

A collage of black and white photographs depicting various scenes of healthcare and community support, overlaid with semi-transparent colored rectangles (yellow, orange, teal). The images show a woman holding a baby, a man using a microscope, a man wearing a face mask, a woman holding a baby, a man and woman looking at a document, a woman holding a baby, a man and woman looking at a document, a woman holding a baby, a man and woman looking at a document, a woman holding a baby, a man and woman looking at a document.



FINANCING UNIVERSAL HEALTH COVERAGE IN INDIA



Global Health Strategies

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LIST OF ACRONYMS

APHI	Average per Household Income
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
BAMS	Bachelor of Ayurveda, Medicine and Surgery
BDS	Bachelor of Dental Surgery
BPL	Below Poverty Line
BRICS	Brazil, Russia, India, China and South Africa
CGHS	Central Government Health Scheme
CHC	Community Health Center
CRS	Congenital Rubella Syndrome
CSR	Corporate Social Responsibility
CSS	Centrally Sponsored Scheme
EHP	Essential Health Package
EKG	Electrocardiogram
ESIS	Employees' State Insurance Scheme
FP	Family Physicians
GDP	Gross Domestic Product
GHS	Global Health Strategies
HALY	Health Adjusted Life Years
Hib	Haemophilus Influenzae Type B
HIH	High Income Household
HLEG	High Level Expert Group
HMIS	Health Management Information System
INR	Indian Rupee
IPV	Inactivated Polio Vaccine
IVAC	International Vaccine Access Center
JE	Japanese Encephalitis
JRF	Joint Reporting Form
KPMG	Klynveld Peat Marwick and Goerdeler
LIH	Low Income Household
MI	Mission Indradhanush
MIH	Middle Income Household
MoHFW	Ministry of Health and Family Welfare
NCAER	National Council of Applied Economic Research
NCD	Non-Communicable Diseases
NFHS	National Family Health Survey
NHM	National Health Mission
NHP	National Health Policy
NHS	National Health Service
OECD	Organisation for Economic Co-operation and Development
OOP-POS	Out-of-Pocket Payment at Point of Service
PCV	Pneumococcal Conjugate Vaccine
Penta	Pentavalent Vaccine
PHC	Primary Health Center
PPP	Purchasing Power Parity
PSU	Public Sector Undertaking
Rota	Rotavirus Vaccine
RSBY	Rashtriya Swasthya Bima Yojan
SC	Sub-Center
SDGs	Sustainable Development Goals
SHI	Social Health Insurance
UHC	Universal Health Coverage
UIP	Universal Immunization Programme
WHO	World Health Organization

TABLE OF CONTENTS

Executive Summary	4
A. Introduction	6
B. The Need for Public Involvement in Health Care	10
C. Key Financing Challenges for Universal Health Coverage	13
D. Health Investment Priority	17
> A Case Study: Immunization	23
E. Public Financing Mechanisms for Achieving UHC in India	26
Conclusion	34
References	35

EXECUTIVE SUMMARY

India is currently undergoing a historic transformation, as sustained economic growth moves the country steadily towards middle-income status. However, in the midst of this transition, the health and well-being of India's citizens remains uncertain.

While the economy continues to grow, there has been no significant increase in public health expenditure for a decade (2005-2014).¹ In 2015-16, the Government of India allocated 1.3% of GDP to public health expenditure.² This compares unfavorably with many other developing countries in the region that spend more on health care than their larger and more prosperous neighbor, including Nepal (2.3%), Bhutan (2.6%) and Sri Lanka (2.0%). The global average, too, is significantly higher at 6% of GDP.³

With no widespread financial protection scheme in place, private spending on health care negatively impacts the financial stability of 63 million Indians every year.⁴ 62.4% of total health expenditure is out-of-pocket and services vary greatly in terms of quality and price.⁵

The Sustainable Development Goals (SDGs) to which India is a signatory, aims to achieve Universal Health Coverage (UHC) including financial risk protection for all. The SDGs recognize that it is only through universal coverage that the right to health for all can be realized, while ensuring that nobody "goes bankrupt when they get sick."⁶ If India is to make progress on achieving this fundamental principle, it must spend more and spend better.

Global Health Strategies (GHS) in partnership with the International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health, and the IKP Trust undertook a study in 2016 **to evaluate public financing mechanisms capable of sustainably delivering universal health coverage in India.**

This report summarizes the findings and recommendations emerging from a combination of desk research, expert interviews and a high-level roundtable consultation with key government officials, economists and public health experts.

The following recommendations and health investment priorities given in the report are considered key to achieving universal health coverage:

- Providing **health care cannot be left to the private sector** alone. Health care is a non-standard good and hence benefits from a welfare-maximizing government intervention.
- **Public allocations on health today are insufficient** to meet the demands of achieving UHC. Official committees, independent commentators and current government policy advocate for an average of at least double the present allocation for health. Specifically, the National Health Policy (NHP) commits to increasing public health expenditure to 2.5% of GDP

- **General tax revenues** are the primary resource for increasing public allocations for health. We recommend that India earmark a higher percentage of incremental increases in GDP towards health care. However, allocations from tax revenues alone are insufficient for delivering UHC.
- A **national social health insurance** scheme should be employed for the entire population, where the government pays for the poor and vulnerable, the formal sector pays through mandatory payroll contribution, and innovative mechanisms are employed to get contributions from the informal sector.
- Furthermore, **supplementary mechanisms** such as sector-specific taxes, sin taxes, corporate social responsibility (CSR) contributions, tax-free bonds and trust funds could be explored to raise capital for specific health interventions over short periods of time.
- **Primary care** should be an investment priority, due to its potential to alleviate financial and infrastructural demands on the Indian health system, as well as its direct positive impact on health outcomes. A high-quality primary care system that is free at the point of service, accessible to all, and that ensures gate-keeping for higher levels of care, should be prioritized.
- Within primary care, high-impact and cost-effective interventions such as **immunization** must be prioritized.

By upholding the commitment to provide universal health coverage, India stands to benefit from the economic and social returns that result from appropriate investments in health care.

A. INTRODUCTION

In 2015, the Government of India made a commitment to the health and well-being of its citizens by ratifying the Sustainable Development Goals. SDG 3.8 obliges signatory states to realize Universal Health Coverage, which means that every member of society should receive quality health services without suffering financial hardship. To avert financial hardship, the SDGs mandate that risk protection be provided for all, thereby minimizing potentially catastrophic out-of-pocket health expenditures.

India has far to go in its journey towards achieving these goals on universal health coverage. Despite a rapidly growing economy that provides increasing fiscal flexibility, public expenditure on health has seen no significant increase for a decade (2005-2014), ranging from 1.1% – 1.4% of GDP.⁷ These figures compare poorly with India's neighbors and fellow developing nations, many of which spend more on health care, including Nepal (2.3%), Bhutan (2.6%) and Sri Lanka (2%). The global average is also significantly higher at 6% of GDP.⁸

Figure 1: Public health expenditure in India (% of GDP)



Source: World Health Organization Global Health Expenditure database

Such low levels of public expenditure shift the burden of financing health care through out-of-pocket payments for services at the point of care. These services vary widely in quality and price.⁹ Out-of-pocket expenditures at the point of care account for 62.4% of total health spending, and are made in the absence of any widespread financial protection scheme.¹⁰ As a result, private spending on health care upsets the financial stability of an estimated 63 million Indians every year, driving them into poverty.¹¹

SDG 3.8 UHC

'Achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all'

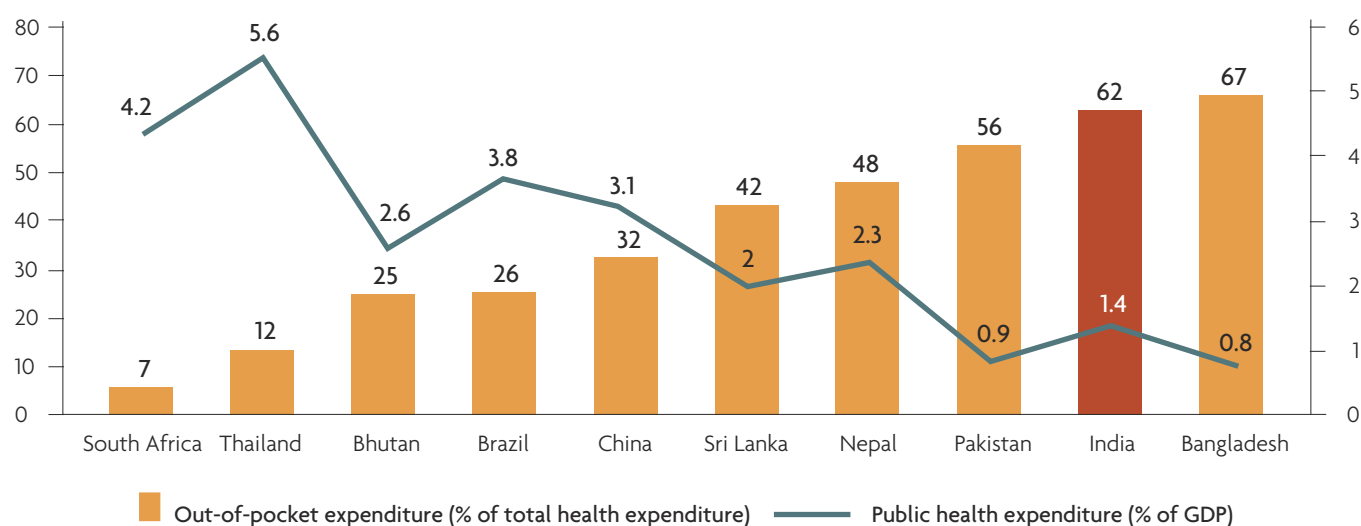
Who: Every person, including the poorest and most vulnerable

What: Full range of essential health services, including prevention, treatment and care

How: Costs are shared among the entire population, through prepayment and risk pooling, rather than shouldered by the sick. Access is based on need rather than ability to pay.

- UHC means that everyone can access quality health services without suffering financial hardship. It enshrines the human right to health.
- 100 + low- and middle-income countries, home to three-quarters of the world's population, have taken steps to deliver UHC.
- Countries implementing UHC are reaping the benefits: healthier communities and stronger economies.
- UHC makes sense economically. Every \$1 that a country invests in health today can produce up to \$20 in full-income growth within a generation.

Figure 2: Public health expenditure and out-of-pocket expenditure



Source: World Health Organization Global Health Expenditure database

This problem demands urgent attention. India must spend more and spend better on the health of its people in order to alleviate the financial hardship faced by millions of families seeking basic health services. The SDGs recognize that it is only through universal coverage that the right to health for all can be realized, while ensuring that nobody "goes bankrupt when they get sick."¹²

Global Health Strategies, in partnership with the International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health, and the IKP Trust undertook this study to evaluate and recommend public financing mechanisms capable of sustainably delivering universal health coverage in India. While any discussion of health financing must acknowledge the parallel importance of health system design for efficient spending, this study will limit itself to the question of how funding can be increased. These two questions are conceptually linked, but distinct from one another, and can therefore be addressed separately.

OUR APPROACH

Section A provides a brief overview and the methodology of the study.

Section B makes a case for higher allocations of public funds for health care. While private markets work efficiently for the exchange of most goods and services, health care has some peculiar features which are impossible for markets to self-correct. Thus, there is a need for welfare-maximizing government interventions in this sector, even for the non-poor.

