successful in establishing the relationship between hygiene and health and created a separate department of public health with clarity of public goods objectives.

The British system was focused primarily on cantonments and cities, and neglected most of the population. This was, however, a criticism about implementation and scale.

In 1943, Health Survey and Development Committee, led by Sir Joseph Bore,

¹¹See, Entry 3 of Part II (Provincial Subjects) of Schedule I of the *The Govt. of India Act 1919, Rules Thereunder & Govt. Reports, 1920, 2017*, at pg. 123.

ICS, (Bhore Committee) was commissioned to:

(a) make a broad survey of the present position in regard to health conditions and health organisation in British India, and (b) recommendations for future developments.

The Bhore Committee would go on to influence health policy thinking in free India in a way that is comparable to the impact of the Royal Commission of 1859 on colonial India.

3 Post-independence

Three major changes happened for health policy of India with independence in 1947. The *Constitution of India, 1950* made provisions for health, there was a decline in the functioning and capability of sub-national government, and the Bhore Committee report was implemented.

3.1 The Constitution of India

The *Constitution of India*, came into force on 26 January, 1950. The Constitution maintained the same distribution of health subjects as found in the previous British law: *The Government of India Act, 1935*.¹² The framers of the Constitution were satisfied with the existing distribution of subjects between the provinces, centre, and subjects which would have dual jurisdiction; and there was little debate on these questions. Most of the health care and sanitation functions, being local subjects, were kept with the states/provinces. Dual jurisdiction was provided

¹²For the complete list of matters distributed between the state and union governments under the Indian Constitution, please see Article 246 of the *Constitution of India, 1950*, read with Seventh Schedule to the Constitution.

over subjects which had an inter-state effect like regulation of doctors, production of medicines, etc. Health issues which affected India's external relations like quarantine (international and inter-state), health of seamen and armed forces were left with the Union. Supreme Court of India, 2016. Department-Related Parliamentary Standing Committee on Health and Family Welfare, 2016. Department-Related Parliamentary Standing Committee on Health and Family Welfare, 2013. Parliamentary Standing Committee on Health & Family Welfare, 2006. *Constitution of India*, 1950. *National Medical Commission Bill*, 2017, 2018.

The Constitution introduced a new concept of "Directive Principles". These are non-enforceable policies which future governments *should* follow. Article 47 of the Constitution requires the State to consider (i) raising the level of nutrition and standard of living, and (ii) improving *public health* as its primary duties.

The term "public health" was understood to be the public goods in health like sanitation, vaccination, etc. Health care was understood to be medical services which was a distinct function that was pursued by a separate department. The only change in the health policy framework that the framers of the Constitution introduced was to emphasise the need for *public health* in the directive principles.

In addition to the Article 47, there are three more directive principles in the Constitution which deal with health. Article 39(e) of the Constitution requires the state to ensure that health and strength of workers, men, women and children are not abused due to economic necessity forcing them to enter unsuitable vocations. Article 41 requires the state (within its economic capacity) to provide social security arising out of sickness, and Article 42 requires the state to provide for maternity benefits.

As the framers of the Constitution chose continuity with the colonial arrangements, and as directive principles have limited influence, the adoption of the Constitution did not change the trajectory of health policy. The change came through

the Bhore Committee report.

3.2 Increased importance of the Union government

Public health functions were rightly placed with sub-national governments in the British design and in the Constitution. After independence, the role of state governments and city governments changed and, in many ways, atrophied. Mathur, 1999, states that the municipal institutions in India were politically important for a brief period between 1919 and 1935, after which their relevance remained low until 45 years post-independence, when their roles were defined through amendments in the Constitution.

With the rise of central planning and the Planning Commission, the Union government became much more important in the policy process. The Union government designed and funded schemes, and state governments were seen as implementation arms. This was inconsistent with the legislative and administrative structures which had been setup prior to independence. Even though the Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs) were created, there was no political will to foster these institutions. Department of Rural Development, Ministry of Agriculture, 1978, highlighted the lack of clarity on distribution of powers between the states and PRIs as a reason for their non-adoption by many states.

After independence, city governments became weaker. New fiscal flows went to state governments, who were implementing schemes designed at the union government. City governments lost control of funds, functions and functionaries.

These developments, in the shift away from the federal design of the Constitution, have been extensively documented and are well understood. We point them out here in connection with the subject of health policy. The bulk of the field of public health consists of local public goods, and when power and resourcing

shifted to the Union government surrounded by State governments as implementing agency, this led to reduced performance on public health.

3.3 Bhore Committee and its consequences

The Bhore Committee started its work in 1943 and finished in 1946. It had intellectual influence upon the post-colonial decision makers. The recommendations of the Bhore Committee can be divided into three categories: *(i)* recommendations on public health issues endemic in India; *(ii)* short-term and long-term proposals on the health system; *(iii)* recommendations on status of professional education and research.

Key ideas of the Bhore committee

The report identified the following as *endemic public health issues*: maternal and child health; health education in schools; health of an industrial worker; drugs and medical appliances; environmental hygiene; vital statistics; and specific diseases like malaria, TB and smallpox.

The report classified its recommendations into short-term and long-term. The short-term recommendation, to be carried out in the first 10 years of independence, envisaged the creation of Primary Health Centers (PHC); one for every 40,000 people. Each PHC would have a woman doctor, four public health nurses, four mid wives and four trained *dais*. There was a separate plan for the long-term, also called the 'Three Million Plan'.¹³ This plan envisaged the famous *three tiered* health system in every district. At the bottom tier would be multiple primary units reporting to secondary units. All secondary units would report to a district headquarter with specialised medical services. The report recommended strength

¹³See, Health Survey and Development Committee, 1946b, at pp. 22 - 23. The name comes from the fact that an average district had a population of three million.

of staff and hospital accommodation at these units.

For medical education, the Committee recommended abolition of the system of *licentiate* doctors.¹⁴ A Licentiate Medical Practitioner held a three year medical degree which trained them to handle acute and uncomplicated diseases. The Committee recommended that there should be equality in the quality of medical services and the government should expand the five-year M.B.B.S degree programmes to provide enough doctors.

From 1951 onwards, the Indian budget system was modified to bring an important role for the 'Planning Commission'.¹⁵ The Bhore Committee's recommendations were largely accepted as the health policy strategy at the Planning Commission. Following the recommendation of the committee, the first plan envisaged the abolition of all licentiate medical schools. The second five year plan also used the Bhore Committee recommendations to calculate the *planned* requirement of doctors in India. This drove the establishment of medical colleges, the resourcing for which was obtained through the *plan expenditure*.

The application of the Bhore Committee's recommendations led to multiple changes in Indian health policy through the evolution of laws, schemes, programs and budgets. While some of them were quickly visible to the public; like the creation of PHCs, the three tiered structure and the abolition of licentiate doctors; other recommendations were less visible, including the internal restructuring of the public health and curative health departments.

¹⁴The third schedule of *Indian Medical Council Act, 1933*, provides a list of licentiate programs in force in India till 1947.

¹⁵The Planning Commission would formulate five-year plans for effective and balanced utilisation of the resources of the country. It was dissolved in 2014 and the current plan, which would end in 2017, is the last five-year plan in the country.

Table 1: Bhore’s recommendations

Recognition of difference	Recommendation
<i>The health services may broadly be divided into (i) those which may collectively be termed public health activities and (ii) those which are concerned with the diagnosis and treatment of disease in general.^a</i>	<i>Preventive and curative health work must be dovetailed into each other if the maximum results are to be obtained and it seems desirable, therefore, that our scheme should provide for combining the two functions in the same doctor in the primary units,^b(emphasis added)</i>

[a]: See *Report of the Health Survey and Development Committee, Volume II: Recommendations*, at pg. 6.

[b] See *Report of the Health Survey and Development Committee, Volume II: Recommendations*, at pg. 18.

Restructuring public health

The Bhore committee brought in a fundamental change in the organisation of health-related work of the government. The second volume of the report reflected an interesting dichotomy; on one hand the committee recognised the difference between preventive and curative health services, but on the other hand, it recommended combining these under the same ‘doctor’ (See table 1).

The merger of public health and curative health bureaucracies in India was a clear departure from the previous British emphasis on public health through sanitation, inspections, vaccinations. It emphasised the role of doctors in the government’s work on health, as opposed to an array of other disciplines that are central to public health. Over the years, the curative services provided by the

doctors eclipsed their role in preventive and primary care, and Indian health policy shifted focus from public health to health care.

A year after the Bhore committee report, the Directorate General of Health Services (DGHS) was formed by the central government.¹⁶ It was formed by merging the Director General of Indian Medical Services (DGIMS) and the office of the Public Health Commissioner of India in 1947.¹⁷ This abolished the position of the Public Health Commissioner, which was the successor to the Sanitary Commissioners positions set up in the 1860s.

Banerji, 1984, notes that the states also initiated merging of the public health and curative departments to form Directorate of Health Services. These mergers led to a single health department, usually led by a doctor.

For example, the day the state of Kerala was created by joining former princely states, 1st Nov., 1956, the medical and public health departments were merged to create the Department of Health Services.¹⁸ Maharashtra continued with separate public health and medical services departments till 1970, when they were merged.¹⁹ In the merger, the post of Director of Public Health was abolished and a new post of Director of Health Services created. This position is usually held by a medical practitioner. In West Bengal, the post of Director of Health Services was created after amalgamation of posts of Surgeon-General, Bengal and Director of Public Health, Bengal in 1970.²⁰ Among the recent mergers was Andhra Pradesh on 29th June, 2016.²¹

In some states, this reorganisation proceeded in a different direction which led

¹⁶See generally, National Medical Library, 2017.

¹⁷See generally, National Medical Library, 2017.

¹⁸See Wins, 2013, at pg. 69.

¹⁹See, the preamble to the *The Surgeon General with Government etc. (Change in Designations) Act, 1973*.

²⁰See, Das Gupta et al., 2009, at 229 pg. 5.

