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Public Health in India: Gaps in Intent, Policy, and Practice

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A view of the fever ward in Government Hospital in Tiruchi on September 17, 2016. File photo: B. Velankanni Raj.

This Issue Brief is an attempt to understand the challenges before the health system in India and why these challenges persist. The year 2016 and 2017 in particular witnessed a series of tragedies so horrendous and widespread that they brought to light the deplorable state of the public health system in India. It was expected that some lessons will be drawn from the public health crisis in 2016, and that the year 2017 would fare better. However, the incidents repeated themselves in different parts of the country.

In 2016, a poor farmer in Odisha was forced to carry his wife's corpse many miles in the absence of a support system. This year witnessed a similar incident in Uttar Pradesh. Likewise, 2016 saw the outbreak of chikungunya in Delhi and this year dengue and

chikungunya infection broke out in Tamil Nadu and Kerala followed by the death of approximately 77 children due to encephalitis in Gorakhpur district of Uttar Pradesh in August 2017. Though a public health system cannot be refurbished in a time span of one year, these public health emergencies establish the chronic nature of ailments affecting the system.

Various studies have found that the Indian health system is besieged by inadequate infrastructure, paucity of skilled human resources, inadequate drug and medical supply, lack of preparedness, all of these further burdened by an increase in communicable, non-communicable, and vector borne diseases. It is a further worry that at a time when the public health system is already in a bad shape and we have humongous Sustainable Development Goals (SDGs) to achieve, the government is withdrawing from providing health services and encouraging the private sector to play a greater role.

A glaring feature of public health delivery today is the government's unwillingness to increase funding and prioritise public health. Increasing cost of medication, high out-of-pocket expenditure, and corruption in the health system have adversely affected public health and have combined to cripple the public health sector¹.

In order to better understand the Union government's approach to public health, the Issue Brief views the above underscored challenges against the gap between the Draft National Health Policy of 2015 and the final National Health Policy of 2017 on the one hand, and the 2015 policy, and the Union Budget 2017-18 on the other.

The Issue Brief finally makes a set of recommendations to plug the gaps in public health delivery towards fulfilling the SDGs expected to be achieved over 15 years.

Introduction

In August 2016, Dana Majhi, a poor tribal man from one of the KBK districts [Koraput, Balangir, and Kalahandi]² of Odisha, had taken his wife, Amangdei, to the Kalahandi district hospital for tuberculosis (TB) treatment, where Amangdei died. The hospital could not arrange an ambulance to transport her body back to the village. Ultimately, Majhi carried her corpse on his shoulder for 16 kilometres. Taking cognisance of the incident, the local administration suspended a male nurse and a security staff for negligence. However, the Chief District Medical Officer gave a clean chit to the hospital and blamed Majhi for the incident. It is noteworthy that only months earlier, in February 2016, the State had started the Mahaprayana scheme to move corpses for free, but the new ambulance under the scheme was parked at the district headquarter as no minister or MLA found time to inaugurate it.³

Saraswati, a 22-year-old pregnant woman in Chhattisgarh, was turned away by several hospitals for an operation to remove a dead foetus as her family could not pay the hospitalisation expenses in advance. She died of infection from carrying an eight-month-old foetus that had been dead for five days.⁴

Palmati Devi was served food on the floor of a government hospital in Ranchi. She was initially denied food as she did not have utensils. On her insistence, she was served food on the floor.⁵ Srinivasachary, a physically-challenged person, had to be dragged to the upper floors by his wife Srivani at a hospital in Anantpur, Andhra Pradesh. She had to do this because no wheelchair or stretcher was available. The government ordered an enquiry and instructed the authorities to provide more wheelchairs to the hospital.⁶

One would be mistaken to think that after the furore on the above-mentioned incidents, things are any better in 2017. On May 2, a labourer was forced to carry the body of his 15-year-old son on his shoulders at Etawah in Uttar Pradesh as no government mortuary van could be arranged, evoking the memories of the Dana Majhi incident. In August, within a week, over 60 children died in Gorakhpur's BRD Medical College, which is the only tertiary care centre in the region. The horror of deaths continued unabated with 42 more children dying by the end of the August. It is interesting to note that the Chief Minister, Yogi Adityanath, who also represents the Gorakhpur constituency, had 'inspected' this hospital twice days before the first incident. Both incidents happened in Uttar Pradesh, the State that has deployed ambulance services for treating sick animals, especially cows, and has come out with a *gau seva* toll-free number to help cows!

All these incidents are not mere outcomes of medical negligence. They tell us a great deal about the responsiveness of our health care system, or the lack of it. The patients are reduced to mere cases, rather than being treated as human beings entitled to basic medical care and facilities.

Numerous instances such as these are regularly reported in the media. Following criticism, it was expected that the Government of India (GoI) would come up with some positive announcements pertaining to public health in the 2017-18 budget. However, the budget is disappointing, even though there is an increase of 23 per cent in allocation compared to 2016-17. When we assess this year's budget against rising inflation, the allocated amount comes to less than that of 2011-2012.⁷

The draft National Health Policy 2015 had emphasised “universal access to good quality health-care services without anyone having to face financial hardship as a consequence”.⁸

However, the thrust of the National Health Policy (NHP), which the Union Government announced in March 2017, is on the insurance-based model of secondary and tertiary health care delivery routed through private players. The NHP aims to increase government expenditure on health to 2.5 per cent of GDP, which is half of the global average of government health spending. However, government spending on health is only 1.4 per cent of GDP.⁹ The NHP greatly emphasises ‘strategic purchasing’ of health services from non-governmental providers, which indicates that there is an intention of limiting the role of the public sector while broadening the area of activity for the private sector in public healthcare. Studies have shown that when the state purchases services from the private sector, it does not reduce the out-of-pocket expenditure on health by the poor. An example of this is the purchase of insurance such as the Rashtriya Swasthya Bima Yojna (RSBY).¹⁰

Post-2015, when Millennium Development Goals (MDGs) made way for the more comprehensive Sustainable Development Goals (SDGs), the focus on public health turned more to prevention of non-communicable diseases (NCDs) that were spreading like epidemics in many countries.¹¹ That India met with limited success towards meeting the MDGs should not be glossed over and indeed requires to be analysed and understood if the loftier goals under the SDGs are to be achieved. Drawing from the health policies over the past few years this Issue Brief aims to examine the political will and commitment of the government towards public health.

The Issue Brief is divided into three chapters covering four core areas concerning public health: public health infrastructure, disease profile of the country, human resources in health, and public health policy-making in India. The conclusion will provide an analysis of the current state of public health in India and raise a few questions that need to be speedily addressed to meet the SDGs within the stipulated time.

A Multiplicity of Concerns

The increasing burden of NCDs in India is an immense cause of concern, especially in the absence of adequate health facilities at the primary, secondary, and tertiary levels. The increasing role of the private sector in public healthcare has made healthcare costly and out of reach for many.

The emphasis of the present government on furthering private medical care is not a farsighted strategy without enhancing the reach and quality of public healthcare to the poor, especially in the case of NCDs like cancer, which is expected to increase by 20 per cent by 2020.¹² As per the World Health Organization's Global Health Expenditure database, as of 2014, the out of pocket medical expenditure in India was over 62.4 per cent of the overall cost of healthcare. This is an indicator of low government investment in healthcare. Out of pocket expenditure in Iraq and Afghanistan are 39.7 and 63.9 per cent respectively.¹³

According to Ernst & Young's 2015 study, there is one oncologist for every 1,600 cancer patients in India. The report suggests that 70-80 per cent of cancer patients are diagnosed in the third and the fourth stages. The patients do not get equitable access to multi-modal treatment as 40-60 per cent of the facilities and oncologists are concentrated in 7-8 metropolitan cities while fewer than 15 per cent are government operated. The skewed distribution can be assessed by the fact that only 40 of 640 districts have LINAC installations. A LINAC, or linear accelerator, is a device commonly used for radiation treatment for patients with cancer. The study estimates that by 2020, India will require 900 LINACS, 13,000 dedicated cancer beds, 550 comprehensive cancer centres, and 3,000 oncologists.¹⁴

People living below the poverty line, and even those belonging to the lower and middle classes, are forced to go without treatment in the absence of adequate care. The budget of 2017-18 is largely silent on policies and plan for prevention and control of NCDs, which are taking the shape of epidemics across both rural and urban India. In the case of such chronic diseases, at the moment investment is needed more towards providing drugs and diagnostic services to poor patients while simultaneously promoting nutrition rich diet and lifestyle changes, and discouraging the consumption of tobacco and alcohol.

In 2005, NCDs, including diabetes, respiratory diseases, cancer, and cardiovascular diseases (CVDs), accounted for 53 per cent of deaths and 44 per cent of disability-adjusted life years (DALYs) lost in India, with projections indicating a rise to 67 per cent of total mortality by 2030.^{15;16} A report by World Economic Forum and Harvard School of Public Health estimated that NCDs and mental disorders would cause \$4.58 trillion loss to India from 2012 to 2030.¹⁷ Available data indicate that premature deaths from NCDs contribute substantially to the loss of productivity; in fact, when "compared with all other countries, India suffers the highest loss in potentially productive years of life due to deaths from CVDs".¹⁸

To counter the threats, various programmes were launched by the Union Government, including the National Tobacco Control Programme (2007), the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease, and Stroke (2008), and the National Mental Health Programme (2003). All these programmes have had limited impact due to shoddy implementation, poor health infrastructure, and paucity of skilled human resources. The World Health Organization (WHO) initiated an NCD Action Plan-2020 aimed at achieving comprehensive care for NCDs through non-discriminatory access to promotive, preventive, curative, rehabilitative, and palliative basic health services. The Plan emphasised the primary role and responsibility of governments to work towards containing this alarmingly growing burden and

“...involves partnering with selected private sector entities that commit to the objectives of the action plan and including those that are demonstrably committed to promoting public health and are willing to participate in public reporting and accountability frameworks”.¹⁹

Among the many NCDs, mental health is the most neglected one in India. Union Health Minister J.P. Nadda, in an answer to the Lok Sabha, quoted the 2005 study of the National Commission on Macroeconomics and Health which reported that approximately 1-2 per cent of the population suffered from severe mental disorders like schizophrenia and bipolar disorder, and nearly five per cent from common mental disorders such as depression and anxiety.²⁰

To take care of this population, according to Dr. G. Prasad Rao, the president of Indian Psychiatric Society, “we have one doctor for every 2.5 lakh people”, whereas the norm should be at least of one for every 10,000 people. As there are only 300 postgraduates and 200 diploma holders in psychiatry who qualify every year, he suggested that more doctors at primary and secondary level be given basic training in psychiatry to bridge the gap.²¹ Currently, India spends 0.06 per cent of its health budget on mental healthcare,²² much lower than Bangladesh’s 0.44 per cent.²³ The fourth target of SDG-3 advocates promotion of mental health and well-being.

