

Healthcare takes centre stage, finally!

05 CHAPTER

"It is health that is real wealth and not pieces of gold and silver."

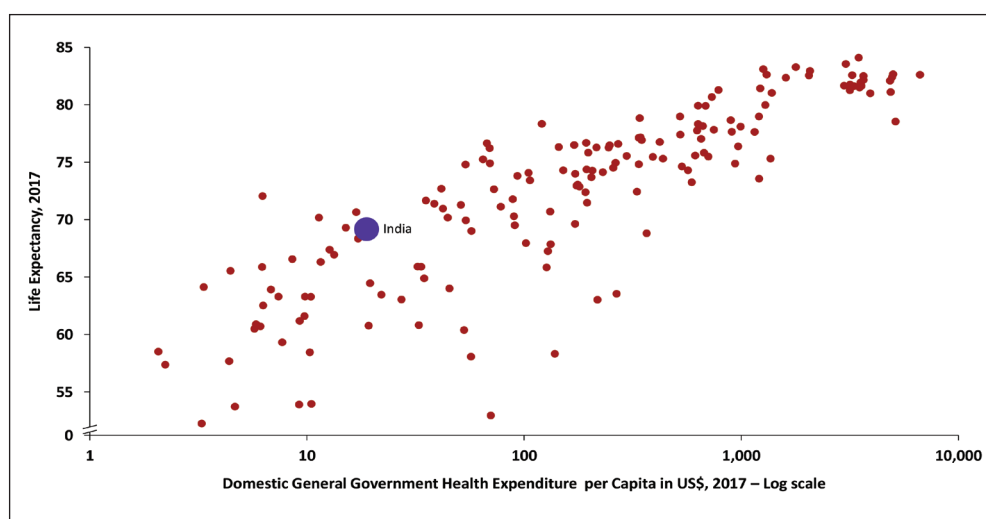
—Mohandas K. Gandhi

The recent COVID-19 pandemic has emphasised the importance of the healthcare sector and its inter-linkages with other key sector of the economy. The ongoing pandemic has showcased how a healthcare crisis can get transformed into an economic and social crisis. First, while key learnings need be gleaned from the current health crisis, healthcare policy must not become beholden to “saliency bias”, where policy over-weights a recent phenomenon that may represent a six-sigma event that may not repeat in an identical fashion in the future. To enable India to effectively respond to future pandemics, the health infrastructure must be agile. Second, given its potential to provide healthcare access in remote areas, telemedicine needs to be harnessed to the fullest by especially investing in internet connectivity and health infrastructure. Third, the National Health mission (NHM) has played a critical role in mitigating inequity as the access of the poorest to pre-natal and post-natal care as well as institutional deliveries has increased significantly. Therefore, in conjunction with Ayushman Bharat, the emphasis on NHM should continue. Fourth, an increase in public spend from 1 per cent to 2.5-3 per cent of GDP – as envisaged in the National Health Policy 2017 – can decrease the Out-Of-Pocket Expenditures from 65 per cent to 30 per cent of overall healthcare spend. Fifth, as a bulk of the healthcare in India is provided by the private sector, it is critical for policymakers to design policies that mitigate information asymmetry in healthcare, which creates market failures and thereby renders unregulated private healthcare sub-optimal. Therefore, information utilities that help mitigate the information asymmetry can be very useful in enhancing overall welfare. The Quality and Outcomes Framework (QOF) introduced by the National Health Service (NHS) in the United Kingdom 2004 as well as other quality assessment practices in various countries provide good examples in this context. A sectoral regulator to undertake regulation and supervision of the healthcare sector must be considered given the market failures stemming from information asymmetry; WHO also highlights the growing importance of the same. The mitigation of information asymmetry would also help lower insurance premiums, enable the offering of better products and help increase the insurance penetration in the country.

INTRODUCTION

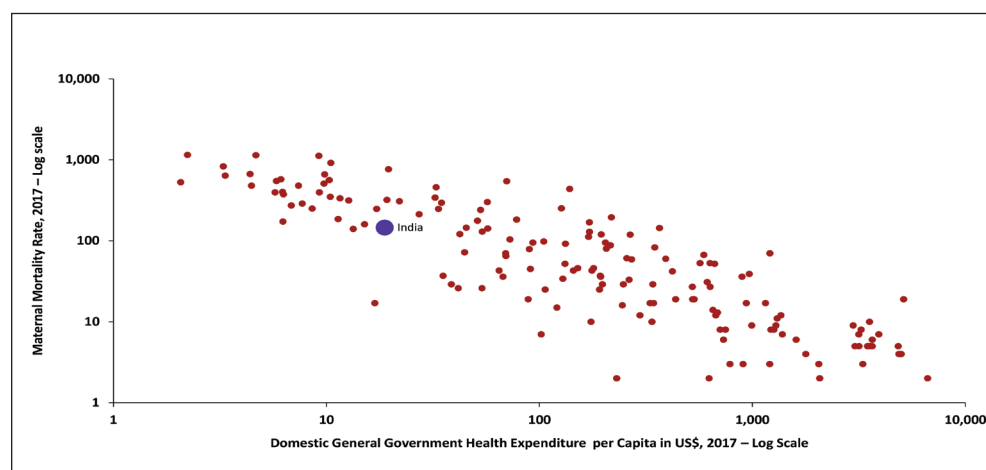
5.1 The health of a nation depends critically on its citizens having access to an equitable, affordable and accountable healthcare system. Health affects domestic economic growth directly through labour productivity and the economic burden of illnesses (WHO 2004). Increasing life expectancy from 50 to 70 years (a 40 per cent increase) could raise the economic growth rate by 1.4 percentage points per year (WHO 2004). As Figure 1 shows, life expectancy in a country correlates positively with per-capita public health expenditure. Figure 2 shows that maternal mortality correlates negatively with increases in per-capita public health expenditure.

Figure 1: Life expectancy correlates positively with per-capita government spending on health (centre and state combined)



Source: World Bank and WHO (Global Health Expenditure Data Base)

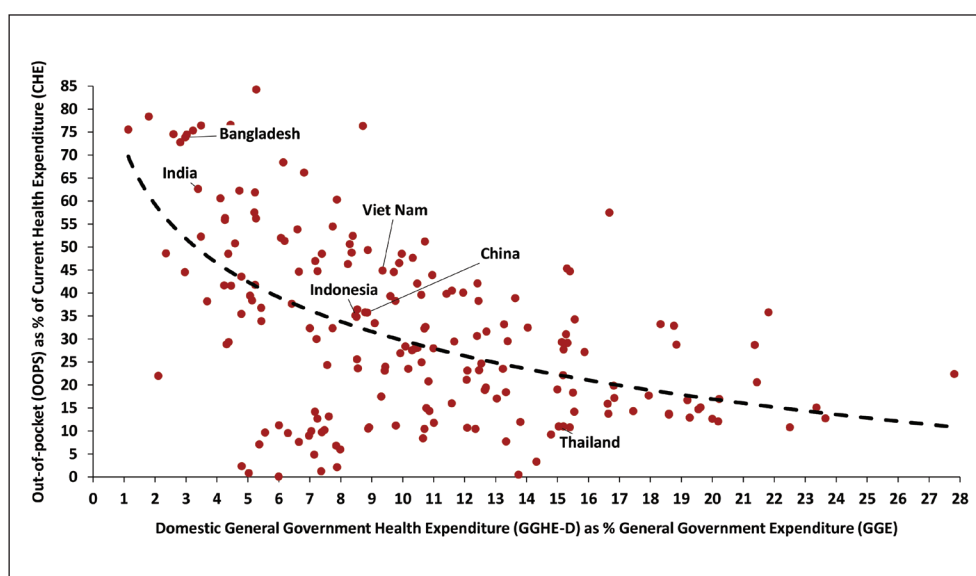
Figure 2: Maternal mortality correlates negatively with per-capita government spending on health (centre and state combined)



Source: World Bank and WHO (Global Health Expenditure Data Base)

5.2 Increased prioritization of healthcare in the central and state budgets is important as it crucially impacts how much protection citizens get against financial hardships due to out-of-pocket payments made for healthcare (WHO 2010). OOP for health increase the risk of vulnerable groups slipping into poverty because of catastrophic health expenditures (O'Donnell et al. 2007; Berki 1986; van Doorslaer et al. 2006). Figure 3 shows that at low levels of public health expenditure, i.e. where public healthcare expenditure as a per cent of GDP is less than 3 per cent, OOP expenditure as a share of total health expenditure drops precipitously when public health expenditure increases. For instance, an increase in public health expenditure from the current levels in India to 3 per cent of GDP can reduce the OOP expenditure from 60 per cent currently to about 30 per cent.

Figure 3: Small increase in public health expenditure can drastically reduce OOP expenditure



Source: WHO (Global Health Expenditure Data Base)

5.3 In fact, an increase in government healthcare spending over a decade in varied countries such as China, Indonesia, Philippines, Pakistan and Thailand significantly decreased the out-of-pocket expenditures of its citizens (Smith et al, 2020).

GIVEN SIGNIFICANT MARKET FAILURES, HEALTHCARE NEEDS CAREFUL SYSTEM DESIGN

5.4 Healthcare systems do not self-organise using the force of free markets because of three key inherent and unchanging characteristics (Arrow, 1963): (i) uncertainty/variability of demand; (ii) information asymmetry; and (iii) hyperbolic tendencies. Hence, any active system design of healthcare must be mindful of these inherent characteristics.

Uncertainty/variability of demand

5.5 The need for health care is driven often by factors that cannot be controlled or predicted. This is also coupled with the nature of demand, which is inelastic especially for emergency care.

Given this uncertainty and variability at the individual level, pooling of healthcare expenditures via health insurance can help to reduce healthcare risk at the macroeconomic level.

Information asymmetry

5.6 In healthcare markets, Arrow (1963) explained that buyers of information (patients) rarely know the value of the information until after it is purchased and sometimes never at all. For example, when individuals avail of a healthcare service like dermatology (i.e., skin care), they may be able to readily evaluate the outcome. Therefore, for such services, low-quality providers will have to reduce their price to remain competitive. In contrast, patients who must undergo open-heart surgery may find it very difficult to evaluate its quality and have to therefore rely on the reputation of the hospital/doctor as a proxy for the quality. For some services such as preventive care and/or mental health, patients may never know for sure whether their provider did a good job.

5.7 This principal-agent relationship between the patient (as the principal) and the healthcare provider (as the agent) gets further complicated by factors that may influence this conflict of interest. For instance, altruism among doctors – a trait that is highly commended and looked for by patients – primarily serves to eliminate this conflict of interest. However, reimbursement rates pre-negotiated with insurance companies, advertising, the private incentives for testing, etc. can exacerbate this conflict of interest. For instance, C-sections in pregnancies, which are more profitable for the hospital/physician, are overused (Guilmoto et al, 2019). Such non-price features of healthcare can lead to obfuscation of price and/or significant price dispersions for the same good/service.

