India: Towards Universal Health Coverage 6

Financing health care for all: challenges and opportunities

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India's health financing system is a cause of and an exacerbating factor in the challenges of health inequity, inadequate availability and reach, unequal access, and poor-quality and costly health-care services. Low per person spending on health and insufficient public expenditure result in one of the highest proportions of private out-of-pocket expenses in the world. Citizens receive low value for money in the public and the private sectors. Financial protection against medical expenditures is far from universal with only 10% of the population having medical insurance. The Government of India has made a commitment to increase public spending on health from less than 1% to 3% of the gross domestic product during the next few years. Increased public funding combined with flexibility of financial transfers from centre to state can greatly improve the performance of state-operated public systems. Enhanced public spending can be used to introduce universal medical insurance that can help to substantially reduce the burden of private out-of-pocket expenditures on health. Increased public spending can also contribute to quality assurance in the public and private sectors through effective regulation and oversight. In addition to an increase in public expenditures on health, the Government of India will, however, need to introduce specific methods to contain costs, improve the efficiency of spending, increase accountability, and monitor the effect of expenditures on health.

Published Online
January 12, 2011
DOI:10.1016/S0140-6736(10)61884-3

See Online/Comment
DOI:10.1016/S0140-6736(10)62179-4,
DOI:10.1016/S0140-6736(10)62044-2,
DOI:10.1016/S0140-6736(10)62182-4,
DOI:10.1016/S0140-6736(10)62112-5,
DOI:10.1016/S0140-6736(10)62042-9,
DOI:10.1016/S0140-6736(10)62041-7,
DOI:10.1016/S0140-6736(10)62034-X,
DOI:10.1016/S0140-6736(10)62045-4, and
DOI:10.1016/ S0140-6736(10)62043-0

This is the sixth in a Series of seven papers on India: towards universal health coverage

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Introduction

Well known weaknesses in India's health financing system are the cause of insufficient provision and reach of good-quality health services and inadequate financial protection against ill health for the Indian people.[1–4] Public spending on health–0·94% of the gross domestic product (GDP) in 2004–05–is among the lowest in the world and the reason for private expenditures accounting for 78% of total health spending in the country,[5] resulting in serious inequities in health.[6,7] The Indian public receives low value for money in terms of the quantity and quality of health-care services in the public and private sectors. Health services in the public sector that can be accessed free or for a nominal fee are grossly inadequate. As a result, most Indians access private health care that is expensive, unaffordable, unreliable, and impoverishing. Good-quality health care in the private sector is also not available, particularly in rural and other remote parts of India. Most private practitioners are not qualified and work in substandard facilities.[2,8] The Government of India has made a commitment to increase public spending on health to 3% of GDP during the next few years. A major policy challenge will be to find out how best to invest augmented public funding.

In this report, we analyse the patterns of health financing in India; extent of financial protection provided by the present health system; whether the money spent on health is used effectively and efficiently; links between health spending and health outcomes; and whether effective mechanisms exist for public funding of health by the central and state governments since the state governments are responsible for implementing health programmes (panel). We draw on our findings to recommend how India can increase health expenditure, consider ways to spend the money wisely, increase insurance cover, and improve the manner in which the central government funds states' expenditures and incentivises states to improve outcomes for the poor. The policy options are not mutually exclusive. Public funding can greatly improve the performance of state-operated public systems by enhancing the volume and flexibility of central-to-state government financial transfers. This funding can also increase insurance coverage for financial protection by supporting the public and the private sectors because universal coverage in India cannot be achieved by either system alone.[19] Most

Key messages

Address major shortcomings

- Low per person spending that results in very high private out-of-pocket expenditures on health
- Large inefficiencies in public and private sectors that reduce efficiency and effectiveness of health expenditures
- Insufficiency of services to address the health needs
- Practically no financial protection for most Indian people against medical expenditures

Policy responses needed

- Ensure achievement of government's commitment to increase public spending on health from less than 1% to 3% of gross domestic product
- Improve quality, performance, efficiency, and accountability of public and private health systems
- Introduce policy and legislative changes to contain the rising costs of medical care and drugs
- Increase availability of health services through direct expansion of public health services and by enlisting private providers of allopathic and non-allopathic drugs
- Increase insurance and risk pooling to include financial protection
- Introduce a predominantly tax-paid universal medical insurance plan that offers essential coverage to all citizens

Panel: Data and methods

Our analysis focuses on India's 14 most populous states that together account for 87% of the population. We excluded very small states, union territories, and Jammu and Kashmir. We used publicly available data for health financing and health expenditure that were reported in the National Health Accounts India 2001–02[9] and the National Health Accounts India 2004–05.[5] Public spending on health is made up of expenditures by the central government, state governments, and local organisations.[5] Private spending on health is made up of expenditures incurred by households, firms, non-governmental organisations, and social insurance funds. External funds include assistance to central and state governments, and non-governmental organisations. Unless otherwise mentioned, data for public expenditure used in this report include external funds and are the sum of revenue and capital expenditures.

These data have been supplemented with additional data for public expenditure from the *Finance Accounts of Individual States and the Centre*. Data for fiscal deficit and definition of development expenditure of state governments have been sourced from *State Finances: A Study of State Budgets* for the year 2008–09.[10] State-specific data for spending on salaries, primary health care, tertiary care, drugs, medical research, and training have been obtained from the *Detailed Demand for Grants*.[11,12] Expenditures in states by the National Rural Health Mission (NRHM) have been calculated from progress reports of individual states. Data for trends in India's public health expenditure in India since 1950–51 are given in the National Health Profile 2007.[13]

For household health expenditures, we used data from household surveys done by the National Sample Survey Organisation.