Section C sets out key financing-related challenges that currently obstruct the implementation and realization of UHC.

- First, we show that public expenditure on health is insufficient to meet the enormous demands of providing equal access to quality care for the entire population. Official committees, independent commentators and current government policy advocate for an average of at least double the present allocation for health. Specifically, the NHP commits to increasing public health expenditure to 2.5% of GDP.¹³
- Second, we trace the causal chain that links low levels of public spending and high out-of-pocket expenditures. This form of expenditure brings the costs of health care to bear directly on individuals and their families, who frequently suffer severe financial hardship and even impoverishment as a result.
- Third, we diagnose key inefficiencies in the current delivery and expenditure of public funds, advocating for a comprehensive approach to health financing.

Section D identifies priority health investment areas.

- Primary care is recommended as a priority investment area due to its preventive nature, as it alleviates pressure and spending on secondary and tertiary care services. A high-quality primary care system that is free at the point of service, accessible to all, and that ensures gate-keeping for higher levels of care, should be prioritized.
- Within primary care, high impact and cost-effective interventions such as immunization should be prioritized.

Section E looks at how best to address health financing challenges by evaluating several financing mechanisms on their relative effectiveness and feasibility.

- **General tax revenues:** General tax revenues are considered first, as they constitute the primary source of funding health in India. While an increase in tax allocations for health is recommended, India's low tax-to-GDP ratio and competing policy priorities constrain the funding capacity of tax revenues. Therefore, additional financing mechanisms are required to supplement tax allocations and to reach the level of funding required to achieve UHC.

- **National social health insurance:** A national social health insurance scheme should be employed for the entire population, where the government pays for the poor and vulnerable, the formal sector pays through mandatory payroll contribution, and innovative mechanisms are employed to gather contributions from the informal sector.
- **Supplementary mechanisms:** Further supplementary mechanisms – including sin taxes, corporate social responsibility contributions, tax-free bonds and trust funds – could be employed to finance very specific interventions for short periods.

METHODOLOGY

This study employed a mixed-method research design.

- First, a detailed **literature review** of global experiences in financing health care was undertaken, which was complemented with an **analysis of secondary data** related to health budgets to generate initial hypotheses on financing mechanisms.
- Second, the hypotheses underpinned a series of **expert interviews**, which validated the secondary data and provided insights on the feasibility of the financing mechanisms. The experts included government officials, economists, finance and tax specialists and public health policy professionals.
- Third, a **high-level national consultative meeting** was organized to gather consensus on key recommendations that emerged from the earlier research phases.¹⁴ The participants included state and central government officials from the Indian ministries of health and finance, economists, public health experts and private sector stakeholders, as well as global and local development partners.

B. THE NEED FOR PUBLIC INVOLVEMENT IN HEALTH CARE

Governments typically focus on providing services and regulation where free market solutions are ineffective. Health care is one such industry where markets alone fail to produce optimal outcomes. In one of the most influential economic papers of our time, Nobel laureate Kenneth Arrow, established reasons for not selling health care like regular market commodities such as food and clothing.¹⁵ There are several peculiar features that make health care a non-standard good.

- **Unpredictability and hyperbolic discounting of health-related risks by individuals**

An individual's need for health care is highly volatile, irregular and unpredictable, and therefore differs from other basic expenses like food or clothing. The negative consequences of unpredictability are compounded by people's natural tendency to disregard future health-related risks. Humans tend to take their current health for granted and do not adequately prepare for potential future illness or injury, a phenomenon known as hyperbolic discounting.

- **Information asymmetry and the importance of trust**

Patients are at a significant informational disadvantage when receiving treatment, and tend to defer decisions to doctors with significantly more information and expertise. While information has generally increased with internet access, most patients remain largely uninformed about their health care decisions. Trust is therefore a key component of the doctor-patient relationship. A doctor's behavior is expected to be governed first and foremost by concern for the patient's welfare and not by his economic self-interest, something that might not be expected of a salesman.

- **Product uncertainty and idiosyncrasies of payment**

Due to the unpredictability of health outcomes, especially for serious conditions, it is difficult for patients to predict health care outcomes or quality. In addition, services are typically paid for after the fact. Patients receive an invoice only after a non-refundable service has been delivered. Given the prevalence of obscure pricing mechanisms, shopping around for health services based on price and value is usually difficult.

- **Vulnerability at point of consumption**

Health care consumers must frequently make choices at times of emotional and physical vulnerability, when they are facing serious risks to their functional ability. Inherently, this makes health care consumption decisions atypical.

- **Barriers to entry**

Medical professionals must be licensed to practice, thereby restricting the supply services to the number of graduating doctors each year.

Kenneth Arrow argued that government intervention is necessary to correct for these deviations.¹⁶ Today, examples of development efforts of effective public involvement from most wealthy capitalist democracy in the world show that some form of government financed and managed universal health care is the most sensible and effective option. For instance, in Japan, 82% of all health expenditure is publically funded compared to the OECD average of 72%. The country has a mandatory health insurance scheme, with premiums varying based on the socio-economic status of beneficiaries. Healthcare in Sweden is primarily funded by the government financed through taxes.¹⁷ At 11.9% of GDP, the Swedish government is one of the highest spender on healthcare in Europe.¹⁸ In addition, a systematic review of health sector performance in low and middle-income countries found public provision of health care to be more cost efficient and results in greater positive impact on outcomes than a largely private sector provided health system.¹⁹

In India though, healthcare is largely financed by out-of-pocket expenditures at private health facilities. The insufficient reach of the public sector has resulted in the growth of a massive, heterogeneous, and mostly unregulated private healthcare sector.²⁰ The private sector today provides more than 80% of outpatient care and 60% of inpatient care in the country.²¹ The payments at these facilities are made largely out of pocket at the point of service. Data shows that 62.4% of total health spending in 2014 was made out-of-pocket in India, compared to the global average of 18.62%.²²

While the private sector has an important role to play, over reliance on a largely unregulated private sector where payments are mostly made out-of-pocket can in the long-term result in negative conditions of over-treatment, poor quality, selective care and cost escalations.

- **Over-treatment**

Driven largely by a profit motive the private sector often over-treats patients to generate greater revenue. In India, NFHS 4 data across 15 states and union territories suggest that approximately twice the numbers of babies are delivered by cesarean section in the private sector as compared to the public sector. While WHO guidelines suggest that cesarean sections should be prescribed within the range of 10-15% of total births, private sector rates range from 87.1% of the deliveries in urban Tripura (compared to 36.4% in the public sector) to 25.3% in urban Haryana (compared to 10.7% in the public sector).²³ This disparity between rates across sectors may be due in part to the higher fees associated with caesarean section deliveries compared to normal deliveries.²⁴

- **Selectivity**

Private providers selectively target treatments toward those with high incomes rather than those with the greatest need. This results in large disparities in accessible health care, such that basic health care continues to remain out of reach to large segments of both the urban and rural population due to the high cost of private health care.

- **Low quality care**

The Indian private health care sector is highly unregulated, which results in varying degrees of service quality. For example, a study in rural Madhya Pradesh of the private health care sector found that only 11% of the sampled health-care providers had a medical degree, and only 53% of providers had completed high school.²⁵ In terms of technology and treatment, several private sector providers continue to use obsolete diagnostic equipment and treatment regimens, especially when treating tuberculosis.²⁶

- **Risk of cost escalations**

India's health system functions at low cost because of a lack of consumers who can afford expensive services. However, as the per capita GDP rises, the country could face rising cost pressures. Rampant cost escalations have occurred in other countries with large private health sectors, including the United States.²⁷

As countries around the world take varying steps to provide universal health coverage, it becomes increasingly clear that if the whole chain of care is privatized and unregulated, that chain of care becomes inefficient. Ensuring universal access to a non-standard good like health care is therefore, in our opinion, an obligation the state cannot abdicate.

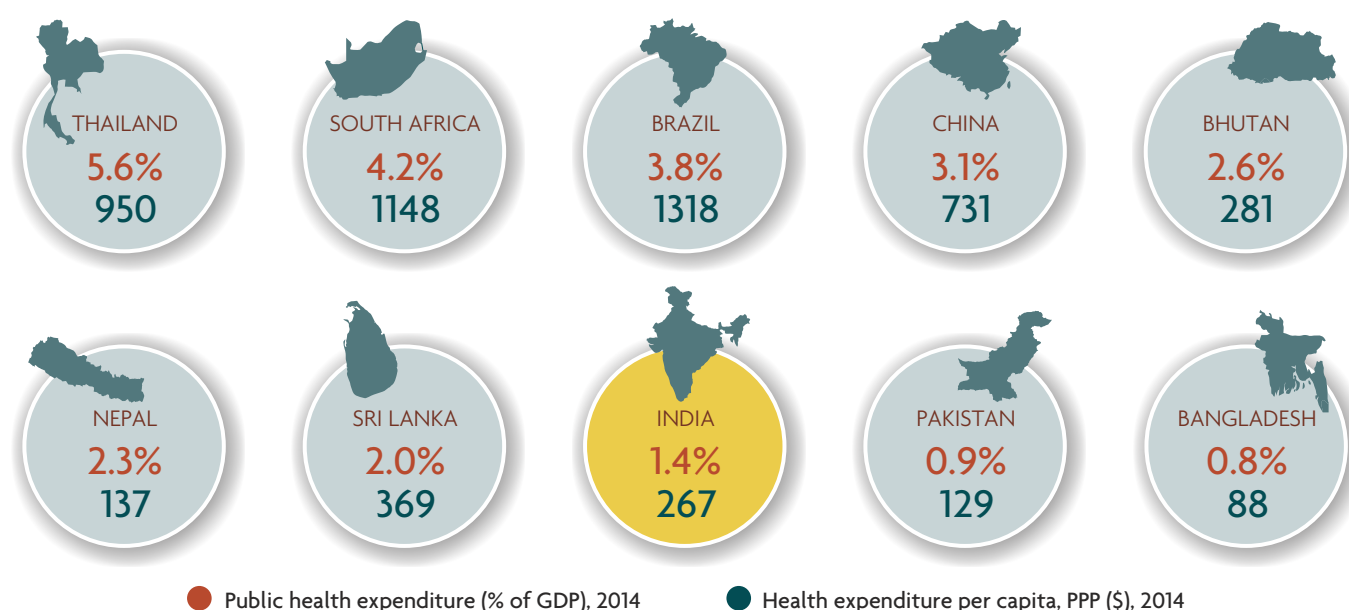
C. KEY FINANCING CHALLENGES FOR UNIVERSAL HEALTH COVERAGE

India's current spends on health are insufficient to provide UHC

India spends approximately 4.5% of GDP on health care, which is less than half the global average of 10% of GDP.²⁸ However, public spending, at just 1.4% of GDP, accounts for only one-third of total health expenditure – significantly lower than the global average of 6% of GDP.^{29,30}