²¹See, The Hindu, 2017, at pg. 1.

to the conversion of the public health department into the water and sanitation department. As an example, Punjab converted its Public Health Department to the Water Supply and Sanitation Department in 2004.²² In this arrangement, curative care took prominence in the field of health policy. For example in Haryana, while the Health Minister is a position of a full minister, the public health engineering minister is a junior *minister of state* position.

The merger of these department has led to a continued neglect of public goods in health specially in areas such as sanitation, vector control, food safety, etc. While many laws on these public health issues exist on the statute books, there has been a reduction in the expertise and focus on implementation, with departments that are led by doctors. For example, in a news article about a drive to enforce public health laws in India, an official noted:

*Officials rarely take action against those who violate the Travancore-Cochin Public Health Act, 1955, and the Madras Public Health Act, 1939. Even health officials are ignorant about the powers of the Acts...*²³

The merger of preventive and curative health, and the shift in leadership to doctors, shaped the nature of health services provided by the government. It pushed the role of the state towards curative services and de-emphasised public goods in health. An example of this transformation is found in the share of *plan expenditure* on preventing communicable diseases: this fell from 16.5% in the First Plan (1951-56) to 4.2% in the Eighth Plan (1992-97).²⁴

²²See generally, Punjab, 2017.

²³See, Staff Reporter, 2011.

²⁴See, Qadeer, 2000, at table 2.

Outcomes

The emphasis on curative health in the Bhore committee recommendations did not play out as expected. Each of the three levels of the health care structure envisaged by the Bhore Committee work poorly with respect to infrastructure as well as the quality of care received by the patients. Despite the fact that public sector health care was prioritised, there was an exit from public facilities by households.

The Health Survey and Development Committee, 1961, had forewarned about the lack of resources and personnel available for PHCs and termed some of the targets set out by Bhore Committee as ‘unduly optimistic’. Despite being aware of limitations of the PHC structure, the government continued to advocate its strengthening and integration. The *Report of the Committee on Integration of Health Services, 1967*, notes that at the PHC level the medical officer is interested in and keeps himself busy with clinical work and exercises no supervision to their staff or Sanitary Inspectors. Nichter, 1986, cited anecdotal evidence of issues including professional incompetency, hierarchy and bureaucracy at PHC level. Filmer, J. S. Hammer, and Pritchett, 1998, questioned whether PHCs have a role in health status of the population and found that there is no demonstrated impact of PHC across various countries and settings. They argued that countries should make health expenditure on PHCs based on the efficacy of the public sector, justification for public intervention and the response of people to such actions. *Rural Health Statistics, 2015-16* show that 25.8% of the sanctioned posts of doctors in PHCs were vacant. Figure 1 compares the number of doctors sanctioned and in position at PHCs from 1996-2016.

The second tier, Community Health Centres (CHCs), were supposed to house four specialists as per the Bhore committee design. *Rural Health Statistics, 2015-16* show that in CHCs, positions for 68.2% of surgeons, 61.9% of obstetricians & gynaecologists, 70.2% of physicians and 63.6% of pediatricians were vacant.

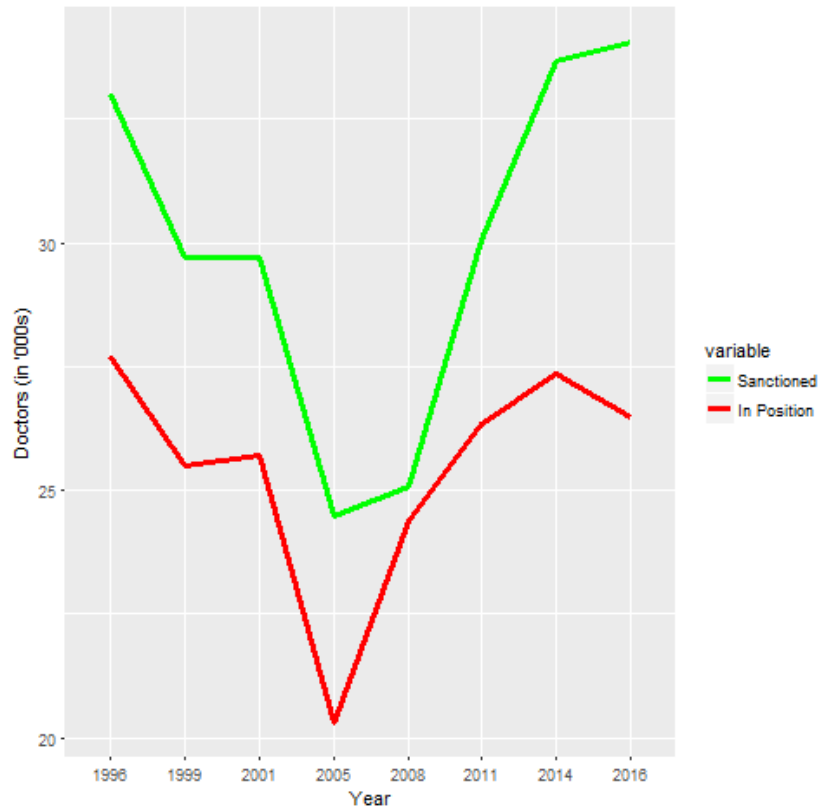


Figure 1: Number of doctors at Primary Health Centres

Source: Author's calculations from Ministry of Health and Family Welfare, 2017 and Central Bureau of Health Intelligence, 2005

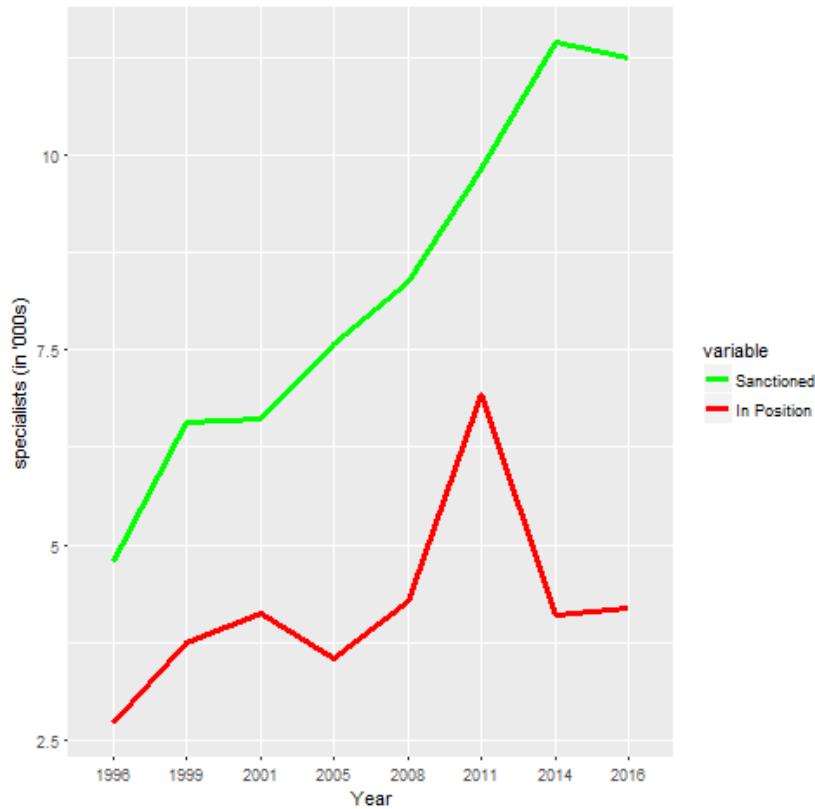


Figure 2: Number of specialists at Community Health Centres

Source: Author's calculations from Ministry of Health and Family Welfare, 2017 and Central Bureau of Health Intelligence, 2005

Overall, 65.3% of the sanctioned posts of specialists at CHC were vacant. Kapoor, 2017, found that 64% of the CHCs do not have the required number of specialists. Desai et al., 2010, argue that in a village where PHCs or CHC are available but there is no private health care alternative, 53% of sick leave village in favor of private treatment while 35% opt for visiting the government facilities. Figure 2 compares the number of specialist doctors sanctioned and in position at CHCs from 1996-2016.²⁵

²⁵The CHCs were designed to be equipped with four specialists in the areas of medicine, surgery, paediatrics and gynaecology.

Interestingly, the government statistics do not even report the vacancy of positions in the third-tier: the district hospitals. A sample study of 40 government hospitals by Jat and Sebastian, 2013, found that 50% of the hospitals were operating inefficiently and that these hospitals could produce the same outputs by using 21% less inputs. However, an indirect measure of their failure is the predominance private facilities for expensive tertiary care. Nair et al., 2013, carried out a randomised survey of cancer patient in three Indian states. They find that even for expensive treatments like cancer (to be provided in district hospitals), the first choice of 45% patients are the private medical facilities while 32% prefer the public hospitals. A study by Transparency International India, 2005, found that around 30% of patients had to pay bribes to get services in government hospitals. It also found that 60% of the patients complained that they had to make repeated visits for treatment due to manpower shortage and infrastructure related reasons.

These problems are compounded by some issues which cut across the tiers of government services. India has weak accountability of government employees. J. Hammer, Aiyar, and Samji, 2007, argued that the doctors employed by the government were not answerable to the authorities and were hired on a fixed salary, which decreased their incentives in the health care of public. This leads to problems like absenteeism. Banerjee, Deaton, and Duflo, 2004, find that absenteeism varies from 45% to 36% in government facilities.

An indicator of the failure of the three tier system is the rise of private health care provisioning in India. Sengupta and Nundy, 2005, note that at independence, only 5-10% of the health care was provided by the private sector. This rose to 82% for outpatient visits and 58% of inpatient visits by 2005. Berman, 1998, studied the role of the non-government sector in providing health care in India by analysing data from National Sample Survey Organization (NSSO) for the year 1991 and concluded that the expenditure burden of households was primarily for

ambulatory care with a preference to private players even for the diseases prioritised in a government health care organisation. Selvaraj and A. K. Karan, 2009, used data from morbidity and health surveys for 1986-87 to 2004 and Consumer Expenditure Survey (CES) for the time period of 1993-94 to 2004-05 to determine that the role of private sector in health care delivery was increasing along with the Out of Pocket (OOP) expenditure of the households. This dependence of private health-care facilities in turn contributed to increase in poverty for vulnerable households. Berman, Ahuja, and Bhandari, 2010, studied the NSSO survey of 2004 on morbidity and health care and found that 6.2% of total surveyed households fell Below Poverty Line (BPL) due to health care expenditure in 2004 with 4.9% of the expenditure paid as the outpatient fees. Shahrawat and Rao, 2011, found that patients are making most OOP payments on procuring drugs and concluded that if the trends would continue, 58.5 million people would fall into poverty due to health care expenditure by 2014-15.