Data for 2005–06 about births in institutions and immunisations are from the National Family Health Survey (NFHS).[14] For data about state-wise deliveries in institutions before and after the launch of NRHM, we used the district-level household surveys (DLHS) done in 2002–04 (DLHS 1) and 2007–08 (DLHS 2).[15] For data about physical provisioning of staff and equipment in primary health-care centres, we used the National Facility Survey done in 2003 as part of DLHS 1.[16] Data for life expectancy at birth across Indian states are taken from population projections for India and the states for 2001–26.[17] For data about health expenditures and health outcomes in different countries, we have used WHO's *World Health Statistics 2008*.[18]

Public expenditure on social sectors include expenditure on education, health, water supply, sanitation, sports, housing, welfare of scheduled castes, scheduled tribes, other backward classes, labour, labour welfare, social security and welfare, nutrition, relief on account of natural calamities, urban development, arts, sports, culture, and rural development. Development expenditure includes expenditure on social sector and economic services. Economic services include expenditure on agriculture and allied activities, special area programmes, irrigation and flood control, energy, industry and minerals, transport and communications, science, technology, and environment. For classification of expenditure on primary, secondary, and tertiary medical care, the definition used in the *National Health Accounts 2001–02* has been followed.[9]

importantly, enhanced public financing can help to greatly reduce private out-of-pocket expenditures on health. Although we recommend increased public expenditures on health, we emphasise the need to contain costs, enhance the efficiency of spending, improve accountability, and assure quality in the public and private sectors through effective regulation and oversight.

Patterns of health financing

At first glance, India seems to spend an adequate amount on health care. In 2005, India's total health expenditure as a proportion of the GDP was less than the global average of about 6% but higher than that for the neighbouring countries such as Thailand, Sri Lanka, and China (table 1).[18] The situation, however, changes greatly when per person health expenditures are assessed. At purchasing power parity International $100 per person, India's health expenditure is only about half that of Sri Lanka's and a third of China's and Thailand's (figure 1).

The low health expenditures are further exacerbated by the low share of public and high share of private funding. In 2004–05, government expenditure (including external support) accounted for 22% of total health spending–slightly reduced from 22·6% in 2001–02 (figure 2). Consequently, private spending in 2004–05 accounted for 78% of the total spending on health–slightly increased from 77·4% in 2001–02.[5,9] Foreign donor financing of targeted campaigns for family planning, immunisation, malaria, and other diseases was substantial in previous decades. Although some foreign funding continues (eg, for eradication of poliovirus), it is about 10% of public expenditures and accounted for only slightly more than 2% of total health expenditures in 2004–05 (figure 2)—about the same amount as the contribution to total health expenditures in 2001–02. Moreover, enhanced domestic funding for health that was made available through the National Rural Health Mission since 2005 has further reduced the dependence on external funding.

Low public spending

As a proportion of the GDP, India's public spending on health, after increasing between 1950–51 and 1985–86, stagnated during 1995–2005, was 0·95% of the GDP in 2005, among the lowest in the world, compared with 1·82% in China and 1·89% in Sri Lanka.[18] Analysis of the per person public spending on health shows that the situation is similarly bleak. The per person government spending on health in India was about 22% of that in Sri Lanka, 16% of that in China, and less than 10% of that in Thailand (table 1).[18]

Despite the steep increase in economic growth and the increase in the per person income and tax collections, a corresponding increase has not occurred in India's total spending on health or on social sectors. Between 1993–94 and 2004–05, for example, compared with a 67% increase in real per person income and an 82% increase in per person tax collections, real per person public health expenditure (at 1993–94 prices) increased from INR84 in 1993–94 to INR125 in 2004–05—an increase of 48%.

High out-of-pocket expenditures

In 2005, India's private expenditure of nearly 80% of the total expenditure on health was much higher than that in China, Sri Lanka, and Thailand (table 1). Two features of the private out-of-pocket expenditure are noteworthy. First, most of the expenditure (74%) was incurred for outpatient treatment, and not for hospital care; 26% was for inpatient treatment. Second, drugs accounted for 72%

 Published online January 12, 2011 DOI:10.1016/S0140-6736(10)61884-3

	Gross national income per person (PPP International $)	Total expenditure on health as proportion of GDP	Private expenditure on health as proportion of total expenditure on health	General government expenditure on health as proportion of total government expenditure	Per person government expenditure on health (PPP International $)	Per person total expenditure on health (PPP International $)	Government expenditure on health as proportion of GDP
South Asia							
India	3460	5·0%	78·0%*	3·5%	19	100	0·9%
Bangladesh	2090	2·8%	70·9%	5·5%	17	57	0·8%
Sri Lanka	4520	4·1%	53·8%	7·8%	88	189	1·9%
Pakistan	2350	2·1%	82·5%	1·5%	9	49	0·4%
Nepal	1530	5·8%	71·9%	8·4%	21	76	1·6%
Bhutan	..	4·0%	29·0%	6·5%	60	85	2·8%
Maldives	..	12·4%	14·4%	17·7%	751	878	10·6%
Others							
China	6600	4·7%	61·2%	1·0%	122	315	1·8%
Thailand	8440	3·5%	36·1%	11·3%	207	323	2·2%

PPP=purchasing power parity. GDP=gross domestic product. *Data from the Ministry of Health and Family Welfare;[5] rest of the data are from WHO.[18]

Table 1: **Health financing in India and selected countries during 2005**

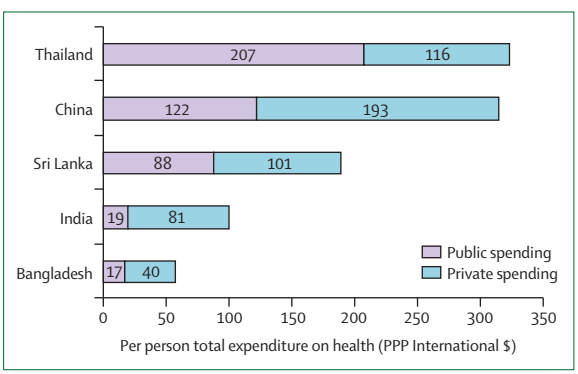

Figure 1: **Health expenditures in India and selected countries during 2005**
Data from WHO.[18] PPP=purchasing power parity.

