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Understanding the Canadian, Thai and Brazilian Universal Healthcare Systems: A Focus on Regulation and Lessons for India

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Introduction: Regulation in Healthcare Systems

This paper examines how the Canadian, Thai and Brazilian healthcare systems are regulated. The case studies are presented separately. For each country I first explain how the health system is designed and implemented. Second, I discuss how the system is regulated, focusing on the following components: the regulatory bodies; the system of paying workers; cost containment measures; efforts to maintain high quality, rational healthcare; and efforts to maintain an appropriate quantity and diffusion of healthcare across the country.

I finish each section with a brief overview of potential lessons that India can draw from the healthcare system of the case study country, suggesting elements of the system that may work well in India and components. The Canadian case study focuses on the division between national and state (or in Canada's case federal and provincial) power, since this division is the component of the Canadian system that is of greatest interest to India and efforts to bring healthcare to remote areas. The Thai case study examines on how the government worked out a system of universal coverage from a patchwork of pre-existing schemes. India's RSBY scheme and other government subsidized or funded health insurance schemes share great similarities to the Thai system prior to Universal Coverage in 2001. Brazil's country profile aligns with India's in several important ways that make its transition to universal access particularly relevant to India. Both countries have large populations and have seen rapid economic growth in the past decades but are still characterized by gross inequalities between the rich and the poor. Understanding how Brazil is making its SUS system of universal healthcare work offers several salient lessons to India.

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1. Healthcare in Canada

Basic Outline

Most healthcare in Canada, commonly called Medicare, is publically funded through universal single-payer public health insurance but is provided both privately and publically by hospitals and physicians operating as for-profit or not-for profit healthcare provision units.

Canada's healthcare system is guided by the Canada Health Act of 1984 and administered separately by each of the 10 provinces and 3 territories. The Act states that all "medically necessary" hospital and physician care must be universally covered without co-payments in order for provinces and territories to receive federal fund transfers (Canada, 2010). It does not cover non-emergency dental care or prescription drugs. The Act does not say exactly how medical care should be organized across the country only that it must meet certain criteria (discussed below) in order to receive federal funding. It leaves the management of health systems to each province or territory. The Canada Health Act does not directly bar private delivery or private insurance for publicly insured services and each province has developed different laws surrounding private healthcare with most explicitly banning it.

The primary objective of the Act is "to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers" (Canada, 2010, Secton 3, p. 8). It lays out the following criteria and conditions for funds transfers:

(a) Public Administration

All provincial and territorial health insurance plans must be "administered and operated on a non-profit basis by a public authority, responsible to the provincial/territorial governments and subject to audits of their accounts and financial transactions" (Section 8). This condition does not deal with delivery, but with insurance. So insurance companies cannot profit from covering 'medically necessary' care but healthcare workers and organizations can profit. Private insurance companies can still profit from covering non-insured services, and/or non-insured persons.

(b) Comprehensiveness

The health care insurance plans must cover "all insured health services provided by hospitals, medical practitioners or dentists" (Section 9). Generally, the insurance must only cover services in hospitals or through physicians. Hence emergency dental care but not any other dental care is covered. The provinces are allowed, but not required, to insure.

(c) Universality

This clause states that all insured persons must be covered for all the health services "provided for by the plan on uniform terms and conditions" (Section 10). Health insurance coverage is extended to all Canadian residents including landed immigrants although there is a waiting period (three to five months) before coverage begins for new immigrants and Canadians who have lived abroad.

(d) Portability

This clause seeks to insure Canadians moving between provinces/territories are covered. Short trips to other provinces (three months or less) are covered by their home province. For people relocated for longer period, the new province imposes a waiting period (three months or less) during which the old province covers them before taking over coverage.

(e) Accessibility

The insurance plan must provide for "reasonable access" to insured services by insured persons. This means access cannot be limited by user charges or extra billing, cannot be limited by age, health status or financial circumstances. If a province imposes user charges or extra-billing the federal government can (and has) withhold the exact same amount from its next financial contribution to that province.

For example, in 1993, British Columbia allowed approximately 40 medical practitioners to use extra-billing in their practices. In response, the federal government reduced B.C.'s payments by a total of $2,025,000 over the course of four years.