Omran, 2005, suggests that mortality and disease pattern transition, with time, in a nation where pandemics of infection which can be controlled through health habits, hygiene and nutrition are gradually displaced by degenerative and man-made diseases as a chief form of morbidity and primary cause of death. However, Yadav and Arokiasamy, 2013, suggest that even though the burden of communicable diseases in India started decreasing in 1970s-1980s, it is still substantially higher and contributes towards 30% of all deaths. This has led to a situation where India has a double burden of communicable as well as non-communicable diseases.

In the late 1990's the government started accepting the failure of the three-tier public hospital system. In 1997, the Central Government introduced a scheme called the *Rashtriya Arogya Nidhi* for the treatment of BPL patients suffering from life threatening diseases. The scheme empanels thirteen super speciality public institutes of the country and is funded by the central government. By 2011,

the government had completely accepted the failure of public sector tertiary care facilities. Planning Commission, 2011 observed that resource allocation by the government on secondary and tertiary care was hindering the expansion of public services. The report also criticised the lack of tertiary care infrastructure in rural areas.

The findings of the Planning Commission have been taken forward by its successor organisation the, National Institution for Transforming India (NITI) Aayog.²⁶ It proposed project guidelines, titled the *Public Private Partnership for Non-Communicable Diseases (NCDs) in District Hospitals*, 2017, which suggest that some functions of the district hospitals be taken over by the private sector.

The merger of public health with medical departments and placing doctors in-charge of the overall health system created an emphasis on curative services within the government services for health care. If that would have led to an acceptable curative service system run by the government, we could have debated the trade-offs made. However, Indian health policy in the Bhore paradigm also failed to create a well functioning curative structure. While the government realised quickly that it would not be possible to send doctors to PHCs and there have been criticism of the PHC structure, the true magnitude of the failure of Bhore Committee recommendations is not just the failure of the first tier but *all the three tiers* of government health care services. Not only are the PHCs plagued with problems, the failure of CHCs and the district hospitals have pushed most secondary and tertiary care to private service providers.

Intensification versus paradigm shift

The government set up *The Mudaliar Committee* in 1959 to review the developments taken place after the Bhore Committee recommendations of 1946 and to

²⁶NITI Aayog was formed via resolution of the Union cabinet in January, 2015

formulate further health programmes for the country.²⁷ The *Mudaliar Committee Report*, 1961 recognised the failures of meeting the targets of the Bhore committee. However, the failure was diagnosed as the inability of the government to implement rather than problems with the recommendations themselves. At the time, the solution was seen in intensification of the Bhore work program. India's first three year plans also used Bhore Committee recommendations as targets for allocating funds, even though each plan failed to come close to the targets.²⁸

These suggestions were reiterated by the *Report of the Committee on Integration of Health Services*, in 1967. and *Shrivastav Committee Report*, 1975. Even in the late 1990's the *Bajaj Committee Report*, 1996, staffed by health experts would continue to recommend the implementation of the Bhore Committee recommendations.

It was only in the early 1980's that criticism shifted from the *implementation* of Bhore committee's recommendation to the ideas therein. *Health For All: An Alternative Strategy*, 1981 is an early example of a formal document accepting the problems with the Bhore committee recommendations. The report argued that even though health care is a necessity, it is not sufficient in order to achieve an integrated and healthy society. It criticised the then 'existing programmes' in as much as discrediting the assumptions on which Bhore Committee's recommendations were made.²⁹ The report explicitly questioned intensification of the Bhore program:

We also believe that any attempt to pump more funds into a costly and wasteful system of this type will, instead of solving, complicate

²⁷See generally, Health Survey and Development Committee, 1961.

²⁸See, Planning Commission of India, 1951; Planning Commission of India, 1956; Planning Commission of India, 1961.

²⁹See, Study Group by Indian Council of Social Science Research and Indian Council of Medical Research, 1981, at pg. 10.

our major health problems.³⁰

All through the failures of these years, the Bhole Committee remained the main strategy for Indian health policy. While some features like the three tier structure were identified early on as failures, others like the merger of public health and medical departments continue to reign. For many years, the established dogma held that political and administrative failures have hampered the sound implementation of the Bhole Committee.

4 Government funded health insurance schemes

4.1 Early Health Insurance Schemes

The concept of Government funded health insurance took root in India at independence. Among the early health insurance benefits introduced by the state were the *Employees' State Insurance Act, 1948* and *Maternity Benefit Act, 1961*. *Employees' State Insurance Act, 1948* provides health insurance to workers in the formal sector. *Maternity Benefit Act, 1961* mandated employers to provide maternity leave and financial benefits to women workers. The benefits of both schemes were to be provided by formal, registered employers like factories, shops, etc. It was hoped that as the economy grew and more people entered the formal workforce, these laws would cover the majority of population. Cognisant of the fiscal situation of the government, the *Maternity Benefit Act, 1961*, put the responsibility to fund on employers while *Employees' State Insurance Act, 1948* used co-payments by the employee, the employer and the state to fund health insurance.

The early Government-Funded Health Insurance Schemes (GFHISs) were intro-

³⁰See, Study Group by Indian Council of Social Science Research and Indian Council of Medical Research, 1981, at pg. 10.

duced either for the benefit of a class of government employees or persons engaged in the formal sector. The central government introduced the concept of these schemes, which was later adopted by several states. Table 2 shows the list of these health insurance schemes in India:

Table 2: **List of Early GFHISs**

Schemes	Year	Centre/State
Employee State Insurance Scheme	1948	State and Centre
Central Government Health Scheme	1954	Centre
Rashtriya Aarogya Nidhi Scheme	1993	Centre
Retired Employees Liberalised Health Scheme	1997	Centre
Delhi Government Employees Health Scheme	1997	Delhi
Ex-servicemen Contributory Health Scheme	2003	Centre

4.2 Recent emphasis on Government Funded Health Insurance Schemes

The Bhore paradigm gave India a combination of weaknesses on public health – which induced a higher disease burden – and a weak public health care system. When faced with a choice between paid private health care services and ostensibly free public sector health facilities, households increasingly favoured the former.³¹ While health economists and policy advisers were debating the Bhore approach, politicians were under pressure from voters to do better on health. There was

³¹See generally, Berman, 1998.

growing concern that mere intensification of the conventional approach was not going to deliver results. While conventional health policy experts pleaded for an increase in public health expenses through conventional programs, politicians were uncomfortable with the poor bang for the buck from conventional health programs.

This conflict has led to the emergence of a second generation of state-led insurance through which front-line health care services are delivered by private players. This shift started with state governments who are primarily responsible for health issues. It then spread to the centre.

The key insight lay in establishing public payment or co-payment for health insurance programs that would be run by health insurance companies (public or private) and pay for consumption of health care services from private players. Forgia and Nagpal, 2012 state that the main objective of these new GFHISs schemes was protection against catastrophic health shocks as defined by the patient stay in the hospital. This created a mechanism for translating public health care expenditure into health care outputs without going through the failing systems of the Bhole paradigm.

Health insurance products in India are narrow in scope when compared with those seen elsewhere in the world. Health insurance products in India usually cover only hospitalisation. Smaller expenses like doctor visits, medication, are too difficult to monitor in India's fragmented health care system. This dovetails with the findings of health researchers, that the health expenditure which drives vulnerable households into poverty is often associated with secondary and tertiary care, as discussed in section 3.3. This led to governments using the insurance market to provide coverage for hospitalisation through GFHISs.

Placing choice in the hands of households, to choose between private and public facilities, was a big step forward when compared with mainstream Indian thinking on service delivery. For contrast, while education vouchers have been advocated

for many years, a negligible proportion of state education expenses flows through mechanisms that give choice to households. However, in the field of health, this policy innovation has become mainstream.

The common characteristics of these schemes are:

1. The schemes allow medical treatment of a pre-decided set of conditions or diseases.
2. The schemes focus on secondary and tertiary treatments instead of prevention and primary care.
3. Empaneled private and public health care facilities can be used, with choice being placed in the hands of households.
4. The schemes are financed partially or completely by state or central government.

The journey of GFHIS began with *Jeevandai Arogya Yojana* in Maharashtra in 1997. The scheme started on 11th October, 1997 to provide financial help to poor people ('the BPL population').³² The scheme was financed by the state government and provided treatment for heart, kidney, brain & nervous system disorders in the government as well as selected private hospitals.

Another model of health insurance which took off in states during this time was the community health insurance program. In 2002, a cooperative health care scheme by the farmers and the government called *Yeshasvini Scheme* started in Karnataka. In this scheme, the beneficiaries pay for the yearly insurance premium, which is now being supplemented with government co-pay models. The number

³²The scheme was discontinued and started again in 2012 as Rajiv Gandhi Jeevandayee Arogya Yojana (RGJAY) and renamed yet again in 2017 as Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY).

of members and the utilisation of the scheme by members has increased since the inception of the scheme.³³

Ministry of Finance, 2006, studied the first central government scheme: Universal Health Insurance Scheme (UHS) which was announced in 2003 as a health insurance scheme for all by the Ministry of Finance. While the scheme was subsidised for the BPL population, every strata had to co-pay for the benefits of the insurance scheme. However, by 2004, it was restructured to be made available only to BPL population as the government intended to concentrate on the coverage of the poorest of the population. This change did not lead to increase in the coverage of UHS and the scheme could not take off.