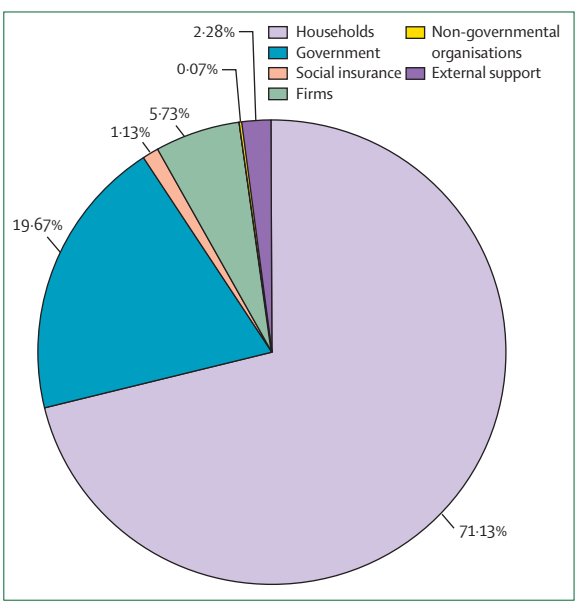

Figure 2: **Sources of funds for health care in India during 2004–05**

of the total private out-of-pocket expenditure.[20] These findings have implications for insurance coverage and cost control.

The costs of medical care have been rising rapidly and, in the absence of adequate medical insurance, contributing to the impoverishment of households.[6] Between 1986 and 2004, the average real expenditure per hospital admission increased three times in government and private hospitals in rural and urban areas. Although in 1993–94, health spending in rural households was 5·4% of the total household consumption, it rose to 6·6% in 2004–05.[20,21] In urban households, health spending was 4·6% and 5·2%, respectively.[20,21] The sharp increase in the prices of drugs has been the main reason for the rising costs of medical care, which more than tripled between 1993–94 and 2006–07.[22]

Financial protection

According to the National Family Health Survey 2005–06,[14] only 10% of households in India had at least one member covered by medical insurance. India's medical insurance sector remains weak and fragmented despite several medical insurance schemes operated by the central and state governments, public and private insurance companies, and several community-based organisations.[23,24] The benefits of insurance coverage accrue only to a few privileged individuals.[25–28] For example, the Central Government Health Scheme, introduced in 1954, which offers comprehensive medical care for outpatient and hospital admission, benefits only the employees of central government (those in service or retired) and their families, members of parliament, and judges in the supreme and high courts. Similarly, the Employees' State Insurance Scheme, established in 1948, provides cash and medical benefits only to a select category of employees in factories in which at least ten people are employed.

For more on **Central Government Health Scheme** see http://mohfw.nic.in/cghsnew/index.asp

For more on **Employees' State Insurance Corporation** see http://esic.nic.in/

Expenditure on social insurance accounted for little more than 1% of total health spending in 2004–05 (figure 2).[5] The absence of financial protection and the rising costs of treatment have been dissuading people from accessing much needed health care. In 2004, 28% of ailments in rural areas went untreated because of financial reasons—up from 15% in 1995–96.[29] Similarly, in urban areas, 20% of ailments were untreated for financial reasons in 2004—up from 10% in 1995–96.[29] 47% of hospital admissions in rural India and 31% in urban India were financed by loans and the sale of assets.[29]

Several factors account for the slow increase in medical insurance in India. According to the National Commission for Enterprises in the Unorganised Sector, only 7% of India's workforce is in the organised sector.[30] The remaining 93% are cultivators, agricultural labourers, fishermen, artisans, and other workers who typically do not have a regular or assured source of income. The commission has classified 77% of India's population (836 million people in 2004–05) with a per person daily expenditure of up to INR20 (in 2004–05) as poor and vulnerable.[30] Contribution to regular medical insurance premiums is difficult and not easily affordable, and the high cost of collecting small amounts of premium every month from such families adds to this difficulty.

Efficiency of health spending

India's pluralistic public sector in health has remained weak and fragmented despite the steady increase since independence.[8,31] Top-end government-run hospitals offer world-class allopathic care at affordable prices. But these are few and often overcrowded and overstretched. India has thousands of health subcentres, primary health-care centres, and community hospitals. In addition to allopathic care, people can access various non-allopathic systems of medicine, including ayurveda, yoga, siddha, homoeopathy, and unani.[8] Poor-quality services, wastage, corruption, and weak management characterise many of the community-based primary health-care institutions.[2,32] Even the few public funds often remain unused or used inefficiently by states. The poor absorption capacity of state health systems is partly attributable to deficiency of public health and managerial expertise and the overload of their primary health-care services with many vertical programmes designed and transferred by the central government. A recent performance audit by the Comptroller and Auditor General of India indicated many deficiencies.[33] Household and facility surveys in many districts need to be completed, monitoring frameworks need to be strengthened, many more new health centres need to be established in underserved areas, and health infrastructure needs to be made functional with all essential infrastructure, equipment, and manpower. As a result, the government has been unable to generate public confidence in the public primary health system. Therefore, in 2004, the most commonly cited reason why people did not avail themselves of public services was not satisfied with medical treatment by government doctor or facility (41% in rural areas and 45% in urban areas). Distance was the reason cited by 21% of people in rural areas and 14% in urban areas.[29] Other reasons, including non-availability of facilities and services, were cited by 30% of people in rural areas and 26% in urban areas. Most people accessed private providers for outpatient care—78% in rural areas and 81% in urban areas. For inpatient care, 58% of Indian people in rural areas and 62% in urban areas accessed private health facilities.[29]