5.8 Health insurance, which becomes desirable because of the uncertainty/variability in demand, creates a second round of informational problems in healthcare markets. First, because health insurance covers (some of) the financial costs that would be caused by poor health behaviour, individuals may have less incentive to avoid them; this phenomenon is labelled *ex-ante* moral hazard (Ehrlich and Becker 1972). Pauly (1968) argued about the role of *ex-post* moral hazard in health insurance, which stems from the fact that the cost of an individual's excess usage of healthcare is spread over all other purchasers of insurance. This free-rider problem causes the individual to not restrain his usage of care. Given the *ex-ante* and *ex-post* moral hazard, incomplete insurance in healthcare is optimal. This prediction is consistent with the idea advocated by Holmstrom (1979) that optimal insurance contracts should be incomplete to strike a balance between reducing risk and maintaining incentives for the individual.

5.9 As Akerlof (1970) predicts, when little information is available on the quality of a product prior to purchase, and the quality of the product is uncertain, quality deteriorates to the lowest level in an unregulated market. While reputation can partially mitigate this market failure, the design of healthcare systems must account for this market failure, which can otherwise lead to loss of consumer faith and resultant under-investment in healthcare.

Hyperbolic tendencies

5.10 People tend to indulge in risky behavior that may not be in their self-interest. Examples include smoking, eating unhealthy food, delay in seeking care, not wearing masks or keeping

social distancing in the context of the pandemic. Such individual behavior may not only be sub-optimal for the individual but also create negative externalities for the entire healthcare system through higher costs and poorer outcomes. Typically, consumers tend to demand primary care less than the economically optimal levels as the price elasticity for this product/service is very high. For instance, among TB patients in Delhi who initially visited a qualified practitioner in 2012, the average length of time from when TB symptoms first appeared to when they reached a DOTS facility was 5.2 months (Kapoor et al, 2012). Similarly, India has very low rate of screening for cancers among women in the age bracket of 15-49 years at 22 per cent for cervical cancer, 10 per cent for breast cancer and 12 per cent for oral cancer when compared to 62 per cent, 59 per cent and 16 per cent respectively in OECD Countries (NFHS 4 and OECD 2015). In fact, the privately optimal preference for primary care may be so low that individuals may have to even be paid to use adequate primary care. Individuals also under-estimate health risks and may, therefore, not purchase adequate health insurance.

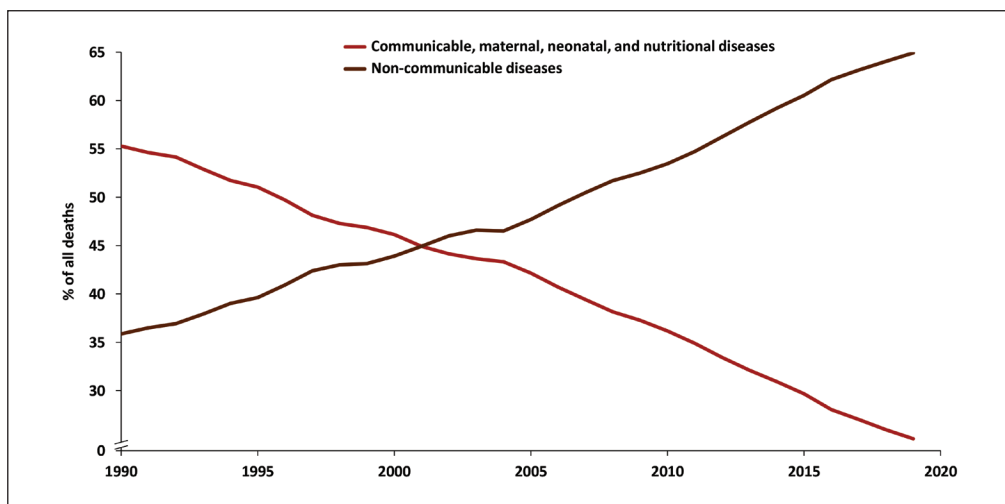
Need for system design in healthcare

5.11 Given these market failures, a free market where individual consumers purchase services from providers on their own while paying at the point of service leads to severely sub-optimal outcomes including demand that can be influenced and induced by suppliers, over-seeking of hospitalization and under-seeking of primary care/public health when compared to economically optimal levels, and catastrophic out-of-pocket spending in part due to the low preference for health insurance. Therefore, *most well-functioning health systems are structured as oligopolies purchasing from oligopsonys instead of individual consumers purchasing from individual providers*. The structure of the market has substantial implications for long term trajectory of the health system. Countries with more fragmented health systems tend to have lower performance as reflected in higher costs, lower efficiency, and poor quality. Therefore, in addition to providing healthcare services and financing healthcare, a key role for the government is to *actively shape the structure of the healthcare market*.

COVID-19 AND INDIA'S HEALTHCARE POLICY

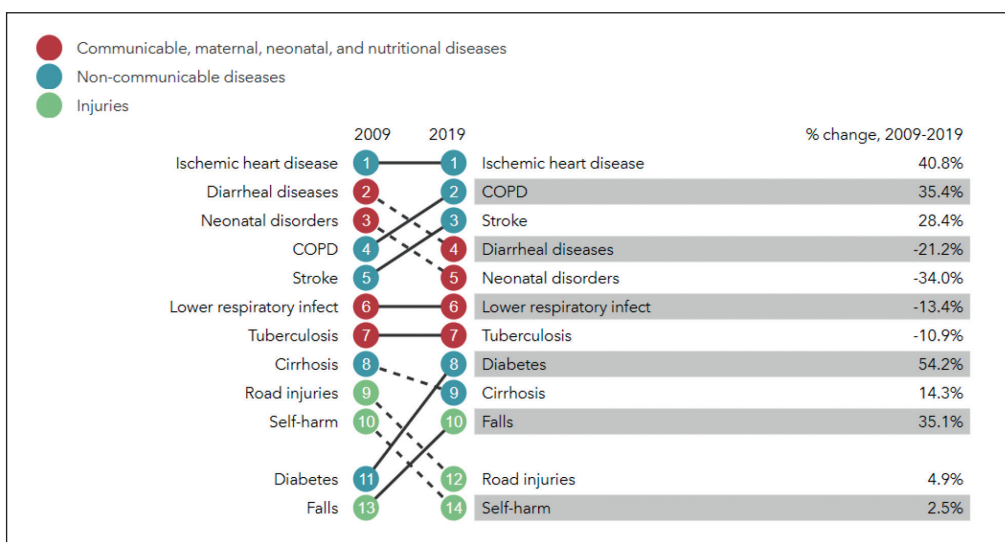
5.12 Following the COVID-19 pandemic, a key portfolio decision that healthcare policy must make is about the relative importance placed on communicable versus non-communicable diseases. The COVID-19 pandemic has spread worldwide because it is a communicable disease. The previous such pandemic occurred more than a century back when the Spanish Flu pandemic devastated the world in 1918. As pandemics represent rare events, healthcare policy can become a victim of “saliency bias”, which involves over-weighting recent phenomena. 71 per cent of global deaths and about 65 per cent of deaths in India are caused by non-communicable diseases (NCDs) (Figure 4, Panel a). Between 1990 and 2016, the contribution of NCDs increased 37 per cent to 61 per cent of all deaths (National Health Portal, n.d.). Further, preventing communicable diseases requires focus on better sanitation and drinking water, which the Swachh Bharat and the Har Ghar Jal Abhiyan campaigns are focusing on.

Figure 4 (Panel a): Proportion of communicable and non-communicable diseases in India



Source: Global Burden of Diseases (2019)

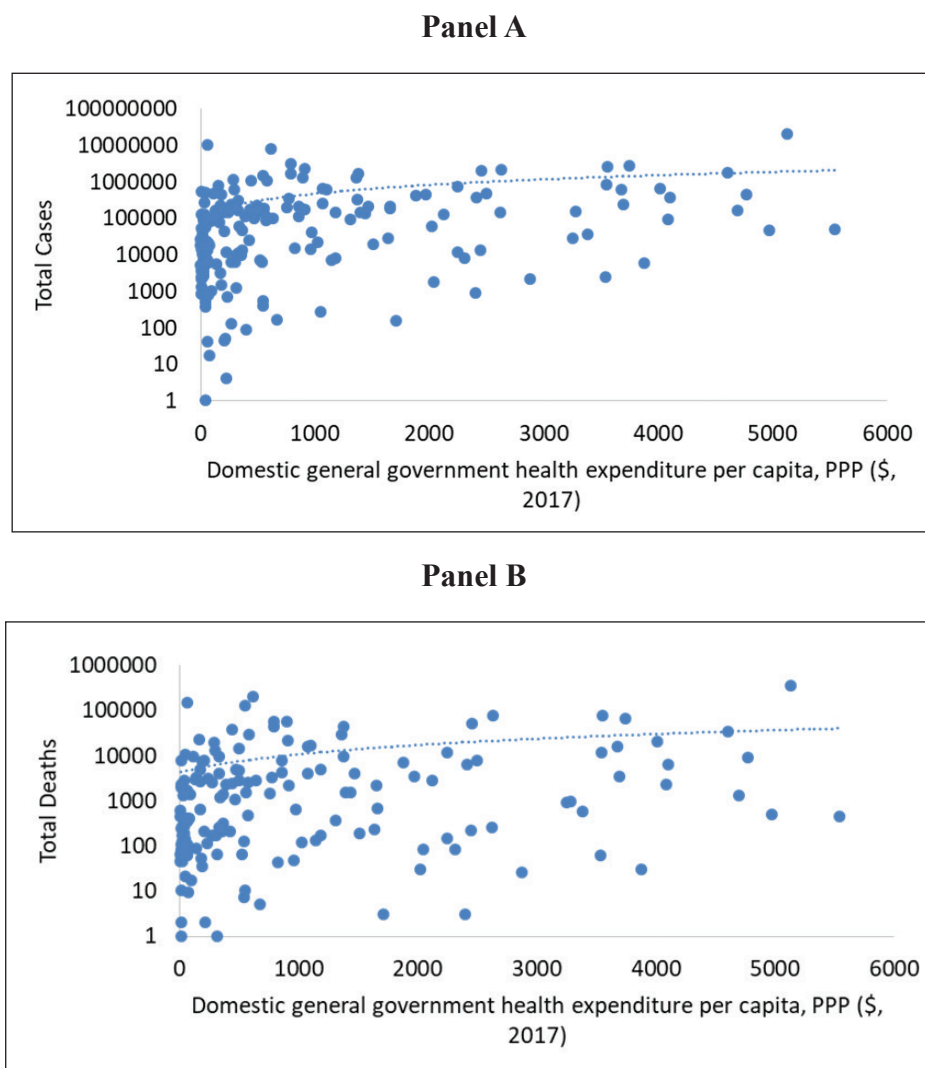
Figure 4 (Panel b): NCD's: one among top 10 reasons for deaths



Source: Institute for Health Metrics and Evaluation

Better healthcare infrastructure is no insurance against communicable disease

5.13 As the evidence below illustrates (Figure 5), faced with such a devastating pandemic, even the infrastructure created by greater healthcare spending in the advanced economies could not deal with the disease burden created by the pandemic. We observe positive correlations between total number of cases and deaths with respect to health expenditure per capita implying better health infrastructure. So, better health infrastructure is no guarantee that a country would be able to deal better with devastating pandemics like COVID-19. As the next health crisis could possibly be drastically different from COVID-19, the focus must be on building the healthcare system generally rather than a specific focus on communicable diseases.