Several reports have established the need to increase public spending on health for India to provide universal health coverage to its citizens. For example, the "High-Level Expert Group Report on Universal Health Coverage for India" by the erstwhile Planning Commission of India, recommended that public health expenditure be increased to 3% of GDP by 2022.³¹ Similarly, a study conducted by Ernst & Young estimated that government expenditure on health will need to account for 3.75% - 4.5% of GDP by 2022.³² Most recently, the National Health Policy 2017, commits to increasing public health expenditure to 2.5% of GDP by 2025.³³ However, current spending levels fall far short of these targets and put India behind several other developing countries in terms of health investments. As seen in Figure 3, fellow BRICS governments in South Africa, Brazil and China spend at least double, and Thailand spends triple the amount.³⁴ Even some of India's much smaller and less economically powerful neighbors, including Bhutan, Nepal and Sri Lanka, have committed a greater proportion of public resources to health care.³⁵ A similar picture emerges when comparing per capita public expenditure for the same set of countries. Except for Nepal, Pakistan and Bangladesh, all of the countries in Figure 3 spend more than India, with Brazil spending five times as much as India.³⁶

Figure 3: Public health expenditure



KEY TAKEAWAYS

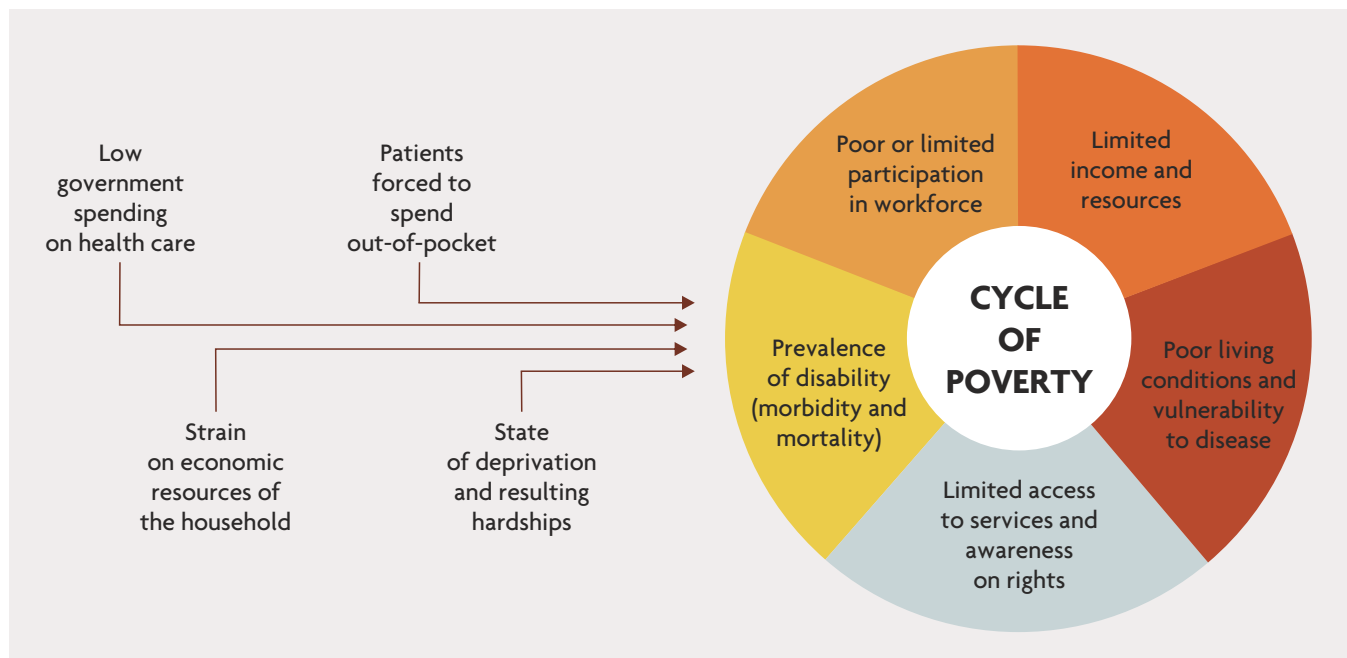
- India compares poorly with its neighbors and developing nations around the world in terms of public spending on health care.
- India's current public expenditure on health care is insufficient to provide universal health coverage.
- Such low levels of public spending shift the financial burden onto ordinary families, who pay out-of-pocket for health services and are often forced into poverty as a result.
- India has to spend more and spend better on the health of its people, in order to free millions of families from the financial hardship they currently face when seeking basic and fundamental health services.
- The most important means of providing better health care for the people of India is through increased public spending, which results in a corresponding reduction in out-of-pocket expenditures.

High out-of-pocket expenditures, paid without financial protection, are the single biggest cause of households being pushed into poverty.

Such low levels of government expenditure combined with low coverage rates for private health insurance, means that individuals bear the cost of a majority of health care consumption through out-of-pocket payments at the point of service. These expenditures accounted for 62.4% of total health spending in India in 2014, compared to the global average of 18.62%.³⁷

While approximately one-quarter of the population in India is covered by various health insurance schemes, they provide financial protection only for low-cost inpatient care.³⁸ Yet, medicines alone constitute 72% of total out-of-pocket payments.³⁹ If out-of-pocket spending on both medicines and outpatient care were to be eliminated, the

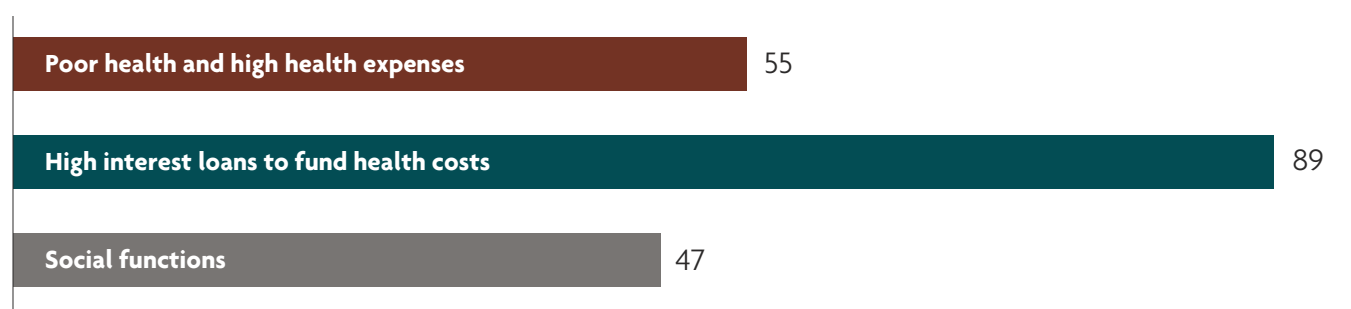
Figure 4: Low government spending on health perpetuates the cycle of poverty



number of people falling into poverty due to health expenditures would be reduced by 99.5%.⁴⁰ Existing health insurance schemes focusing on inpatient care therefore provide little protection against the financial hardship endured by many Indians as a result of unaffordable health care, treatment and services.⁴¹

Without proper financial protection, many Indian households face potentially crippling health care bills and live with a high degree of health insecurity.⁴² As a result, approximately 63 million Indians are pushed into poverty every year.⁴³ The situation further deteriorated, with 18% of all households facing catastrophic health expenditures in 2011-12, as opposed to 15% in 2004-05.⁴⁴ Furthermore, two of the three principal reasons for Indian households falling below the poverty line are health-related. These include poor health and its related high expense, as well as debt repayments on high-interest loans taken to fund health care costs.⁴⁵

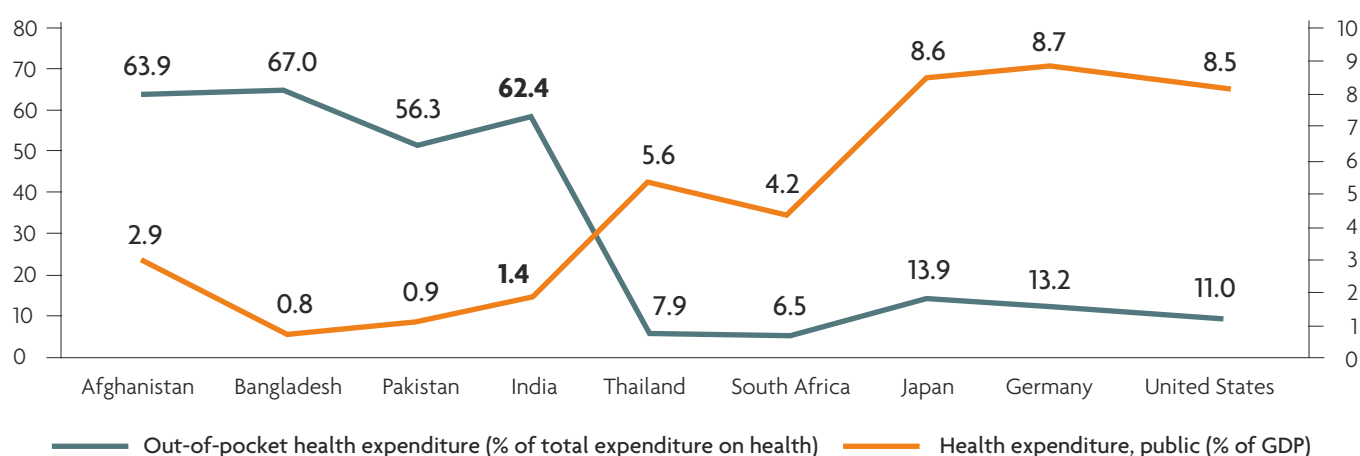
Figure 5: Principal reasons for Indian households falling into poverty (in %)



Source: *Falling into Poverty: Other Side of Poverty Reduction*

International precedents show that when public spending on health care rises to around 6% of GDP (the global average for universal health coverage systems) out-of-pocket payments fall below 20% of total health expenditure.⁴⁶ This problem demands urgent attention – India must spend more and spend better on the health of its people, in order to free millions of families from the financial hardship they currently face when seeking basic and fundamental health services. **One way of doing so is through increased public health spending, which results in a corresponding reduction in out-of-pocket expenditures.**

Figure 6: Negative correlation between out-of-pocket health expenditure and public health expenditure (in %)



Source: *World Health Organization Global Health Expenditure database*

The inefficient use of resources diminishes funds that are already scarce

Although the Constitution of India delegates primary responsibility for health care to the states, the role of the Centre is growing in practice. Since 2010, the central government's share in public expenditure has been approximately 30% and decreased only marginally.⁴⁷ Thus, there is a need for governments at both the national and state level to cooperate effectively to ensure the optimal use of resources for health care.

Two major problems arise from this dual funding system. First, over the past decade, government ministries have not spent the total budget allocated for health from the Centre. The Ministry of Health and Family Welfare (MoHFW) spent only 63.9% of its 1.4 lakh crore budget allocated in the Eleventh Five Year Plan (2007-12).⁴⁸ In addition, inconsistency in the timing of funds released from the Centre to state governments has contributed to inequity in terms of service delivery across the country.⁴⁹ In the first quarter of 2015-16, 57% of the allocations had been released for the National Health Mission (NHM).⁵⁰ However this figure was 29% in 2014-15 and 46% in the year 2013-14.⁵¹

Second, states themselves are culpable for the inefficient use of available resources. Poor absorption and distribution of funding at the state level leads to an accumulation of unspent resources each year. Variation among states in terms of absorptive capacity also contributes to the inequitable distribution of health services across the country.⁵² This lack of absorptive capacity at the state level has been used both as a justification for the Centre's non-release of funds, as well as an argument for decreasing overall funding for health care.⁵³ Although this paper limits itself to the discussion of health financing rather than system design, it is necessary to underline the mutually reinforcing effect that the two have on one another. Proper investment is required for an integrated and cohesive health care system, and such a system, in turn, ensures that resources are fully and effectively utilized.