Towards achieving the SDG-3, the Rajya Sabha passed the Mental Health Care Bill 2016, which,

“...gives everyone the right to access mental health care as well as avail of treatment from mental health services run or funded by the government; it also provides for the

supply of all notified essential medicines free of cost to those with mental illness through the government. The situation today is a far cry from what is promised. While the bill says that mental health services should be available at the district level, even States with well-functioning district hospitals do not offer regular psychiatric outpatient services, leave alone in-patient facilities.”²⁴

In a move towards providing care to the mental health patient, the NHP 2017, which aims at achieving universal health coverage and delivering quality health care services to all at affordable cost, entrusts the already overburdened ASHA workers with the task related to the mental health and palliative care, both of which need specialised knowledge and training. The ASHA workers, who are the first port of call for any health-related demands of the rural population, especially women and children, have already been burdened with health education, family planning, immunisation, first aid, keeping demographic records, and primary prevention of non-communicable diseases. The addition of new responsibilities will only add to their existing workload that will result in compromised healthcare to the patients needing palliative and mental health care.

Systemic Response and the Seasonal Outbreaks of Diseases in India

It is not only the NCDs that have a debilitating impact on the health system. The seasonal outbreaks of communicable diseases like chikungunya, malaria, dengue, and Japanese Encephalitis (JE) have also crippled the Indian health system in varying degrees. The recent outbreak of chikungunya in New Delhi gave us a clear glimpse of a crippling healthcare system and the lack of timely action from the government.²⁵ During the same period, the spread of JE in Assam, Uttar Pradesh, and Odisha took a toll on human lives. Despite a history of annual outbreak and spread of vector-borne diseases, these States have not been able to prevent and manage any outbreak. As Primary Health Centres (PHCs) and Community Health Centres (CHCs) are not equipped to provide care for JE, the district hospitals are forced to bear the burden of attending to these patients^{26,27} Many patients in remote areas die due to want of timely response and an adequate referral system in case of emergency. Despite this, the central and State governments have not felt any compulsion to take serious preventive measures.

In early 2016, the government came up with the National Framework for Malaria Elimination in India, 2016-2030. The framework encouraged different States with various levels of transmission to take action to control malaria infection.²⁸ However, last year's spread of

malaria, chikungunya, dengue, and JE across the country shows that there is still a lack of political commitment for proper implementation and required resources to combat vector-borne infection.²⁹

The biggest question that is being raised in the light of these recent breakouts is over the ability of the Indian health care system to absorb these shocks and to recover from them. In his budget speech, Finance Minister Arun Jaitley said, “The government has, therefore, prepared an action plan to eliminate kala-azar and filariasis by 2017, leprosy by 2018, and measles by 2020. Elimination of tuberculosis by 2025 is also targeted.” This is a welcome move but we need to measure the promises against what happened in the past.

In 2005, India announced that it had eliminated leprosy by bringing down the incidence to one patient per 10,000 population. However, then Minister of State for Health, Faggan Singh Kulaste, said in a written reply in the Rajya Sabha that India accounted for 60 per cent of the global new cases reported during 2015. While bringing down the numbers should be the primary duty of the government, the rehabilitation of those with infection should also be given equal importance. Some of the targets, like the elimination of TB, are highly ambitious and will need to be backed by concrete strategies and initiatives to achieve the goal within the stipulated time. In 2015, the Union Health Ministry, published technical and operational guidelines for Revised National Tuberculosis Control Programme, to introduce a daily regimen that would be more effective than the existing alternate day regimen of drugs. However, the programme was not rolled out. After a Public Interest Litigation was filed by TB specialist, Raman Kakkar, in the Supreme Court, the government was ordered to enforce the daily regimen of drugs to the patients across the country by September 2017. A cursory search on google shows that apart from the States like Himachal Pradesh, Sikkim, Bihar, Maharashtra, and Kerala, where the daily regimen was launched last year on the pilot basis, only Karnataka and Jharkhand have implemented the court’s order.

Perilous State Withdrawal

The Human Resource on Health (HRH) in any health care system can perform only when they are provided with proper infrastructure. Loss of lives due to lack of adequate health care infrastructure is not uncommon in India, as has been pointed out through some cases mentioned in the introduction. Add to that a sudden outbreak of a communicable disease and one sees the entire health machinery crumbling under pressure, struggling to keep afloat.

About six million people in India need palliative care, with their numbers increasing every day.³⁰ The government’s efforts to provide psychological, spiritual and emotional care has not

matched the huge demand. Unfortunately, the importance of palliative care in improving the quality of life of patients is not well-acknowledged even by doctors. Shyam Aggarwal, an oncologist at Sir Ganga Ram Hospital, was quoted in the media as saying, “It is far from reality to say palliative care should begin with diagnosis. It is a thing of affluent societies.” Another study shows that doctors do not want to refer their patients to palliative care. As doctors are not taught the importance of palliative care in the Indian medicinal system, it has not become a part of their routine referral. It was only in late 2010 that the Medical Council of India (MCI) accepted palliative medicine as a specialty and even announced an MD course. Subsequently, a Master’s degree in palliative care was started at the Tata Memorial Hospital, Mumbai, in 2012, and at the All India Institute of Medical Sciences (AIIMS), New Delhi, in 2016.³¹ Before this, AIIMS had a two-day course on palliative care organised twice a year starting 2009.

In 2012, a National Palliative Care Strategy was drawn up that was to be implemented during the 12th Five Year Plan period to create the basic infrastructure of this specialised care.³² Ironically, no funds were initially allotted and, later, an arrangement of flexi pool was made under which the States could prepare their palliative care plans to draw up to Rs. 48.4 lakhs per district. This money could be spent on establishment of infrastructure like State Palliative Care Cell and District Palliative Care Unit with the provision of one physician and four nurses each at 629 district hospitals, up to 10 beds for palliative care in every district hospital, alongside palliative care OPDs; capacity building and training, etc.³³ Only a few States like Kerala, Tamil Nadu, and Maharashtra stepped up to the scheme.³⁴

The lack of required infrastructure was a major hurdle in achieving the goals under MDGs. According to the Gol’s Statistical Yearbook 2015, India could achieve only six of the 18 targets adopted as part of the eight MDGs in the year 2000. Though it halved maternal and child mortality from the 1990 levels, it could not achieve the targets. The Yearbook states that 89 million children in the 0-3 years age group are malnourished. India has also failed to meet the objectives of reducing the incidence of TB and malaria. The Yearbook shows that every year, 1.8 million persons develop TB and, until recently, over 1,000 people died of it daily.³⁵

The SDG-3 underlines the importance of public finance to achieve public health goals and emphasises prevention. Ironically, while addressing the 2016 India Health Summit, Union Health Minister J.P. Nadda urged “private institutions to establish their outfits in semi-rural areas to offer affordable treatment and help ensure accessibility to people in the region”.³⁶ It is important to emphasise here that the primary aim of private hospitals is to achieve maximum

profit, and that in the absence of a regulatory framework they will not have any accountability towards the people and the government.³⁷

In past few Five Year Plans, though the health infrastructure has seen growth, it could not match the growth of population. Between 2005 and 2016, the number of sub-centres (SCs) has increased by six per cent, the number of Primary Health Centres (PHCs) by nine per cent and the number of Community Health Centres (CHCs) by 65 per cent.³⁸ The problem with this growth is that the number of SCs, which is the first contact point for patients, has not increased in proportion to the population, which grew by 15.7 per cent during this period. This resulted in increasing the burden on the PHC and the CHC. The CHCs are already in a severe crisis with a shortfall of nearly 81 per cent of specialists. Thus, poor patients are stuck between understaffed and inadequate SCs, and PHCs and the CHCs where there are no doctors available. In the name of infrastructure, the government has achieved success in providing buildings for SCs, PHCs, and CHCs, which have increased to 65 per cent, 45 per cent and 91 per cent, respectively, since 2005.³⁹ But, these buildings do not have basic amenities and resources for providing health care. Rural Health Statistics (RHS) 2016 states that 71 per cent of PHCs have labour rooms but the report does not mention the equipment available and functional status of these labour rooms as per Indian Public Health Standard norms.

Inefficiencies and Mortalities

It is not the diseases alone that kill patients in India; a large chunk of the mortality is caused by the inefficiency of the health care system in preventing deaths. Maternal mortality, for example, claims around 45,000 women every year. This accounts for around 17 per cent of total such deaths globally. Post-Partum Haemorrhage (PPH), defined as the loss of more than 500-1,000 ml of blood within the first 24 hours following childbirth, is cited by the WHO as the primary cause of these deaths. As many of these deaths are preventable, the WHO is providing evidence-based guidelines and tools to improve quality and experience of care at birth.⁴⁰

To control MMR, India has programmes like *Janani Suraksha Yojana* and *Pradhan Mantri Surakshit Matritva Abhiyan* (PMSMA). Despite these programmes, we could not achieve MMR targets of 137 per 100,000 births, as envisioned under the Millennium Development Goals, due to a shortage of frontline workers. Many of the public hospitals lack basic infrastructure to facilitate safe deliveries. The RHS states that 82 per cent of the CHCs have new born care corner, but there is a shortfall of 80 percent paediatricians; 92 per cent of the CHCs have labour room, but there is a deficit of 77 per cent obstetricians and gynaecologists, which is the

primary cause of death among pregnant women during complicated pregnancies. Apart from lack of medical care, expectant mothers in rural areas often lack nutrition which affects their pregnancy. An integrated approach is necessary from various government institutions to curb MMR significantly.