Figure 5: Correlation of COVID-19 cases/deaths and Per Capita Health Expenditure

INDIAN HEALTHCARE CURRENTLY

5.14 Despite improvements in healthcare access and quality (healthcare access and quality scored at 41.2 in 2016, up from 24.7 in 1990), India continues to underperform in comparison to other Low and Lower Middle Income (LMIC) countries. On quality and access of healthcare, India was ranked 145th out of 180 countries (Global Burden of Disease Study 2016). Only few sub-Saharan countries, some pacific islands, Nepal and Pakistan were ranked below India.

Poor health outcomes

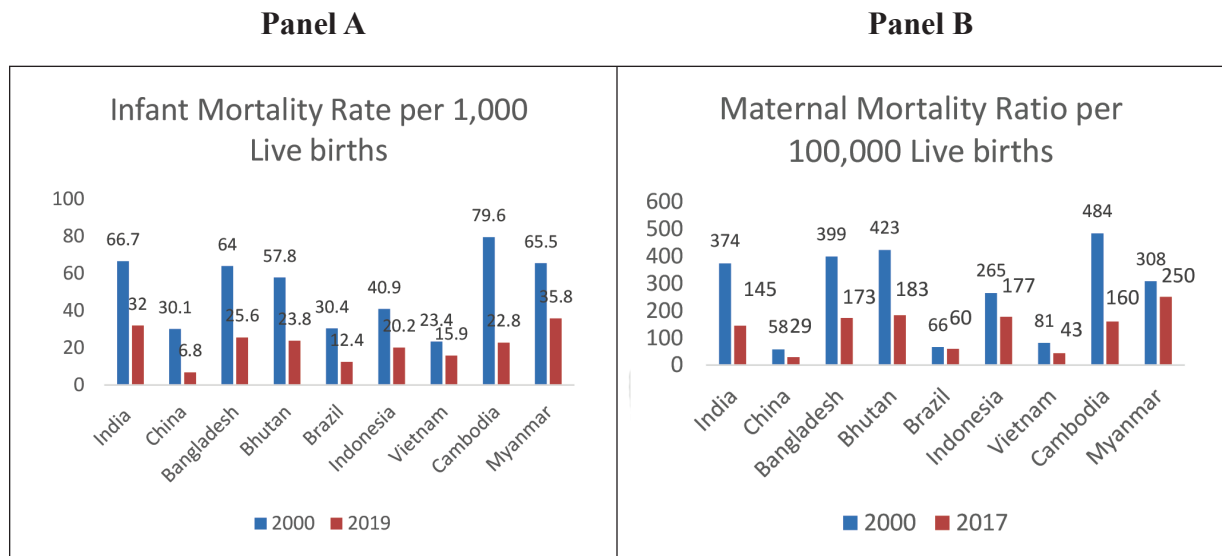
5.15 As seen in Figure 6, despite improvements in MMR and IMR, India still needs to improve significantly on these metrics. Countries such as China, Bangladesh, Bhutan, Cambodia, etc. have improved much more on these metrics than India.

Low access and utilisation

5.16 At 3-4 per cent, the hospitalisation rates in India are among the lowest in the world; the average for middle income countries is 8-9 per cent and 13-17 per cent for OECD countries

(OECD Statistics). Given the increasing burden of NCD, lower life expectancy, higher MMR and IMR, the low hospitalisation rates are unlikely to reflect a more healthy population as compared to middle income or OECD countries. Thus, the low hospitalisation rates reflect lower access and utilisation of healthcare in India.

Figure 6: IMR and MMR in India and other countries

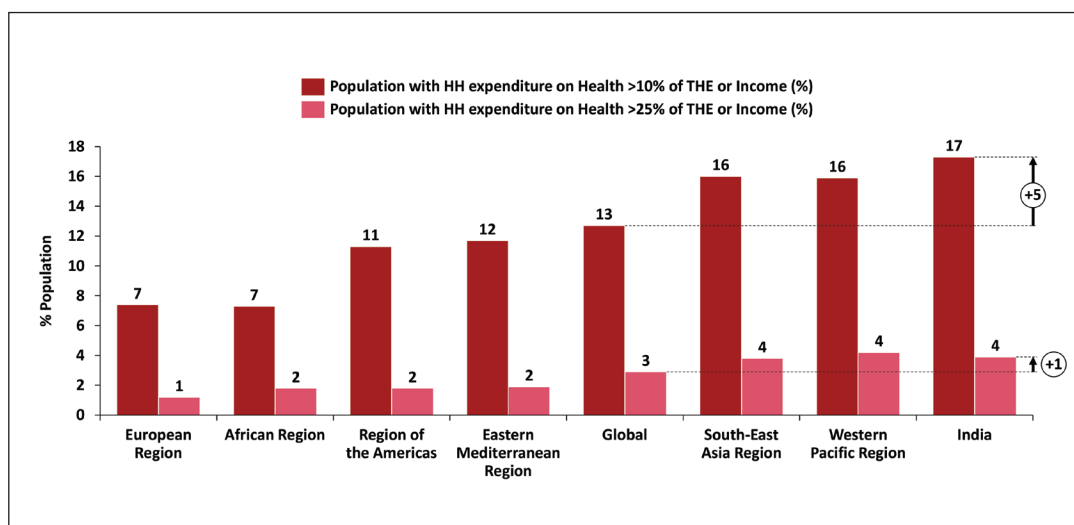


Source: World Bank

High out-of-pocket health expenditures

5.17 As shown in Figure 3 and supported by Figure 7 below, India has one of the highest levels of OOPE in the world.

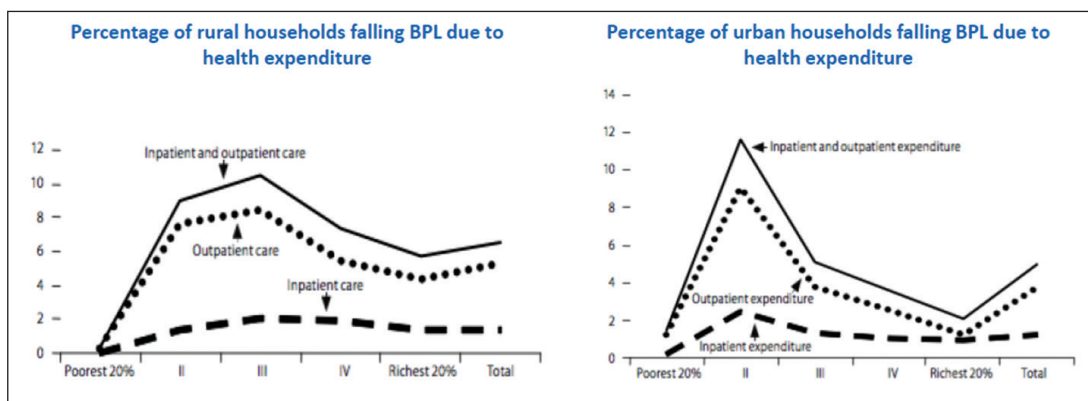
Figure 7: Comparison of Health Expenditure across different regions



Source: World Health Statistics 2020

Though decreasing in recent years, inequity persists in availability of healthcare

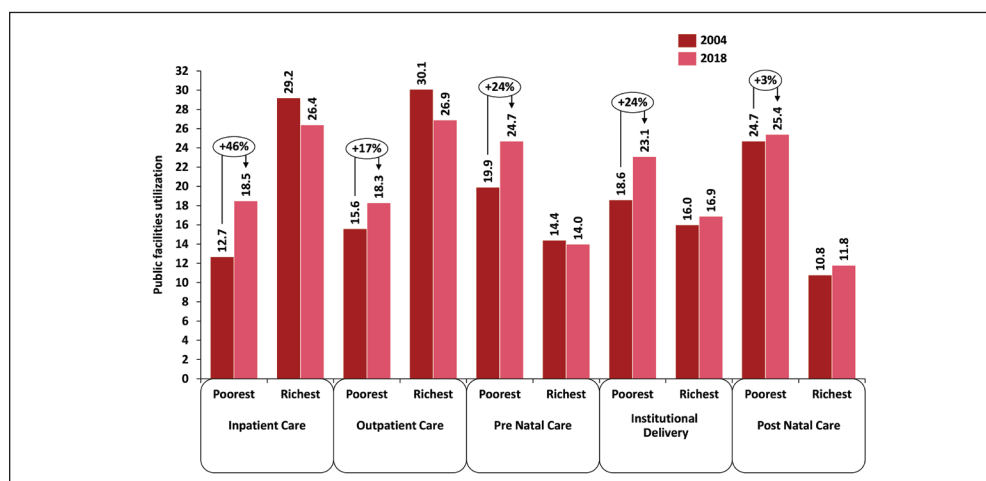
Figure 8: Households falling below poverty line (BPL) due to health expenditure



Source: Berman et al 2017

5.18 However, recent data show that the distribution of the public subsidy has improved in favour of the poor, more clearly in maternity and child healthcare. Earlier studies have argued that public sector-based healthcare has been pro-rich (or aggressive) (Berman et al. 2017). This had resulted in poor households being disproportionately impacted by OOPe and pushed below the poverty line (Figure 8). In recent times, the percentage of the poorest utilising prenatal care through public facilities has increased from 19.9 per cent to 24.7 per cent from 2004 to 2018, and there is a similar increase in the percentage of the poor accessing institutional delivery as well as post-natal care (Figure 9). The poorest utilising inpatient care and outpatient care has increased from 12.7 per cent to 18.5 per cent and from 15.6 per cent to 18.3 per cent. At the same time, both inpatient and outpatient utilisation among the richest dropped from 29.2 per cent to 26.4 per cent and 30.1 per cent to 26.9 per cent, respectively.