However, India's vibrant and diverse private sector does not offer quality health care at affordable prices.[34–37] At one extreme are deluxe private hospitals, some of which even promote medical tourism by offering world-class services to foreign clients and Indian people who have high incomes. The range of services offered include cosmetic and cardiac surgeries, and liver and bone marrow transplants. At the other extreme are private doctors with little medical knowledge or formal training. In between these two extremes are several private clinics and low-cost for-profit and not-for-profit private hospitals. These are accessed by those who can afford to pay for the services. However, with the virtual absence of effective regulation and oversight by the state, the quality of health care is mixed at best and the costs are often unreasonably high. Reported problems include unnecessary tests and procedures, rewards for referrals, lack of quality standards, and irrational use of injections and drugs. Since no national regulations exist for provider standards and treatment protocols for health care, overdiagnosis, overtreatment, and maltreatment are common.[1,8]

The Planning Commission, in its mid-term appraisal of the 10th Five Year Plan in 2005 summarised the situation as:[2]

> "There are exceptions, but by and large, the quality of care across the rural public health infrastructure is abysmal and marked by high levels of absenteeism, poor availability of skilled medical and para-medical professionals, callous attitudes, unavailable medicines and inadequate supervision and monitoring. The fact is that when people at the grassroots, first seek diagnosis and treatment for an illness, an estimated 70-85 per cent among them, visit a private sector provider (PSP) for their health needs. Private providers are fragmented along diverse delivery models, not always present in the most under-served states, largely unregulated, and the mushrooming of sub-standard facilities is dominated by unqualified practitioners. All of this yields enormous variation in the quality of diagnosis and treatment."

However, even today, in many rural areas and also in several urban settings, the public sector is often the only source of any credible medical care. The sharp increase in the use of health services in the public sector after the infusion of more resources through the National Rural Health Mission suggests that the public sector is regarded by many as a credible and reliable source of medical care. Providers in the private sector offering similar services are virtually non-existent in

www.thelancet.com Published online January 12, 2011 DOI:10.1016/S0140-6736(10)61884-3

most rural areas, which is to be expected with the very high rural poverty and the inability of people who are poor to pay for health care.

State differentials in financing and outcomes

India shows high variability among its states in health financing, outputs, and outcomes (table 2). Generally, the southern states are better than the northern states in all financing, outputs, and outcomes (table 2). Although the average per person public expenditure on health for India in 2004–05 was INR268, wide variations exist in public expenditure across states. For example, the amounts for Kerala and Bihar differ by three times (table 2). These differences are also shown in the health outputs and the capability of the health infrastructure. People living in Kerala and Bihar have a difference of 8·3 years in life expectancy (table 2). In Kerala, almost all babies are born in medical facilities and 75% of children are fully immunised, whereas in Bihar less than a third of the babies are born in medical institutions and about a third of children are fully immunised (table 2). Kerala has roughly one public hospital bed per 1000 population, whereas Bihar has nearly one per 29 000 population (table 2). Large differences exist between Kerala and Bihar's primary health centres having at least 60% of the mandated staff and equipment (table 2).

Similarly, a comparison of Tamil Nadu (a state with good health) and Madhya Pradesh (a state with poor health) shows that the amount and the composition of health expenditure affect both the efficiency and effectiveness of health spending. On the one hand, the public spending on health in Tamil Nadu is much higher than in Madhya Pradesh. The provision, reach, and use of public health services are much better in Tamil Nadu than in Madhya Pradesh (table 2). On the other hand, the differences in the composition of spending are substantial between the two states. Typically a large proportion of public health expenditure is paid as salaries. As a result, most poor states have insufficient funds to maintain and provide quality health-care services. In Madhya Pradesh, salaries account for the overwhelming proportion of public expenditure, leaving 17% for all complementary health inputs.[11] By contrast, the proportion of the non-salary component in Tamil Nadu is 28%,[12] which enables the state to spend more on drugs and other supplies than in Madhya Pradesh. In 2004–05, per person spending on drugs in Tamil Nadu was more than twice that in Madhya Pradesh (table 3). Also, as a result, a larger proportion of people receive free surgery (96·5% *vs* 61·5%) and drugs (79·7% *vs* 7·7%) in the government hospitals of Tamil Nadu than in Madhya Pradesh.[29] In 2004–05, Tamil Nadu spent an average of INR17 per person on medical education, training, and research–more than five times that reported by Madhya Pradesh (INR3 per person).[11,12]

At the same time, many factors other than amounts and patterns of health financing (such as social determinants and investments in non-health sectors) affect the effectiveness and outcomes of health expenditures. Tamil Nadu, for instance, has higher amounts of per person incomes, lower poverty, higher education among women (leading to improved health-seeking behaviour), and better physical infrastructures than does Madhya Pradesh (table 2). The Government of Tamil Nadu has also shown a stronger commitment to invest in sectors that are complementary to health such as nutrition, water