Likewise, mortality among children from many preventable diseases is quite high in India. The Pneumonia and Diarrhoea Progress Report 2016 shows that India ranks among top 15 countries with 2,96,279 deaths.⁴¹ The pneumonia vaccine, pneumococcal conjugate vaccines, was introduced in the year 2000, but only in 2017 did the Government of India make it a part of Universal Immunisation Programme by implementing it in Himachal Pradesh and parts of Bihar and Uttar Pradesh in the first phase. It is yet unknown as to why the government has not made vaccines like the cervical cancer vaccine a part of the immunisation programmes. The NITI Aayog Report 2015 on the functioning of Anganwadi states that that 41 per cent of Anganwadis are cramped for space, 71 per cent are not visited by doctors, 31 per cent have no supply of nutritional supplementation, and 52 per cent have bad hygienic conditions.⁴²

The 2017-18 budget has also not done much to increase infrastructure and resources at the primary level. According to PRS Legislative Research's analysis of the budget, 104 per cent increase in Pradhan Mantri Swasthya Suraksha Yojana will be utilised for setting up government colleges. The budget has also earmarked an additional Rs. 2,000 crore for NRHM to fund 'health system strengthening', which will result in transforming 1.5 lakh health sub-centres into 'health and wellness centres'.⁴³ However, the Ministry of Finance's Notes on Demands for Grants, 2017-2018 shows that no money was allocated for the Human Resources for Health under NRHM.⁴⁴ This will restrict the functioning of the sub-centres. The NHP 2017, with a target to increase the health budget expenditure by 2.5 per cent of the GDP by 2025, was initially envisaged for 2020 in the draft National Health Policy. In the current scenario, it would be difficult to achieve the goal of converting sub-centres into health and wellness centres with the stipulated increase in health budget by 2025.

As stated earlier, political will and commitment play a key role in achieving all public health goals. Sadly, in his New Year's Eve speech, Prime Minister Modi repackaged the National Food Security Act (NFSA) as a new scheme to provide Rs. 6,000 each to all pregnant women.⁴⁵ The NFSA scheme is already being piloted in 53 districts of the country as Indira Gandhi Matritva Sahyog Yojana (IGMSY). However, due to the paucity of resources and funds, this scheme could not be universalised. In 2010, IGMSY was launched by the central government as the first scheme to provide conditional maternity benefit of Rs. 6,000 to women

for two living births. The scheme is very crucial in the Indian context where 90 per cent of women work in the unorganised sector without any benefit from the employer.

Only Odisha and Tamil Nadu are currently running nutritional programmes for pregnant women. Tamil Nadu launched the Muthulakshmi Reddy Maternity Benefit Scheme in 1987, under the leadership of the then Chief Minister M.G. Ramachandran. Initially, it provided Rs. 300 per beneficiary from its fund, which was gradually increased to Rs. 12,000 in 2011, and then scaled up to Rs. 18,000 in the current budget. Similarly, the Odisha government is running the Mamta programme as a universal maternity entitlement providing Rs. 5,000 each to all mothers.⁴⁶ These two schemes underline the importance of political will.

Analysis of the current and previous health budgets and Rural Health Statistics 2016 by Sourindra Mohan Ghosh and Imrana Qadeer shows that there is a decrease in allocation for reproductive and child health (including immunisation), communicable diseases, and maintenance of existing infrastructure. They have highlighted that the government has only rearranged the subheads of budget rather than actually increase the allocation for building and upgrading the existing infrastructure. While the NRHM's counterpart, NUHM, requires Rs. 3,391 crores per year as per government estimates for it to be effective, this year, the project got an allocation of only Rs. 752 crore. However, this meagre allocation will also be used for upgrading the tertiary health care, i.e. building new AIIMS, which is not an adequate strategy to meet the needs of primary health care. As we have already witnessed the poor service delivery by the newly established AIIMS in few States, the need of the hour is to first increase the budget for upgrading the rural and urban health infrastructure. The health budget of 2017-18 is not pro-poor and does precious little to reduce the out-of-pocket expenditure of the poor who do not get care at the PHC level and are left with no option but to go to private hospitals for treatment.⁴⁷

Issue of Trust in Government Health System in India

A FICCI–Ernst & Young (EY) report that was released in September 2016 took note of the fact that patients in India do not have faith in the government health system. The report cites an online survey conducted by EY among 1,000 respondents, which showed that 38 per cent believed that hospitals do not always act in their best interest, while 24 per cent believed that doctors may not act in their best interest. At least 40 per cent of the respondents believed that their bills and financial estimates were not correct. The report recommends the need for a transparent, multi-stakeholder planning and review approach: All of them should work in collaboration for preventive care and not only for curative care.⁴⁸

Recent NSSO data (71st NSSO report) indicates that people's dependence on public sector health services has declined from 60 per cent in 1986-87 to 41 per cent in 2014. The decline is sharper in urban areas, which account for 60 per cent of all patients. The 52nd round of NSSO data shows that there is a three-fold increase in the out-of-pocket expenditure. In 1995-96, people spent Rs. 3,561 on hospitalisation, which rose to Rs. 18,268 in 2014. Seventy per cent of the out-of-pocket expenditure is due to expensive medicines.⁴⁹ Similarly, doctors working in the public sector are moving gradually towards the private sector due to lucrative options. In April 2012, the State of Karnataka announced a vacancy of 660 specialist doctors and received just 252 applications. Finally, only 75 candidates turned up to join despite the government increasing monetary incentives.⁵⁰

Absconding doctors is one of the leading causes of worry for the health department. Doctors do not want to stay in the government sector because they have to work with limited resources and serve a large number of patients. They also do not get due acknowledgement for their work. A sustained focus on improving Human Resource on Health (HRH) is needed, which will go a long way in preventing many diseases. Task shifting, integrating AYUSH with the established health delivery system, and using private sector resources by leasing out health centres could be helpful in reducing the burden on doctors.

Non-Traditional Public Health Threats and the Health System in India

Apart from the traditional health threats like communicable diseases, IMR and MMR, India also faces challenges of man-made threats to public health, especially that of pollution. According to a recent WHO study, the Indian population living outside Kashmir and the Himalayan belt is exposed to air pollution beyond the WHO safe limits. Though the issue of air pollution was highlighted after smog engulfed Delhi last year, which was declared an 'emergency' by the government, the WHO data shows that the situation is far worse in Tier-2 and Tier-3 cities. It is striking that WHO considers air unsafe if PM_{2.5} and PM₁₀ are above 10 microgrammes per cubic metre and 20 microgrammes per cubic metre, respectively. "India's prescribed limits for the same are 20 microgrammes per cubic metre and 60 microgrammes per cubic metre, respectively."⁵¹

The Greenpeace's assessment of the Global Burden of Disease project shows a continuous increase in the number of premature deaths due to air pollution in India since 1990. "The recent data showed that in 2015, India witnessed 3,283 premature deaths per day, whereas

China had 3,233 deaths.”⁵² Pollution causes difficulty in breathing and is linked to asthma, bronchitis, eye irritation, CVDs, and can cause wheezing, coughing and phlegm production. It can even lead to impaired cognitive development and low birth weight among children.⁵³ Children are at a higher risk as their respiratory defences have not yet fully developed and they breathe more air per kilogram of body weight than adults. Besides, children also tend to do more outdoor exercises as compared to adults.⁵⁴ The elderly with low immunity are at risk, too, as the pre-existing medical conditions can exacerbate.

Due to the reasons mentioned above, air pollution has also been identified as a global health priority in the SDG. The issue is addressed in SDG-3, which deals with substantially reducing the number of deaths and illnesses from air pollution; SDG-7, which deals with ensuring access to affordable, reliable, sustainable and modern energy for all; and SDG-11, which specifically mentions reduction of the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.⁵⁵

To tackle this problem, several measures like the odd-even policy in Delhi, a temporary ban on construction activity, thermal power plants, and use of generators powered by diesel were implemented by the Delhi government. These actions are unsustainable and directed towards short-term gain. The long-term solution is effective waste management, checking vehicular pollution, and better real-time monitoring of more cities. In reality, the government is trying to woo automobile companies for investment⁵⁶ without doing anything seriously to make public transport efficient and discourage people from buying private vehicles. In a ‘cosmetic’ verdict on vehicular pollution, the Supreme Court in August 2016 lifted its December 2015 ban on the registration of large diesel vehicles in the National Capital Region. It also directed that the automobile makers would have to pay a levy equal to one per cent of the ex-showroom price of diesel vehicles with an engine capacity above 2000cc.⁵⁷ Prior to this decision, the Environment Pollution (Prevention and Control) Authority in its report to the Supreme Court had recommended a green cess of 20-22 per cent on diesel vehicles.⁵⁸ However, the government of India had opposed even the one per cent Green Tax stating that it would adversely affect its economic policies.⁵⁹

Unhealthy Policies Affecting Public Health

While health policies have a direct bearing on people, sometimes, apparently unrelated policy changes bring about disastrous results for the health sector. Demonetisation is a case in point. In an arbitrary decision, Prime Minister Modi on November 8, 2016, declared that the 86 per

cent of the total legal tender of Rs. 500 and Rs. 1,000 notes will be invalid from midnight. While economists are still debating the impact of this diktat on the Indian economy, the negative impact on healthcare is beyond any doubt.

The government, in the list of places where old notes could be used, excluded private hospitals, which according to the 71st round of NSSO survey provides healthcare services to 58 per cent of Indians in rural areas and 68 per cent of Indians in urban areas.⁶⁰ Sudarshan Ballal, Chairman of Manipal Hospitals, said that following the new rule, the hospital saw a 20 per cent decline in patient inflow.⁶¹

Many hospitals simply refused to accept cheques to avoid taking risks. Though the media consistently highlighted the plight of the patients, Arun Jaitley, the Finance Minister of India, refused to exempt private hospitals stating that it would encourage misuse of old currency.⁶² It is noteworthy that among the places that were listed for accepting old currency till December 15, 2016, were petrol pumps, shops like Kendriya Bhandar, and other designated places. The currency could also be used to pay for prepaid mobile top-ups and airline tickets.⁶³ It shows how much importance government accords to public health. Funnily, the government allowed crematoria and burial grounds to accept old currency. It is certainly small mercy for the people who died due to lack of 'legal tender' to pay for their treatment! Despite the government's push for 'digital transactions', the lack of proper infrastructure on the ground meant that even card transactions were difficult for many people. Demonetisation also visibly led to a drop-in patient inflow in the public and private hospitals.

Though there is a lack of credible data available on this, various news reports from across the country suggested a drop in domestic and international patient inflow between 15 to 50 per cent.

There is an evident contradiction in the stipulated goals of the present government and its actions. In the budget 2017-18, Jaitley made an announcement that the Drugs and Cosmetics Rules, which classifies the drugs and regulates the storage, sale, display, and prescription, will be amended to make drugs more affordable and to promote generic medicines. He further said, "These rules will be internationally harmonised and attract investment into this (medical devices) sector."