After UHS, the government tried to ensure health security for poor people through the *Unorganised Sector Workers' Social Security Scheme* in 2004. It was funded through co-payment by employees, employers and the government. However, the scheme did not get enough enrolments at the pilot stage and was discontinued.³⁴

In 2008, Rashtriya Swasthya Bima Yojana (RSBY) was launched by the labour ministry to prevent catastrophic health spending through access to hospital-based secondary care for its members.³⁵ Thereafter, a law called *The Unorganised Workers Social Security Act, 2008* was passed by the parliament which included social security schemes, like RSBY within its ambit.³⁶ UHS and RSBY were the major GFHS introduced for the poor by the central government. One major driver for RSBY was the failure of the Employee's State Insurance Scheme (ESIS) to expand as expected. In the 1950's, it was hoped that as the formal economy expanded,

³³While the number of members has increased from 1.6 Million (Mn) in 2003-04 to 4.36 Mn in 2016-17; the number of services availed increased from 44861 to 4.65Mn in the same time period.

See, Yeshasvini Trust, 2017.

³⁴See, Virk, 2013, at pp.72-74.

³⁵See, Federal Ministry for Economic Cooperation and Development, 2011.

³⁶See, Ministry of Law and justice, 2008, schedule I, entry 10 at pg.8.

schemes for employees would reach universal coverage. However, the percentage of formal-organised workers to the total workforce in India has not crossed 8%. Out of those only about half are covered by the ESIS.³⁷ After years of hoping that the workforce would enter the formal economy, the government had to give up and develop schemes to cover workers who would never enter the formal/organised workforce.

According to Virk, 2013, RSBY was initially launched for only five years for the benefit of BPL persons. However, the scheme performed well with respect to enrolment of beneficiaries and was expanded gradually to include workers with low paying jobs as beneficiaries. RSBY is operational in 15 states of India and has completed enrolment of 36.33 million families in 267 districts.³⁸ A family of maximum five people are the units of beneficiaries in the scheme which has a total annual coverage of ₹ 30,000 for secondary care treatments, including maternity care.³⁹

In 2004, Madhya Pradesh started *Deen dayal upchar yojana* for BPL persons. This scheme provides free diagnostic, investigative and treatment procedures for hospitalised patients including medicines in government health care institutes with a cap of ₹30,000 per family in a year.

In 2005, Gujarat government started *Chiranjeevi Yojana* for reduction in Maternal Mortality Rate (MMR) in the state. Under this scheme, BPL and Above Poverty Line (APL) mothers who chose to give birth in recognised hospitals are identified during ante-natal period by health workers. They are registered in the scheme and a micro plan for birth is made. Private doctors are empaneled and

³⁷Source: Authors' calculations. Figures for ESIS coverage taken from ESIC, 2017. Figures for formal-organised workforce as a percent of total workforce in India taken from ILO Country Office for India, 2016

³⁸See generally, Government of India, 2017.

³⁹See generally, Ministry of Labour & Employment, 2017.

paid ₹0.38Mn per 100 deliveries under this scheme, irrespective of the procedure adopted for the delivery.⁴⁰ The mother receives free medical services and transportation costs. The government statistics show a sharp increase in institutionalised births (32.7%) and a decrease in the MMR (38%) in the state in the period 2005-06 to November 2013. The National Health Mission (NHM) through its Janani Suraksha Yojana (JSY) scheme and many other states subsequently followed this model to increase the rate of institutionalised births.

In 2007, Andhra Pradesh started Rajiv Aarogyasri Scheme (RAS) as its GFHIS.⁴¹ It covers BPL population and provides screening and counselling as well as treatment for 1044 identified therapies up to ₹0.25Mn per family per year.⁴² The scheme is entirely financed by the state government and is cash-less for beneficiaries and has a dedicated trust working for the administration of the scheme.

Since 2008, many state and central schemes were started by the government to reduce the burden of out of pocket expenditure on health care on the BPL population. The mechanism of these schemes is to prevent people from making catastrophic expenditure on health care by providing financing for fixed packages of health care.⁴³ This is an innovation in health policy which has spread rapidly across the country. Table 3 lists the schemes of this genre presently running in India.

⁴⁰See generally, *Chiranjeevi Yojana*, 2017.

⁴¹The state of Andhra Pradesh later bifurcated into two in 2014 into Telangana and Andhra Pradesh. While Telangana retained the name RAS, Andhra Pradesh renamed it's scheme to Dr. NTR Vaidya Seva (NTRVS).

⁴²See generally, Aarogyasri Health Care Trust, 2013.

⁴³For example, see Federal Ministry for Economic Cooperation and Development, 2011, at pg. 6.

Table 3: **List of GFHISs**

Schemes	Year	Centre/State
Yeshasvini	2003	Karnataka
Deen Dayal Upchar Yojana	2004	Madhya Pradesh
Chiranjivi Yojana	2005	Gujarat
Janani Suraksha Yojana	2005	Centre
Jansankhya Sthirta Kosh, Santushti Yojna	2005	Centre
Vijaya Raje Janani Kalyan Bima Yojna	2006	Madhya Pradesh
Rajiv Arogyasri Scheme	2007	Telangana
Rashtriya Swasthya Bima Yojana (RSBY)	2008	State and Centre
Saubhagyavati Surakshit Matritva Yojana	2008	Uttar Pradesh
Mamta Scheme	2008	Delhi
Mizoram Health Care Scheme	2008	Mizoram
Comprehensive Health Insurance Scheme	2008	Kerala
Senior Citizens Health Insurance Scheme	2008	Centre
Vajpayee Arogyashree Scheme	2009	Karnataka
Bal Sakha Scheme	2009	Gujarat
Rashtriya Swasthya Bima Plus	2010	Himachal Pradesh
U-Health Card	2010	Uttarakhand

Continued on next page

Table 3 – continued from previous page

Scheme	Year	Centre/State
Mukhyamantri Swasthya Bima Yojana	2011	Chattisgarh
Chief minister's comprehensive health insurance scheme	2011	Tamil Nadu
Megha Health Insurance Scheme	2012	Meghalaya
Mukhyamantri Amrutam Yojana	2012	Gujarat
Biju Krushak Kalyan Yojana	2013	Odisha
Rajiv Arogya Bahagya	2013	Karnataka
Rajiv Gandhi Jeevandayee Arogya Yojana	2013	Maharashtra
Bhamashah Swasthya Bima Yojana	2014	Rajasthan
Mukhyamantri Mufat Ilaj Yojna	2014	Haryana
Arunachal Pradesh Chief Minister's Universal Health Insurance Scheme	2014	Arunachal Pradesh
Tripura Health Assurance Scheme for Poor	2014	Tripura
J&K Government Employees Group Mediclaim Insurance Scheme	2014	Jammu and Kashmir
Jyothi Sanjeevini	2014	Karnataka
Mukhyamantri Swasthya Bima Yojana	2015	Uttarakhand

Continued on next page

Table 3 – continued from previous page

Scheme	Year	Centre/State
Andaman & Nicobar Islands Scheme for Health Insurance	2015	Andaman and Nicobar Islands
Mukhya Mantri State Health Care Scheme	2015	Himachal Pradesh
Working Journalists Health Scheme	2015	Andhra Pradesh
Punjab Government Employees and Pensioners Health Insurance Scheme	2015	Punjab
Swasthyasathi	2016	West Bengal
Atal Amrit Abhiyan	2016	Assam
Deen Dayal Swasthya Seva Yojana	2016	Goa
New health insurance scheme	2016	Tamil Nadu
Journalists Health Scheme	2016	Telangana
Arogya Raksha	2017	Andhra Pradesh
Thayi Bhagya Scheme	–	Karnataka

By January, 2018, India had around 48 GFHISs. While some of them are independent, others top-up the central government RSBY scheme. Beneficiaries are free to use public or private facilities. Twenty of these schemes are managed through various insurance companies. The GFHISs sector covered through these insurance companies is growing, both in terms of the number of persons covered

and the amount of the premium paid. From 2011-12 to 2015-16, the percentage of population covered by these schemes has increased to 7.9%, while the share of premium has grown by ₹ 2 Billion. (See, table 4).

With a view to develop further understanding of the GFHISs, we have studied and classified all 48 schemes identified by us in section A.

RSBY is one of the biggest GFHISs in India in terms of geographical reach. Research on RSBY shows achievements and pitfalls. Official data on RSBY is limited to enrolment and overall usage data. Studies have relied on sample surveys or household surveys conducted by the government to determine the impact of the RSBY. Nandi et al., 2014, performed a literature review of the existing studies on RSBY and found that different types of bias lead to different outcomes of the studies. For instance adverse selection may lead the researchers to believe that RSBY is not performing well even if the truth is otherwise. In another case selection bias in cross-sectional studies would not allow to appreciate the outcomes. Devadasan et al., 2013, suggest that despite using RSBY, 58% of patients had to make OOP expenditure. A. Karan, Yip, and Mahal, 2017, studied the effects of RSBY on OOP expenditure and found that RSBY does not reduce OOP spending for inpatient treatment, but increased it to upto 30%.

In an environment where the Bhore paradigm was delivering poor quality health care services, there is value in giving the choice to households of opting for private sector health care. In addition, there may be merit in using fiscal resourcing in order to combat catastrophic health episodes.

4.3 Areas of concern

There are four concerns with this new emphasis on health care delivered by private providers coupled with publicly funded insurance programs purchased from insurance companies.

Table 4: **Growth of GFHISs in India**
(Source: IRDAI Annual Report and World Bank)

Year	Persons Covered* (Million)	Share of premium (₹ Billion)
2011-12	161.2 (12.7%)	22.25
2012-13	149.4 (11.7%)	23.48
2013-14	155.3 (12.0%)	20.82
2014-15	214.3 (16.3%)	24.74
2015-16	273.3 (20.6%)	24.25

The figures in brackets indicate people insured as a percent of the total population of India.

The first concern is the lack of focus on public health. The highest impact public programs are in the public goods of public health. Gupta and Rani, 2004, state that when public health systems (providing public goods in health) falter, people pay a high price in illness, debility and death. The public goods in public health remain in disarray.