DEVOLUTION: AN OPPORTUNITY FOR TAX-BASED FINANCING?

Beginning in the financial year 2015-16, the Government of India committed to devolving 42% of its tax pool to the states, a significant increase from the previous year's commitment of 32%. This move came as part of a long-standing demand from the states for greater devolution and flexibility in the design and implementation of centrally sponsored schemes, including the NHM.

Increased tax devolution from the Centre provides an opportunity for the states to prioritize health care financing. With greater autonomy over spending at the state level, funds can be directed in a more targeted manner that is appropriate to local contexts. However, concerns exist due to the potential for states to further de-prioritize health spending in relation to other policy areas. In addition, the varying performance of different states in terms of inequitable public service delivery and access makes devolution a potential challenge as well as an opportunity.

Despite these concerns, early data indicates that social spending in general increased significantly between 2014-15 and 2015-16* – the same period during which central tax devolution increased by 10%. However, it remains to be seen at the end of the current financial year (2016-17) exactly how states have used the extra 5.24 lakh crore at their disposal.**

* State of Social Sector Expenditure 2015-16. Accessed from <http://accountabilityindia.in/state-social-sector-expenditure-2015-16-1>

** Press Information Bureau, Government of India, Ministry of Finance. Accessed from <http://pib.nic.in/newsite/PrintRelease.aspx?relid=136590>

D. HEALTH INVESTMENT PRIORITY

As discussed in the previous section, unaffordable out-of-pocket payments for health-related expenditures push approximately 63 million people into poverty each year in India.⁵⁴ Achieving UHC is, first and foremost, about covering individuals suffering from poor health and financial consequences due to limited access to health care products and services.

Many developing countries have formulated differing strategies to improve health care access for their citizens. On the supply side, successful countries have built robust and technology enabled primary care systems characterized by high accessibility and compulsory gate-keeping, thereby reducing financial and operational burden on secondary and tertiary facilities. On the demand side, many countries have successfully implemented mandatory social health insurance schemes limiting out-of-pocket expenses at point of service by smoothing expenditure and pooling of risks.

India too needs to develop appropriate supply and demand interventions to tackle high out-of-pocket expenditures. A successful effort will require addressing concerns regarding both the financing and provisioning of health care. While the financing challenges will be tackled in the next section, hereon after this section will discuss the priorities regarding the provisioning of health care in the country. In terms of provisioning, India needs a high-quality comprehensive primary care network that is free at the point of service, accessible to all and ensures gate-keeping for higher levels of care. A scheme with an optimal design centered around free primary care, coupled with a smoothly functioning referral system for patients requiring advanced care, also provided free at point of service, will ensure that financial risk associated with out-of-pocket at point of service is minimized.

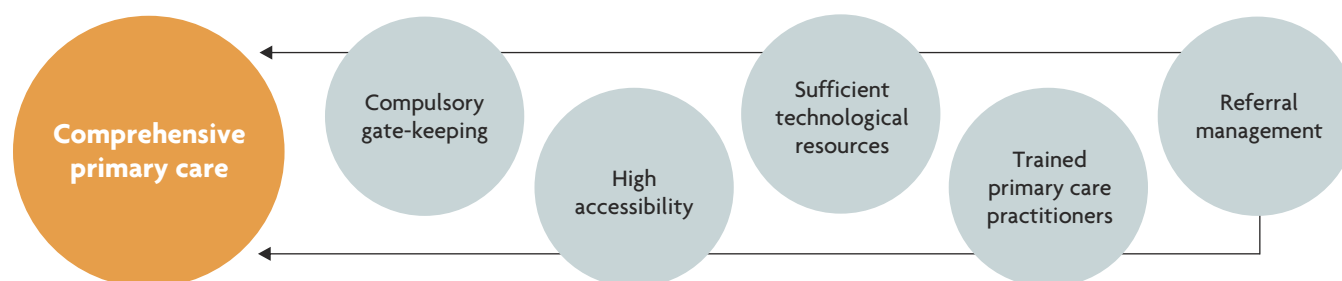
Building a comprehensive primary health care system

A comprehensive primary health care system is characterized by high accessibility, sufficient technological resources to diagnose and treat common health problems, compulsory gate-keeping and referral management to secondary and tertiary care hospitals, and trained primary care practitioners. These fundamental attributes of high primary health care performance are evident in countries with strong health systems. For example, Spain, Thailand, Kyrgyzstan and Colombia have successfully rationalized hospital care through implementing referral management, with disincentives for directly seeking care at secondary/tertiary levels.^{55,56}

Evidence from several countries and programs indicates that a well-developed primary health care system is beneficial for all stakeholders, including:

- the purchaser, through reduction in costs of health care;
- the provider, as the cost of setting up secondary/tertiary health care facilities is far higher; and
- the insurer, through the prevention of disease and treatment of conditions at lower costs in primary health care facilities.

Figure 7: Comprehensive primary health care



Ideally, primary care should deal with the majority of the population and provide both primary and secondary level of prevention together with referral services. Through playing a role of the gate-keeper, primary care has a principal role in the referral system leading to a decreased load at the overburdened secondary and tertiary health care centers.

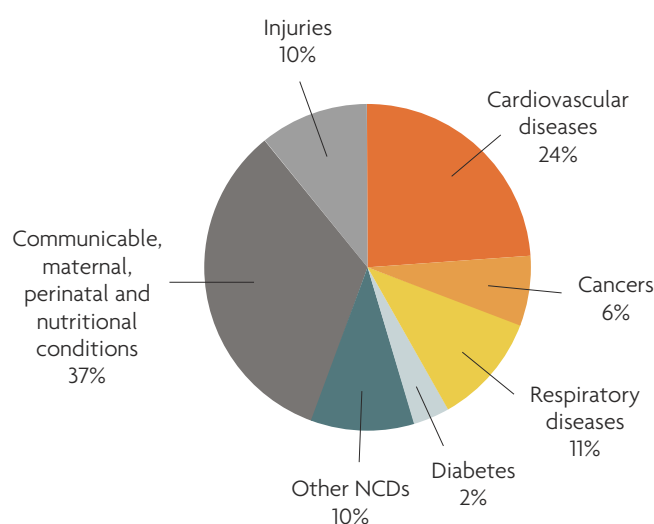
In Thailand, a gate-keeping system prevents patients from going directly to general or regional hospitals without a referral from district hospitals (except in an emergency or when paying out-of-pocket directly). Hence, today 45.3% of patient visits are to health care centers, 37% are to district hospitals, and only 17.8% are to tertiary care centers.⁵⁷ Under this system, the provincial health office acts as the link between district hospitals and general hospitals.⁵⁸ In the Indian context, the gate-keeping role is very limited and has not been considered a priority, leading to crowding of patients at secondary and tertiary facilities. The problem with primary health care in India is two-fold – in design and in provisioning.

Design

Perhaps the biggest challenge facing the primary health care system in India is its design. While India is witnessing a rising burden of non-communicable diseases (NCDs), the public health system is largely geared to address maternal and child health.

In India, cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, and other NCDs are a leading cause of death, accounting for an estimated 60% of all deaths (ahead of injuries and communicable, maternal, prenatal, and nutritional conditions).⁵⁹ Incidence of chronic diseases such as diabetes, hypertension and obesity is on an unprecedented rise. The absolute number of adults with diabetes in India increased from 11.9 million in 1980 to 64.5 million in 2014, with the country contributing 15.3% of the global share of adults with diabetes.⁶⁰ In 1975, India had only 0.4 million obese men and 0.8 million obese women. By 2014, those numbers had increased to 9.8 million obese men and 20 million obese women. The current health system is not adequately designed or appropriately equipped to respond to these emerging health needs.

Figure 8: NCD deaths in India, 2010 (in %)



Source: NCD Country Profile – India 2010. World Health Organization 2015

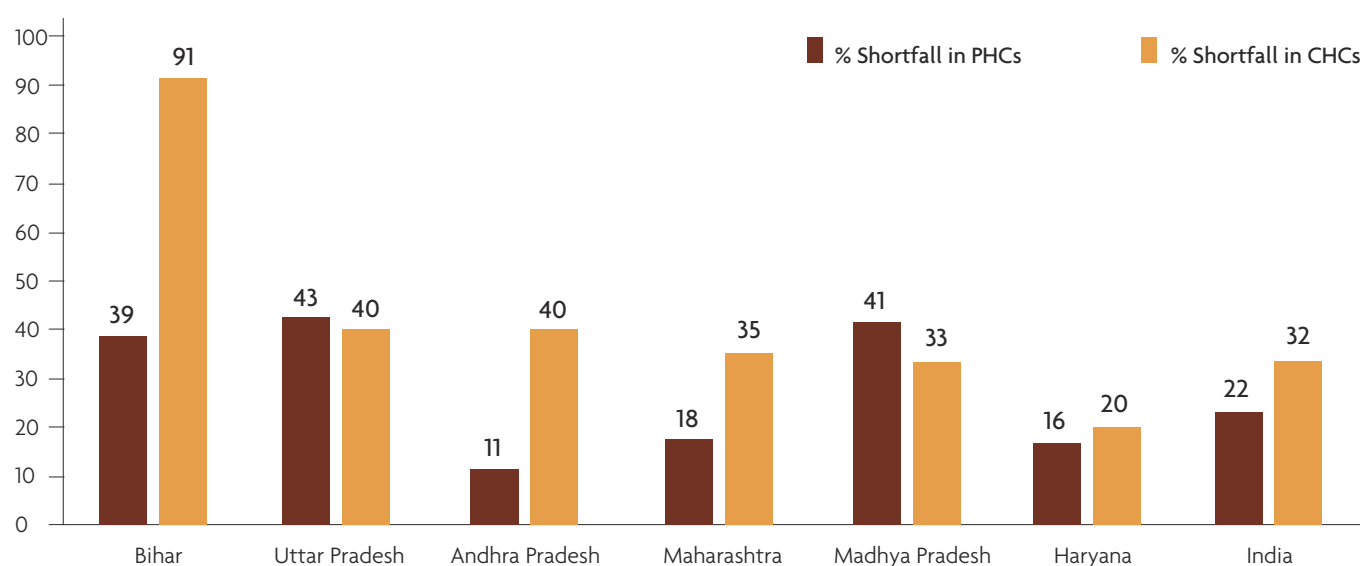
The current lack of focus on preventive-promotive health has overburdened secondary and tertiary hospitals, and led to inefficient and expensive health care.⁶¹ Evidence suggests that 95% of hospital cases can be effectively treated at the primary care level.⁶²

Provisioning

In addition to – and, largely, because of – weak primary health system design, the provision of primary health care in India is limited. Public resources for the delivery of health services remain low and the lack of accountability and regulation have affected health outcomes. There is a significant shortfall in primary care health infrastructure, human resources, and quality of services.