Figure 9: Increasing equity in healthcare (2004-18)

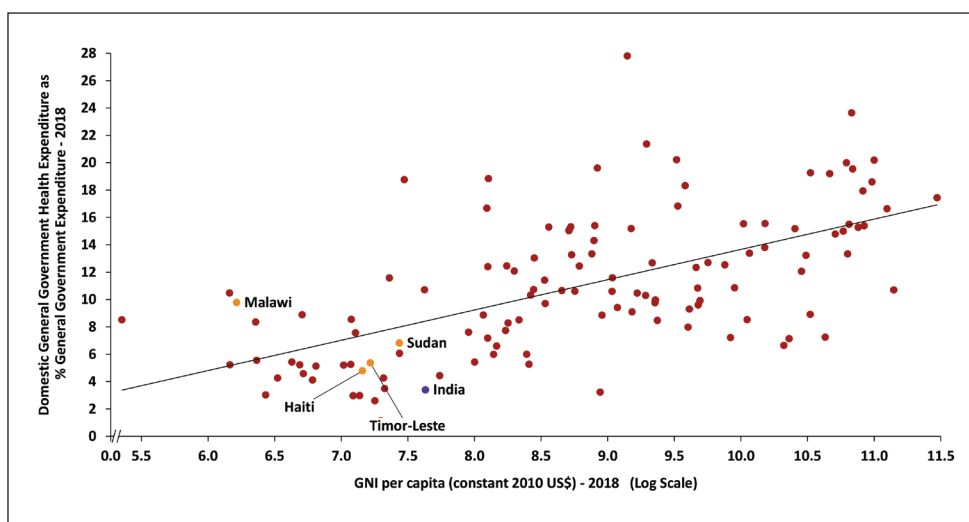


Source: Survey computation based on NSSO (2004) & NSSO (2018)

Low budget allocations for healthcare

5.19 As health is a state subject in India, spending on healthcare by states matters the most when examining government healthcare spending. According to National Health Accounts, 2017, 66 per cent of spending on healthcare is done by the states. India ranks 179th out of 189 countries in prioritization accorded to health in its government budgets (consolidated union & state government). As Figure 10 shows, this prioritisation of health in India is similar to donor-dependent countries such as Haiti and Sudan, and well short of its peers in development.

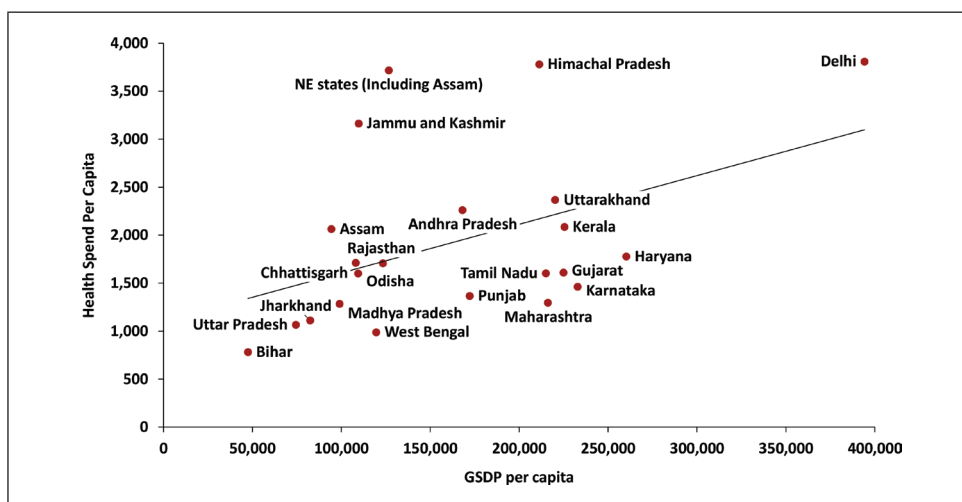
Figure 10: Public Health Spend as percentage of Total Government Budget for different countries (centre and state combined)

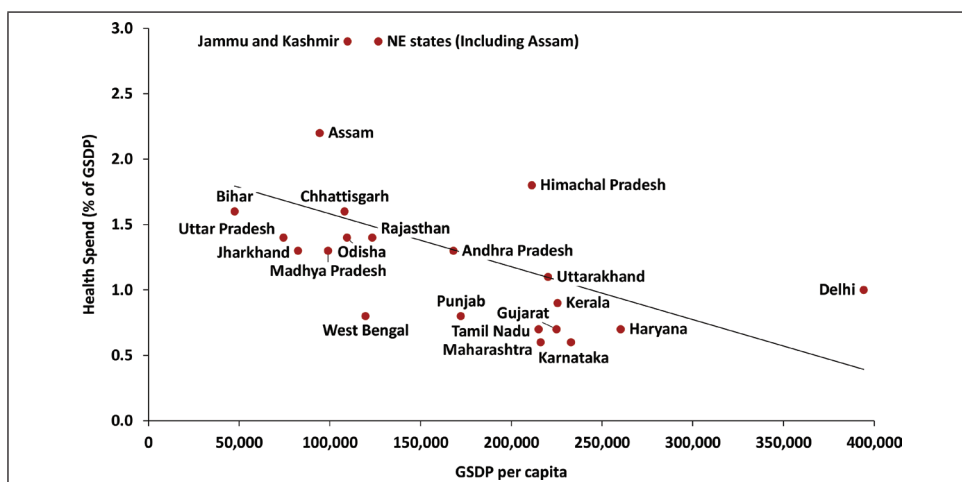


Source: World Bank and WHO (Global Health Expenditure Data Base)

5.20 The state expenditure on healthcare is highly variable across states and is not fully explained by the income level of the state. Figure 11 illustrates the same: while healthcare spending per capita increases with the GSDP per capita, healthcare spending as a per cent of GSDP decreases with the GSDP per capita. Thus, the richer states are spending a lower proportion of their GSDP on healthcare.

Figure 11: Healthcare spending across different Indian States

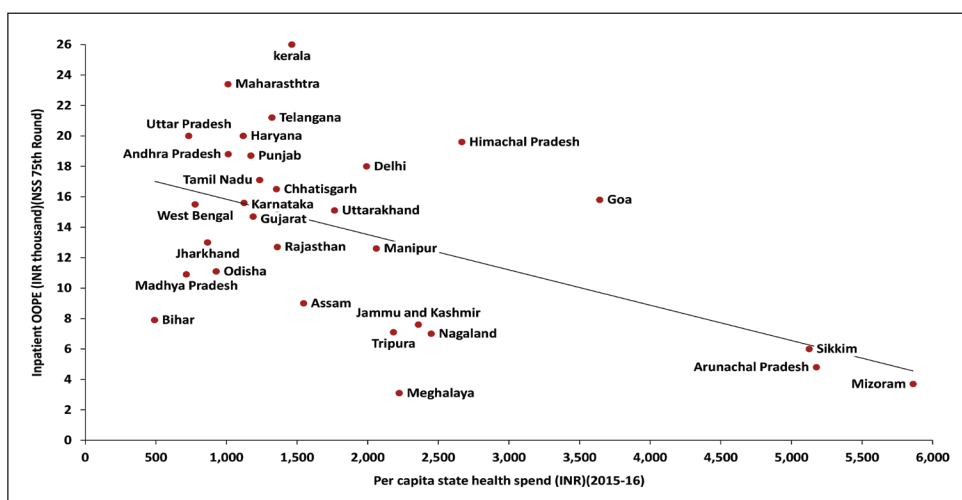




Source: National Health Systems Resource Centre 2017

5.21 The states that have higher per capita spending have lower out-of-pocket expenditure, which also holds true at global level. Hence, there is need for higher public spending on healthcare to reduce OOP. As the evidence in Figure 3 clearly demonstrates, an increase in public spending to 2.5-3 per cent can substantially reduce OOP from the current level of 60 per cent to 30 per cent. Therefore, the richer states should especially target increasing the healthcare spending as a per cent of GDP to 2.5-3 per cent (Figure 12).

Figure 12: Correlation between state health spending and inpatient OOPE



Source: Survey computations based on NSSO data

Low human resources for health

5.22 Health status of any country crucially depends on the available health infrastructure in general and human resources for health. Several research studies, using cross-country data, have highlighted a positive causal link between the availability of the health workforce in a healthcare system and health outcomes (Jadhav et al, 2019, Choudhury and Mohanty 2020, Anand and Bärnighausen 2004). World Health Organization (WHO) identified an aggregate density of health workers to be 44.5 per 10,000 population and an adequate skill-mix of health workers to achieve composite SDG tracer indicators index by 2030 (WHO 2019). The WHO

also specified a lower range of 23 health workers per 10,000 population to achieve 80 per cent of births attended by skilled health professionals.

5.23 Although aggregate human resources for health density in India is close to the lower threshold of 23, the distribution of health workforce across states is lop-sided. Also, the skill mix (doctor/nurse-midwives ratio) is far from adequate. State-level variations in the density of health workers and the skill mix reflects that while Kerala and Jammu and Kashmir have a high density of doctors, states like Punjab, Himachal Pradesh and Chhattisgarh have a larger number of nurses and midwives but a very low density of doctors. Andhra Pradesh, Delhi and Tamil Nadu reflect a better balance of doctors and nurses and midwives (Figure 13 and 14).

Figure 13: Density of doctors and Nurses/Midwives in different Indian states

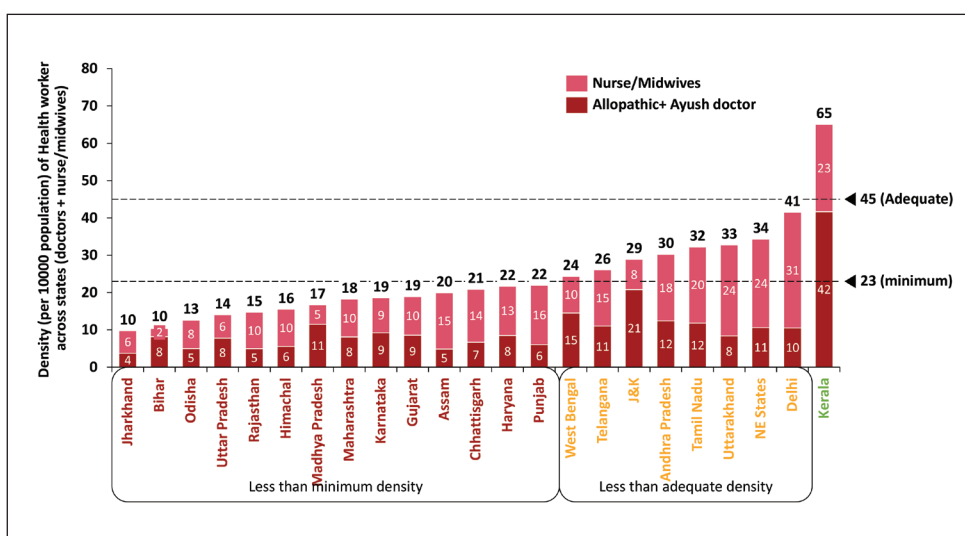
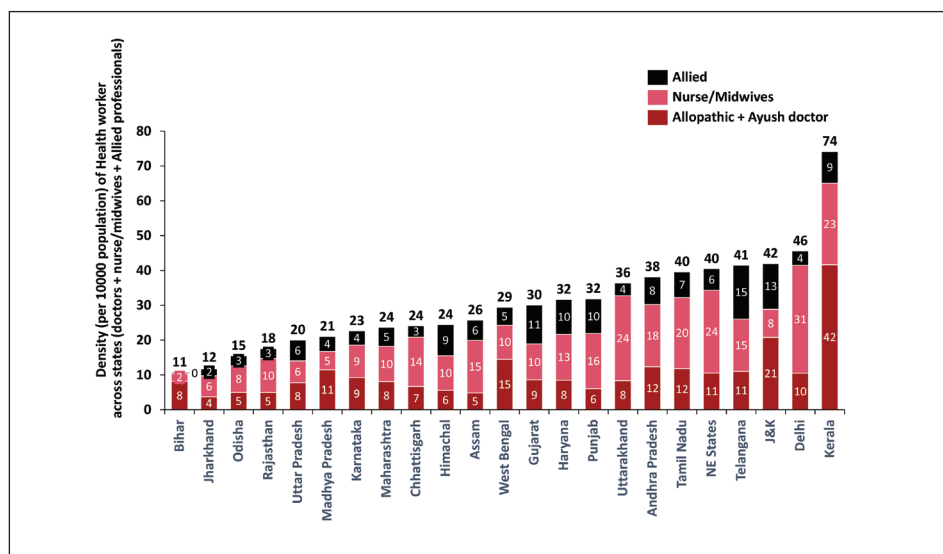