On the one hand, the government is planning to promote generic medicines and, on the other, it took the decision to close the public-sector Rajasthan Drugs and Pharmaceuticals Limited (RDPL) and Indian Drugs and Pharmaceuticals Limited (IDPL) with effect from December 28,

2016. These companies were producing tablets, capsules, liquid orals, ORS (oral rehydration solution), and ophthalmic medicines at an affordable cost for the Medical and Health Department of Rajasthan, thus directly benefitting poor patients. In the name of increasing efficiency, NITI Ayog had recommended the sale of the government's stake in India's oldest public sector pharmaceutical company, the Bengal Chemicals & Pharmaceuticals (BCPL), to private entities rather than investing in and strengthening these companies.

The challenges in public health care in India require the government to accord high priority to it. While the private sector could be an alternative, the primary responsibility of public health should be on the public sector. Rather than subsidising services by giving money to the private sector through health insurance, the government should invest in strengthening the public health infrastructure so that the need of the poorest in society can be met.

Managing Human Resources for Health

According to data from the Organization for Economic Co-operation and Development (OECD), India has 0.7 doctors per 1,000 people, which is lower than Pakistan's (0.8), China's (1.5), and UAE's (2.5).⁶⁴ Rural Health Statistics 2014-15 indicates that there is a huge shortfall of surgeons (83.4 per cent), obstetricians & gynaecologists (76.3 per cent), physicians (83 per cent), and paediatricians (82.1 per cent) in rural India. Overall, the statistics noted that there is a shortfall of 81.2 per cent specialists at the CHCs. This situation becomes worse due to rampant absenteeism among doctors at these health centres who, however, could be seen attending their private practice regularly.

In its most recent commitment towards public health, the government announced in the current budget and the National Health Policy 2017 that sub-centres and PHC would be converted to Health and Wellness Centres. This would require well-trained and well-managed human resources. However, the NHP 2017 does not suggest a concrete strategy to achieve this goal. Considering the increasing burden of work and unavailability of HRH at all levels of health care, this goal seems to be unattainable for now. The fact that the government has called for volunteers to work pro bono to fill the gap of human resource in urban areas, where a fee will be levied on the middle class, does not seem to be a well thought out policy.⁶⁵ Expecting the profit-oriented private sector to invest in such charitable venture rather than the government investing to strengthen its own workforce may not be a desirable or sustainable option.

The Medical Council of India (MCI), the apex body that governs HRH in India, has recently come under the Supreme Court's scanner for not doing enough to stop various malpractices,

including that of giving approvals to applications for establishment of new medical colleges in a non-transparent manner. In this direction, the court constituted the Justice Lodha Committee in 2016 to oversee the functioning of the MCI.⁶⁶ In comparison to the government medical colleges, a majority of private colleges operate in alarming conditions. Many studies have found them to be of below par and indulging in financial and educational malpractices, which can be done either by hiring fake patients and cheating on other parameters like infrastructure to get the license to operate medical college, or by not teaching properly resulting in poor research output and quality of doctors.⁶⁷

The NHP 2017 has been largely silent on reforming the MCI, Nursing, and Dental Councils, which approve the establishment of medical, nursing and dental colleges, respectively. The Policy states that the existing mechanism will be reviewed so that medical education can be regulated and quality ensured. However, there is an urgent need of a regulatory structure to scrutinise the functioning of private colleges of MCI's suspect record in regulating these college.

As per MCI data, India is short of 50,00,000 doctors to fulfil the WHO norm of 1:1000 doctor-population ratio. Currently, India has one doctor for every 1674 patients.⁶⁸ Not only doctors, there is a serious shortage of staff at the PHC and the CHC level as well. The CHCs need to have four specialists—a surgeon, a physician, a gynaecologist, and a paediatrician. However, as per the Rural Health Survey 2016, India is facing a shortage of 84 per cent surgeons, 77 per cent gynaecologists and obstetricians, 83 per cent physicians and 80 per cent paediatricians at the CHC level.⁶⁹

An observed fact about the public health staff and their commitment towards delivery of health services to the needy is that their practices often lack respect for the patients' rights, transparency, and ethics in medical care. In most private sector hospitals, patients are misguided and recommended unnecessary medical tests and surgeries to earn commission, dragging them further into the pits of poverty. People approach private sector hospitals primarily because doctors in the public sector barely have time to attend to them, burdened as they are by patient overload and multi-tasking, like having to conduct deliveries, administering vaccines and shots, all of which can be done by well-trained paramedics and nurses. Increasing the number of staff will enable doctors to render services where they are required for the most. Integration of AYUSH and partnering with the private sector can also be helpful in this direction. Thus, reforms in the health sector require a reform in HRH training so that the quality of service can be maintained.⁷⁰

There is also a pressing need to sensitise medical professionals in public health ethics so that they can understand the value of health care and their own responsibility towards the marginalised sections of society. A prime cause for the high attrition rate among doctors in rural areas is the lack of basic health infrastructure and amenities for doctors. The government had introduced Compulsory Rotatory Residential Internship (CRRI) as one of the measures to bridge this gap in the rural areas. But this scheme has not been successful as many medical graduates prefer opting out of this bond by paying a penalty.⁷¹ While the change in the mindset will take time, the government must do away with the option of opting out by making it mandatory for the medical students to serve in rural areas to get their degrees. This should be done alongside an increase in stipend, which is below Rs. 10,000 in many States, and introduction of bonus marks for students who have completed the internship.

In this year's budget, the Union Finance Minister made an announcement to allocate Rs. 3,975 crore, which is almost double the amount as compared to the revised estimates of 2016-17 (Rs. 1,953 crores), for Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) to provide tertiary healthcare services and medical education. There is also an announcement of an additional 5,000 medical post-graduate seats in government medical colleges.⁷² This is certainly a welcome step. However, the intention with which the policy decision was made needs to be scrutinised. The said aim of increasing the number of seats is to augment the number of specialists in secondary and tertiary level. A closer look at the health system in India makes it clear that tertiary care is already overburdened because of the low performing primary health care system. The need of the hour is to increase the number of doctors at the primary level, as it will reduce the burden on tertiary care. Uncomplicated health issues like the common cold and flu, diarrhoea, and other diseases can be efficiently cured at the primary level provided the staff is committed and well trained. In a recent move, the ministry has also allowed for-profit companies like Reliance, Wipro, and Fortis, to set up medical colleges after fulfilling MCI's minimum statutory norms.⁷³ Since these multinational corporations will look at medical education as a profit-making business, charging a high fee from the students, the students graduating are less likely to serve in the rural areas as their focus would be to recover the money spent on their education.

In 2015, the government took the initiative to upgrade 58 district hospitals into medical colleges with 100 MBBS seats in each. However, till 2017, only five district hospitals have been upgraded as medical colleges.⁷⁴ The plan to provide 5,000 extra PG seats could have been achieved just by implementing this initiative earnestly. The highest priority should have been accorded to a well-focused policy on HRH for primary health care. Merely increasing the number of PG seats will not be sufficient to meet the requirement at the primary level. More

than a new policy, India needs to scrutinise its existing policies for their effective implementation.

Conclusion

All the major institutions and authorities working in the area of public health have underlined the importance of the role of public sector spending on health care in India. However, NITI Aayog has been emphasising the role of private sector for primary health care. Currently, just 12 per cent of the urban and 13 per cent of the rural population have health insurance coverage, as per the recent National Sample Survey (NSS). Nearly 26 per cent of the total health expenditure in the rural household is met by either borrowing money or selling an asset.⁷⁵ This out-of-pocket expense on healthcare often drags the vulnerable population below the poverty line.

The NITI Aayog, on its part, is trying to help governments escape from their basic responsibility towards the people by recommending that the State governments should rely on Public-Private Partnerships (PPP) and Corporate Social Responsibility (CSR) to generate funds for public health concerns.⁷⁶ The National Health Policy 2017 has itself called for a greater role of the private sector in providing health services. However, this requires the restructuring of regulatory mechanism so that the basic tenets of public service, 'equity' and 'justice', can be ensured for the poorest of the population. The PPPs require reforms in professional bodies and also strict regulations to ensure the implementation of the Clinical Establishment Act (CEA). However, the NHP in this regard has resorted to advocacy to encourage all the states to pass the CEA or any such State-level act in their State assemblies.⁷⁶ Not all States have passed the CEA even after seven years of adoption at the national level, often leading to malpractice and discrepancies in the purchase of secondary care by the government. The rigorous adoption and implementation of the CEA is required to make the private sector transparently display the service charges they provide. The government for its part will need to invest substantially in manpower (inspector and other officials) and infrastructure to ensure regulation. Without adequate infrastructure and manpower, will governments be able to regulate and monitor the services in a PPP is a big question.

The increasing burden of NCD, communicable diseases, seasonal infections, MMR, and IMR has been attributed both to low health care expenditure by the state and unaffordable out-of-pocket expenditure incurred by patients in inadequately serviced public-sector hospitals. A country like Rwanda, with 270 times lower GDP than India, has a system of Universal Health Coverage (UHC) covering 66 per cent of its population.⁷⁷ This is also an indication that private

funding alone cannot solve the issues in public health. In 2005, the Indian government adopted the National Rural Health Mission (NRHM) with the aim of achieving UHC. After 11 years, not much progress has been made.

The situation did not improve even after the adoption of National Urban Health Mission (NUHM) and Rashtriya Swasthya Bima Yojna (RSBY) in 2013. Added to that is the gigantic task of achieving the Sustainable Development Goals (SDG), which call for defining the roles of all stakeholders, including the public and the private sector. A high level of political commitment is required to achieve this goal which requires all ministries and government institutions to take equal ownership.

India can begin by increasing public expenditure on health. The NHP 2017 emphasised increasing it to 2.5 per cent of the GDP by 2020.⁷⁸ This increment should be reflected in increased investment for preventive care. The Indian public health care system suffers on account of poor implementation of UHC, which is the best route to achieve health equity. Regulation of private healthcare should go hand in hand with UHC to avoid any discrepancy in terms of delivery of health services. While a strict regulatory mechanism for the private sector is essential, the public sector should first be resurrected and then evaluated, and there should be some checks and balances to make it efficient and in a position to achieve SDGs. In a welcome move, the NITI Aayog has launched a 'Performance on Health Outcomes' index to assess the annual incremental improvement by States and improve data collection systems.⁷⁹ Such measures of evaluation and assessment may work for improving the State-level health system, but there is an urgent need of creating a curriculum that instils a sense of rigour, ethics, and responsibility among the health workforce.