Since the launch of the NHM in 2005, the Government of India has focused greater attention on expanding primary health infrastructure in the country. The numbers of sub-centers (SCs) and primary health centers (PHCs) grew substantially between 2005 and 2015, increasing by 17.5% and 11.5%, respectively.⁶³ The number of Community Health Centers (CHCs) also grew by 3.5%. However, despite these efforts, primary health services are extremely inequitable within the country, both in terms of access and delivery. For example, Andhra Pradesh suffers a PHC shortfall of 11%, Uttar Pradesh of 43%, Bihar of 39% and Madhya Pradesh of 41%.⁶⁴ Furthermore, in terms of service delivery, more than 80% of the increased service provision under the NHM was attributed to just 20% of health facilities.⁶⁵

Figure 9: Shortfall of PHCs and CHCs in India

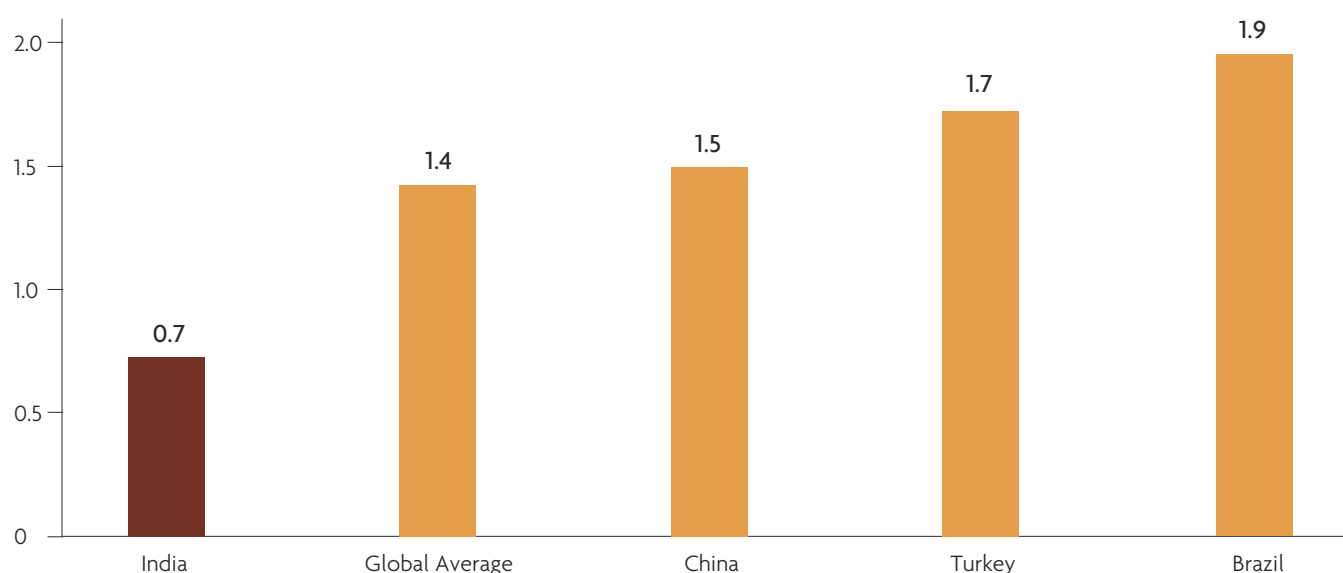


Source: Rural Health Statistics 2014-15

Access and delivery problems are compounded by severe human resource constraints. Challenges prevail in three aspects of human resources for health – numbers, distribution and skills. In terms of numbers, the country faces a shortage of physicians and specialists, with a doctor-patient ratio of 0.7 per 1,000. This is significantly lower than the global average of 1.4, as well as that of several other developing countries and emerging economies, including Brazil (1.9), Turkey (1.7) and China (1.5).⁶⁶ In March 2015, at least 8% of PHCs in India had no doctor and 22% were unsupported by pharmacists.⁶⁷ In addition, less than 50% of PHCs had the required number of female health assistants.⁶⁸ According

to the Indian Public Health Standards set by the Ministry of Health and Family Welfare, only 21% of PHCs were performing satisfactorily in 2015.⁶⁹ What's more, the distribution of health workers is skewed, with urban areas having far higher concentrations than rural areas. Finally, skills and training present challenges across all cadres of health care providers. Doctors are sometimes not equipped to handle primary care cases, nurses are not adequately trained for all settings, health workers do not have refresher trainings for years, and most training programs – across all cadres – are not oriented to practical skill sets.

Figure 10: Doctor to patient ratio (per 1000)



Source: WHO Global Health Workforce Statistics

These challenges result in the delivery of low-quality primary health care services that are highly variable across the country, leading to an increase in the number of people using largely unregulated private health services. These services account for more than 80% of outpatient and 60% of inpatient care.⁷⁰ Financed through out-of-pocket expenditures, private health care investment has focused on a proliferation of profitable multi-specialty hospitals, rather than on delivery of basic primary care services.⁷¹ This has resulted in tertiary overcrowding, which is not only cost-ineffective, but also leads to frequent cases of misdiagnosed or inappropriate care, and ultimately, to poor health outcomes.

Such an imbalanced health care system, which favors point-of-care payments for expensive secondary and tertiary care facilities and treatments, is unsustainable. Those who struggle to afford these payments suffer financially, while those who seek primary health services in the public sector often suffer low-quality care. The benefits of a properly functioning primary health care system, which is accessible to all, need to be recognized. Effective investment in this system would see sustained returns due to primary health care's gate-keeping capacity, which would allow only those most in need to progress to secondary and tertiary care facilities. Overcrowding and long waiting times in hospitals would thereby be reduced, with patients receiving cost-effective care at a level appropriate to their condition.⁷²

Moreover, the primary health care focus on prevention, early treatment, and healthier lifestyles is essential to address India's dual burden of preventable and non-communicable diseases in the long term.

In addition to this, given the shortage of financial resources, the government will need to prioritize high impact, cost-effective interventions such as immunization. The next section of this report presents a case study on India's key milestones related to immunization coverage and impact. It makes a case for prioritizing investment in both new vaccines and expanding coverage of existing vaccines. Additionally, India requires an approach that builds on its inherent strengths and existing resource base. This includes harnessing technological resources to improve the efficiency of health systems, and strengthening human resources by retraining medical and paramedical staff.

Medical and paramedical human resources

In India, the MBBS undergraduate course produces a 'basic doctor' to be employed in the public health system. However, a large chunk of newly qualified doctors enter hospital-based specialties instead of primary health care. In the primary healthcare system, a large share of vacancies is filled by AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy) physicians.⁷³ In India, there is an urgent need to further develop the training of mid-level doctors, allow nurse practitioners to practice independently, to train AYUSH practitioners in rural areas in prescribing allopathic medicines, and to continue up-skilling primary care doctors. As estimated by the Planning Commission, India would require 15,000 Family Physicians (FP) to be trained per year by 2030.⁷⁴ In India, the need for FPs to have an extended range of skills in anaesthesia, obstetrics and surgery is clear.⁷⁵

Primary care is not a popular career choice among physicians in India. This reluctance may stem from the lack of positive exposure in undergraduate education, low salaries, and the need to work in more rural and remote areas.⁷⁶ Many countries have experimented with ways of incentivising doctors to choose primary care as a career by ensuring greater exposure to primary care in the training curriculum, and through internships and residency training. For example, Brazil has adopted a model of postgraduate training for FPs. At the policy level, the government is also trying to create incentives for doctors to choose this as a career pathway such as the Program for Professionals in Primary Health Care that provides income tax exemptions to doctors who work for at least one year in PHCs.⁷⁷

Within the Indian context, training non-physician medical providers would include targeting Nurse Practitioners (BSc Nursing), Ayurvedic Practitioners (BAMS), and Dentists (BDS), all of whom would require additional training and formal certification in allopathic primary care. To ensure the legitimacy of these practitioners, this should ideally be done through government approved 6 to 12 month training program.⁷⁸ The Supreme Court, in its 'Dr. Mukhtiar Chand & Others Versus the State of Punjab' judgement in 1998, confirmed the legal feasibility of such an approach specifically for BAMS doctors, who are in adequate supply in India.⁷⁹ Adopting a similar approach for nurses and dentists will require legislative changes. Although there is an acute shortage of nursing and paramedical staff in India, there is an adequate supply of dentists who have formal surgical training, making them well suited for these roles.⁸⁰

In addition to increasing the number of FPs, there is also a need to find additional specialists and surgeons, especially at district and sub-district hospitals where the shortage of such professionals is close to 80%. Given that our existing education system adds only close to 50,000 doctors per year, attempting to fill these vacancies by increasing the number of post-graduate college seats will take an extremely long time. Instead, this number could be supplemented by focused training and certification at accredited local hospitals for doctors with MBBS degrees in order to provide an adequate number of anaesthetists, paediatricians, obstetricians, gynaecologists and orthopaedic surgeons.⁸¹

Technological resources

The use of information technology needs urgent attention and can have a transformative impact on our health system. The penetration of Aadhaar and the rapid expansion of data-connectivity offer an unprecedented opportunity in a country like India, which is a world leader in technological know-how. From a manufacturing point of view, India already produces low-cost drugs and vaccines, which make it an attractive medical tourism destination for people across the globe.⁸²

Over the past decade, India has seen successful health care pilots which harness the use of information technology, but these pilots have not been scaled up successfully. For example, the Swasthya Slate, or "Health Tablet", uses an Android tablet to conduct 33 diagnostic tests, including EKGs (Electrocardiograms), and measuring blood pressure, blood sugar, and urine protein.⁸³ The handheld device costs less than \$1,000, and has cut the turnaround time for maternal health care tests (for example, from 14 days to 40 minutes in Jammu and Kashmir, where it is being piloted as part of the NHM).⁸⁴

Nonetheless, the integration of technology has been piecemeal at best. India fares poorly when it comes to the use of Health Management Information Systems (HMIS) to drive efficient and data driven health care service delivery. The proposal to establish a Health Management and Information system in the 11th Five Year Plan was a positive step. Building on that plan, the 12th Five Year Plan approaches information technology in a more holistic way, incorporating registration, health records, electronic patient records, health payments and telemedicine. A holistic effort will need to be supplemented by building technical and managerial capability to help drive large scale government programs.

A CASE STUDY: IMMUNIZATION

India has achieved a series of significant immunization related milestones in recent years. In 2012, the self-funded expulsion of the wild-polio virus led to India's subsequent polio-free certification in 2014. Maternal and neonatal tetanus was also eliminated in 2015, while tetanus reduced by approximately 95% over the past three decades.^{85,86} Measles is at an all-time low, and child mortality has reduced by 52% since 2000.⁸⁷

However, the country continues to suffer from a disproportionately high burden of vaccine-preventable diseases. It has the largest number of under-5 deaths in the world, at 1.2 million, constituting 20% of the global total.⁸⁸ India's share of pneumococcal, rotavirus and measles deaths worldwide is 25.6%.⁸⁹

Despite being a major economic power in the region, India spends comparatively less than its neighbors on vaccines. Pakistan, Bhutan, China, Bangladesh, Sri Lanka and Nepal all spend significantly more per capita.⁹⁰ China alone self-finance its immunization coverage fully.⁹¹

THE VALUE OF VACCINES

Vaccines are unique in their ability to guarantee freedom from debilitating diseases

- The eradication of smallpox in 1980, the elimination of polio and the potential elimination of other diseases has built a lasting legacy for the health of future generations.
- Vaccines have presided over an unprecedented reduction in under-5 mortality and disease incidence, as well as increases in life-expectancy.