Figure 14: Density of doctors, Nurses/Midwives and Allied professionals in different Indian states

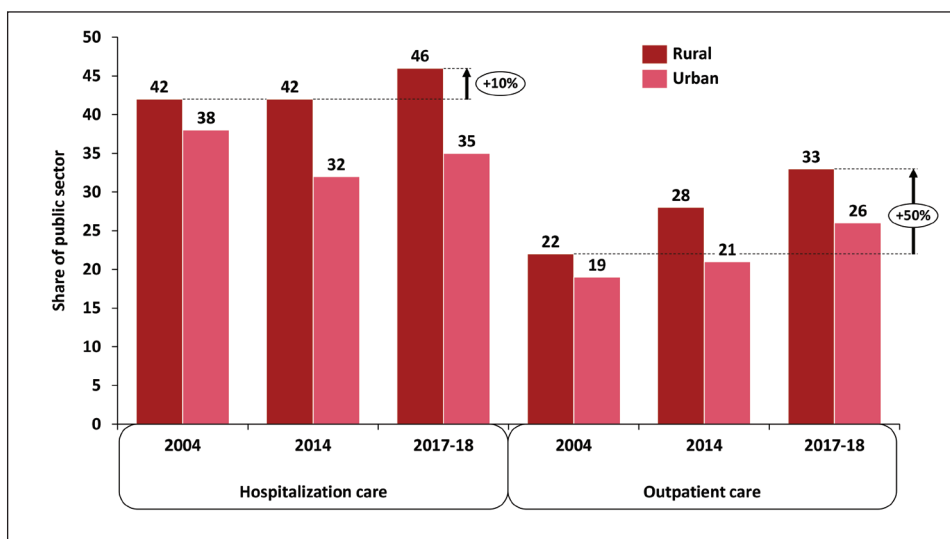


Source: Periodic Labour Force Survey 2017-18 (Ministry of Statistics & Programme Implementation 2019) and Population Projection for 2018 (Census of India 2020).

UNREGULATED PRIVATE ENTERPRISE IN AN INDUSTRY MARKED BY HIGH LEVEL OF MARKET FAILURE

5.24 While the share of public institutions has increased both in hospital and outpatient cares, the private sector dominates in total healthcare provision in India. Around 74 per cent of outpatient care and 65 per cent of hospitalisation care is provided through the private sector in urban India (Figure 15).

Figure 15: Share (per cent) of public sector in total healthcare, hospitalisation care and outpatient care



Source: NSSO, various rounds.

5.25 The significant market failures that stem from information asymmetries in the healthcare sector were highlighted earlier. Therefore, unregulated private enterprise can create significant negative effects. For instance, Kurk et al. (2018) highlight that a large proportion of deaths in India manifests due to poor quality of healthcare than due to insufficient access; this proportion is significantly higher than neighbouring countries (Figure 16) and other countries in the world (Figure 17).

Figure 16: Poor care quality leads to more deaths than insufficient access to healthcare

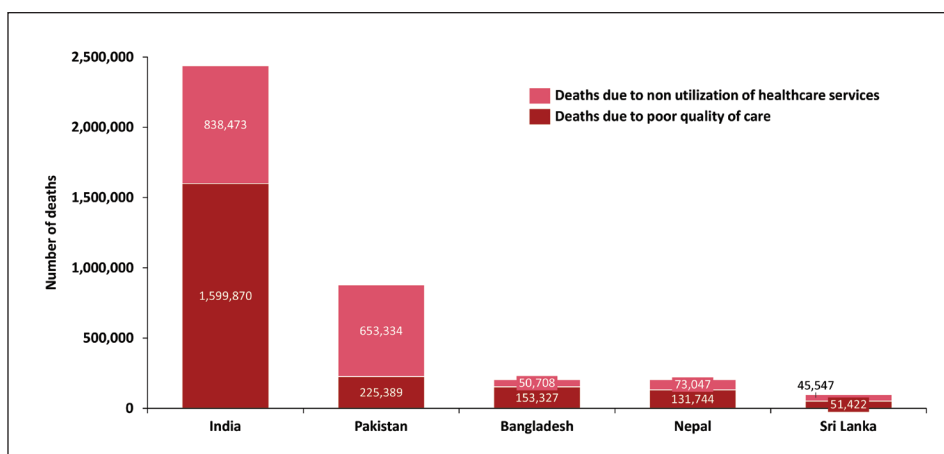
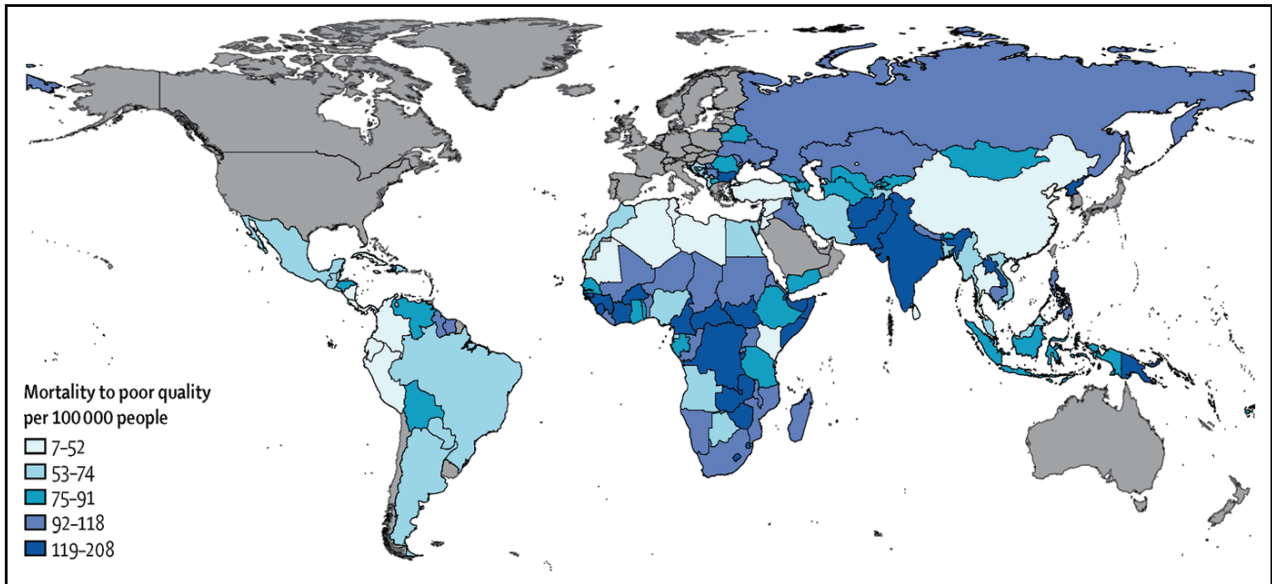


Figure 17: Mortality due to poor quality health care by country

5.26 In fact, Kane and Calnan (2017) highlight the erosion of trust in the Indian healthcare sector. To understand the difference in quality between the public and private sector providers, we use data from PMJAY. Among the most common metrics of quality in the hospital setting is unplanned readmissions (Mohpal et al., 2020). Readmissions typically impose a heavy burden on patients and their families and on health systems in general as a result of unnecessary care. In general, readmissions are costlier than original admissions. Using the data till November 2019, it is observed that the average claim amount in a readmission case is INR 19,295 compared to INR 12,652 in the corresponding original case. The average length of stay is also higher in the readmission, 7.5 days versus 6.6 days. Crucially, the data shows that the mortality rate for neonatal procedures is much higher in private hospitals than in public hospitals, 3.84 per cent and 0.61 per cent respectively. Public sector patients get readmitted to the same hospital 64 per cent of the time versus 70 per cent for private hospitals. About 3/4th of outpatient care and 2/3rd of hospitalisation care is provided through the private sector. So, a large proportion of deaths in India manifesting due to poor quality of healthcare is likely to reflect that the quality of treatment in the private sector may not be significantly better than that in the public sector in India. (Basu et al, 2012, Kumar and Prakash 2011, Coarasa et al, 2014, Russo 2015)

5.27 The problem of asymmetric information in healthcare is also reflected in the substantial variation in costs for treating the same disease between public and private sector. As argued above, the quality of treatment in the private sector does not seem to be markedly better in the private sector when compared to the public sector. Yet, the costs of treatment are not only uniformly higher in the private sector, the differences are humongous for in-patient treatments of severe illnesses such as cancers (3.7x), cardio (6.8x), injuries (5.9x), gastro (6.2x), and respiratory (5.2x) (NSSO data, Figure 18 and 19).

5.28 Given the market failures stemming from significant asymmetric information, an unregulated private healthcare system is clearly sub-optimal compared to a system where policies mitigate the problem of asymmetric information. Parallels can be drawn from banking and financial intermediation – another industry that suffers from significant market failures due to asymmetric information – to design policies for mitigating these market failures.