Henk Bekedam, WHO Representative to India, recently said: "Investing in health is investing in India's growth story."⁸⁰ On the contrary, Bibek Debroy, a member of NITI Aayog, said, "There is not much point in saying that government expenditure on health should be increased to 2.5 per cent of GDP unless you also explain where those extra resources will come from." He further said, "Unless as a country, given the paucity of resources, we have a consensus on what is our priority, a statement [increasing public spending] like that, to me, is operationally not very meaningful."⁸¹ Ironically, these questions on resource mobilisation are never raised in case of, for instance, military spending. This statement is also a give-away of the mindset that prevails among sections of the bureaucracy and the technocrats occupying important positions in the government.

The National Health Accounts, which monitors the flow of resources in the country's health system and provides detailed data on health finances, estimated that in 2013-14, around 69 per cent of the total money circulating in Indian healthcare came from out-of-pocket (OOP) expenditure by households.⁸² Sakthi Selvaraj, a member of the expert group that put together the NHA estimates, was quoted in *The Hindu* saying: "I cannot think of any other country, except Myanmar, where OOP is this huge. This is a huge concern". High OOP spending is a result of abysmally low government spending on health. Currently, for curative care in India, Rs. 3.4 lakh crore (80.4 per cent of current health expenditure of Rs. 4.5 lakh crores) is spent, while for preventive care, we spend Rs. 40.6 thousand crore, i.e. 9.6 per cent of the current health expenditure.⁸³

An examination of the various government policies related to public health revealed ambitious policy targets very few of which were achieved by the government due to lack of resources. For instance, the government decided to open up 3,000 Jan Aushadhi stores by 2017. At present, only 437 such stores are operational.⁸⁴ The policy to establish Kendras was aimed at making unbranded quality drugs available to the people. However, many of these Kendras have failed to provide all the drugs needed by the patients. The public-sector drug companies have been blamed for being unable to provide essential medicines in required amount. This imbalance between demand and supply is negatively affecting this programme.

Sri Lanka is the best example of how a responsive and responsible health care system can achieve public health goals by using available resources efficiently. Despite decades of civil strife, notwithstanding, in September 2016, Sri Lanka was declared Malaria free by WHO. Interestingly, Sri Lanka almost succeeded in eliminating malaria 50 years ago, but its enormous effort fell apart due to the political turmoil.⁸⁵ Sri Lanka restarted its war against Malaria again in the 1990s. In 1991, it had 4,00,000 Malaria positive cases, and the whole Malaria control initiative was oriented towards reducing infection. The most affected population were the soldiers serving in the North-eastern regions. During 2002-06, during the ceasefire, Sri Lanka successfully brought malaria cases down to only 200 new infections with the backing of international funding.⁸⁶ The country could only achieve 'Malaria free' status because of its strict surveillance, follow-ups, and early case detection and management. One lesson, which must be drawn from this example, is that regular and persistent efforts from the health system are required to achieve goals on time.

The draft National Health Policy 2015 proposed a National Health Rights Act as an essential component. This was done away with while approving the NHP 2017. It was replaced by a

vague 'incremental insurance-based approach' placing private actors in critical positions to influence the shaping and implementation of health services. Though the NHP has made a provision for Community Based Monitoring and Planning (CBMP) to place people at the centre of the health system to ensure monitoring of quality and delivery of health services, it does not make much sense in the absence of any legal right to health accorded to the people and the community.

Amit Sengupta of the People's Health Movement succinctly writes on the NHP that one can choose to believe that the new policy will galvanise change. However, what we must then examine are the quantum of change proposed in the targets set out, what concrete mechanisms for change are proposed, and if there is evidence that these will lead to better public health outcomes.⁸⁷ The NHP ends by acknowledging that any "policy is only as good as its implementation." Given the evidence of what is being done regarding the setting of targets, fund allocation and policy implementation, it is quite clear that we lag far behind our neighbours in reality.

Five areas that require immediate attention from the government

The following are five major areas where immediate attention is required to improve the delivery of health services to all without discrimination:

1. There is an immediate need to strengthen PHCs, which are the backbone of the public health system. It will not only reduce the burden on secondary and tertiary care system but also help in preventing many life-threatening diseases through timely diagnosis and medication. PHCs face severe shortage of doctors and trained para-medics, lack infrastructure, and face a severe crunch in drug and vaccine supply. As a result, the below par services have shaken the trust of the people in the public health system. The 71st round of NSSO data shows that between January and June 2014, for every 1,000 population seeking treatment, 243 went to a public sector hospital while 756 people visited a private doctor/hospital. This situation needs to change with proper deployment of resources at the right place by the government.
2. India's gradual advancement towards an insurance-based health care model is an area of concern. Studies assessing the *Rashtriya Swasthya Bima Yojna (RSBY)*, *Rajiv Aarogyasri Health Insurance Scheme (RAS)* in Andhra Pradesh, *Rajiv Gandhi Jeevodayee Arogya Yojana (RGJAY)* in Maharashtra, and *Chief Minister's Comprehensive Health Insurance scheme (CMCHIS)* in Tamil Nadu have shown that these

health insurance schemes could not cut down the out-of-pocket expenditure for poor patients, and instead funnelled huge sums of tax-based public money towards private hospitals.⁸⁸

The other problem with these insurance schemes is policy overlap as health conditions like gynaecological problems, deliveries, and cataract, which are given protection under the insurance scheme, have already been covered under some of the government's flagship programmes. Besides, a bulk of the private empanelled hospitals are located in urban areas restricting the population in the rural areas from availing of quality care. Thus, the government needs to work on these loopholes and strengthen the public health system in order to reinforce the trust of people in the system.

With the recent implementation of the GST, people will have to spend more from their pockets for accessing some of the healthcare services such as dialysis, pacemaker implantation, support devices in orthopaedics and cancer treatment.⁸⁹ With almost 84 per cent of the population outside any kind of health insurance, according to the 71st round of NSSO⁹⁰, the insurance companies will gain most out of this.

3. The major burden on the poor is the cost of dietetics and medication, which should be addressed by the government to bring down their out-of-pocket expenditure. Sadly, the budget is silent on providing free medicines to the needy. Medicines for most chronic diseases are not available at the pharmacy attached to the government hospital and poor patients are forced to buy them from the market. Late last year, the NITI Aayog had proposed to take away the drug-price-fixing powers from the National Pharmaceutical Pricing Authority (NPPA), which, if implemented, could be a major setback to affordable health care as it would affect the pricing of drugs in the National List of Essential Medicines. The government needs to prioritise the health of poor patients rather than push for free market competition in case of essential medicines.
4. For any disease, communicable or otherwise, prevention is the best strategy. Communicable diseases like TB, malaria, dengue, chikungunya, and N1H1 can be prevented with a well-functioning surveillance system, which can also help develop an account of the disease burden on the country. Similarly, early diagnosis can prevent the severity of non-communicable diseases. The Union Government launched an Integrated Disease Surveillance Project in 2004 for the surveillance of both NCDs and communicable diseases. The District (DSU), State (SSU) and National Surveillance Units (NSU) function

as an organised structure, headed by a surveillance officer and supported by epidemiologists, microbiologists, data entry operators, and data managers.

At sub-centre levels, data collection is done by multipurpose health workers (MPHW), Accredited Social Health Activist (ASHA) and Auxiliary Nurse Midwifery (ANM) personnel. However, the absence of adequate staff and resources at the local level hampers data collection. There are too many vertical programmes like the Universal Immunisation Programme, National HIV/AIDS Control Programme, Revised National Tuberculosis Control Programme. Huge funding for these programmes often pushes the surveillance programme to the margins.

5. Lastly, most public health related decisions fail to achieve the targeted goals due to the lack of evidence for the policies because of abysmally low investment in the research and data collection on public health. India requires an increase in the budget allocation for public health research, which is currently 2.9 per cent of the total health budget.⁹¹ Earlier in January 2016, the Department of Health Research's (DHR) funds were reduced by 25 per cent in the revised budget estimates. Soumya Swaminathan, secretary, Department of Health Research, and director general of Indian Council for Medical Research, was quoted in the *Indian Express* as saying that funds crunch and tougher clinical trial norms were adversely impacting critical research. "In the 12th Five Year Plan, DHR was allocated Rs. 10,000 crore but only 50 per cent of that has been released so far," she lamented.⁹²

Considering the challenges on the public health front, the Indian government needs to commit itself to achieving the public health goals stipulated in the budget of 2017-18 as well as under the SDG within the timeframe. Ideally, public health should be treated as a fundamental right of the citizens. While the situation is far from ideal in India, one hopes that a course correction will be made soon.

¹ Prasad, A., et al., 2017. "[Accounting for the future of health in India](#)", *The Lancet*, February 07. Last accessed on September 28, 2017.

² The KBK districts include Kalahandi Balangir Koraput Regions of the State of Odisha, India. In 1992-93 the KBK region was divided into eight districts- Koraput, Malkangiri, Nabarangpur, Rayagada, Balangir, Subarnapur, Kalahandi and Nuapada, which comprises of 14 Sub- divisions, 80 Tehsils.

³ Mohanty, D. 2016. "[Odisha: With no money for vehicle, man carries wife's body for 12 km](#)", *The Indian Express*, August 25. Last accessed on October 19, 2017. [<http://indianexpress.com/article/india/india-news-india/odisha-poverty-no-money-man-carries-wife-body-2994862/>]

⁴ Basu, I. 2016. "[Chhattisgarh Woman Carries Dead Foetus for Five Days, Dies After Hospitals Refuse to Operate](#)", *Huffington Post*, September 21. Last accessed on October 19, 2017. [http://www.huffingtonpost.in/2016/09/21/chhattisgarh-woman-carries-dead-fetus-for-five-days-dies-after_a_21476149/].