	Life expectancy at birth (years) in 2001–05	Per person public health spending in 2004–05 (INR)	Private expenditure in 2004–05	Per person gross domestic product in 2004–05 (INR)	Proportion of births attended by health personnel in 2005–06	Proportion of children (age 12–23 months) fully immunised in 2005–06	Population served per government hospital bed in 2007	Proportion of primary health-care centres with at least 60% staff in 2003	Proportion of primary health-care centres with at least 60% equipment in 2003
Kerala	73·5	287	90·3%	32 613	99·7%	75·3%	1217	91·4%	34·3%
Punjab	69·0	247	81·8%	38 000	68·6%	60·1%	2363	38·0%	43·7%
Karnataka	67·0	233	71·9%	26 782	71·3%	55·0%	1321	58·0%	61·1%
Tamil Nadu	67·6	223	82·3%	31 408	93·2%	80·8%	1391	96·8%	92·2%
Maharashtra	68·0	204	83·2%	37 091	70·7%	58·8%	2280	95·6%	91·4%
Haryana	67·3	203	81·2%	41 429	54·2%	64·3%	3099	51·1%	41·2%
Gujarat	66·9	198	79·2%	34 737	64·7%	45·2%	1360	85·7%	80·6%
Andhra Pradesh	65·6	191	82·0%	26 528	74·2%	46·0%	2351	88·4%	84·5%
Rajasthan	65·6	186	75·6%	18 980	43·2%	26·5%	1977	25·6%	53·9%
Orissa	61·3	183	79·7%	18 673	46·4%	51·8%	2699	0·2%	15·1%
West Bengal	68·0	173	86·3%	25 072	45·7%	64·3%	1734	5·7%	8·6%
Madhya Pradesh	60·9	145	81·6%	16 667	37·1%	40·3%	3392	35·4%	26·2%
Uttar Pradesh	62·0	128	86·9%	13 913	29·2%	22·9%	5646	52·8%	28·6%
Bihar	65·2	93	81·9%	8304	30·9%	32·8%	28 959	19·6%	6·2%

States are ranked in descending order of per person public health spending. GDP=gross domestic spending.

Table 2: **Health outputs, outcomes, and financing in 14 most populous Indian states**

	Tamil Nadu	Madhya Pradesh	India
Public spending			
Per person public spending on primary health care in 2004–05 (INR)	92	70	NA
Per person public spending on tertiary care in 2004–05 (INR)	55	18	NA
Per person public spending on drugs in 2004–05 (INR)	28	11	NA
Per person public spending on medical research and training in 2004–05 (INR)	17	3	NA
Per person expenditure on social sectors in 2004–05 (INR)	1738	959	1607
Per person public expenditure in 2004–05 (INR)	5235	3550	8984
Other development indicators			
Proportion of population below the poverty line in 2004–05	23%	38%	20%
Proportion of population that is literate	73·5%	64·1%	65·4%
Median years of schooling completed by women aged 15–49 years	4·5	0·1	1·9
Proportion of households with electricity	89%	71%	68%
Proportion of habitations connected by all-weather roads in 2008	98%	38%	68%

NA=not applicable.

Table 3: **Selected indicators for Tamil Nadu and Madhya Pradesh**

	Per person state health expenditure without NRHM in 2007–08 (INR)	Per person NRHM expenditure in 2007–08 (INR)	Per person total state health expenditures including NRHM expenditure in 2007–08 (INR)	NRHM releases (proportion of total public expenditures on health) in 2007–08	Public health expenditure (proportion of total development expenditure by the government)	
					2001–02	2007–08
Kerala	373	66	439	15%	11·3%	10·6%
Punjab	280	42	322	13%	9·2%	5·9%
Tamil Nadu	269	60	329	18%	8·9%	6·3%
Maharashtra	252	49	301	16%	7·2%	4·7%
Karnataka	311	58	369	16%	5·7%	4·4%
Haryana	235	44	279	16%	4·9%	4·9%
Andhra Pradesh	293	62	355	17%	7·9%	6·9%
Gujarat	234	67	301	22%	4·4%	7·0%
Rajasthan	224	92	316	29%	8·3%	5·9%
West Bengal	210	52	262	20%	10·1%	8·5%
Uttar Pradesh	213	58	271	21%	7·0%	7·9%
Madhya Pradesh	169	96	265	36%	6·4%	5·4%
Orissa	179	68	247	28%	7·4%	5·2%
Bihar	142	48	190	25%	9·4%	9·7%

States are ranked in descending order of per person health spending.

Table 4: **Contribution of National Rural Health Mission (NRHM) to health expenditures in states (2007–08)**

and sanitation, education, and basic infrastructure. Moreover, Tamil Nadu's health achievements have been registered against the backdrop of the state's distinct sociopolitical history. Other factors distinct to Tamil Nadu are a strong political backing for health and social development by the state's two major political parties, the problem-solving approach of the health bureaucracy, a commitment to universal coverage rather than targeted schemes in health and other welfare programmes, and the special attention paid to overcoming social barriers and bridging social distances.[38–40]

Centre–state financing of health

Insights for potential solutions to the problem of low public expenditure in the states that have a poor performance must begin with the Indian Constitution, which assigns health as a state subject. The state governments are primarily responsible for the funding and delivery of health services. Yet, the amount and type of public financing is jointly determined by both the centre and the state. The state government bears 64% of the total government health expenditure, whereas the centre accounts for the remaining third.[5] Even though the centre's financial contribution is small, the central government's influence can be substantial.

Many state governments do not give high priority to health. Analyses of public expenditures show that in all Indian states, with the exception of Gujarat and Uttar Pradesh—and to a very small extent Bihar—the proportion of government development expenditures allocated to health decreased or stayed the same between 2001–02 and 2007–08 (table 4).

Apart from the lack of sufficient political commitment to make health a priority and the limitations of public administration, states with low public health expenditure typically find themselves fiscally constrained by two factors.[41,42] First, the centre's distribution of revenues across the states does not offset the fiscal deficits of the states that are poor. Second, the fiscal space for development spending in the poor states is small, and these incur a large share of the obligatory expenditures (including salaries, wages, pensions, and interest payments). For example, in Bihar, the public spending on health is unlikely to increase from INR93 per person in 2004–05 to reach the national average of INR268 soon with its government's fiscal deficit of 3% of the gross state domestic product even in 2006–07.