The second concern is the lack of regulation of private health care providers, which is likely to induce failures of consumer protection. The failure of regulation of medical profession in India is well documented. Nagarajan and Roy, 2017, state that even though many attempts have been made to reform the medical profession in India, the legislative provisions to drive a sound regulatory process are missing. In their recent study, Malhotra and Roy, 2018, show that the Medical Council of India (MCI) has poor track record in investigating and punishing doctors accused of malpractice or negligence when compared with the Medical Board of California (MBC) or General Medical Council (GMC) of UK. Profit motivated health insurance companies and profit motivated health care providers may reach solutions which are unfair upon consumers and taxpayers.

The third concern is the about weaknesses of regulation of insurance companies, which induces concerns about consumer protection and micro-prudential regulation.⁴⁴

The sustainability of any insurance scheme is calculated through Net Incurred Claims Ratio (NICR). NICR is defined as the ratio of net incurred claims to net earned premium. *Health Insurance Product Filing Guidelines, 2016* state that if the NICR of the portfolio of an insurer is more than 90% for the consecutive four half-years, the insurer is not allowed to participate in the tender for any GFHIS. A study of Insurance Regulatory and Development Authority of India (IRDAI) *Annual Report, 2015-16* indicates that in case of GFHISs, NICR has been higher

⁴⁴See, Malhotra, Patnaik, et al., 2018.

Table 5: **Shortfall in the premium paid under GFHIS** (*Source: IRDAI Annual Report*)

Year	Premium paid	NICR	Premium shortfall*
	₹ Billion	Percent	₹ Billion
2013-14	20.82	93	0.69
2014-15	24.74	108	4.94
2015-16	24.25	109	5.12

Premium shortfall is the additional premium requirement to bring the NICR to the IRDAI recommendation of 90%.

than IRDAI requirements since 2013-14. Using the NICR and the claims paid for GFHIS, we calculated the shortfall in the premium amount paid under the GFHISs. The findings are shared in table 5.

Finally, the costs paid out by insurance companies will ultimately translate into fiscal cost. The introduction of these schemes has generally taken place without adequate fiscal analysis. Once entitlements set in, they are difficult to roll back. Over the years, expenditures are likely to go up once health insurance companies and health care providers understand the political game that has begun. The ageing of the population will result in increased per-capita costs.

For an analogy, when careful calculations were undertaken in the context of pension reforms, the values observed were vastly higher than those understood by policy practitioners. Bhardwaj and Dave, 2006, found that the cost of defined benefit pension for civil servants would amount to 64% of the GDP and were instrumental in driving pension reforms to move civil servants to defined contribution pensions. Recently, India has promised all retired military persons the same

pension, equal to the pension of the person to last retire from a rank, called *One-Rank-One-Pension*. An analysis by, Sane and Shah, 2015, indicate that implicit pension debt may be between 50 to 100% of GDP. In similar fashion, careful fiscal analysis of health care insurance-based programs is urgently required.

The immediate fiscal expenses may be understated: With weak micro-prudential regulation of health insurance companies, there is the possibility of health insurance companies recklessly giving out protection while imposing costs of bailout after bankruptcy upon the exchequer. This may already be happening in the case of GFHISs. Malhotra, Patnaik, et al., 2018, find that the claims ratio for such schemes have already crossed 100%, i.e. for every ₹ 100 of premium being collected, the insurance companies are spending ₹ 109. Such values for the claims ratio are unsustainable and will eventually lead to insolvency of the insurers. Therefore, simplistic fiscal analysis, based on prices apparently obtained today, would understate the long term fiscal consequences of health insurance entitlements given to the citizenry.

5 Conclusion

Public economics emphasises a distinction between public health (the public goods in the field of health) versus health care (which are private goods afflicted by market failures). Under colonial rule, in the first phase of health policy in India, there was an emphasis upon public goods. In the second phase, in the post-independence period, the focus shifted to public sector health care production, under the leadership of doctors. In this transition, both elements – public health and health care – fared poorly.

After decades of effort on these lines yielded poor results, it appears that politicians and civil servants shifted gears and there has been a spate of government

programs which respect the fact that most households in India use private health care facilities. This has given the third phase of health policy in India : the rise of state-funded insurance programs through which health care services are delivered to households by hospitals with choice being placed in the hands of households about going to a public or a private hospital.

These developments add up to a major shift in health policy that calls for greater analysis. Health policy in India today represents an awkward combination of weak initiatives in addressing market failures, coupled with a large public sector health care effort grounded in the Bhore paradigm, and a layer of these new initiatives with private production of health care with public funding. The third phase requires careful analysis of the regulatory framework for private health care providers, of consumer protection and micro-prudential concerns about the working of health insurance companies, and fiscal analysis.

There is a need for greater clarity in analysing the working of these systems on the ground, in re-orienting the State towards addressing market failures through the field of public health, and obtaining greater coherence in the overall policy framework.

A Annexure

A.1 Classification of Government Funded Health Insurance Schemes

Of the 48 GFHISs in force in India, nine cater exclusively to government employees and eight exclusively provide health care services to expecting mothers. ESIS is a unique scheme which is operational throughout the country through a single entity and benefits persons of organised sector. Table 8 list schemes where beneficiaries are government employees and table 9 consists of schemes that focus on maternal health care.

We have classified the remaining of the 30 GFHISs into three types, namely; *RSBY Variants*, *RAS Variants* and *Miscellaneous Schemes*. Our classification is based on the following four salient features of the schemes:

- **Regulatory Body:** This is the body responsible for managing and operating the scheme in a state. This can be a State Nodal Agency (SNA) or a Special Purpose Vehicle (SPV).
- **Funding:** Funding can be described as the money provided for the purpose of health insurance. It can be further classified by the mode of its provision into *insurance mode* and *budget mode*. Insurance mode funding uses one or more insurance agencies in the scheme. The insurance agency is given a pre-determined premium by the government through the regulatory body for providing insurance to the eligible population. Budget mode funding is a mechanism through which the regulatory body holds sanctioned budget by themselves and disburse it to the stake holders according to the scheme. Working Journalists Health Scheme (WJHS) of Andhra Pradesh was the

only scheme studied that had funding through co-payment where the state and beneficiaries shared the cost of coverage in a 50:50 ratio.

- **Maximum Benefit Amount:** The Maximum Benefit Amount is the cap on the amount of money spent for an enrolment unit per year in a scheme. For example, RSBY has a maximum benefit amount as ₹ 30,000. Most of the schemes use a family of 4-5 individuals as an enrolment unit.
- **Empaneling Authority:** The body responsible to empanel hospitals in the scheme is the Empaneling Authority.

The salient features of RSBY and RAS variants are described in table 6:

Table 6: **Salient features of GFHISs**

Feature	RSBY variant	RAS variant
Regulatory Body	SNA formed by the state government. As the SNA is not required to be a registered entity, it could be either a government department, a state nodal cell notified by the government or a registered corporate body. ¹ We will refer to these bodies as RSBY bodies for consistency.	Registered SPV for operation and management. Can be in the form of society, corporation or trust. For example RAS scheme has Arogyasri Health Care Trust for implementation of the scheme. Chief Minister's Comprehensive Health Insurance Scheme (CM-CHIS) has Tamil Nadu Health Systems Society as its special purpose vehicle.

Continued on next page

Table 6 – continued from previous page

Feature	RSBY variant	RAS variant
Funding	Funding occurs through insurance. Commercial Insurance Companies are responsible for management of the funding. The insurance premium is given by the state government, or by both state and central government. The SNA transfers the premium received through the central and state government to the insurer within a stipulated time period	Through a fixed budget set by the government and shared with the regulatory body. The SPV formed under the scheme holds a sanctioned amount of budget which is then disbursed to the empaneled hospitals either directly or through other government bodies. RG-JAY is an example of an exception where the SPV works with an insurance agency. ²
Maximum benefit amount	In most RSBY variant schemes, was found to be close to the sum of ₹ 30,000. Deen Dayal Swasthya Seva Yojana (DDSSY), Goa is an example of an exception where the maximum benefits can go up to ₹ 4,00,000 per family. ³	The Maximum Benefit Amount in most RAS variant schemes was found to be close to the sum of ₹ 1,00,000 or more.
Empaneling Authority	Public health care providers, which are the institutes owned and managed by the government, are either automatically enrolled in the scheme or empaneled by satisfying a minimum criteria set in the scheme. The empanelment of private health care providers is through the insurance agency.	Empanelment in these schemes is done through the SPV. Sometimes, government health care providers are automatically empaneled. The SPV sets minimum criteria for empaneling health care providers.

¹ The list of state nodal agencies can be accessed here: <http://www.rsby.gov.in/> (Accessed on 05 August, 2017)

² Refer: Rajiv Gandhi Jeevandayi Yojana Maharashtra, 2011

³ Refer: Directorate of Health Services, Goa, 2015

Schemes with three or more features resembling RSBY were classified as RSBY variants. If three or more salient features of the scheme resembled RAS, it was classified as RAS variant. All other schemes were classified as Miscellaneous. Miscellaneous schemes do not conform to majority of these salient features. Arunachal Pradesh Chief Minister’s UHIS is the only miscellaneous scheme. It is a hybrid scheme with features resembling both RSBY and RAS variant features equally.