In 1996, Alberta had their payment reduced by a total of $3,585,000 over the course of a few years due to the use of private clinics that charged user fees. Newfoundland suffered the loss of $323,000 until 1998 and Manitoba lost a total of $2,056,000 until 1999 from user fees being charged at private clinics. Nova Scotia has also forgone payment for their use of user fees in private clinics.

Non-Hospital/Physician Services

Prescription drugs, dental care, vision care, medical equipment and appliances (prostheses, wheelchairs, etc.) and the services of allied health professionals such as podiatrists and chiropractors need not be provincially covered for federal transfers under the Canada Health Act. However, the provinces and territories provide coverage to certain groups of people (e.g., seniors, children and social assistance recipients) for these services. Others must find private group insurance, usually through their workplace or as a dependent on someone with workplace insurance.

Private Insurance/Payment for Medically Necessary Healthcare?

The single criterion for accessing health care in Canada has been medical necessity. However, recent changes suggest a move towards a second criterion: financial capacity. The use of private insurance or out-of-pocket expenditure to pay for health services covered under public insurance are banned by various provincial level laws in most provinces. However the 2005 ruling on the case *Chaoulli v. Quebec* may create space for private health insurance for medically necessary hospital and physician services. The Supreme Court of Canada found that Quebec's prohibition on purchasing private insurance for government-insured physician and hospital services contravenes Quebec's legislative act, the 1975 Charter of Human Rights and Freedoms (Dhalla, 2007).

Quebec now allows citizens to purchase private insurance to obtain care for three procedures (cataract surgery and knee and hip replacement) at "a specialized medical centre where only physicians not participating in the health insurance plan" practice (Dhalla, 2007, p. 89). Alberta and British Columbia have also frequently considered allowing private insurance but the issue remains controversial.

In general, provinces require physicians to fully opt in or opt out of the public insurance system (Hurley & Guindon, 2008). If a physician chooses to open a cataract surgery clinic, for example, and accept private insurance or out of pocket payments, he or she cannot also perform cataract surgery on other patients and bill the Quebec public insurance plan. Likewise, any physician operating outside the public system to provide services not included in public insurance covers (i.e., 'medically unnecessary' services such as laser eye surgery) must support the entire practice on money earned through private funding. Most provinces also regulate the amount physicians who have opted out can charge (Flood & Archibald, 2001). There are extensive differences between provinces:

- Manitoba, Ontario and Nova Scotia prohibit opted-out physicians from charging private fees greater than the fees paid by the public plan.
- Other provinces permit opted-out physicians to charge fees higher than those in the public plan, however, all but Newfoundland and Prince Edward Island prohibit such patients from receiving any public subsidy.
- Newfoundland is the only province that currently allows private health insurance coverage for publicly insured physician and hospital services, allows opted-out physicians to charge more than the public fee, and allows patients to receive public coverage for a service even when the fees charged are higher than those of the public plan. (Hurley & Guindon, 2008)

Very few physicians have chosen to opt out of the public insurance system because so few people are inclined or able to pay out of pocket or buy private insurance for services that are already insured through Medicare. Health Canada (2007) estimates that no physicians have opted out in seven of Canada's 10 provinces, while six are opted out in British Columbia, 129 in Ontario, and 97 in Quebec.

Regulation within the Canadian Health System

In order to document compliance with the Canada Health Act (thus determining federal money transfers) the federal Minister of Health annually reports to the Canadian Parliament on how the act has been administered by each province over the course of the previous fiscal year. For non-compliance with the any of the five criteria listed above, the federal government may withhold all or a part of the transfer payment with "regard to the gravity of the default" (Section 15). Thus far all non-compliance issues have been settled through discussion or negotiation.

Only the provinces can pass laws on the creation and administration of hospitals and the provinces handle health insurance regulation, the distribution of prescription drugs, and the training, licensing and terms of employment of practitioners (Makarenko, 2008). Each province thus has a college of physicians and surgeons that provides professional regulation, develops patient safety guidelines, registers all physicians, deals with complaints, and publishes ethical and legal guidelines.

Over 95% of Canadian hospitals are operated as private non-profit entities run by community boards of trustees, voluntary organizations or provincial health authorities (Association of International Physicians and Surgeons of Ontario, 2004). Public hospitals are regulated by provincial regulatory bodies, usually the Ministry of Health and Long-term Care, under the Public Hospitals Act. The hospitals' Boards of Directors report to the provincial Ministries of Health on how they have used their provincial subsidy grants, which in turn report to the federal Ministry of Health.