With the weak health financing by the states, transfers from the centre have a crucial part to play in increasing the amount of, reducing the inequality in, and enhancing the efficiency of health expenditure across states.[43,44] The incomplete equalisation grants (up to 30% of the deficit between the state's per person health expenditure and the average per person health expenditure) for health introduced for 2005–10 by the Twelfth Finance Commission[45] could be seen as an important method to help with central transfers in seven low-income, poor-health, and fiscally constrained states—Assam, Bihar, Jharkhand, Madhya Pradesh, Orissa, Uttar Pradesh, and Uttarakhand.

Financing initiatives

Flow of funds

The Government of India has, since 2005, introduced many new initiatives to address the challenges of health financing, including low public spending, high

 Published online January 12, 2011 DOI:10.1016/S0140-6736(10)61884-3

out-of-pocket expenditures, little financial protection, inflexible financial arrangements with state governments, poor efficiency, and rising costs of health care.[46]

Started in 2005, the National Rural Health Mission attempts to induce state governments to join a centrally sponsored scheme that seeks to quickly increase the delivery of good-quality health care to the people, especially the people living in rural areas who are poor. Although too early to systematically assess the effect of the National Rural Health Mission, this initiative is a key effort to increase public funding and enhance the efficiency of the state health systems. Preliminary data from the National Rural Health Mission indicate improvements across many dimensions of rural health-care delivery. Also, expenditures supervised by the National Rural Health Mission form a substantial proportion of public health spending in India's states.[47–49] Estimates of funding given by the National Rural Health Mission to the state governments in 2007–08 indicate that the share of expenditure by this mission in per person health spending varies between 13% and 36% in the states (table 4). Even a fairly rich state like Gujarat has capitalised on the financing by the National Rural Health Mission (table 4).[50]

Mechanisms of fiscal transfer

The National Rural Health Mission has struggled not only with the amount of funding, but also with the mechanisms of fiscal transfers to enhance the efficiency of the health system. The inherent problems in the conditionality of fiscal transfers from the centre to the states are well known.[51,52] The usual pattern is that the resources of the central government are directed towards the improvement of facilities and priority programmes for the control of specific diseases and family planning, leaving the state to support the recurring costs of prevention, primary care, and general health services. This situation has often led to states accepting the central funds for health infrastructure, but neglecting or being unable to allocate additional complementary funds for the recurring expenditures of new staff and operations that are in progress.

The National Rural Health Mission has addressed this constraint in several ways. First, the state governments are able to use central resources to fill gaps identified by them in the health infrastructure, human resources, equipment, and service outcome guarantees to ensure conformity with the Indian Public Health Standards. Second, the National Rural Health Mission directly releases flexible funds to supplement the operations and maintenance budget of government health facilities. Another major change has been that the funds from the central government are routed directly to newly formed state health societies (government-sponsored legal entities with the authority to take financial decisions), which have increased autonomy and decision-making authority to spend the resources. Although this system of direct transfers results in immediate benefits, its continuation will need to be assessed against the efforts to transfer funds directly to locally elected governments (panchayats) for the delivery and management of basic social services including health care.

Innovative cash transfers

If public investments in health are to have a positive effect, enhanced flexibility of centre-to-state transfers will be necessary. An example of the flexibility introduced by the National Rural Health Mission is Janani Suraksha Yojana, an innovative scheme to provide conditional cash assistance to pregnant women who give birth in institutions, and also to the health workers who motivate, assist, and accompany the pregnant women to the health facility. Funded entirely by the central government, this intervention is expected to reduce maternal and neonatal mortality rates, and health risks associated with pregnancy by promoting deliveries in institutions; reduce private out-of-pocket expenditures; prevent individuals, particularly those who are poor, from seeking care from unqualified private providers; and revitalise the public sector. Recent data indicate an increase in the all-India proportion of births in institutions since the introduction of Janani Suraksha Yojana from 41% in 2002–04 (before National Rural Health Mission) to 47% in 2007–08.[15] However, the progress has differed between states during this period. Whereas the proportion of births in institutions increased by more than 15 percentage points in Madhya Pradesh, Rajasthan, and Orissa, an increase of 3 percentage points or less was recorded in Uttar Pradesh, Kerala, and West Bengal.[15] A concurrent assessment of Janani Suraksha Yojana in 2008, although indicating the need to create increased capacity in the health systems and for strengthening the management of this scheme, attributes the large increase in deliveries in institutions in the states that did not do very well to the popularity of Janani Suraksha Yojana.[53]

Prices of drugs

Aware of the rising costs of drugs and the financial burden they impose, the central government has introduced fiscal and other methods during the past decade to reduce the costs of drugs and ensure availability of good-quality drugs at affordable prices. These include price control of essential drugs, standardised tax of 4% on drugs, and reduction of the excise duty from 16% to 4%. The Government of India is opening Jan Aushadhi—a countrywide chain of medical stores to make generic and other drugs available at reasonable prices. Though only a few stores have been opened so far in Andhra Pradesh, Delhi, Haryana, Orissa, Punjab, Rajasthan, and Uttarakhand, the differences in prices are quite substantial. For instance, ciprofloxacin (250 mg) is available in these stores at a fifth the average market price, and cough syrups at a third the price. Some state governments have started retail outlets for drugs to ensure that people get reliable, good-quality drugs at affordable prices. Some state governments such as

For more on **Indian Public Health Standard Guidelines for subcentres, primary health-care centres, and community health-care centres issued by the National Rural Health Mission** see http://www.mohfw.nic.in/NRHM/iphs.htm

For more on the **Department of Pharmaceuticals, Government of India** see http://janaushadhi.gov.in/

Tamil Nadu have streamlined the procedures for drug procurement to reap benefits from the reduced costs of drugs in the public sector.