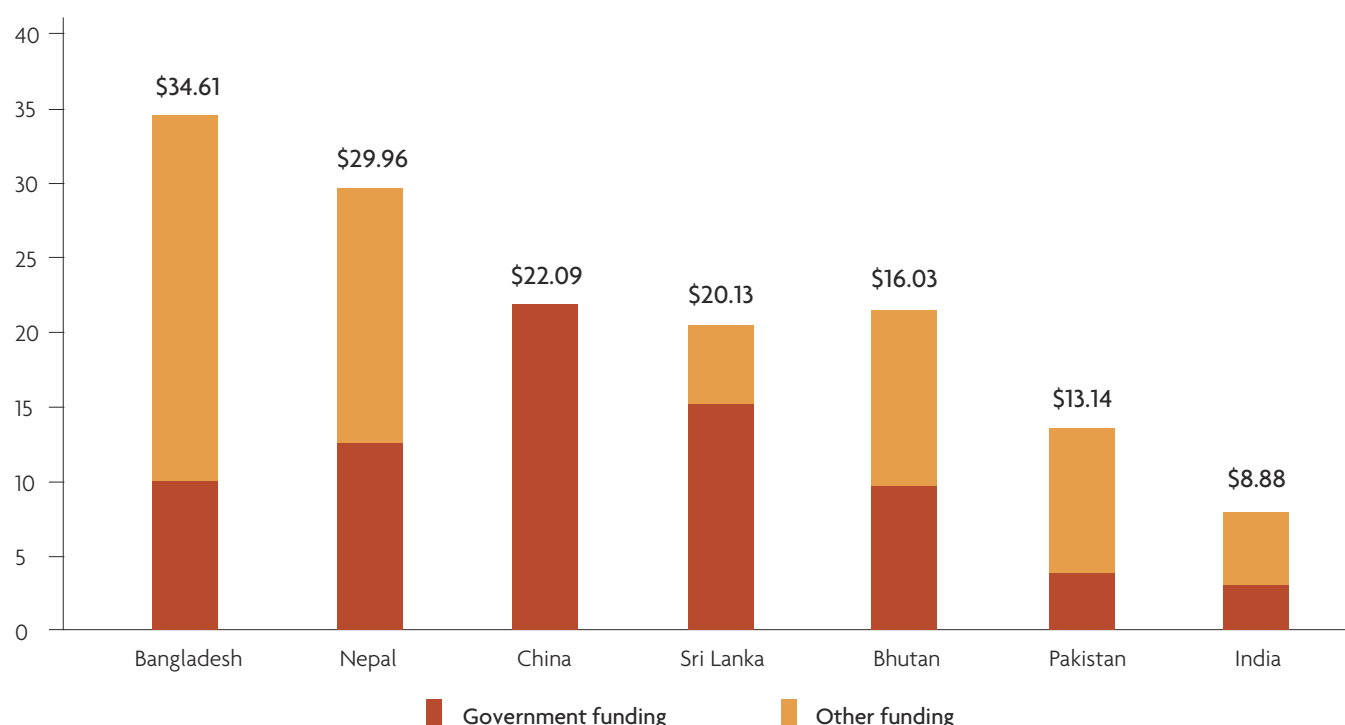
Vaccines are among the most cost-effective means of providing health protection and empowering the poor

- Every dollar spent on vaccines in low-income countries yields a \$16 return in terms of direct costs and a \$44 return in terms of indirect costs within a decade.
- By preventing illnesses, vaccines protect against financially catastrophic health expenditures that otherwise push families into poverty.

Vaccines are fundamental to strong health systems and global health security in the 21st century

- When countries invest in immunization delivery, the assets they build strengthen the primary health care system.
- Vaccines are a highly cost-effective tool for preventing antimicrobial resistance.

Figure 11: Per capita spends on immunization



Source: World Health Organization, JRF Database, 2015

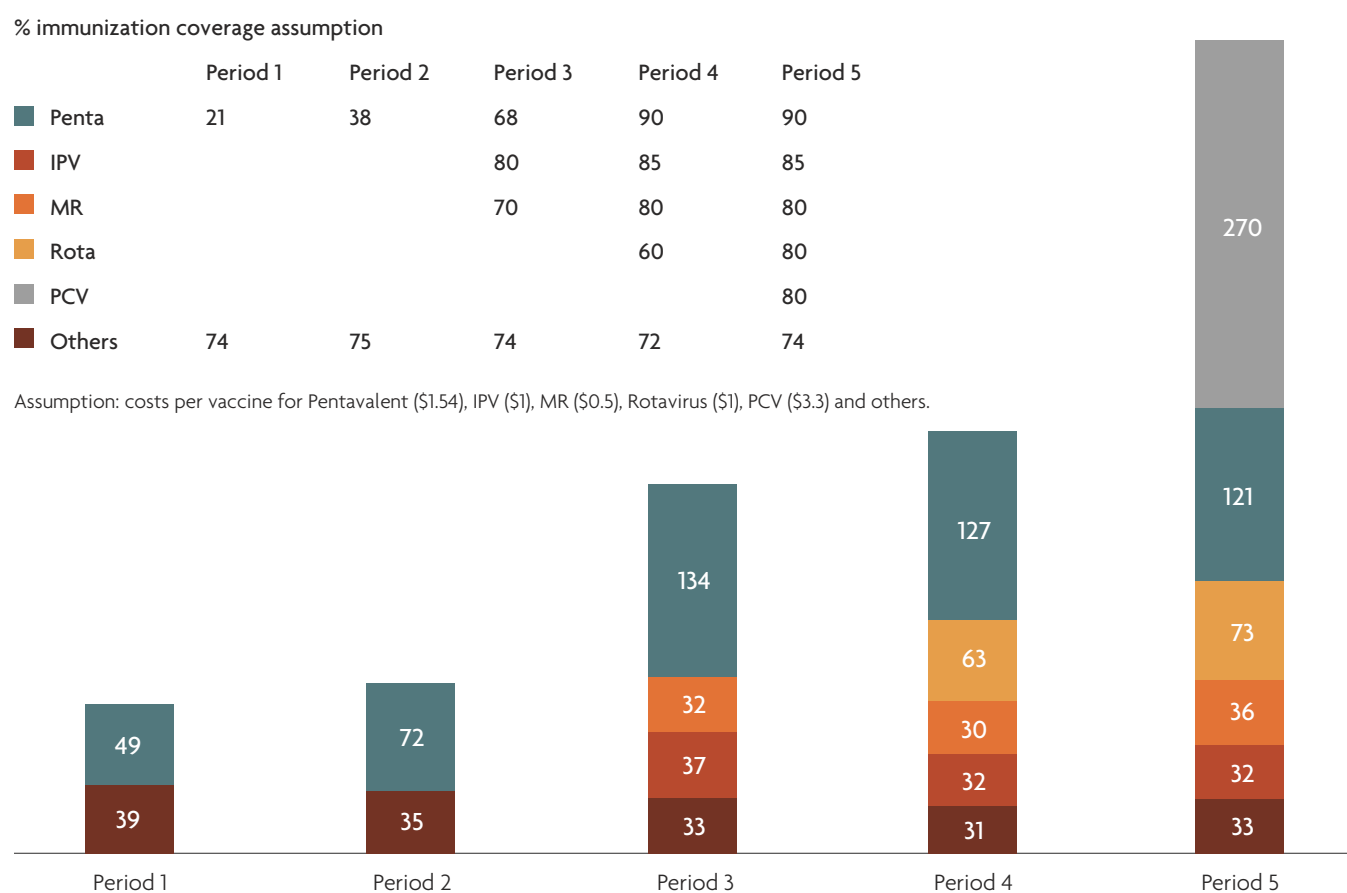
Going hand-in-hand with a lack of funding, India has also struggled to introduce new life-saving vaccines that have been more widely available in other low-and-middle-income countries. It was among the last four countries to approve Haemophilus influenzae type B (Hib) vaccine to prevent pneumonia, along with Indonesia, Belarus and South Sudan and it has only recently introduced the vaccine at a national level.^{92,93}

Pneumococcal Conjugate Vaccine (PCV) prevents a further cause of pneumonia and is introduced in 56 out of 73 other Gavi-eligible countries, including Pakistan, Bangladesh and Nepal.⁹⁴ The Government of India has introduced PCV earlier this year.⁹⁵ Currently, Inactivated Polio Vaccine (IPV) has been rolled out nationally, rotavirus vaccine in nine states, and Japanese Encephalitis (JE) in all priority districts.^{96,97,98} The government has also launched the Mission Indradhanush campaign to fully immunize every child with the new vaccines available under the Universal Immunization Programme (UIP) by 2020. However, a substantial increase in funding will be required to finance the introduction of these vaccines. Given the government's laudably ambitious coverage targets for new vaccines, the procurement costs of the UIP are estimated to rise by 6.5 times, from \$88 million to \$565 million over time.^{99,100}

The cost of new vaccines contributes considerably towards the total funding required by the program, which has already begun to outpace government and donor allocations. With a forecasted budget increase from \$694 million to \$1.44 billion, the funding gap for UIP is set to rise to 37% of total program costs, equaling to \$534 million.¹⁰¹

Gavi, the Vaccine Alliance, has contributed \$500 million in catalytic funding to alleviate this initial pressure. But as India graduates from Gavi-eligibility to middle-income country status by 2021 the government needs self-sufficient and sustainable funding to ensure the future success of the UIP.

Figure 12: Vaccine costs (in \$ million)¹⁰²



Source: CmYP 2012-2017

Experts recommend prioritizing immunization as a crucial public health intervention

At the high level national consultative meeting organized by GHS, a panel of experts made key recommendations. Above all, the panel recognized that immunization is a priority investment for the nation's future, due to its proven economic benefits and positive externalities, and should therefore be classified as capital rather than revenue expenditure. Given that immunization is a cost-effective intervention, the government needs to provide the capital required for new vaccines, as well as for scaling the coverage of existing vaccines.

E. PUBLIC FINANCING MECHANISMS FOR ACHIEVING UHC IN INDIA

A primary question for any government is how to pay for universal access to health care? Unfortunately, there is no single financing system that works across all settings. The path may vary based on the administrative feasibility of the mechanisms and the economic standing of the country. The primary sources of funding however largely remain constant across settings: general government revenues (tax financing) and public contributions towards a social health insurance program. The paper looks at the feasibility of both these mechanisms and evaluates supplementary funding avenues such as sector specific taxes, sin taxes, corporate social responsibility allocations, tax free bonds and trust funds.

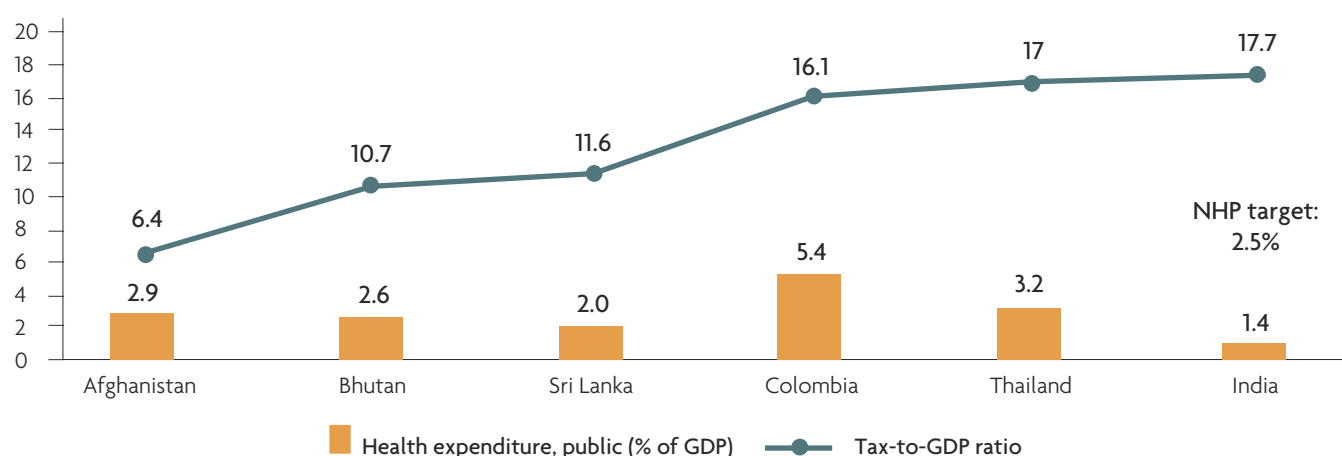
General government revenues: Government needs to earmark a higher percentage of incremental increases in GDP to achieve the NHP target of allocating 2.5% of GDP on health care by 2025.