⁵ Hebbar, A. 2016. "[Patient at Ranchi Govt Hospital Made to Eat Off the Floor Because 'there are no plates'](#)", *Huffington Post*, September 23. Last accessed on October 19, 2017. [http://www.huffingtonpost.in/2016/09/23/woman-with-broken-arm-made-to-eat-food-off-the-floor_a_21477720/]

- ⁶ Sudhir, U. 2016. “[At Andhra Hospital, Wife Had to Drag Him Behind Her up A Ramp](#),” *NDTV*, November 17. Last accessed on October 19, 2017. [https://www.ndtv.com/andhra-pradesh-news/at-andhra-hospital-wife-had-to-drag-him-behind-her-up-a-ramp-1626759]
- ⁷ Mukhopadhyay, I. 2017. “[In Budget 2017, Arun Jaitley Gave Flailing Public Health Programmes Little Hope](#),” *Scroll.in*, February 06. Last accessed on October 19, 2017. [https://scroll.in/pulse/828471/in-budget-2017-arun-jaitley-gave-flailing-public-health-programmes-little-hope]
- ⁸ Ministry of Health & Family Welfare. 2015. “[National Health Policy 2015 Draft](#)”. Last accessed on October 19, 2017. [http://www.thehinducentre.com/resources/article6742028.ece].
- ⁹ World Health Organization. 2017. “[Global Health Expenditure Database](#)”, Last accessed on October 19, 2017. [https://data.worldbank.org/indicator/SH.XPD.PUBL.ZS]. However, according to the National Health Accounts Estimates for India 2013-14, the estimated total government health expenditure in the financial year 2013-14 is Rs. 1,29,778 crores. This equates to 1.15 per cent of GDP, 3.8 per cent of General Government Expenditure, 28.6 per cent of the Total Health Expenditure and Rs. 1,042 per capita. The Estimates can be downloaded from <http://nhsrcindia.org/NATIONAL%20HEALTH%20ACCOUNTS-%20Estimates%20for%20India-2013-14.pdf>
- ¹⁰ Karan, A, et al., 2017. “[Extending health insurance to the poor in India: An impact evaluation of Rashtriya Swasthya Bima Yojana on out of pocket spending for healthcare](#)”, *Social Science Medicine*, May 2017. Last accessed on October 19, 2017. [https://www.ncbi.nlm.nih.gov/pubmed/28376358]
- ¹¹ Bekedam, H. 2016. “[SDGs: Big Agenda, Big Opportunities for India](#),” *The Hindu*, May 8. Last accessed on March 5, 2017 [http://www.thehindu.com/sci-tech/health/sdgs-big-agenda-big-opportunities-for-india/article8570010.ece]
- ¹² Ghosh, A. 2014. “[Over 20% More Cancer Cases in 2020: Govt Report](#)”, *The Indian Express*, July 18. Last accessed on October 19, 2017. [URL: <http://indianexpress.com/article/india/india-others/over-20-more-cancer-cases-in-2020-govt-report/>]
- ¹³ World Health Organization. 2017. “[Out-of-pocket health expenditure \(% of total expenditure on health\)](#)”, World Health Organization Global Health Expenditure database, 2017. Last accessed on October 19, 2017. [https://data.worldbank.org/indicator/SH.XPD.OOPC.TO.ZS]
- ¹⁴ Ernst & Young. 2015. “[Call for Action: Expanding Cancer Care in India](#)” *Ernst & Young LLP*, July 2015. Last accessed on October 19, 2017. [http://www.ey.com/Publication/vwLUAssets/EY-Call-for-action-expanding-cancer-care-in-india/%24FILE/EY-Call-for-action-expanding-cancer-care-in-india.pdf]
- ¹⁵ Mohan, S., et al., 2011. “[Chronic Non-Communicable Diseases in India](#)”, September, Last accessed October 19, 2017. [http://www.phfi.org/images/what_we_do/PHFI_NCD_Report_Sep_2011.pdf].
- ¹⁶ Patel, V., et al., 2011. “[Chronic Diseases and Injuries in India](#)”, *The Lancet*, November 1. Last accessed on October 19, 2017. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)61188-9/abstract].
- ¹⁷ Bloom, D.E., et al., 2014. “[Economics of Non-Communicable Diseases in India: The Costs and Returns on Investment of Interventions to Promote Healthy Living and Prevent, Treat, and Manage NCDs](#)”, *World Economic Forum, Harvard School of Public Health*, November. Last accessed October 19, 2017. [http://www3.weforum.org/docs/WEF_EconomicNonCommunicableDiseasesIndia_Report_2014.pdf].
- ¹⁸ Reddy, K.S., et al., 2005. “[Responding to the Threat of Chronic Diseases in India](#)”, *The Lancet*, November 12, 2005. Last accessed October 19, 2017. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)67343-6/fulltext].
- ¹⁹ World Health Organization. 2013. “[Global Action Plan For The Prevention And Control Of Non-communicable Diseases 2013-2020](#)”, *World Health Organization*. Last accessed on October 19, 2017. [http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf?ua=1].
- ²⁰ Nadda, J.P., 2016. “[Lok Sabha Starred Question No. 187 To Be Answered On The 06th May, 2016 Mental Health Institutes](#),” *Lok Sabha*, May, 6. Last accessed October 19, 2017. [http://164.100.47.190/loksabhaquestions/annex/8/AS187.pdf].
- ²¹ Santoshi, N. 2016. “[5 Challenges Before Mental Healthcare in India](#)”, *Hindustan Times*, January 27. Last accessed on October 19, 2017. [http://www.hindustantimes.com/bhopal/5-challenges-before-mental-healthcare-in-india/story-9ryWNInIEIvON3OZTjYb6J.html].
- ²² World Health Organization. 2011. “[Mental Health Atlas 2011, Country Profile India](#)”, *World Health Organization*. Last accessed on October 19, 2017. [http://www.who.int/mental_health/evidence/atlas/profiles/ind_mh_profile.pdf].
- ²³ World Health Organization. 2011. “[Mental Health Atlas 2011, Country Profile Bangladesh](#)”, *World Health Organization*. Last accessed on October 19, 2017. [http://www.who.int/mental_health/evidence/atlas/profiles/bgd_mh_profile.pdf?ua=1].
- ²⁴ *The Hindu*. 2016. “[A New Deal for Mental Health](#)”, August 13. Last accessed on October 19, 2017. [http://www.thehindu.com/todays-paper/tp-opinion/A-new-deal-for-mental-health/article14567573.ece].
- ²⁵ Jha, D.N. 2016. “[Dengue: Ads Only After Outbreak](#)”, *The Times of India*, September 27. Last accessed on October 19, 2017. [https://timesofindia.indiatimes.com/city/delhi/Dengue-Ads-only-after-outbreak/articleshow/54532837.cms]

According to the news report, the CAG in its yet-to-be-tabled report on the preparedness of the Delhi government, municipal bodies and others in control and prevention of the vector borne diseases in the capital noted, “The Delhi government issued advertisements worth Rs. 10.04 crore between September and November over the past three years (from 2013-14 to 2015-16) only after the outbreak of dengue. Thus, the very objective of spending to create awareness about the measures to prevent an outbreak was defeated.”

The CAG in its report criticised the municipal corporations for lack of effective surveillance, shortage of staff and logistics, and absence of a standard operating procedure in the civic bodies. The report pointed out that the corporations suffer from shortage of supervisory staff, ranging from 46 per cent to 97 per cent, and in the workmen cadre, from 20 per cent to 36 per cent. “In NDMC, there is no sanctioned posts of entomologist (scientists who study insects) while the sanctioned posts of epidemiologist and sanitation officers are lying vacant as of January 2016. There is a 12 per cent shortage of anti-malaria jamadaars. The CAG points out that despite this situation, many malaria inspectors, assistant malaria inspectors and field workers are still deployed on ministerial work.” The federal auditor also found that 26 per cent of the available vector management pumps/machines in the corporations and 65 per cent of the available pumps/machines in NDMC were dysfunctional. Given the multiplicity of agencies dealing with dengue prevention and control in Delhi, CAG suggested constituting an inter-agency coordinating mechanism.

Thakur, P. 2016. “[Delhi Under-Reporting Dengue Toll, Cases: CAG](#)”, *The Times of India*, September 26. Last accessed on October 19, 2017. [<https://timesofindia.indiatimes.com/city/delhi/Delhi-under-reporting-dengue-toll-cases-CAG/articleshow/54515812.cms>].

The CAG also criticised various government bodies for hugely under-reporting dengue cases and deaths.

²⁶ **Mahapatra, S. 2016.** “[In Odisha, No Love From the Government in the Time of Encephalitis](#)”, *The Wire*, October 19. Last accessed on October 19, 2017. [<https://thewire.in/74052/je-encephalitis-nvbdcpc-article21/>].

²⁷ **Bahri, C. 2016.** “[How Incurable Japanese Encephalitis Threatens Emerging India](#)”, *IndiaSpend*, August 29. Last accessed on October 19, 2017. [<http://www.indiaspend.com/cover-story/how-incurable-japanese-encephalitis-threatens-emerging-india-70359/>].

²⁸ **National Vector Borne Disease Control Programme. 2016.** “[National Framework For Malaria Elimination In India \(2016–2030\)](#)”, Directorate of National Vector Borne Disease Control Programme (NVBDCP), Ministry of Health & Family Welfare, Government of India. Last accessed on October 19, 2017. [<http://nvbdcpc.gov.in/Doc/National-framework-for-malaria-elimination-in-India-2016%E2%80%932030.pdf>].

²⁹ **Mishra, P., et al., 2016.** “[A Patchy Approach to Fight Vector-Borne Diseases](#)”, *The Hindu Centre for Politics and Public Policy*, December 1. Last accessed on October 19, 2017. [<http://www.thehinducentre.com/the-arena/current-issues/article9401688.ece>].

³⁰ **Khosla, D., et al., 2012.** “[Palliative Care in India: Current Progress and Future Needs](#)”, *Indian Journal of Palliative Care*, September-December. Last accessed on October 19, 2017. [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3573467/>].

³¹ **Paliwal, A. 2016.** “[Too Little, Too Late: Why Palliative Care Is Vastly Inadequate in India](#)”, *Scroll.in*, October 18. Last accessed on October 19, 2017. [<https://scroll.in/pulse/818898/too-little-too-late-why-palliative-care-is-vastly-inadequate-in-india>].

³² **Ministry of Health & Family Welfare. 2012.** “[Proposal of Strategies for Palliative Care in India \(Expert Group Report\)](#)”, Directorate General of Health Services, Ministry of Health & Family Welfare, November. Last accessed on October 19, 2017. [http://palliumindia.org/cms/wp-content/uploads/2014/01/National-Palliative-Care-Strategy-Nov_2012.pdf].