Medical insurance schemes

Since 2003, the central and some state governments have launched new medical insurance schemes, all with different features, to extend coverage to workers in the informal sector, particularly those who are poor. Most of the schemes, however, are still in an experimental phase (table 5). The largest is the central government's Rashtriya Swasthya Bima Yojana, a national medical insurance programme announced in 2007 and launched on April 1, 2008 (table 5). Pre-existing illnesses are covered from the first day and there is no age restriction. Coverage applies to five members of the family, including the head of household, spouse, and up to three dependants. This scheme, implemented by the Ministry of Labour and Employment, gives poor families the freedom to choose from 981 public hospitals and 3146 private hospitals. By April, 2010, 14·45 million smart cards had been issued to 29·76 million families below the poverty line in 172 districts of India. The financial protection offered by this scheme and other medical insurance schemes, however, remains insufficient. Many schemes target only poor families; they are not universal in coverage. Most schemes cover treatment costs of hospital admission or serious illnesses, and not outpatient care. Also, many of the schemes do not reimburse costs of drugs—a major out-of-pocket expenditure.

For more on **Rashtriya Swasthya Bima Yojana** see http://www.rsby.gov.in/

Way forward

India has set a target of increasing public spending on health from 0·94% in 2004–05 to 3% of the GDP.[1,54,55] First, attention needs to be paid to centre–state financial flows. Under the National Rural Health Mission, the central and state governments are expected to share the additional health expenditures in the ratio of 85:15 during 2007–12.[55] After 2012, the ratio is expected to change to 75:25. This arrangement needs to be assessed on a state-by-state basis. In the past, state governments have used central government funds for the creation of health infrastructure. The finance departments of most states are reluctant to increase the workforce on a recurring basis, even for the provision of improved health care. As a result, many of the facilities are underused, or states do not recruit more members of staff other than what is possible with funds from the central government. The central government might have to specify conditions for reciprocity for the allocation of its resources to state governments. Appropriate incentive systems will be needed to ensure that states are rewarded financially for improved use of public funds and also for recording improved health outcomes. Similarly, a more effective method of equalisation of public health expenditures will be needed to ensure that states with low per person public spending do not have to wait a long time to generate additional resources to achieve a nationally accepted threshold.

Second, for a low-middle-income country like India, with millions of self-employed and underemployed people working in a large informal sector, taxation is the

	Coverage	Features
Universal Health Insurance Scheme (launched in 2003)	Mostly benefits (≤INR30 000) for admission to hospital for a family on a floater basis, including compensation (INR25 000) for death of earning head of the family; compensation at the rate of INR50 per day for a maximum of 15 days to the earning head or spouse of the family; one maternity benefit with 1 year waiting period with INR2500 for normal and INR5000 for caesarean sections	Only for families below the poverty line and for individuals younger than 70 years; given on a yearly rate of INR300 for an individual; INR450 for a family of five; INR600 for a family of seven members with a government subsidy of INR200, INR300, and INR400, respectively
Rashtriya Swasthya Bima Yojna (launched in 2008)	Offers cashless coverage of all health services using the smart-card-based system; to cover hospital admission and day-care diseases; total of INR30 000 insured per family below poverty line per year on a floater basis; pre-existing illnesses also covered; reasonable expenses for before and after hospital admission for 1 day before and 5 days after hospital admission; transport allowance (actual with limit of INR100 per visit) but subject to a yearly limit of INR1000	Families below the poverty line with up to five members for 1 year; to be renewed yearly; registration fee for a family is INR30; central government contribution is 75% of the premium of INR750, subject to maximum of INR565 per family per year and the cost of the smart cards; contribution by state government is 25% of the premium
Yeshasvini Scheme in Karnataka (launched in 2003)	Covers risk of INR100 000 for one surgery and INR200 000 for several surgeries in a year with a premium of INR120; pre-existing diseases are covered; cashless surgery at fixed tariff	Should be a member of Registered Rural Cooperative Society of Karnataka for a minimum of 6 months; all members of the family are eligible; upper age limit is 75 years
Kudumbasree in Kerala (launched in 2006)	INR30 000 a year as the total medical expenses for a family of five; up to INR60 000 a year for treatment at home, if required; up to INR15 000 a year for maternity need; a subsistence allowance of INR50 a day if bread winner is hospitalised; coverage of all existing illnesses, and cashless medical treatment; an accident insurance benefit of INR100 000 for death or full disability and INR50 000 for partial disability	Families below the poverty line; beneficiary's contribution is INR33; premium for a typical family with five members below the poverty line is INR399 a year; a central government subsidy of INR300 from the Universal Health Insurance Scheme and an additional subsidy of INR33 each from the state government and the local organisation; implemented through a neighbourhood group
Arogyashree in Andhra Pradesh (launched in 2007)	INR200 000 insured per family; covers hospital admission for surgeries and treatment of diseases such as heart, cancer, neurosurgery, renal, burns, and polytrauma cases	Families below the poverty line; beneficiaries for treatment are identified through health camps; INR330 per year per family are paid by the state government; validity for 1 year or up to the time when the overall claim ratio reaches 120% of the premium

Table 5: **Medical insurance schemes introduced by central and state governments**

only viable option for mobilisation of resources to achieve the target of public spending on health of 3% GDP. The conditions needed for other methods of financing such as payroll or social security contributions to generate sufficient revenues (large formal sector employment, substantial payroll or social security contribution, and strong tax collections) are not present in India.[56] Taxes are easier to collect than are payroll contributions—a reason why Spain, for example, changed from social security contributions to general taxation. Taxation is also a better financing option, because of the large recurrent expenses, which can only be expected to rise with population aging and the shift towards chronic diseases. The state could specifically consider raising taxes on products that harm public health such as all tobacco products, alcohol, high-calorie foods of little or no nutritional value, and energy-inefficient and polluting vehicles. This increase in taxes will give additional health benefits through reduced consumption of these products. Although user fees can potentially contribute to enhancing accountability of public services and deter unnecessary overuse of the health facilities, they have not proven to be an effective source of resource mobilisation.[57,58] Imposition of user fees in many low-income and middle-income countries has increased inequalities in access to health care.[59,60] Even in India, although some evidence suggests improvement in quality of health facilities with the introduction of user fees, other evidence indicates an increase in inequalities in favour of rich individuals in specific health facilities.[61,62]