Physicians working in hospitals and clinics are regulated by their provincial college of physicians and surgeons.

Private health centres offering services beyond what are covered by Medicare (cosmetic surgery, laser eye vision correction surgery, executive health clinics that offer enhances physical examinations and wellness counselling) or performing surgeries paid for by private insurance in Quebec (see *Private insurance for medically necessary healthcare?*) have been flagged as lacking appropriate regulation (Lett, 2008). In some provinces, even private medical clinics that are integrated into the delivery of insured medical services lack regulation (ibid). Other provinces have regulatory acts, such as Nova Scotia's Health Facilities Licensing Act, and Ontario's Private Hospitals Act 1973 working with the provincial college of physicians and surgeons (Association of International Physicians and Surgeons of Ontario, 2004). Efforts are currently underway to bring about regulation throughout the country.

How Does the System Pay Healthcare Workers?

Since each province handles administration differently, the method of healthcare worker payment varies. However, generally, for out-patient care, physicians bill the government insurance organization on a fee-for-service basis. Patients are occasionally contacted by the government insurance organization to check that they actually received the service the physician billed for. Physicians at clinics in remote areas receive financial bonuses from the government. For in-patient care at hospitals, healthcare workers have a flat salary, which depends on the healthcare worker's experience, amount of responsibility, additional tasks (administration work, teaching medical students, etc.), as well as the hospital's location (remote hospitals offer higher salaries to attract workers) and tier (tertiary/teaching hospitals are the most elite with the best equipment and the most complex medical cases).

How are Costs Contained?

By international standards, Canadian spends an above-average amount on health care. Medicare was 6.9% of Canada's GDP in 2005 placing it 9th highest in the world (Hurley & Guindon, 2008). Nonetheless there are many provincial level efforts to contain costs. Physicians and their clinics are audited to insure that they are not over-billing (i.e., charging for things they did not do or charging for unnecessary procedures or tests). These audits are extensive and serve to discourage over-treatment, over-medicalization, over-testing and cheating. Hospital costs are contained by maintaining a minimum standard of non-medical care, and allowing supplementary charges or supplementary insurance to upgrade non-medical elements of hospital care (i.e., people can pay or use private insurance for 'perks' such as shifting into a private room).

Defensive medicine to avoid lawsuits is not a major issue in Canada. Physicans in private practice (i.e., most physicians) buy medical liability insurance, with the government reimbursing them for about 80% of their insurance premium payments. Medical malpractice suits are less common in Canada than in the US and liability insurance fees are lower for a number of reasons. A major reason is that Canada's highest courts have set limits on awards. Also the country's liability laws make establishing professional negligence quite difficult (Clarke, 2009).

Finally, by making healthcare free and accessible to citizens, chronic illnesses such as hypertension and diabetes are addressed earlier than in countries without coverage (i.e., the USA), where both the uninsured and those with low private coverage and high deductibles or co-payments delay care because of cost.

Health planning including public health efforts to reduce the disease burden in the population (such as anti-smoking, sexual health and healthy lifestyle campaigns) can stop expensive and long-term health conditions from occurring, or facilitate early testing and thus more effective and less expensive treatment. The Canadian government has a financial interest in preventing illness and thus supports significant

health promotion research and initiatives (for example high tobacco taxation and innovative needle exchange programs to reduce disease among intravenous drug users).

Containing the Cost of Drugs

In 2007, Canadians spent an average of $578 CND per capita on prescription drugs ($548 USD = Rs.25 615) (Therapeutics Initiative, 2008). Public insurance plans in Canada pay for about 44% of total prescription-drug spending (because of coverage for the elderly, those on social assistance and the disabled); private plans cover 34%, and patients pay the remaining 22% out of pocket.

The Patented Medicine Prices Review Board (PMPRB) is a government review board that seeks to prevent 'excessive' increases in patent-drug prices that might result from manufacturers' rights to market exclusivity. The PMPRB can force price reduction based on the following criteria:

- For most new patented drugs, the cost of therapy may not exceed the highest cost of therapy with existing drugs used to treat the same disease in Canada.
- For breakthrough drugs and those that offer a substantial improvement, manufacturers can charge the median of the prices charged for the same drug in countries listed in the PMPRB's "Regulations."
- Price increases after a product launch cannot exceed the rate of increase in Canada's Consumer Price Index.
- The price can never exceed the highest price for the drug in the countries listed in the "Regulations" (Mulligan, 2003).