Figure 18: Substantial variation in costs for treating the same disease between public and private sector (outpatient care)

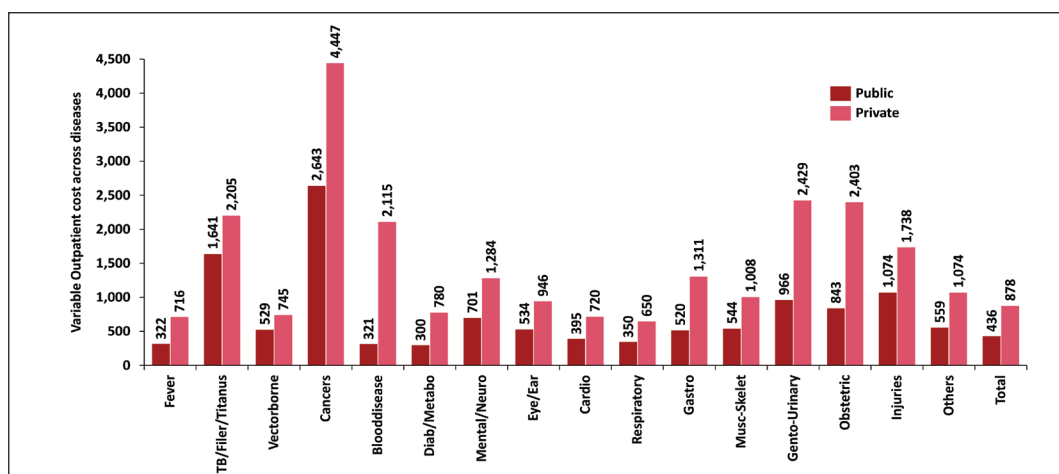
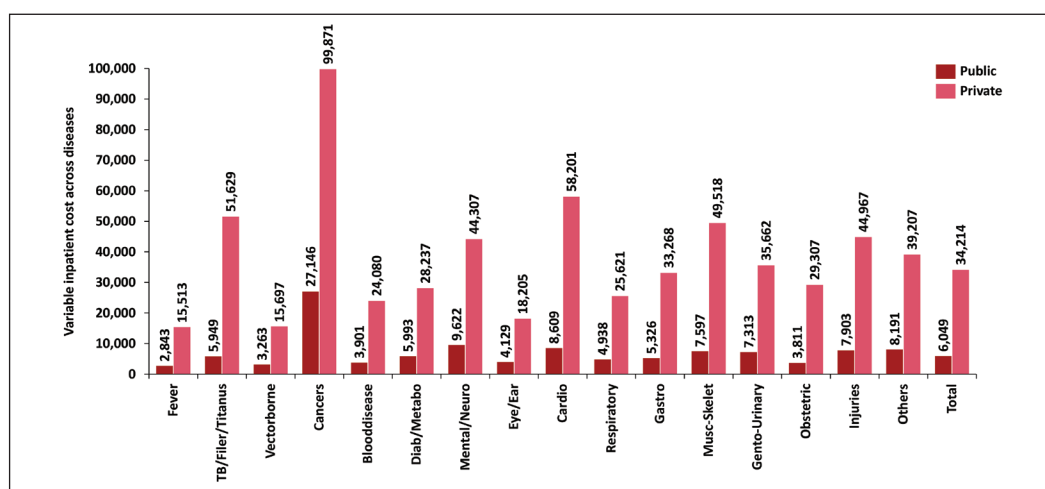


Figure 19: Substantial variation in costs for treating the same disease between public and private sector (Inpatient care)



5.29 Credit rating agencies mitigate the information asymmetry faced by investors when investing in the debt of a firm. Specifically, credit rating agencies assess the likelihood of the firm repaying the debt that it takes from the investors, thereby the quality of the firm borrowing the money. Similarly, healthcare policymakers should consider creating agencies to assess the quality of the healthcare providers – both doctors and hospitals. The Quality and Outcomes Framework (QOF) introduced by the National Health Service (NHS) in the United Kingdom 2004 as well as other quality assessment practices introduced by NHS provide a good example. The NHS quality assessment practices included national standards for the major chronic diseases, annual appraisal of all doctors working in the NHS, and widespread use of clinical audits to compare practices, sometimes with public release of data. These should be evaluated carefully and considered for implementation.

5.30 Credit bureaus assess the quality of individual borrowers by assigning them credit scores, thereby mitigating the information asymmetry faced by a bank or financial institution in lending to the individual borrower. In the healthcare context, insurers as well as healthcare providers

suffer from similar information asymmetry about the patient. As argued in Chapter 4 (“Data of the people, by the people, for the people”) of the Economic Survey 2018-19, data from The National Digital health mission can be utilised even within the framework of data privacy. By utilising such data with the aid of artificial intelligence and machine learning algorithms, the predictive aspects can be used to mitigate information asymmetry with respect to the patients. Therefore, information utilities *a la* the credit bureaus should be evaluated and considered.

5.31 Finally, given the information asymmetries that make unregulated private enterprise sub-optimal in healthcare, a sectoral regulator that undertakes regulation and supervision of the healthcare sector must be seriously considered. This is especially pertinent as regulation has grown in importance as a key lever for governments to affect the quantity, quality, safety and distribution of services in health systems (Clarke 2016). Please see Table 1 below for regulation in other countries (Schweppenstedde et al, 2014).

Table 1: International Experience in Regulating Healthcare

Country	Source of standards	Content of standards	Experience
Australia	National Safety and Quality Health Service (NSQHS) Standards developed by the Australian Commission on Safety and Quality in Health Care (ACSQHC) are part of the Australian Health Services Safety and Quality Accreditation Scheme endorsed by the Australian health ministers in 2010.	The Standards provide a set of measures that can be applied across services and settings and used as quality assurance mechanism for providers to test whether minimum standards are met or as quality improvement mechanism for goal development. Other national standards include quality of care principles as part of nursing home accreditation, mental health standards, and standards for child day care and also out-of-home care. The ACSQHC also produced an Australian Safety and Quality Framework for Health Care in 2010 that sets out three core principles (consumer-centered care, driven by information, and organized for safety), plus 21 areas of action for improvement.	Regulatory activity to improve healthcare safety and quality has increased considerably during the last decade. The national and state governments have passed legislation and have established government and quasi-government bodies. Some essential and mandatory quality standards have been introduced, despite the strong preference in the health and social care sectors towards voluntary guidelines and developmental improvements. Mechanisms for enforcing such standards are not well developed and tend to rely on internal rather than external mechanism. The regulatory regime in Australia relies largely on networked governance which is being built via three strategies. First, the division of responsibilities in Australia’s federal system of government. Second, networked governance requires extensive consultation among the many public and

			private stakeholders in mixed systems of health and social care. Third, governance in complex health and social sectors requires the engagement of professionals.
England	National standards for the delivery of care services were first introduced following the 2000 NHS Plan, with the regulatory framework supporting implementation undergoing reform since.	The 2008 Health and Social Care Act sets the framework for regulations by securing that any service provided in the carrying out of a regulated activity is of appropriate quality. The stipulations for this are defined further as a set of 16 essential standards of quality and safety' in service provision which are to be implemented by providers in health and social care (and currently regulated by the Care Quality Commission); the 16 standards concern care and welfare of service users; assessing and monitoring the quality of service provision; safeguarding service users from abuse; cleanliness and infection control; management of medicines; meeting nutritional needs; safety and suitability of premises; safety, Availability and suitability of equipment; respecting and involving service users; consent to care and treatment; complaints; records; and requirements relating to workers. The essential standards are due to be updated, alongside the inspection and assessment approach, for April 2014.	Following the 2012 Health and Social Care Act, the NHS in England has undergone considerable change, with reform implementation continuing. In addition to regulators professional statutory bodies also have an important role in England. it is conceivable that the roles and responsibilities of the respective organizations in England is expected to change as new structures and governance arrangements are being implemented. Currently, they use a mix of enforcement and punishment to ensure compliance.

Finland	<p>The Finnish Constitution sets out the requirement that government must provide adequate care for all, providing the legal foundation for national regulation such as the 1992 Act on the Status and Rights of Patients.</p>	<p>It sets out patients' right to information, informed consent to treatment, the right to see any relevant medical documents, the right to complain and the right to autonomy. Further national legislation defines the quality and standards of healthcare. There are national standards for selected specific service categories, such as elderly care.</p>	<p>Health system governance is shared by the center and the municipalities. Standards of care are practically embedded within the Finnish constitution, which provides the legal foundation for national regulation. The Finnish regulatory system can be characterized by a system of self-regulation and voluntarism, with some aspects of meta-regulation such as mandated continuous improvement; external clinical audit; mandated incident reporting system; consumer complaints through Valvira as main national regulatory body, the Regional State Administration, and the ombudsman.</p>
Germany	<p>The Social Code Book sets the regulatory framework for major actors, their roles and obligations in the statutory health insurance (SHI) system. Thus, quality and effectiveness measures of services within the SHI system have to comply with the current level of medical knowledge and take account of required technical quality. Service providers must safeguard and develop the quality of services they provide.</p>	<p>Stipulations set out in the Social Code Book are further defined by the Federal Joint Committee (G-BA), which issues binding directives on treatments, quality assurance and minimum standards of care, which are implemented by SHI funds, hospitals and associations of physicians. Areas of regulation are: quality management; external quality assurance; cross-sectoral quality assurance; regulation on quality of structures, processes and outcomes; regulation on assessment and monitoring of services by SHI-accredited physicians.</p>	<p>Regulation of healthcare in Germany's federal system is shared between the federal and state governments and corporatist actors. A 2010 hospital quality report included quality data from almost 1,800 hospitals and showed that, compared to 2009, 65 quality indicators had improved. However, for the majority of quality indicators (n = 236), there was no change, while deterioration was observed for 8 indicators. Evaluations of the activities of regulatory bodies remain limited. The G-BA, dominated by corporatist actors, was delegated a high degree of decision-making power concerning the definition of the health basket and is non-transparent.</p>

Netherlands	<p>The Dutch government has defined quality of care in terms of effectiveness (clinical effectiveness; patient safety), patient-centeredness and cost-efficiency, which form the basis of the regulatory system and national regulation.</p>	<p>National-level regulation provides for the overall requirements for quality of care to be defined further by professional bodies on how to meet these requirements in a way that safeguards quality and delivers ‘responsible care’ (verantwoorde zorg). For example, the 1996 Quality Act makes quality systems mandatory for all healthcare institutions (excluding GPs and dentists), further stipulating that healthcare institutions have to provide ‘responsible care’ (defined as care being of a good level, suitable, patient- and needs-oriented); to provide a structure that allows for the delivery of responsible care and communicate how they achieve/maintain it; to systematically monitor, control and improve quality of care; to publish annual reports on quality management and quality delivered.</p>	<p>The Dutch regulatory framework uses a mixture of policy instruments to safeguard the quality and safety of healthcare. The system relies to a great extent on self-regulation and voluntarism, through for example having the medical profession define ‘verantwoorde zorg’, develop clinical guidelines and medical training programmes, and having a voluntary system of external accreditation. Hout et al. (2010) argued, that the Dutch supervisory regime is characterized by comparatively low formal intervention rates, of around 10–15 per cent. This may be because of the time required to work through cases and the potential risk of creating mistrust and frustration among actors in the healthcare sector. Friele et al. (2009) reviewed the regulatory instruments of the 2006 Health Care Market Regulation Act (Wmg) and noted that the Dutch Health Care Authority (NZa) appears to opt for acting in a less interventionist way. The fragmented system of healthcare governance at central level for the cure and care sectors, and decentralized governance responsibilities for social care and public health, can be seen to increase the risk for inequity in healthcare provision.</p>
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USA	The 2010 Affordable Care Act required the Department of Health and Human Services (DHHS) to develop a National Strategy for the Improvement of Health Care (National Quality strategy). The Nursing Home Reform act (OBRA'87) deals with nursing home regulation.	The National Quality Strategy is a developing strategy guided by DHHS as an attempt to set national aims and priorities in healthcare quality improvement. The strategy has three aims: better care, healthy people and communities, and affordable care. The OBRA'87 deals with nursing home regulation; it defines regulatory standards for nursing homes at the federal level, supplemented by individual state laws.	Regulatory activity in the USA is for the most part decentralized with multiple local governmental and private sector agencies involved in assuring quality. Each state licenses healthcare facilities within its territory. US General Accountability Office (GAO) often reviews the actions and activities of CMS and other healthcare agencies in government. The GAO has published criticism of the limited use of regulatory powers with regard to nursing homes. The National Quality Strategy is an attempt to unify and streamline the efforts of diverse federal agencies involved in healthcare, with input from private sector stakeholders.
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INFORMATION ASYMMETRY IN INDIA'S PRIVATE INSURANCE MARKETS