The attributes of various schemes and the classification can be seen in the table 7 below:

Table 7: **Features and classification of GFHISs**

Scheme	Regulatory Funding Structure		Maximum Benefit Amount	Empaneling Authority	Classification
Rashtriya Swasthya Bima Yojana (RSBY)	RSBY	Insurer	30,000	Insurer	RSBY variant
Rashtriya Swasthya Bima Yojana Plus (RSBYP)	RSBY and SPV	Insurer	30,000 and additional 0.175 Mn for critical cases	Insurer	RSBY variant
Bhamashah Swasthya Bima Yojana (BSBY)	SPV	Insurer	30,000	Insurer	RSBY variant

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Table 7 – continued from previous page

Scheme		Regulatory Structure	Funding	Maximum benefit amount	Empaneling authority	Classification
Rajiv Aarogyasri Scheme (RAS)	SPV	Insurer	0.2 Mn and additional 50,000 for special cases	Trust	RAS variant	
Vajpayee Arogyashree (VAS)	RSBY and SPV	Budget	0.15 Mn and additional 50,000 for special cases	Trust	RAS variant	
Megha Insurance (MHIS)	Health Scheme	RSBY	Insurer	0.2 Mn	Insurer	RSBY variant
Swasthyasathi (SS)	SPV	Insurer	0.15 Mn and additional 50,000 for special cases	Insurer	RSBY variant	
Mizoram Care (MHCS)	Health Scheme	RSBY and SPV	Budget	0.30 Mn	Trust	RAS variant

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Table 7 – continued from previous page

Scheme		Regulatory Funding Structure		Maximum benefit amount	Empaneling authority	Classification
Biju Kalyan (BKKY)	Krushak Yojana	Government Internal	Insurer	30,000 for Stream I and 70,000 for Stream II	Insurer	RSBY variant
Mukhyamantri Swasthya Yojana (MSBY) Uttarakhand	Bima	RSBY and SPV	Insurer	50,000	SNA and Insurer	RSBY variant
Atal Amrit Abhyan (AAA)		RSBY and SPV	Budget	0.2 Mn	State Nodal Cell	RAS variant
Deen Swasthya Yojana (DDSSY)	Dayal Seva	Government Internal	Insurer	0.4 Mn	Insurer	RSBY variant
Rajiv Arogya Bahagya (RAB)		RSBY and SPV	Budget	0.15 Mn and additional 50,000 for special cases	Trust	RAS variant
Arogya (AR)	Raksha	SPV	Budget	0.2 Mn	Trust	RAS variant

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Scheme	Regulatory Structure	Funding	Maximum benefit amount	Empaneling authority	Classification
Andaman and Nicobar Islands Scheme for Health Insurance (AN-ISHI)	SPV	Budget	0.5 Mn	Directorate of Health Services	RAS variant
Mukhya State Care (MMSHCS)	Mantri Health Scheme and SPV	RSBY Insurer	30,000 and additional 0.175 Mn for critical cases	Insurer	RSBY variant
Mukhyamantri Swasthya Yojana (MSBY), Chattisgarh	Bima	RSBY Insurer	30,000	Insurer	RSBY variant
Comprehensive Health Insurance Scheme (CHIS)	Insurance and SPV	RSBY Insurer	30,000	Insurer	RSBY variant
Senior Health Insurance Scheme (SCHIS)	Citizens	RSBY Insurer	30,000	Insurer	RSBY variant

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Table 7 – continued from previous page

Scheme	Regulatory Structure	Funding	Maximum benefit amount	Empaneling authority	Classification
Mukhyamantri Mufat Ilaj Yojna (MMIY)	Government Internal	Budget	No maximum limit	Automatic for public hospitals only	RAS variant
Rashtriya Arogya Nidhi (RAN)	SPV	Budget	0.2 Mn	SPV	RAS variant
Yeshasvini	SPV	Self Financed	0.2 Mn	SPV	RAS variant
NTRVS	RSBY and SPV	Budget	0.3 Mn	SPV	RAS variant
Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS)	SPV	Insurer	0.2 Mn	N/A	RAS variant
Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY)	SPV	Insurer	0.15 Mn 0.25 Mn for renal transplant	SPV	RAS variant

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Table 7 – continued from previous page

Scheme	Regulatory Funding Structure		Maximum benefit amount		Empaneling authority	Classification
Mukhyamantri Amrutum Yojana(MAY)	RSBY	Insurer	0.2 Mn		Insurer	RSBY variant
Arunachal Pradesh Chief Minister's UHIS	SPV	Insurer	0.2 Mn		Insurer	Miscellaneous
Journalists Health Scheme (JHS)	RSBY and SPV	Budget	No Limit	Maximum	Trust	RAS variant
Working Journalists Health Scheme (WJHS), Andhra Pradesh	SPV	Co-payment	No Limit	Maximum	Trust	RAS variant
Tripura Health Assurance Scheme for Poor (THASP)	RSBY	Budget	0.15 Mn		Government	RAS variant
U-Health (UHC)	Card RSBY	Co-payment	–		Government	RAS variant

Table 8: **GFHISs for government employees**

Scheme	Centre/State	Year of launch
Central Government Health Scheme (CGHS)	Centre	1954
Retired Employees Liberalised Health Scheme (RELHS)	Centre	1997
Delhi Government Employees Health Scheme (DGEHS)	NCT of Delhi	1997
Ex-servicemen Contributory Health Scheme (ECHS)	Centre	2003
J&K Government Employees Group Mediclaim Insurance Scheme (JGEGMIS)	State (Jammu and Kashmir)	2014
Jyothi Sanjeevini (JS)	State (Karnataka)	2014
Punjab Government Employees and Pensioners Health Insurance Scheme	State (Punjab)	2015
Telangana State Government Employee Health Scheme	State (Telangana)	2015
New health insurance scheme (NHIS)	State (Tamil Nadu)	2016

Table 9: **GFHISs relating to Maternal and Child Health**

Scheme	Centre/State	Launch(Date/Year)
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Table 9 – continued from previous page

Scheme	Centre/State	Year of launch
Janani Suraksha Yojana	Centre	12 April 2005
Chiranjivi Yojana	State (Gujarat)	08 September 2006
Saubhagyavati Surakshit Matritva Yojna	State(Uttar Pradesh)	May 2008
Janani Suvidha Yojana	State (Haryana)	2006
Mamta Scheme	NCT of Delhi	2008
Jansankhya Sthirta Kosh, Santushti Yojna	Centre	2005
Vijaya Raje Janani Kalyan Bima Yojna	State (Madhya Pradesh)	12 May 2006
Thayi Bhagya Scheme	State (Karnataka)	–

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References

- Aarogyasri Health Care Trust (2013). *Guidelines for Rajiv Aarogyasri Scheme*. URL: http://www.ntrvaidyaseva.ap.gov.in/documents/10181/0/Scheme_Manual.pdf/e67a112b-6407-4ce5-b50d-a52c18399e3d (visited on Oct. 17, 2017).
- Banerjee, Abhijit, Angus Deaton, and Esther Duflo (2004). “Health, Health Care, and Economic Development. Wealth, Health, and Health Services in Rural Rajasthan”. In: *American Economic Review*.
- Banerji, D (1984). “Breakdown of Public Health System”. In: URL: http://www.epw.in/system/files/pdf/1984_19/22-23/health_breakdown_of_public_health_system.pdf (visited on Sept. 28, 2017).
- Berman, Peter (1998). “Rethinking Health Care Systems: Private Health Care Provision in India”. In: URL: <http://www.sciencedirect.com/science/article/pii/S0305750X9800059X> (visited on Aug. 22, 2017).
- Berman, Peter, Rajeev Ahuja, and Laveesh Bhandari (2010). “The Impoverishing Effect of Healthcare Payments in India: New Methodology and Findings”. In: *Economic & Political Weekly*, pp. 65–71. URL: <http://www.jstor.org/stable/25664359> (visited on Apr. 28, 2017).
- Bhardwaj, Gautam and Surendra A Dave (2006). “Towards Estimating India’s Implicit Pension Debt on Account of Civil Service Employees”. In: URL: <http://www.micropensions.com/pdf/Papers/Towards%20estimating%20Indias%20Implicit%20Pension%20Debt%20on%20Account%20of%20Civil%20Service%20Employees.pdf> (visited on Aug. 10, 2017).

- Bulmus, Birsen (2012). *Plague, Quarantines and Geopolitics in the Ottoman Empire*. Edinburgh University Press. URL: <https://oapen.org/search?identifier=625255> (visited on Aug. 31, 2017).
- CBC News (2008). "Cholera's seven pandemics". In: URL: <http://www.cbc.ca/news/technology/cholera-s-seven-pandemics-1.758504> (visited on Aug. 31, 2017).
- Central Bureau of Health Intelligence (2005). *Health Information of India*. URL: <http://cbhidghs.nic.in/hia2005/content.asp> (visited on Nov. 16, 2017).
- Chiranjeevi Yojana (2017). URL: <https://www.nhp.gov.in/sites/default/files/pdf/chiranjeevi-yojana-details.pdf> (visited on June 7, 2017).
- Constitution of India (1950). URL: <http://lawmin.nic.in/olwing/coi/coi-english/coi-4March2016.pdf> (visited on Nov. 13, 2017).
- Crawford, D.G. (1914). *A history of the Indian Medical Service. Volume I*. London and Calcutta & Simla: W.Thacker & Co. and Thacker Spink & Co. URL: <https://ia800506.us.archive.org/3/items/b21352148/b21352148.pdf> (visited on Aug. 30, 2017).
- Das Gupta, Monica et al. (2009). *How might India's public health systems be strengthened?* URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1517012 (visited on Aug. 11, 2017).
- Deen dayal upchar yojana (2012). URL: <http://www.health.mp.gov.in/deendayal/deendayal-about.pdf> (visited on June 7, 2017).
- Department of Rural Development, Ministry of Agriculture (1978). *Report of the Committee on Panchayati Raj Institutions*. Tech. rep. URL: <http://www.panchayatgyan.gov.in/documents/30336/0/Asoka+Mehta+Committee+Report.pdf/41d384c3-bab7-4957-8ea0-69d8d5f4fc08> (visited on Mar. 26, 2018).