PMPRB regulation has consistently kept prescription drug in Canada lower than the international average.

The provinces set the cost of generic drugs as a percentage of the brand name drug; the Ontario government recently reduced the cost of generics from 50% of the price of brand name drugs to 25% (CBC, 2010).

How is Quality and Rationality of Care Maintained?

Provincial licensing bodies deal with malpractice issues and complaints. These bodies also handle discipline, which can range from suspensions to losses of the privilege to continue practicing medicine.

The cost containment measures discussed above also encourage rational care, since physicians are generally not able to bill for unnecessary procedures. Also, the low rate of medical malpractice suits reduces physician likelihood to practice defensive medicine.

The market structure of the Canadian Medicare system encourages physicians to provide the care that patients want. Physicians practice as private units and patients chose their provider so it is in the physician's interest to provide attractive service (friendly, diligent, clear, appealing to immigrant populations, etc.). However, there is a shortage of doctors in Canada so many Canadians take whichever doctor they can find who is accepting patients. In addition, rural areas often end up having very little choice over their doctor.

How is Quantity and Diffusion of Care Regulated?

Institutions

Equal access is a central component of the Canada Health Act and the federal government's Office of Rural Health focuses on addressing issues of rural health and access to services. Most provinces have put in place programs to bring people to medical care services, or medical care to communities. Examples include the Underserviced Area Program and the Northern Health Travel Grant Program in Ontario. However, rural people in Canada still have to travel long distances to reach hospitals. Rural areas have helicopter emergency medical services (HEMS) that have consistently demonstrated that air transport to tertiary trauma care is lifesaving and cost effective .

Healthcare Providers

The government of Canada has implemented many strategies to attract physicians to rural practice. They have created a rural medical school (Northern Ontario Medical School) and a rural medical campus (Prince George Campus of the University of British Columbia) to train physicians who are themselves from rural areas. There are several scholarships and loan remission programs for rural medical students and new doctors who chose to practice in rural areas. Medical schools have altered admission policies to select more students from rural areas, increased generalist education, and developed rotations in rural settings. The Society of Rural Physicians of Canada has a taskforce that examines government efforts and suggests additional programs.

Nurse-practitioners are registered nurses who undergo extensive additional training to function in many important ways as physicians, including being able to prescribe drugs. Nurse-practitioners have been flagged as another potential solution to increase rural access to healthcare.

Representatives from rural communities have also developed recruitment strategies, including frequent participation at conferences and recruitment fairs that are held for medical students and physicians. Many offer financial incentives, namely subsidized overhead costs, debt repayment, and financial grants, and promote other benefits of their communities, such as recreational opportunities (Jutzi, Vogt, Drever, & Nisker, 2009).

Problems with Quantity and Diffusion

Although 20% of Canadians live in rural communities, only 10% of the country's family physicians practise in these areas (Jutzi, Vogt, Drever, & Nisker, 2009). Continued efforts are required to increase the number of rural physicians, including recruiting more medical school students from rural areas, offering greater financial incentives for practicing in rural areas, help rural physicians access specialist insight though better referrals systems and telemedicine systems, and implement comprehensive plans to enable physicians time off.

Lessons from Canada's Medicare System for India

- India's system of government, with a diverse range of state infrastructure, resources, histories, cultures, ethnic and financial capacity, would lend well to a public medical care administrator system similar to Canada's. Creating an overarching Act controlling the transfer of national level funding, but administered and organized according to each state's needs could suit the Indian situation.
- The measures used in Canada to control medical malpractice lawsuits pay outs would certainly benefit India's urban medical system which is seeing a rise of malpractice suits.
- Leaving individuals to choose their physician, and leaving medical practices as private units where the charges are billed to the government insurance rather than paid out of practice, would likely find less resistance than attempting to convert all private medical practices into public government-run facilities. It is closer to the current state of affairs in India.