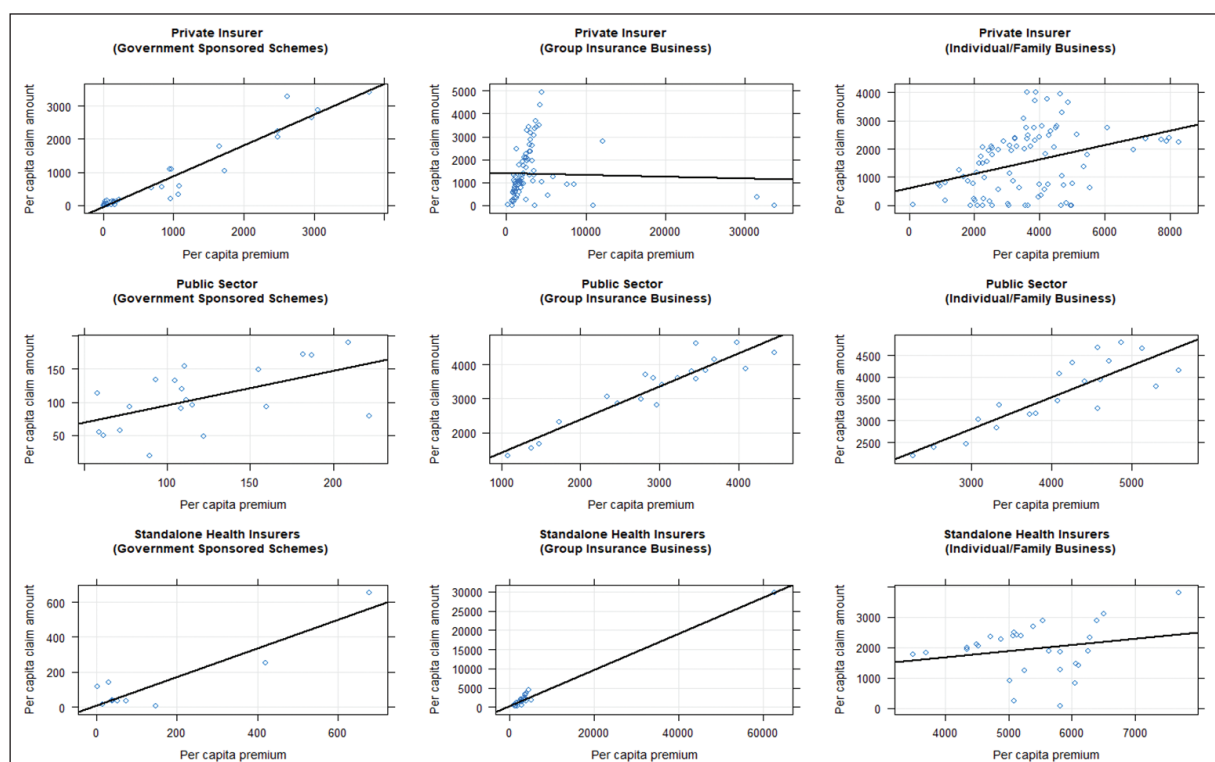
Box 1: Empirical strategy to identify information asymmetry in insurance markets

The empirical literature on testing for information asymmetry in insurance markets can be traced back to the seminal articles of Chiappori and Salanie' (2000, 2003). Rooted in Chiappori and Salanie' (2000, 2003), these studies propose a variety of reduced-form correlational tests to statistically demonstrate the existence of asymmetric information. The basic idea is to compare claims rates consumers, who have identical observed characteristics, but have self-selected into different insurance policies (Puelz and Snow 1994, Cawley and Philipson 1999, Cardon and Hendel 2001, Finkelstein and Poterba 2004, 2006, Cohen 2005, and Finkelstein and McGarry 2006). A positive correlation between insurance coverage and claims – after controlling for all observable characteristics so that the two individuals being compared as identical on observable characteristics – provides evidence of asymmetric information. This could result either because of adverse selection (with greater-risk taking individuals self-selecting into the more expensive, high feature contract) or moral hazard (because individuals behave differently under the two contracts).

5.32 To examine asymmetric information in the Indian insurance market, the empirical analysis is conducted using insurer-specific yearly time-series data secured from IRDA. The unit of analysis is an insurer of a specific insurer type (i.e., private, public sector or standalone) underwriting a specific insurance-type (government-sponsored, group insurance or individual/

family floater) of health insurance from years 2015-2019. The bivariate patterns between per-capita premium and per-capita claim amount for the nine combinations (three insurer types for each of the three insurance types) are illustrated in Figure 20. Figure 20 also includes a linear trend line for each of the scatter plots. An upward sloping trend line is noticeable for all scenarios but one (i.e., private insurer underwriting group-insurance schemes).

Figure 20: Correlation Patterns Between Per-Capita Premium and Per-Capita Claim Amount



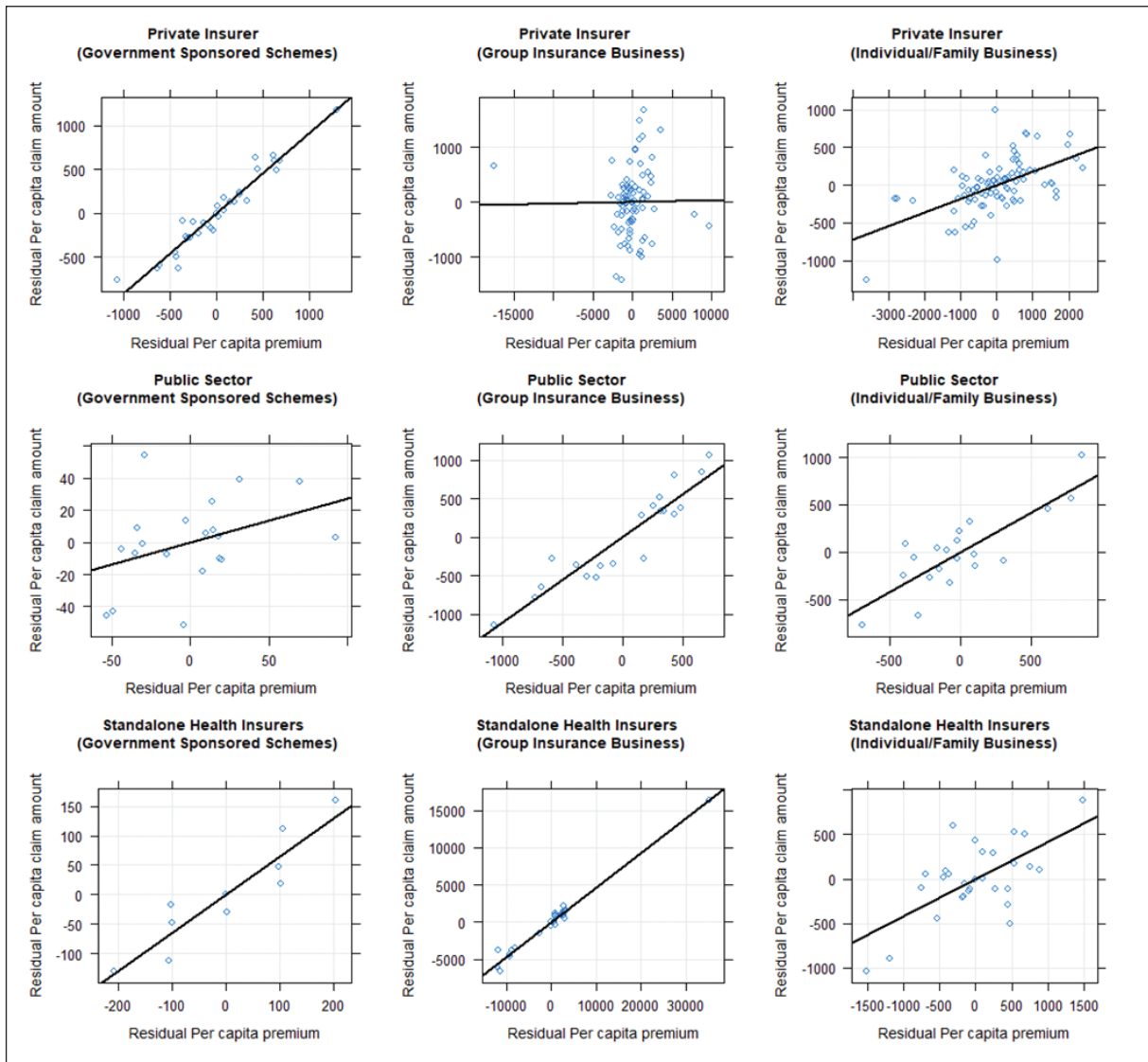
5.33 To rule out any unobservable differences between insurance providers and time-varying aggregate shocks that may systematically impact both per-capita premiums and per-capita claim amount, we examine the same correlation after including a fixed effect for each insurer and for each year. Figure 21 shows that the results shown in Figure 20 remain unaltered even after controlling for these unobservable differences.