Revenues from general taxation are the primary source of government funding for health in India, contributing close to 90% of total expenditures.¹⁰³ However, funding from general tax revenues has been constrained due to a relatively low tax to GDP ratio of 17.7%, which is compounded by competition from other portfolios that have ranked higher in terms of political priority.¹⁰⁴

While the government must earmark a higher percentage of incremental increases in GDP for healthcare, allocations from tax revenues will need to be supplemented by additional sources to achieve UHC

Despite similar challenges, other developing countries with far less economic might and political stability have been able to allocate a much higher proportion of their general tax revenue to health care. Mexico moved towards universal coverage by increasing public spending on health from 1.9% in 1996 to 3.25% of GDP in 2014.¹⁰⁵ Similarly, in less than

Figure 13: Public health expenditure and tax on GDP ratio



Source: World Health Organization: Global Health Expenditure Database (2014)

two decades Thailand doubled its public expenditure on healthcare from 1.66% in 1995 to 3.2% of GDP in 2014.¹⁰⁶ The graph below demonstrates that a low tax-to-GDP ratio is not reason enough to abandon national aspirations for universal coverage in India. Countries such as Thailand and Mexico have tax-to-GDP ratios that are almost identical to India's, but have spent significantly more on health care.

The fact that 14.1% of the total public expenditure in India is spent on education as compared to 4.7% for the health sector, demonstrates a clear political de-prioritization of health, relative to other social sectors. The recently approved NHP recommends a target of 2.5% of GDP by 2025. Scaling up public expenditure to almost double its current level seems like an uphill task. Reaching this target will require a strong commitment from the government to increase budget

allocations towards health care in a phased manner. **It is recommended that the government earmark a higher percentage of incremental increases in GDP for healthcare.**

However, allocations from general tax revenues alone might not be adequate to finance universal coverage. No examples of a universal healthcare system funded purely by general taxation exist anywhere in the world. Even the National Health Service (NHS) in the UK is funded by a combination of general taxation (around 80%) and National Insurance contributions (close to 20%).^{107,108} The UK's tax to GDP ratio is around double that of India, and public funding for health is more than 5 times higher as a percentage of GDP.^{109,110}

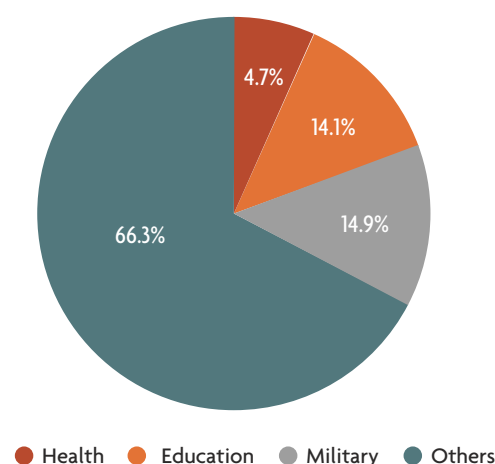
Tax revenues will need to be supplemented by additional sources to achieve UHC. One such major source would be to use insurance contributions to supplement general tax revenues.

Social health insurance: A mandatory national Social Health Insurance (SHI) scheme should be implemented to supplement general tax revenues.

The total expenditure on health care in India as a percentage of GDP is 4.7%.¹¹¹ While this is close to the WHO and Sustainable Development Solutions Network's recommendation of 5% of GDP to realise UHC, a large part, 62.4% of it, is spent out-of-pocket at point of service (OOP-POS) thereby pushing over 63 million people into poverty each year.^{112,113,114} Successfully channelling current levels of out-of-pocket spending into pre-payment pools would help reduce large and catastrophic, one-time health care payments, and instead enable users to spread the expenditure over a longer time frame.

SHI is one such form of financing and managing health care which pools both the health risks of the people on one hand, and the contributions of individuals, households, enterprises, and the government on the other.¹¹⁵ SHI schemes function by mandating payroll contributions from workers, pooling the resources collected, and earmarking them for a comprehensive health benefits package for all. Rather than anxiously awaiting a catastrophic health event, SHI gives people the opportunity to make gradual payments towards their long-term health and financial security.

Figure 14: % of total public expenditure



Source: World Bank: Development Indicators (2013)

KEY BENEFITS EXPECTED FROM A SOCIAL HEALTH INSURANCE SCHEME

Increased resources

- Payroll contributions in SHI can be an additional resource-base for the government
- Resources generated through SHI can be dedicated to healthcare

Integrated pool

- Inclusion of the middle class in UHC and health protection
- Benefits of integrated pooling of health risks and risk equalization
- Benefits of redistribution

Better health system outcomes

- Greater access to healthcare for all population groups, without financial distress and impoverishment
- Direct entitlement to benefits package
- Expected improvement in accountability and quality due to involvement of a broader citizenry
- Comprehensive package can lead to focus on primary care, gate-keeping and rational treatment

The following are key elements of robust SHI schemes:

- **Expenditure smoothing and risk pooling**

As discussed above, catastrophic health expenditures push vulnerable sections of the society into poverty. SHI seeks to spread this potential spending by getting households to contribute a fixed nominal amount each month, thereby creating a pool of resources and spreading the risk across the scheme participants. Risk pooling is a mechanism by which revenues are aggregated to spread financial risk of health expenditures across individuals and over time. Pooled revenues are used to pay for health care needs of individuals, reducing or eliminating the need for out-of-pocket expenditures at the point and time of service.¹¹⁶

- **An essential health package**

The Essential Health Package (EHP) forms the actual substance of the benefits available to the population. While several countries have different EHPs for different pools (with greater benefits accruing to populations that contribute more premia than those subsidized through government spending), it is crucial that these benefits are comprehensive, covering the entire range of services across the healthcare continuum, including the following:

- **Out-patient care:** Historically, health insurance in India has restricted coverage to in-patient hospital-based care. But almost 70% of health expenses are incurred during out-patient visits, making insurance cover vital.¹¹⁷
- **Purchase of medicines:** Costs incurred from buying medicine account for 70% of total out-of-pocket expenditures.¹¹⁸ Given the financial hardship caused, the purchase of medicines needs to be covered under SHI.
- **Whole healthcare continuum:** Rather than partial coverage for low-cost treatments, the whole continuum of care pathways, from primary to the tertiary stage, needs to be included as part of an integrated health service. Thailand, Colombia, Kyrgyzstan, Ghana and Vietnam are developing countries that have all achieved exemplary benefit packages. Although the details of each package vary, they all hold a fully comprehensive benefits package in common.

- **Earmarking resources for healthcare**

If the resources raised by the government are effectively earmarked for healthcare, the willingness of the middle and higher income-groups to contribute will be higher. This is because their contribution would constitute an investment with a clear and desirable return: affordable healthcare and security against out of pocket expenditures, especially at the point of service. The drop-in demand that often accompanies the imposition of a new 'tax' on a 'product', known as deadweight loss, can thus be prevented.

India has not had any true SHI scheme, apart from the Employees' State Insurance Scheme (ESIS) – a scheme meant for blue collar workers. Existing health protection schemes such as Rashtriya Swasthya Bima Yojna (RSBY) have provided only partial coverage to the very poor, as well as other select groups. Beneficiaries under RSBY are entitled to hospitalization coverage up to ₹ 30,000 for most diseases that require hospitalization. There are fixed package rates for many surgical interventions. Coverage extends to five members of the family which includes the head of household, spouse, and up to three dependents.

In the Indian context, a national social health insurance scheme should be employed for the entire population, where the government pays for the poor and vulnerable, the formal sector pays through mandatory payroll contribution, and innovative mechanisms are explored to charge fees from the informal sector. By harnessing contributions from healthier and wealthier members of society, the health risks of the poorer and less healthy would be equalized and premiums can be cross-subsidized. The more vulnerable members of society would then have the same level of access to quality services, and no longer be disproportionately burdened financially by treatments funded out-of-pocket.

Countries have adopted varied approaches to implementing SHI schemes. Some of the key challenges India will need to overcome to achieve UHC are as follows:

Targeting the poor

Scaling up SHI in fragmented societies requires overcoming the significant challenge of effectively reaching the most vulnerable populations. Enrolling the poor is difficult not only because they often lack the resources to contribute to voluntary insurance schemes, but also because locating population and determining who qualifies for the program requires significant resources. This is a challenge in India which faces immense income inequity and a high burden of poverty. Nearly 22% of the population subsists below the national poverty line and the poorest 40% of the people have access to only 20% of the total income.¹¹⁹

To reach these populations, countries must first develop methods to target and identify the poor. This work can be expensive, requiring informational and administrative costs, incentive costs to encourage poor households to join the programs, and political costs to overcome opposition to the programs.¹²⁰ Despite these challenges, low- and middle-income countries have developed increasingly powerful tools to identify and enroll the poorest segments of society.¹²¹ Programs frequently begin with a form of geographic and community targeting to focus outreach in the poorest districts. Later, countries increasingly roll out more sophisticated outreach through "targeting registries," which evaluate households' eligibility through more rigorous income testing methods. This more specific form of testing is an improvement on the previously used geographically or community-based approaches.

Multiple global examples show how SHI programs can effectively evolve from using less precise methods of targeting into more mature systems. For example, in 2012, both Turkey and Indonesia replaced community targeting based on local expertise to rigorous targeting registry programs, with increased program enrollment success.¹²² The Philippines also initially used community-based targeting where local governments identified beneficiaries, enrolling millions of people identified as poor in a health insurance scheme financed by the central government.