³³ **Ministry of Health & Family Welfare. 2013.** “[Model PIP under National Program for Palliative Care \(NPPC\) for seeking financial assistance by state governments under NRHM Flexipool](#)”, Ministry of Health & Family Welfare. Last accessed on October 19, 2017. [<http://palliumindia.org/cms/wp-content/uploads/2014/01/Model-PIP-under-NPPC-MOH-Delhi.pdf>].

³⁴ **Paliwal, A. 2016.** “[Too Little, Too Late: Why Palliative Care Is Vastly Inadequate in India](#)”, *Scroll.in*, October 18. Last accessed on October 19, 2017. [<https://scroll.in/pulse/818898/too-little-too-late-why-palliative-care-is-vastly-inadequate-in-india>].

³⁵ **Ministry of Statistics & Programme Implementation, 2015.** “[Statistical Year Book India 2015](#)”, Ministry of Statistics & Programme Implementation, Government of India, September 15. Last accessed on October 19, 2017. [http://www.mospi.gov.in/sites/default/files/statistical_year_book_india_2015/MDG.pdf].

³⁶ **Sharma, N.C. 2016.** “[Bring Private Care to the Interiors: JP Nadda](#)” *DNA*, December 16. Last accessed on October 19, 2017. [<http://www.dnaindia.com/health/report-bring-pvt-care-to-the-interiors-2283355>].

³⁷ **Oxfam. 2013.** “[Unregulated and Unaccountable: How the Private Health Care Sector in India Is Putting Women’s Lives at Risk](#)”, *Oxfam*, February 6. Last accessed on October 19, 2017. [<https://www.oxfam.org/en/pressroom/pressreleases/2013-02-06/unregulated-and-unaccountable-how-private-health-care-sector>].

³⁸ **Ministry of Health & Family Welfare. 2016.** “[Rural Health Statistics 2015-16](#)”, Ministry of Health & Family Welfare, Government of India, December. Last accessed on October 19, 2017. [<https://nrhm-mis.nic.in/Pages/RHS2016.aspx?RootFolder=%2FRURAL%20HEALTH%20STATISTICS%2F%28A%29RHS%20-%202016&FolderCTID=0x01200057278FD1EC909F429B03E86C7A7C3F31&View=%7B3EF44ABD-FC77-4A1F-9195-D34FCD06C7BA%7D>].

- ³⁹ Kumar, A. 2017. “[Rural Health Statistics 2016 Explained in 10 Charts](#)”, *PUBHEAL*, February 14. Last accessed on October 19, 2017. [https://pubheal.wordpress.com/2017/02/14/rural-health-statistics-2016-explained-in-10-charts/].
- ⁴⁰ PTI. 2016. “[5 Women in India Die Every Hour During Childbirth: WHO](#)” *The Indian Express*, June 16. Last accessed on October 19, 2017. [http://indianexpress.com/article/lifestyle/health/5-women-in-india-die-every-hour-during-childbirth-who-2856975/].
- ⁴¹ International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health. 2016. “[2016 Pneumonia & Diarrhea Progress Report: Reaching Goals Through Action and Innovation](#)”, International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health, November. Last accessed on October 19, 2017. [https://www.jhsph.edu/research/centers-and-institutes/ivac/resources/IVAC-2016-Pneumonia-Diarrhea-Progress-Report.pdf].
- ⁴² NITI Aayog. 2015. “[A Quick Evaluation Study of Anganwadis Under ICDS](#)”, *NITI Aayog*, Government of India, June. Last accessed on October 19, 2017. [http://niti.gov.in/writereaddata/files/document_publication/report-awc.pdf].
- ⁴³ PRS Legislative Research. 2017. “[Demand for Grants 2017-18 Analysis Health and Family Welfare](#)”, PRS Legislative Research, March 1. Last accessed on October 20, 2017. [http://www.prsindia.org/administrator/uploads/general/1488370622~DfG-%20Health%20and%20Family%20Welfare.pdf].
- ⁴⁴ Ministry of Finance. 2017. “[Notes on Demands for Grants, 2017-2018](#)”, Ministry of Finance, Government of India, February. Last accessed on March 6, 2017. Page 137 [http://indiabudget.nic.in/ub2017-18/eb/allsbef.pdf].
- ⁴⁵ Saha, D., et al., 2015. “[Modi’s Claim of New Maternity Benefit Scheme Is Misleading](#)”, *Fact Checker*, July 24. Last accessed on October 19, 2017. [http://factchecker.in/modis-claim-of-new-maternity-benefit-scheme-is-misleading/].
- ⁴⁶ Sen, J. 2017. “[After Ignoring Mandated Maternity Entitlements, Modi Makes a Recycled Promise](#)”, *The Wire*, January 2. Last accessed on October 19, 2017. [https://thewire.in/91011/modi-maternity-entitlements/].
- ⁴⁷ Ghosh, S.M., et al., 2017. “[An Inadequate and Misdirected Health Budget](#)”, *The Wire*, February 8. Last accessed on October 19, 2017. [https://thewire.in/106575/health-budget-2017-18/].
- ⁴⁸ FICCI and E&Y. 2016. “[Re-Engineering Indian Health Care: Empowered Patient \(consumer\), enhanced outcome and efficient business](#)”, *FICCI and E&Y*, September. Last accessed on October 19, 2017. [http://ficci.in/PressRelease/2506/ficci_Press_Release_Reengineering_Indian_Health%20care_Final_LR.pdf].
- ⁴⁹ Singh, J., et al., 2016. “[The Changing Pattern of Healthcare in India](#)”, *Mint*, April 5. Last accessed on October 19, 2017. [http://www.livemint.com/Politics/lz9De8e3TUkru2KTFjslBN/The-changing-pattern-of-healthcare-in-India.html].
- ⁵⁰ Aiyappal, M. 2016. “[Govt Losing Specialist Doctors to Private Sector](#)”, *The Times of India*, January 16. Last accessed on October 19, 2017. [https://timesofindia.indiatimes.com/city/bengaluru/Govt-losing-specialist-doctors-to-private-sector/articleshow/21412408.cms].
- ⁵¹ Singh, K. 2016. “[Gwalior Is the Most Polluted Indian City, Not Delhi: WHO Report](#)”, *The Indian Express*, September 27. Last accessed on October 19, 2017. [http://indianexpress.com/article/india/india-news-india/gwalior-is-the-most-polluted-indian-city-not-delhi-who-report-3052946/].
- ⁵² Greenpeace. 2016. “[India Overtakes China in Number of Deaths Due to Outdoor Air Pollution in 2015](#)”, *Greenpeace India*, November 16. Last accessed on October 19, 2017. [http://www.greenpeace.org/india/en/Press/India-overtakes-China-in-number-of-deaths-due-to-outdoor-air-pollution-in-2015/].
- ⁵³ Rees, N. 2016. “[Clear the Air for Children: The Impact of Air Pollution on Children](#)”, *UNICEF*, October. Last accessed on October 19, 2017. [https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf].
- ⁵⁴ World Health Organization. 2008. “[Children’s Health and the Environment: WHO Training Package for the Health Sector](#)”, *World Health Organization*, July. Last accessed on October 19, 2017. [http://www.who.int/ceh/capacity/Children_are_not_little_adults.pdf].
- ⁵⁵ United Nations. 2015. “[Transforming Our World: The 2030 Agenda for Sustainable Development](#)”, *Sustainable Development Knowledge Platform*, September 25. Last accessed on October 19, 2017. [https://sustainabledevelopment.un.org/post2015/transformingourworld].
- ⁵⁶ Department Of Industrial Policy & Promotion. 2014. “[Make In India-Automobile Sector](#)”, *Department Of Industrial Policy & Promotion, Government Of India*, October. Last accessed on October 19, 2017. [http://www.makeinindia.com/sector/automobiles].
- ⁵⁷ Sen, S., et al., 2016. “[SC Lifts Ban on Sale of Diesel Cars in Delhi, Imposes 1% Green Cess](#)”, *Mint*, August 12. Last accessed on October 19, 2017. [http://www.livemint.com/Industry/yHP6xg0RFW8hT4OxP5tywN/SC-lifts-diesel-car-registration-ban-in-Delhi-NCR-with-rider.html].
- ⁵⁸ Aggarwal, M., et al., 2016. “[Environment Panel Recommends 20-22% Green Cess on Diesel Vehicles](#)”, *Mint*, July 5. Last accessed on October 19, 2017. [http://www.livemint.com/Politics/KZ1ZafaoCPd6zIj0KTjdQJ/SCappointed-EPCA-recommends-1025-green-cess-on-diesel-ve.html].