- Department-Related Parliamentary Standing Committee on Health and Family Welfare (2013). *The Indian Medical Council Amendment Bill, 2013*. Ministry of Health and Family Welfare. Tech. rep. Seventy-Third Report. URL: <http://www.prsindia.org/uploads/media/Medical%5C%20Council,%5C%202013/SCR%5C%20Indian%5C%20Medical%5C%20Council%5C%20Amendment%5C%20Bill%5C%202013.pdf> (visited on May 29, 2017).
- (2016). *Functioning of Medical Council of India*. Ministry of Health and Family Welfare. Tech. rep. Ninety-Second Report. URL: <http://164.100.47.5/newcommittee/reports/EnglishCommittees/Committee%5C%20on%5C%20Health%5C%20and%5C%20Family%5C%20Welfare/92.pdf> (visited on Apr. 21, 2016).
- Desai, Sonalde B. et al. (2010). *Human Development in India. Challenges for a society in transition*. URL: <http://www.sonaldedesai.org/human-development-in-india.pdf> (visited on Nov. 14, 2017).
- Devadasan, Narayanan et al. (2013). “Promoting universal financial protection: evidence from the Rashtriya Swasthya Bima Yojana (RSBY) in Gujarat, India”. In: *Health Research Policy and Systems* 11.1, p. 29. URL: <https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-11-29> (visited on Apr. 26, 2017).
- Directorate of Health Services, Goa (2015). *Deen Dayal Swasthya Seva Yojana (DDSSY) RFP*. URL: www.dhsgoa.gov.in/documents/ddss_rfp.pdf (visited on May 1, 2017).
- Employees’ State Insurance Act, 1948* (1948). *Act No. 34 of 1948*. URL: <http://www.esic.nic.in/Tender/ESIAct1948Amendedupto010610.pdf> (visited on Aug. 1, 2017).
- ESIC (2017). *ESIC Services: Coverage*. Website. URL: <http://www.esic.nic.in/coverage> (visited on June 1, 2017).

- Federal Ministry for Economic Cooperation and Development (2011). *Health insurance for India's poor*. URL: https://health.bmz.de/ghpc/case-studies/Health_Insurance_India_New/RSBY_EN_long-Oct-2011.pdf (visited on Sept. 26, 2017).
- Filmer, Deon, Jeffery S. Hammer, and Lant H. Pritchett (1998). "Health Policy in Poor Countries. Weak Links in the Chain". In: URL: <http://documents.worldbank.org/curated/en/709051468739469213/pdf/multi0page.pdf> (visited on Oct. 16, 2017).
- Forgia, Gerard La and Somil Nagpal (2012). *Government-Sponsored Health Insurance In India. Are you covered?* URL: <http://documents.worldbank.org/curated/en/644241468042840697/pdf/722380PUB0EPI008029020120Box367926B.pdf> (visited on Aug. 17, 2017).
- Government of India (2017). *Enrollment of Beneficiaries*. URL: <http://www.rsb.gov.in/Overview.aspx> (visited on Oct. 23, 2017).
- (1864). *Act No. XXII of 1864*. URL: <http://lawmin.nic.in/legislative/textofcentralacts/1864.pdf> (visited on Aug. 29, 2017).
- Gupta, Monica Das and Manju Rani (2004). "India's Public Health System. How Well Does It Function at the National Level?" In: URL: <https://openknowledge.worldbank.org/bitstream/handle/10986/14215/WPS3447.pdf?sequence=1&isAllowed=y> (visited on Mar. 26, 2018).
- Hammer, Jeffrey, Yamini Aiyar, and Salimah Samji (2007). "Understanding Government Failure in Public Health Services". In: *Economic & Political Weekly* 42.40. URL: <https://www.jstor.org/stable/pdf/40276648.pdf?refreqid=excelsior%5C%3Af131332d4b48cae59641d1d5d0449c46> (visited on Sept. 6, 2017).
- Shrivastav Committee Report, 1975* (1975). *Health Services and Medical Education: A Programme for Immediate Action*. URL: <https://www.nhp.gov.in/>

- [sites/default/files/pdf/Srivastava_Committee_Report.pdf](#) (visited on Aug. 16, 2017).
- Health Survey and Development Committee (1946a). *Report of the Health Survey and Development Committee. Volume I: A Survey of the State of the Public Health and of the Existing Health Organisation*. Tech. rep. URL: https://www.nhp.gov.in/sites/default/files/pdf/Bhore_Committee_Report_VOL-1.pdf (visited on July 10, 2017).
- (1946b). *Report of the Health Survey and Development Committee. Volume II: Recommendations*. Tech. rep. URL: https://www.nhp.gov.in/sites/default/files/pdf/Bhore_Committee_Report_Vol2.pdf (visited on July 10, 2017).
- (1961). *Report of the Health Survey and Planning Committee*. URL: https://www.nhp.gov.in/sites/default/files/pdf/Mudalier_Vol.pdf (visited on Sept. 4, 2017).
- Herbert, Sidney et al. (1864). *Report of the Commissioners appointed to inquire into the sanitary state of the army in India*. URL: <https://ia601201.us.archive.org/24/items/b28709226/b28709226.pdf> (visited on Aug. 31, 2017).
- Hunter, W.W. (1909). *The Imperial Gazetteer of India. The Indian Empire, Vol. 1 Descriptive*. Oxford at the Clarendon Press. URL: <https://ia802707.us.archive.org/16/items/imperialgazettee030583mbp/imperialgazettee030583mbp.pdf> (visited on Aug. 29, 2017).
- ILO Country Office for India (2016). *India Labour Market Update*. URL: http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new-delhi/documents/publication/wcms_496510.pdf (visited on Mar. 26, 2018).

- Indian Medical Council Act* (1933). URL: <http://lawmin.nic.in/legislative/textofcentralacts/1933.pdf> (visited on May 28, 2017).
- Insurance Regulatory and Development Authority of India (2016a). *Annual Report, 2015-16*. Tech. rep.
- (2016b). *Guidelines on Product Filing in Health Insurance Business*. URL: <http://ayush.gov.in/sites/default/files/Guidelines%5C%20on%5C%20Product%5C%20Filing%5C%20in%5C%20Health%5C%20Insurance%5C%202016.pdf> (visited on Sept. 5, 2017).
- Jat, Tej Ram and Miguel San Sebastian (2013). “Technical efficiency of public district hospitals in Madhya Pradesh, India: a data envelopment analysis”. In: *Global Health Action* 6 (1). URL: <http://www.tandfonline.com/doi/abs/10.3402/gha.v6i0.21742> (visited on Oct. 23, 2017).
- Jeevandai Arogya Yojana* (1997). URL: https://mahades.maharashtra.gov.in/MPSIMS/ViewSchemeProfile.do?OWASP_CSRFTOKEN=null&mode=printProfile&recordId=268&planyearId=2016 (visited on June 16, 2017).
- Kapoor, Avani (2017). *Budget Brief 2013-14*. URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2231855 (visited on Oct. 23, 2017).
- Karan, Anup, Winnie Yip, and Ajay Mahal (2017). “Extending health insurance to the poor in India: An impact evaluation of Rashtriya Swasthya Bima Yojana on out of pocket spending for healthcare”. In: *Social Science & Medicine* 45.9. URL: https://www.researchgate.net/publication/315737708_Extending_health_insurance_to_the_poor_in_India_An_impact_evaluation_of_Rashtriya_Swasthya_Bima_Yojana_on_out_of_pocket_spending_for_healthcare (visited on Sept. 22, 2017).
- Mackie, Thomas T. (1941). “Florence Nightingale and Tropical and Military Medicine”. Presidential Address, American Society of Tropical Medicine. St. Louis. URL:

- <https://www.astmh.org/ASTMH/media/Documents/Thomas-Mackie-Presidential-Address.pdf> (visited on Sept. 26, 2017).
- Malhotra, Shefali, Ila Patnaik, et al. (2018). “Fair play in Indian health insurance”. In: *NIPFP Working Paper* 228. URL: http://macrofinance.nipfp.org.in/PDF/malhotraRoy20171026_privateHI.pdf.
- Malhotra, Shefali and Shubho Roy (2018). “Analysing the National Medical Commission Bill: Composition”. In: URL: <https://ajayshahblog.blogspot.in/2018/01/analysing-nmc-bill-1-composition-of-nmc.html> (visited on Mar. 26, 2018).
- Maternity Benefit Act, 1961* (2017). URL: <http://www.ilo.org/dyn/travail/docs/678/maternitybenefitsact1961.pdf> (visited on Oct. 3, 2017).
- Mathur, Om Prakash (1999). *India: the challenge of urban governance*. National Institute of Public Finance and Policy. URL: http://www.nipfp.org.in/media/pdf/books/BK_47/India%5C%20The%5C%20Challenge%5C%20of%5C%20Urban%5C%20Governance.pdf (visited on Mar. 26, 2018).
- Ministry of Finance (2006). *Eleventh Report: Committee on Public Undertakings*. Tech. rep. URL: <http://164.100.24.208/ls/CommitteeR/PU/11threp.pdf> (visited on Sept. 25, 2017).
- Ministry of Health and Family Welfare (2017). *Health Management Information System*. URL: https://nrhm-mis.nic.in/SitePages/HMIS-Publications.aspx?RootFolder=%5C%2FPubStatistical_Publications%5C%2FRural%5C%20Health%5C%20Statistics&FolderCTID=0x012000AC878C9A74E6DC46A4B9220C1AAC27300098View=%5C%7B963874F4-C1DD-4335-9EEB-C1FC961508FB%5C%7D (visited on Nov. 16, 2017).
- Ministry of Labour & Employment (2017). *Rashtriya Swasthya Bima Yojana (RSBY) Operational Manual*. URL: <http://rsby.gov.in/Docs/Guidelines%5C%20for%5C%20Revamp%5C%20of%5C%20RSBY%5C%20-Operational%5C%>

20Manual%5C%20for%5C%20Phase%5C%20I%5C%20(Released%5C%20on%5C%2016th%5C%20July%5C%202014).pdf (visited on Sept. 22, 2017).

Ministry of Law and justice (2008). *The Unorganised Worker's Social Security Act*. URL: www.ilo.org (visited on May 5, 2017).

Mushtaq, Muhammad Umair (2009). "Public Health in British India. A Brief Account of the History of Medical Services and Disease Prevention in Colonial India". In: *Indian Journal of Community Medicine* 34 (1). URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2763662/> (visited on Aug. 16, 2017).

Nagarajan, Shyama and Shubho Roy (2017). "Concerns about how the Medical Council of India thinks about medical malpractice". In: URL: <https://ajayshahblog.blogspot.in/2017/07/concerns-about-how-medical-council-of.html> (visited on Mar. 26, 2018).