Table 2: Conditional Pearson Correlation Between Per-Capita Premium and Per-Capita Claim Amount after controlling for insurer fixed effects and year fixed effects

Type of Insurer	Conditional Correlations		
	Government Sponsored	Group Insurance	Individual/Family
Private	0.968***	-0.040	0.361***
Public Sector	0.544**	0.935***	0.850***
Standalone	0.916***	0.990***	0.226

Note: *p<0.01; **p<0.05; ***p<0.01

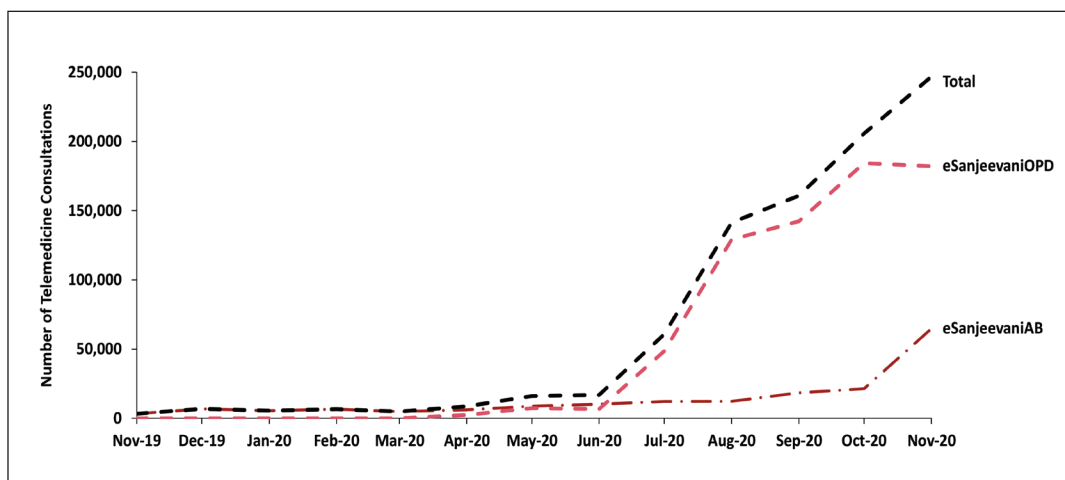
Figure 21: Conditional Correlation of Residuals after controlling for insurer fixed effects and year fixed effects



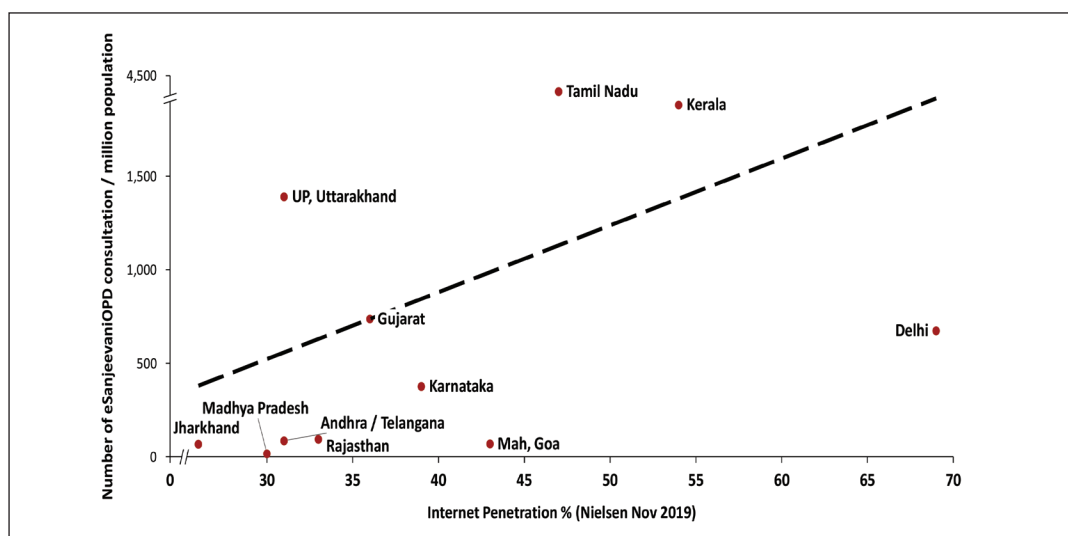
5.34 Table 2 shows the conditional Pearson correlations after controlling for insurer and year fixed effects. The evidence highlights clearly the presence of asymmetric information in the Indian private health insurance market.

TELEMEDICINE

5.35 Impressive growth has been seen in the adoption of telemedicine in India since the outbreak of the COVID-19 pandemic. This coincided with the imposition of lockdown in India and the issuance of the Telemedicine Practice Guidelines 2020 by the Ministry of Health and Family Welfare (MoHFW) on March 25, 2020. eSanjeevani OPD (a patient-to-doctor tele-consultation system) has recorded almost a million consultations since its launch in April 2020, as seen in Figure 22. Similar growth was also reported by Practo, which mentioned a 500 per cent increase in online consultations (varying from 200 to 700 per cent across different specialties) in just three months.

Figure 22: Number of eSanjeevani consultations (November 2019 to November 2020)

Source: PIB Delhi 2020.

Figure 23: Correlation between eSanjeevani consultations reported and Internet penetration in the state

5.36 Figure 23 shows that the number of telemedicine consultations correlates strongly with the Internet penetration in a state. Thus, the success of telemedicine critically hinges on having decent level of health infrastructure and Internet connectivity nationwide. Specifically, investing in Internet access, can lead to greater uptake of telemedicine, which in turn can greatly help reduce geographic disparities in healthcare access and utilization.

CONCLUSIONS AND POLICY SUGGESTIONS

5.37 The recent COVID-19 pandemic has emphasised the importance of healthcare, whereby a healthcare crisis transformed into an economic and social crisis. Considering the same and in striving to achieve the SDG target of Universal Healthcare Coverage, India must take steps to improve healthcare accessibility and affordability in the country. Yet, healthcare policy must not become beholden to “saliency bias”, where policy over-weights a recent phenomenon that may represent a six-sigma event. This is especially pertinent given the fact that countries with

much higher healthcare investments and concomitant health infrastructure have struggled to contain the pandemic. The next health crisis may not possibly involve a communicable disease. Therefore, India's healthcare policy must continue focusing on its long-term healthcare priorities. Simultaneously, to enable India to respond to pandemics, the health infrastructure must be agile. For instance, every hospital may be equipped so that at least one ward in the hospital can be quickly modified to respond to a national health emergency while caring for the normal diseases in usual times. Research in building such health infrastructure can guide how to build such flexible wards.

5.38 The ongoing COVID-19 pandemic has helped showcase the role of technology-enabled platforms as an alternate distribution channel for remote delivery of healthcare services. These technology-enabled platforms offer a promising new avenue to address India's last-mile healthcare access and delivery challenges. These technology platforms coupled with digitisation and the promise of artificial intelligence at-scale, have led to a drastic uptake in the utilisation of telemedicine for primary care and mental health. Given India's unique last mile challenges, such technology-enabled solutions need to be harnessed to the fullest. As we show, telemedicine depends crucially on internet connectivity and health infrastructure. Therefore, both Central and the State governments need to invest in telemedicine on a mission mode to complement the government's digital health mission and thereby enable greater access to the masses.

5.39 The National Health mission has played a critical role in mitigating inequity in healthcare access. The percentage of the poorest utilising prenatal care through public facilities has increased from 19.9 per cent to 24.7 per cent from 2004 to 2018. Similarly, the percentage of the poorest accessing institutional delivery increased from 18.6 per cent to 23.1 per cent and from 24.7 per cent to 25.4 per cent for post-natal care. The poorest utilising inpatient care and outpatient care has increased from 12.7 per cent to 18.5 per cent and from 15.6 per cent to 18.3 per cent. Therefore in conjunction with Ayushman Bharat, the emphasis on NHM should continue.

5.40 From a financial perspective, India has one of the highest levels of OOPE in the world, contributing directly to the high incidence of catastrophic expenditures and poverty. A negative correlation exists between the level of public spend and OOPE both across countries and states. In fact, at small levels of public spend (less than 3 per cent of GDP), even marginal increases in public spend generate substantial "bang for the buck" in reducing the OOPE. An increase in public spend from 1 per cent to 2.5-3 per cent of GDP – envisaged in the National Health Policy 2017 – can decrease the OOPE from 65 per cent to 30 per cent of overall healthcare spend. As Chapter 9 in this volume shows, PMJAY has been a marquee evolution in this direction, providing financial affordability to a large percentage of the Indian population.

5.41 As a bulk of the healthcare in India is provided by the private sector, it is critical for policymakers to mitigate information asymmetry in healthcare, which creates market failures and thereby renders unregulated private healthcare sub-optimal. Therefore, information utilities that help mitigate the information asymmetry can be very useful in enhancing overall welfare. The Quality and Outcomes Framework (QOF) introduced by the National Health Service (NHS) in the United Kingdom 2004 as well as other quality assessment practices introduced by NHS provide a good example in this context. These should be evaluated carefully and considered for implementation. Similarly, data from the National Digital health mission can be utilised even

within the framework of data privacy with the aid of artificial intelligence and machine learning algorithms to mitigate information asymmetry with respect to the patients. A standardised system for quality reporting on healthcare for hospitals, physicians and insurance companies can start with basic input indicators to be reported mandatorily by every healthcare stakeholder. Over time, this can evolve to cover output and outcome indicators such as infection rates and re-admission rates. A start has been made in this direction by the Niti Aayog through the Health Index at the state level. Finally, a sectoral regulator to undertake regulation and supervision of the healthcare sector must be seriously considered. This is especially pertinent as regulation has grown in importance as a key lever for governments to affect the quantity, quality, safety and distribution of services in health systems (Clarke 2016).

5.42 With limited visibility into patients' medical records and no standardised treatment protocols, insurance companies have a risk of adverse selection at the time of policy issuance and a risk of moral hazard at the time of claims. To safeguard against this risks, insurance companies resort to high premiums and restriction of services covered in the insurance policy. Addressing this information asymmetry can help lower premiums, enable the offering of better products and help increase the insurance penetration in the country.

CHAPTER AT A GLANCE

- The recent COVID-19 pandemic has emphasised the importance of healthcare sector and its inter-linkages with other key sectors of the economy. The ongoing pandemic has showcased how a healthcare crisis can get transformed into an economic and social crisis.
- Healthcare policy must not become beholden to “saliency bias”, where policy over-weights a recent phenomenon. To enable India to respond to pandemics, the health infrastructure must be agile.
- The National Health mission (NHM) has played a critical role in mitigating inequity as the access of the poorest to pre-natal and post-natal care as well as institutional deliveries has increased significantly. Therefore, in conjunction to with Ayushman Bharat, the emphasis on NHM should continue.
- An increase in public spend from 1 per cent to 2.5-3 per cent of GDP – as envisaged in the National Health Policy 2017 – can decrease the OOOPE from 65 per cent to 30 per cent of overall healthcare spend.
- A sectoral regulator to undertake regulation and supervision of the healthcare sector must be considered given the market failures stemming from information asymmetry; WHO also highlights the growing importance of the same.
- The mitigation of information asymmetry would also help lower insurance premiums, enable the offering of better products and help increase the insurance penetration in the country. Information utilities that help mitigate the information asymmetry in healthcare sector can be very useful in enhancing overall welfare.
- Telemedicine needs to be harnessed to the fullest by investing in internet connectivity and health infrastructure.

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