Third, increased spending on health alone is insufficient to improve the health status of Indian people. Simultaneous steps are needed to improve performance, efficiency, and accountability in the public and private sectors. Introduction and reinforcement of health management information systems, third-party assessments of service guarantee and quality, community supervision, public disclosure, social audits, and accreditation of facilities could help to improve effectiveness and accountability. Mechanisms are also needed to help with the flow of public funds, minimise unspent balances, enhance the absorption capacity of the public health system, and ensure improved monitoring and assessment.[1] Also important is to build adequate capacity at different tiers of administration, introduce flexibility, and set up mechanisms for the enforcement of quality standards in the delivery of health care.

Fourth, policy and legislative changes will be needed to contain the rising costs of medical care and to ensure quality of care. The government would need to fill gaps and deficiencies in drug policies, registration of health practitioners, and guidelines for health-care interventions including use of pharmaceutical drugs and biotechnologies. The coverage of price regulation of commonly used drugs would need to be strengthened and increased. Standardised protocols and costs of various treatments would have to be developed and monitored, particularly when private providers are called on to provide services to fill gaps in public provisioning. This development ought to be effectively associated with a well designed medical insurance system. The central and state governments would need to introduce more effective ways of ensuring consumer protection and information disclosure about quality, pricing, equity, and efficiency of health services provided in the public and private sectors.[63,64]

Fifth, risk pooling would need to be greatly increased as a prerequisite for the introduction of any viable system of financial protection. The country's demographics and rising per person income make it feasible to do so. The possibility of average risks increasing as large numbers of low-income households with higher rates of morbidity join an insurance programme are likely to be offset by the large proportion of India's young population. Risk pooling can also be improved by an increase in the duration of the coverage, preferably to lifelong insurance. Intertemporal risk pooling would then take place by any member of an insured group during the lifespan of that person—low incidence of disease at young age is offset by high incidence at old age. Risk pooling for different types of illness will be beneficial. Insurance should cover low-cost and frequent outpatient illnesses, medium-cost and low-occurrence illnesses requiring treatment in hospital, and the expensive but infrequent life-threatening illnesses. Households would then have a high incentive to adopt medical insurance to safeguard against serious illnesses.[65] They would decide to move from complete self-financing to at least part insurance against health contingencies that are less likely but involve increased expenses.

Sixth, universal financial protection is necessary to guarantee health as a right of all citizens. Financial protection should be offered to all citizens, not just those who are poor, against inpatient and outpatient care. Although several lessons remain to be learned from the experiences of other countries, no single solution exists.[66,67] On the basis of evidence, we recommend a single-payer system for India that is known to have several advantages.[68,69] In such a system, the government would collect and pool revenues to purchase health-care services for the entire population from the public and private sectors. The state would enlist public and private providers of allopathic and non-allopathic systems of medicine, establish uniform national standards for payment, and regulate quality and cost by use of appropriate information technologies. If well managed, countries with single-payer systems have been able to deal with delays and shortages that are often encountered. They have been better able to manage competition, contain and decrease costs, negotiate reduced prices with private providers, ensure adequate funding for preventive and primary care that reduces costs of curative care, build incentives for physicians to improve quality and performance, and introduce management systems

(such as uniform electronic payment) to improve efficiency of service delivery.[70]

Such a medical insurance scheme for health care could be supported by public financing from a combination of tax revenues, private insurance (mandatory for all employers), and income-indexed compulsory personal insurance payments integrated to provide funds for a universal health-care fund. Existing government-sponsored insurance schemes will, however, need to be integrated into the universal medical insurance scheme for health care.[19]

Seventh, effective regulation and oversight are needed to ensure that increased health spending by the government and private households results in improved access to good-quality health care. This outcome will require enforcement of existing norms to contain costs and assure quality, and introduction of new legislation to ensure compliance in the public and private sectors. Methods to ensure compliance with the Indian Public Health Standards specified by the National Rural Health Mission will need to be specified. Appropriate systems of national reporting and record keeping will need to be developed. Registration of private providers with an appropriate authority would be necessary to monitor standards. Such a system of empanelment of private providers would be essential particularly for those who wish to participate in a national public health system and insurance plan.

Last, the value for the money spent on health that an individual gets will depend on the organisation, management, and productivity of health-care services in different states. The extraordinary performance spread within the public and private sectors makes use of additional public expenditures for galvanising a judicious mix of public and private providers for the delivery of health care by India imperative. Additional financial and human resources are needed to ensure better returns on investments already made in the public sector. Increased public investments will be needed to strengthen the provision of primary health care, which is largely the domain of the public sector. Public financing of health care could ensure that affordability does not become a barrier to access of needed health care that draws on the strengths and complementarities of India's public, private, and voluntary sectors.

Whatever happens to medical insurance and private financing of health care, India's national health goals cannot be achieved without greatly expanding public financing in the health sector. In view of the very low level of public financing, greater public investments are thought to be necessary albeit insufficient for India to achieve its national health goals. The amount of public financing and the strategies followed will affect the overall performance of the health systems, including public and private providers and facilities, and will also affect the extent of national medical insurance cover for all people in India.

Contributors
All authors contributed equally to the conception, data gathering, analysis, writing, and discussion of this report.

Conflicts of interest
We declare that we have no conflicts of interest.

Acknowledgments
The Lancet Series on India: Towards Universal Health Coverage was supported by grants from the John T and Catherine D MacArthur Foundation and the David and Lucile Packard Foundation to the Public Health Foundation of India.

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