Nair, Kesavan Sreekantan et al. (2013). "Cost of Treatment for Cancer: Experiences of Patients in Public Hospitals in India". In: *Asian Pacific Journal of Cancer Prevention* 14 (9). URL: http://www.koreascience.or.kr/article/ArticleFullRecord.jsp?cn=POCPA9_2013_v14n9_5049 (visited on Oct. 23, 2017).

Nandi, Arindam et al. (2014). "The need for better evidence to evaluate the health & economic benefits of India's Rashtriya Swasthya Bima Yojana". In: *Indian Journal of Medical Research*. URL: <http://icmr.nic.in/ijmr/2015/October/1004.pdf> (visited on Sept. 22, 2017).

National Medical Commission Bill, 2017 (2018). URL: <http://www.prsindia.org/uploads/media/medical%5C%20commission/National%5C%20Medical%5C%20Commission%5C%20Bill,%5C%202017.pdf> (visited on Jan. 16, 2018).

- National Medical Library (2017). *About Us - History*. National Medical Library *History*. online. URL: <http://www.nml.nic.in/about.html> (visited on Oct. 10, 2017).
- Nichter, Mark A. (1986). “The Primary Health Center as a Social System: PHC, Social Status, and the issue of team-work in South Asia”. In: URL: https://www.researchgate.net/publication/19411914_The_primary_health_center_as_a_social_system_PHC_social_status_and_the_issue_of_team-work_in_South_Asia (visited on Sept. 8, 2017).
- Omran, Abdel R. (2005). “The Epidemiologic Transition: A Theory of the Epidemiology of Population Change”. In: URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2690264/pdf/milq0083-0398.pdf> (visited on Oct. 23, 2017).
- Parliamentary Standing Committee on Health & Family Welfare (2006). *The Indian Medical Council (Amendment) Bill, 2005*. Tech. rep. Nineteenth Report. URL: http://www.prsindia.org/uploads/media/1167469776/scr1185869086_Medical_Council.pdf (visited on May 23, 2017).
- Planning Commission (2011). *Report of the working group on Tertiary Care institutions for the Formulation of the Twelfth Five Year Plan (2012-2017)*. URL: http://planningcommission.nic.in/aboutus/committee/wrkgrp12/health/WG_2tertiary.pdf (visited on Oct. 9, 2017).
- Planning Commission of India (1951). *1st Five Year Plan. Chapter 32: Health*. URL: <http://www.planningcommission.nic.in/plans/planrel/fiveyr/1st/1planch32.html> (visited on Sept. 14, 2017).
- (1956). *2nd Five Year Plan. Chapter 25: Health*. URL: <http://www.planningcommission.nic.in/plans/planrel/fiveyr/1st/1planch32.html> (visited on Sept. 14, 2017).

- Planning Commission of India (1961). *3rd Five Year Plan. Chapter 32: Health and Family Planning*. URL: <http://www.planningcommission.nic.in/plans/planrel/fiveyr/1st/1planch32.html> (visited on Sept. 14, 2017).
- Public Private Partnership for Non-Communicable Diseases (NCDs) in District Hospitals* (2017). PPP Project Guidelines. Draft Guidelines. URL: http://niti.gov.in/writereaddata/files/document_publication/Draft%20Guidelines%20on%20PPP%20in%20NCDs_0.pdf (visited on Oct. 17, 2017).
- Punjab, Government of (2017). *Historical Background. Department of Water Supply and Sanitation*. online. URL: http://www.pbdwss.gov.in/dwss/left_menu/mandate_department.html (visited on Oct. 10, 2017).
- Qadeer, Imrana (2000). "Health care systems in transition III. India, Part I. The Indian experience". In: *Journal of Public Health Medicine* 22.1. URL: <https://pdfs.semanticscholar.org/1ff5/b29efde1a76817b4e092cba1c1a5135a64ae.pdf> (visited on Oct. 17, 2017).
- Rajiv Gandhi Jeevandayi Yojana Maharashtra (2011). *Memorandum of Understanding. Between RGJAYS and National Insurance Company Ltd*. URL: <https://jeevandayee.gov.in/RGJAY/RGJAYMOU.pdf> (visited on May 1, 2017).
- Rashtriya Arogya Nidhi (2016). *Guidelines*. URL: <http://mohfw.gov.in/sites/default/files/25632541254789653265.pdf> (visited on June 7, 2017).
- Report of the Committee on Integration of Health Services* (1967). Directorate General of Health Services. URL: https://www.nhp.gov.in/sites/default/files/pdf/Jungalwal_Committee_Report.pdf (visited on Aug. 16, 2017).
- Bajaj Committee Report, 1996* (2017). *Report of the Expert Committee on Public Health System*. Government of India Ministry of Health & Family Welfare. URL: http://www.communityhealth.in/~commun26/wiki/images/e/e8/Bajaj_Committee_report_1996.PDF.pdf (visited on Aug. 16, 2017).

- Rosenbaum, S (1990). “More than a century of Army medical statistics”. In:
 URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1292737/pdf/jrsocmed00134-0058.pdf> (visited on Oct. 4, 2017).
- Rural Health Statistics* (2016). 2015-16. Government of India, Ministry of Health and Family Welfare, Statistics Division. URL: <https://nrhm-mis.nic.in/Pages/RHS2016.aspx?RootFolder=%5C%2FRURAL%5C%20HEALTH%5C%20STATISTICS%5C%2F%5C%28A%5C%29RHS%5C%20-%5C%202016&FolderCTID=0x01200057278FD1EC909F429B03E86C7A7C3F31&View=%5C%7B3EF44ABD-FC77-4A1F-9195-D34FCD06C7BA%5C%7D> (visited on Oct. 17, 2017).
- Sane, Renuka and Ajay Shah (2015). “What is the cost of one-rank-one-pension?” In: *Ajay Shah’s blog*. URL: <https://ajayshahblog.blogspot.in/2015/07/what-is-cost-of-one-rank-one-pension.html> (visited on Oct. 22, 2017).
- Selvaraj, Sakthivel and Anup K Karan (2009). “Deepening Health Insecurity in India: Evidence from National Sample Surveys since 1980s”. In: URL: <http://www.jstor.org/stable/pdf/25663657.pdf?refreqid=excelsior%5C%3Ab397bcac49f76f2c55f28633dcc533bd> (visited on Aug. 22, 2017).
- Sengupta, Amit and Samiran Nundy (2005). “The private health sector in India. Is burgeoning, but at the cost of public health care”. In: *British Medical Journal* 331. URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1285083/#ref4> (visited on Oct. 23, 2017).
- Shahrawat, Renu and Krishna D Rao (2011). “Insured yet vulnerable: out of pocket payments and India’s poor”. In: *Health policy and planning*. URL: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.851.674&rep=rep1&type=pdf> (visited on May 18, 2017).
- Staff Reporter (2011). “Fine imposed for violation of Public Health Act”. In: *The Hindu*. URL: <http://www.thehindu.com/todays-paper/tp-national/>

[tp-kerala/fine-imposed-for-violation-of-public-health-act/article2386621.ece](#) (visited on Oct. 10, 2017).

Study Group by Indian Council of Social Science Research and Indian Council of Medical Research (1981). *Health For All: An Alternative Strategy*. URL: http://www.communityhealth.in/~commun26/files/HFA_An_Alternate_Strategy.pdf (visited on Sept. 21, 2017).

Supreme Court of India (2016). *Modern Dental College and Research Centre vs State of Madhya Pradesh. Civil Appeal No. 4060 of 2009*.

The Calcutta Municipal Act, 1923 (1923). URL: <https://ia601903.us.archive.org/32/items/in.ernet.dli.2015.505304/2015.505304.calcutta-municipal.pdf> (visited on Sept. 27, 2017).

The Epidemic Diseases Act (1897). URL: <http://digital.nls.uk/indiapapers/browse/archive/74589870> (visited on Sept. 27, 2017).

The Government of India Act, 1935 (1943). New Delhi. URL: <http://lawmin.nic.in/legislative/textofcentralacts/GOI%5C%20act%5C%201935.pdf> (visited on Aug. 30, 2017).

The Govt. of India Act 1919, Rules Thereunder & Govt. Reports, 1920 (2017). Sibpur, Calcutta. URL: <https://ia801407.us.archive.org/34/items/govtofindiaact19029669mbp/govtofindiaact19029669mbp.pdf> (visited on Aug. 30, 2017).

The Hindu (2017). “Merger of departments in Andhra”. In: URL: <http://www.thehindu.com/todays-paper/tp-opinion/merger-of-departments-in-andhra/article19227716.ece> (visited on Oct. 4, 2017).

The Surgeon General with Government etc. (Change in Designations) Act (1973). URL: <http://www.bareactslive.com/MAH/MH285.HTM> (visited on Oct. 22, 2017).

- The Tamil Nadu Public Health Act, 1939* (2017). *Act 3 of 1939*. URL: http://www.lawsofindia.org/pdf/tamil_nadu/1939/1939TN3.pdf (visited on Aug. 30, 2017).
- Transparency International India (2005). *India Corruption Study 2005*. URL: http://www.transparencyindia.org/resource/survey_study/India%5C%20Corruption%5C%20Study%5C%202005.pdf (visited on Oct. 23, 2017).
- Virk, Amrit Kaur (2013). “Expanding Health Care Services for Poor Populations in Developing Countries. Exploring India’s RSBY national health insurance programme for low-income groups”. URL: <https://ora.ox.ac.uk> (visited on Sept. 22, 2017).
- Wins, Joel T (2013). “A history of health and family welfare department in kerala”. PhD thesis. University of Kerala. URL: <http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/12699> (visited on Oct. 22, 2017).
- Yadav, Suryakant and Perianayagam Arokiasamy (2013). “Understanding epidemiological transition in India”. In: URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4028906/pdf/GHA-7-23248.pdf> (visited on Oct. 23, 2017).
- Yeshasvini Trust (2017). *Achievement since inception of the scheme*. URL: <http://www.yeshasvini.kar.nic.in> (visited on June 7, 2017).