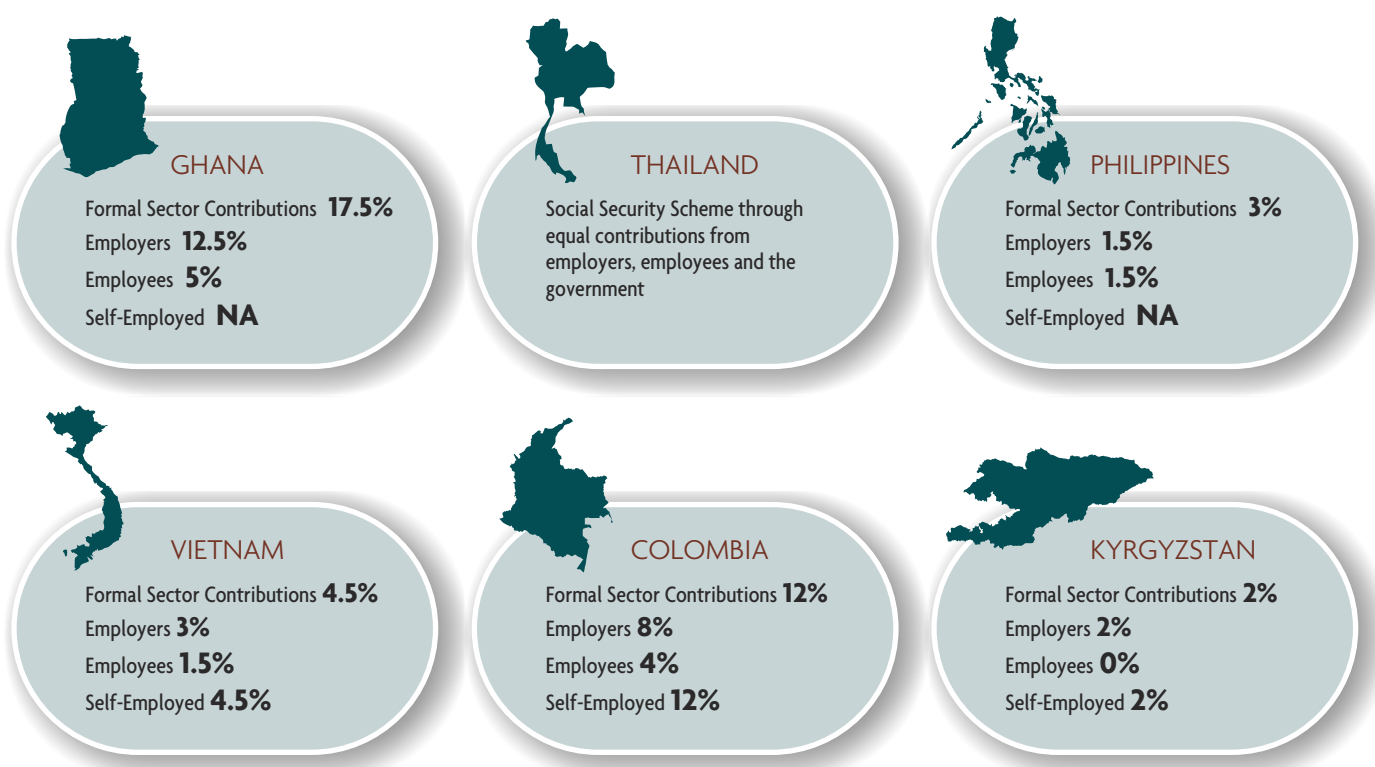
In 2009, the central government imposed a more rigorous methodology through the National Household Targeting System. The new system revealed that only 800,000 of the beneficiaries qualified as poor and were thus eligible for subsidies, and that many households that were poor had not been enrolled in the subsidized health insurance program.

Despite the costs and challenges associated with rolling out rigorous targeting registries, these examples demonstrate that developing countries can effectively reach their most vulnerable populations with essential SHI services.

Payroll contributions made by formal sector workers

The primary method of collecting funds would be through payroll contributions deducted at source from formal sector workers' salaries. An early estimate based on income tax collections in 2014-15 of ₹ 284,266 crores (PPP \$ 160 billion), shows that between ₹ 14,000 to 34,000 crores (PPP \$ 7.7 billion to 18.9 billion) could be raised, with contributions ranging from 5-12%.^{123,124} This figure would provide a significant contribution to the NHP target of 2.5% of GDP for universal coverage, equivalent to 25% of the current shortfall in spending.¹²⁵

Figure 15: Financing through payroll contributions



Obtaining contributions from the informal sector

India has a very high proportion of informal sector workers (83.5% of those not employed in the agricultural industry), a key challenge to successfully implementing a far-reaching SHI.¹²⁶ While the poor in India are already covered under RSBY, the large segments of non-poor in the informal sector have limited access to affordable health insurance or health care. Due to the unorganized nature and high tax-evasion rates, sustainably engaging this segment of the population in SHI schemes remains a huge challenge.

However, multiple developing nations provide models for implementing successful social health insurance schemes, including countries with large informal sectors such as Thailand and Vietnam (42.3% and 68.2% of the workforce, respectively).¹²⁷

Different approaches to helping self-employed and informal sector workers join the existing social health insurance schemes include:

- **Offering a sliding scale of contributions**

Different methods exist to partially subsidize informal sector enrolment in health insurance schemes. For example, Vietnam uses tax funding to reduce the premium for the informal sector by 50%, while Turkey employs a sophisticated system to determine appropriate premium payments for informal sector workers through scoring estimated income, property value and car cost.^{128,129} Despite this expanding capacity, effectively determining appropriate subsidies for informal workers remains a challenge. For example, the Chilean government found in 2010 that 400,000 workers were illegally enrolled in health insurance as indigent laborers to decrease their payments.¹³⁰

- **Give full subsidies**

Instead of charging partial fees for enrolling in SHI schemes, some programs have transitioned to offering non-contributory enrolment to informal non-poor sectors through tax financing. Multiple governments, including Colombia, Mexico and Thailand, originally charged the informal sector to participate in health insurance schemes, but have since extended full subsidies to those populations.

This approach has the benefit of quick enrolment and scale-up, but may not be sustainable in the long term.

SHI programs have followed different methods and processes of informal non-poor sector enrolment and payment. These processes have also changed over time; for example, countries that now offer full subsidies for informal sector enrolment in insurance schemes originally only offered partial subsidies, while other programs that originally targeted only specific groups have expanded target segments over time with increased capacity. While others that started out with a voluntary enrolment program for the informal sector have now made it mandatory.

India will have to iterate to find its own methods of getting contributions from the informal sector. The platform of Jan Dhan, Aadhaar and extensive use of mobiles could provide the building blocks of identifying and enrolling the target population.

Supplementary funding strategies

While general tax revenues and social health insurance focus on increasing resource allocations overall, the following section examines a series of supplementary mechanisms for targeted healthcare interventions. These mechanisms are suitable only for targeted rather than general healthcare financing for one of three reasons: either, they are effective at raising capital only in the short-term; they lack the capacity to raise sufficient capital; or have limited efficacy and potential adverse effects.

- **Sector-specific taxes**

India has made effective use of levies for the benefit of particular sectors and industries in recent years. To provide capital for research and innovation in the National Clean Energy Fund, a levy of ₹ 200 per ton of coal imported or produced in India was introduced. Similarly, a tax on petrol in 2015, which increased in price from ₹ 2 to ₹ 6 per liter, was implemented in 2015 to fund improvements in road infrastructure.

The education cess, implemented in 2004, is an example of a successfully managed sector-specific tax with adequate scope for raising significant resources. It consisted of a 2% levy on all existing taxes, duties and services, increasing total allocations for elementary education from ₹ 5,000 to ₹ 41,000 crores between 2004 and 2013.

In terms of health-sector specific taxes, the developing nations of Tajikistan, Vietnam and Haiti have all successfully raised funds for immunization through levies on luxury goods, as well as health-harming alcohol and tobacco.

- **Sin taxes**

Sin taxes penalize the consumption of products deemed to be harmful to health. They are increasingly used, particularly in middle and high-income countries, to raise funds by taxing unhealthy foods and drinks with high fat and sugar content. In March 2016 for example, the UK followed Mexico's example and announced the introduction of a 'sugar tax'. In India, the policy has more traditionally been applied to tobacco and alcohol, with sin taxes constituting around 60% of the total price of a packet of cigarettes.¹³¹

However, the ambiguity of the tax, which requires the 'sin' to continue to raise resources, makes its scope for expansion and sustainability questionable. They can therefore not be relied upon as a consistent source of revenue, given that the motives of the tax are inherently inconsistent.

- **Corporate Social Responsibility (CSR) funds**

Section 135 of the Companies Act 2013 made India the first country in the world to legislate for mandatory CSR contributions.¹³² In order to qualify, companies must have a new worth of above ₹ 500 crore, a turnover of at least ₹ 1000 crore, and an annual net profit of ₹ 5 crore or more. The Act lists a series of legitimate recipients of CSR contributions, including causes such as reducing child mortality and improving maternal health.

The scheme stands to raise a significant amount of money for development projects. In the first year of implementation in 2014-15, Indian companies paid out around ₹ 6,400 crore in CSR payments. Reliance Industries Ltd was the top contributor, funding approximately ₹ 761 crore of the total, followed by the state-run Oil and Natural Gas Corporation Ltd with ₹ 495.2 crore.¹³³

But early evidence suggests that contributions are falling short of their mandated mark. In 2015, KPMG found that more than half of the 100 largest Indian companies failed to meet the 2% target.¹³⁴ Further reports have emerged of evasion, with payments made from companies to charitable organizations only to be returned, minus a commission fee.¹³⁵ CSR will need to be subjected to greater scrutiny to bear fruit for specific health interventions.

- **Tax-free bonds**

There are several precedents for their use in India, particularly for public sector infrastructure projects and high priority industries, such as the railway network and steel manufacturing. In the 2013-14 Union Budget, the government relaxed regulations for issuing bonds, offering higher tax-free interest rates to investors. This resulted in 13 Public Sector Undertaking (PSU) companies raising ₹ 49,200 crore, just shy of the projected target of ₹ 50,000 crore.

Bonds must be repaid at the time of maturity and come at a cost. Therefore, while they can constitute an effective means of raising debt capital for building health infrastructure, it is not an effective source of financing delivery of healthcare.

- **Trust funds**

Trust funds have the potential for financing targeted health interventions because they can protect and guarantee resources over extended periods of time. Funding can be pooled from a variety of sources, be public or private, domestic or international.

In the Indian context, CSR funds present an important opportunity for a national trust fund like that of Bhutan, raising resources for targeted healthcare interventions such as immunization.

THE NATIONAL TRUST FUND FOR IMMUNIZATION IN BHUTAN

In the late 1990s, the Royal Government of Bhutan (RGOB) noted that the cost of vaccines and drugs accounted for almost 50% of all expenditures in the national health sector. Reliance on donor funding made their future financing uncertain. In 1998, the RGOB established the Health Trust Fund to provide a viable model for the sustainable financing of vaccines and drugs.

The Government agreed to finance half of the \$24 million required, with the rest coming from a combination of different private and public donors. The Fund enjoys tax free status within the country and invests both within and outside Bhutan.

CONCLUSION

Providing better health through universal health coverage in India today is an essential priority, not just because health is a basic human right, but also because it makes good economic and political sense. Government investment in the health sector provides a high benefit-to-cost ratio through extending life and increasing economic capacity. In addition, it engages the emerging middle class which increasingly demands better health care access. Despite these compelling reasons to increase health spending, India consistently falls short both in allocating sufficient proportions of public expenditure to this key issue and in the quality of its investments.

To effectively improve health outcomes and ultimately achieve universal health coverage in India, the country must increase the amount and efficiency of its spending. In addition to earmarking a higher percentage of GDP incremental increases for health care, supplementary financing mechanisms and a national SHI scheme must be developed to provide financial protection to diverse populations. Finally, high impact system design changes and interventions must be prioritized, with a focus on improving primary care and programs like immunization that positively impact the productivity and prosperity of the whole country.

To turn these recommendations into actionable next steps, a committee of diverse stakeholders and policy makers must be established to further evaluate these recommendations and use them to develop implementable guidelines. Successfully realizing such recommendations through health system improvements and SHI creation will be a long journey and requires sustained commitment and patience. However, by using other countries' successes and failures as models, India can leverage its growing economy and power to achieve universal health coverage and improve the quality of life of its citizens.

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