- ⁵⁹ **The Telegraph**. 2016. “[Govt Bats for Diesel Cars](#)”, May 10. Last accessed on October 19, 2017. [https://www.telegraphindia.com/1160510/jsp/nation/story_84773.jsp#.WGtDOPI9600].
- ⁶⁰ **NSSO**. 2015. “[India - Social Consumption: Health, NSS 71st Round : Jan - June 2014](#)”, *Ministry of Statistics & Programme Implementation, Government of India*, June. Last accessed on October 19, 2017. [http://www.thehinducentre.com/multimedia/archive/02460/nss_71st_ki_health_2460766a.pdf].
- ⁶¹ **Yasmeen, A.** 2016. “[Private Hospitals Seek Permission to Accept Old Currency](#)”, *The Hindu*, November 22. Last accessed on October 19, 2017. [http://www.thehindu.com/news/cities/bangalore/Private-hospitals-seek-permission-to-accept-old-currency/article16679667.ece].
- ⁶² **IANS**. 2016. “[Demonetisation: Patients Face the Brunt as Private Hospitals Refuse to Take Old Notes](#),” *The News Minute*, November 28. Last accessed on October 19, 2017. [http://www.thenewsminute.com/article/demonetisation-patients-face-brunt-private-hospitals-refuse-to-accept-old-notes-53523].
- ⁶³ **Sultania, D.** 2016. “[Here’s a List of 23 Places Where You Can Still Use the Old Rs 500 Notes](#)”, *International Business Times*, November 25. Last accessed on October 19, 2017. [http://www.ibtimes.co.in/heres-list-23-places-where-you-can-still-use-old-rs-500-notes-705657].
- ⁶⁴ **World Health Organization's Global Health Workforce Statistics, OECD, supplemented by country data.** 2016. “[Physicians \(per 1,000 People\)](#)”, *The World Bank*. Last accessed on October 19, 2017. [https://data.worldbank.org/indicator/SH.MED.PHYS.ZS].
- ⁶⁵ **Sundararaman, T.** 2017. “[National Health Policy 2017: a cautious welcome](#),” *Indian Journal of Medical Ethics*, April 4. Last accessed on October 19, 2017. [http://ijme.in/articles/national-health-policy-2017-a-cautious-welcome/?galley=html].
- ⁶⁶ **Outlook**. 2016. “[It’s Inspector Vs Inspector](#)”, October 24. Last accessed on October 19, 2017. [https://www.outlookindia.com/magazine/story/its-inspector-vs-inspector/297990].
- ⁶⁷ **MacAskill, A., et al.,** 2015. “[Special Report: Why India’s Medical Schools Are Plagued with Fraud](#)”, *Reuters*, June 17. Last accessed on October 19, 2017. [http://www.reuters.com/article/us-india-medicine-education-specialreport/special-report-why-indias-medical-schools-are-plagued-with-fraud-idUSKBN0OW1NM20150617].
- ⁶⁸ **Kumar, A.** 2017. “[Rural Health Statistics 2016 Explained in 10 Charts](#)”, *PUBHEAL*, February 14. Last accessed on October 19, 2017. [https://pubheal.wordpress.com/2017/02/14/rural-health-statistics-2016-explained-in-10-charts/].
- ⁶⁹ **Ministry of Health & Family Welfare, 2016.** “[Rural Health Statistics 2015-16](#)”, *Ministry of Health & Family Welfare, Government of India*, December. Last accessed on October 19, 2017. [https://nrhm-mis.nic.in/Pages/RHS2016.aspx?RootFolder=%2FRURAL%20HEALTH%20STATISTICS%2F%28A%29RHS%20-%202016&FolderCTID=0x01200057278FD1EC909F429B03E86C7A7C3F31&View=%7B3EF44ABD-FC77-4A1F-9195-D34FCD06C7BA%7D].
- ⁷⁰ **Patel, V.** 2015. “[Cure the Doctor](#)”, *The Indian Express*, December 21. Last accessed on October 19, 2017. [http://indianexpress.com/article/opinion/cure-the-doctor-healthcare-healthcare-in-india-indian-doctors/].
- ⁷¹ **PTI**. 2016. “[In Gujarat, out of 4,341 Doctors Only 530 Served in Rural Areas](#)”, *The Indian Express*, April 4. Last accessed on October 19, 2017. [http://indianexpress.com/article/india/in-gujarat-out-of-4341-doctors-only-530-served-in-rural-areas/].
- ⁷² **Gupta, P.** 2017. “[Union Budget 2017-18: A Look at the Health Sector](#)”, *Oxfam*, February 2. Last accessed on October 19, 2017. [https://www.oxfamindia.org/blog/1783/union-budget-2017-18%3A-look-health-sector].
- ⁷³ **The Tribune**, 2017. “[5,000 PG Medical Seats to Be Created](#)”, February 2. Last accessed on October 19, 2017. [http://www.tribuneindia.com/news/nation/5-000-pg-medical-seats-to-be-created/358220.html].
- ⁷⁴ **PTI**. 2015. “[Govt to Upgrade District Hospitals into Medical Colleges](#)”, *Business Standard*, May 20. Last accessed on October 19, 2017. [http://www.business-standard.com/article/pti-stories/govt-to-upgrade-district-hospitals-into-medical-colleges-115052001001_1.html].
- ⁷⁵ **NSSO**. 2015. “[NSSO 71st Round \(January—June 2014\): Key Indicators of Social Consumption in India Health](#)”, *Government of India, Ministry of Statistics and Programme Implementation*, August. Last accessed on October 19, 2017. [http://www.thehinducentre.com/multimedia/archive/02460/nss_71st_ki_health_2460766a.pdf].
- ⁷⁶ **Sethi, N.** 2015. “[NITI Aayog against Free Health Care, Bats for More Private Sector Role](#)”, *Business Standard*, August 25. Last accessed on May 6, 2017. [http://www.business-standard.com/article/economy-policy/niti-aayog-against-free-health-care-bats-for-more-private-sector-role-115082500061_1.html].
- ⁷⁷ **Mohan, D.** 2016. “[Why Not a Right to Primary Healthcare?](#)”, *Business Line*, August 12. Last accessed on October 19, 2017. [http://www.thehindubusinessline.com/opinion/why-not-a-right-to-primary-healthcare/article8981663.ece].
- ⁷⁸ **Bekedam, H.** 2016. “[SDGs: Big agenda, big opportunities for India](#)”, *The Hindu*. May 8. Last accessed on October 19, 2017. [http://www.thehindu.com/sci-tech/health/sdgs-big-agenda-big-opportunities-for-india/article8570010.ece].
- ⁷⁹ **NITI Aayog**. 2016. “[Performance on health outcomes. A reference guidebook](#)”, December 23. Last accessed on October 19, 2017. [http://niti.gov.in/writereaddata/files/document_publication/Guidebook_SHI.pdf].
- According to the guidebook, the salient features of the health index are as follows:
1. It comprises a limited set of indicators grouped into relevant domains and sub-domains for which data are available with the States.

2. Indicators are categorized into the domains of Health outcomes, Governance & Information and Key inputs/processes.
3. The maximum weightage is awarded to measurable outcomes since these remain the focus of achievement.
4. Indicators have been selected based on their periodic availability through existing data sources such as the Sample Registration System (SRS), Civil Registration System (CRS) and Health Management Information Systems (HMIS).
5. A composite index would be calculated which focuses on measuring the “level” of health status of each State (calculated as a weighted average of the various indicators). The change in the index from the base year to a reference year, and in each subsequent year, will be the measure of incremental improvement of each State, relative to its own baseline performance.
6. A decision on inclusion of all indicators for calculation of the composite index will be taken on the basis of final validation and analysis of data.

States/UTs will be ranked in categories to ensure comparison among similar entities.

⁸⁰ **Gautam, N. 2016.** “[India’s Health Care System: Upcoming Government Initiatives](#)”, *WTO News*, December 27. Last accessed on October 19, 2017. [<http://www.wionews.com/south-asia/indias-health-care-system-upcoming-government-initiatives-10625>].

⁸¹ **Bansal, S. 2016.** “[Health in India: Where the money comes from and where it goes?](#)”, *The Hindu*. August 28. Last accessed on October 19, 2017. [<http://www.thehindu.com/data/Health-in-India-Where-the-money-comes-from-and-where-it-goes/article14594704.ece>].

⁸² **Ministry of Health & Family Welfare, 2016.** “[National Health Accounts- Estimates for India-2013-14](#)”, *National Health Systems Resource Centre (NHSRC), Ministry of Health & Family Welfare (MoHFW), Government of India*, August. Last accessed on October 19, 2017.

[<http://www.mohfw.nic.in/sites/default/files/89498311221471416058.pdf>]

⁸³ **Bansal, S. 2016.** “[Health in India: Where the money comes from and where it goes?](#)”, *The Hindu*, August 28. Last accessed on October 19, 2017. [<http://www.thehindu.com/data/Health-in-India-Where-the-money-comes-from-and-where-it-goes/article14594704.ece>].

⁸⁴ **PTI. 2016.** “[437 Jan Aushadhi Kendra operational across India: Govt.](#)”, *Business Standard*, September 20. Last accessed on October 19, 2017. [http://www.business-standard.com/article/pti-stories/437-jan-aushadhi-kendra-operational-across-india-govt-116092001048_1.html].

⁸⁵ **McNeil Jr. D.G. 2016.** “[Big success story: Sri Lanka is declared free of malaria](#)”, *The New York Times*, September 21. Last accessed on October 19, 2017. [https://www.nytimes.com/2016/09/13/health/sri-lanka-declared-free-of-malaria.html?_r=2].

⁸⁶ **Subramanian, N. 2016.** “[Experience, rigour, determination: How Sri Lanka eradicated malaria](#)”, *The Indian Express*, September 12. Last accessed on October 19, 2017. [<http://indianexpress.com/article/explained/how-sri-lanka-eradicated-malaria-health-system-who-3026438/>].

⁸⁷ **Sengupta, A. 2017.** “[India’s new National Health Policy sets a very low bar for better public health](#)”, *Scroll.in*, March 20. Last accessed on October 19, 2017. [<https://scroll.in/pulse/832245/indias-new-national-health-policy-sets-a-very-low-bar-for-better-public-health>].

⁸⁸ **Prinja, S. 2017.** “[Impact of Publicly Financed Health Insurance Schemes on Healthcare Utilization and Financial Risk Protection in India: A Systematic Review](#)”, *PLOS One*. February 2. Last accessed on October 19, 2017.

[<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170996#pone.0170996.ref004>].

⁸⁹ **PTI. 2017.** “[GST: Dialysis, pacemaker, cancer devices to cost more, says health ministry](#)”, *Business Standard*, August 6. Last accessed on October 19, 2017.

[<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170996#pone.0170996.ref004>].

⁹⁰ **NSSO. 2016.** “[Health in India- NSS 71st Round](#)”, *Ministry of Statistics and Programme Implementation, National Sample Survey Office, Government of India*, January-June 2014. Last accessed on October 19, 2017. [http://mospi.nic.in/sites/default/files/publication_reports/nss_rep574.pdf].

⁹¹ **Dash S. 2016.** “[India needs to address non-communicable disease crisis](#)”, *Daily O*, March 28. Last accessed on October 19, 2017. [<http://www.dailyo.in/politics/non-communicable-diseases-diabetes-who-health-healthcare-lifestyle/story/1/9763.html>].

According to the National Health Accounts Estimates for India 2013-14, the Total Health Expenditure (THE), which comprises of capital and current health expenditure in both public and private sectors providing healthcare in India, in the financial year 2013-14 is estimated at Rs. 4,53,106 crore, this equates to 4.02% of the country’s Gross Domestic Product (GDP) and Rs. 3,638 per capita. The current health expenditure is estimated at Rs. 4,21,194 crores (93% of THE) and the capital expenditure is estimated at Rs. 31,912 crores (7% of THE). It is important to note here that the capital expenditure includes expenditure on construction of buildings and infrastructure, research and development, education and training in medical/ paramedical/ allied sciences, etc.

The Estimates can be downloaded from <http://nhsrindia.org/NATIONAL%20HEALTH%20ACCOUNTS-%20Estimates%20for%20India-2013-14.pdf>

⁹² **The Indian Express. 2016.** “[Govt cuts health research fund by 25 pc](#)”, January 15. Last accessed on October 19, 2017. [<http://indianexpress.com/article/india/india-news-india/govt-cuts-health-research-fund-by-25-pc/>].

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