2. Healthcare in Thailand

Basic Outline

In 2001 Thailand introduced the Universal Health Coverage (UC) scheme, sometimes called the 30 baht[2] scheme because of a now-defunct co-payment system. This insurance program closed the gap on a patchwork of previous schemes and currently operates in conjunction with two other government healthcare insurance schemes: the Civil Servant Medical Benefit Scheme (CSMBS) and the Social Security Scheme (SSS). Members are enrolled in UC for free through presenting their home registration papers and gain access to a basic package of services through public or private health centres, emergency healthcare and a standard list of drugs. Registration

[2] 1 Thai baht = Rs.1.43

is only possible in one's region of permanent residence. Treatment outside the healthcare network in which one is registered is limited to emergency care

CSMBS is a general tax-funded benefit scheme for government employees, state enterprise employees and their dependents. Its coverage is the most extensive and flexible of Thailand's three schemes because it provides reimbursement on a fee-for-service basis and can be used for complete coverage at public healthcare centres or significant, but not complete, coverage at private hospitals.

SSS is for private sector employees and the self employed. It is financed based on tripartite contributions from the government, employees and employers, each contributing 1.5% of the payroll (Tangcharoensathien, Supachutikul, & Lertiendumrong, 1999). Members of the scheme register with a healthcare provider from a set list of potential providers (of whom about half are public and half private) who are paid a flat rate by the insurance purchasing agency based on the population of SSS holders under their care (i.e., capitation).

Prior to 2001, the Thai government offered a public Medical Welfare Scheme (MWS) for the poor, the disabled, the elderly, children under 12, veterans and monks as well as a voluntary health card (VHC) scheme for farmers and other informal (generally rural) workers. While the MWS was free, the VHC scheme required that families purchase a health card for B500 (Rs. 720). VHC was originally a community-based insurance scheme; however by 1994 the government agreed to make a matching B500 contribution thus bringing the scheme into the government-tax funded fold. MWS and VHC were combined and expanded to make the UC scheme, which was introduced in October 2001. Figure 1 (below) shows the percent of the Thai population covered by each insurance scheme the year before and several years after the introduction of the UC scheme. The percent of uninsured people went from 20.3% in 2000 to 1.3% in 2004.

Figure 1: Health Insurance Coverage in Thailand Leading up to and after Introduction of UC (%)

Scheme (prior to UC, i.e., 2001)	*2000*	*Scheme (after UC)*	*2004*
Civil servant medical benefit scheme (CSMBS)	12.0	CSMBS	8.0
Social security scheme (SSS)	9.4	SSS	13.2
Public welfare scheme for the poor (PWS)	40.8	UC	78.5
Voluntary health card scheme (VHC)	17.5		
Uninsured	20.3	Uninsured	1.3

Source: (MoPH T. , 2001) and (MoPH, 2004) and (Jongudomsuk, 2008)

UC is funded from the general tax system and is non-contributory. It provides coverage for treatments within a core benefits package. From 2001 to 2006 members were required to make a co-payment of B30 (about Rs. 43) per chargeable episode (unless they were elderly, disabled, under 12 or extremely poor). In 2006 the government removed the B30 co-payment, making no out-of-pocket patient expenditure necessary.

Under UC healthcare is funded via the National Health Security Office (NHSO), a central purchasing agency. The NHSO pays provider organizations, which take the form of contracted units for primary care (CUPs) and can be public or private. Each CUP is typically comprised of a district hospital and a network of primary health centres and channels NHSO funding to healthcare provider payments. CUPs are given a per year allotment of funds based on the size of population they provide care for (i.e., capitation funding). CUPs serve a range of population sizes, with large city CUPs serving over 145,000 people to small rural CUPs serving a population of fewer than 17,000 (Hughes, Leethongdee, & Osiri, 2010). Since 2006, UC has moved from capitation to fee-for-service funding for some prevention and health promotion services. In addition, some private hospitals have special contracts with the government for special disease management programs (Jongudomsuk, 2008).

The Public-Private Mix in Thai Healthcare

Economic growth in the 1990s led to increasing demand for high quality health care, especially among those in the growing urban middle class (Teerawattananon, Tangcharoensathien, Tantivess, & Mills, 2003). This economic growth, along with the

extension of health insurance that could pay for private sector care through CSMBS and SSS and new tax incentives through the Board of Investment, spurred rapid growth in the private healthcare sector (Nittayaramphong & Tangcharoensathien, 1994).

The urban areas have far more private healthcare providers than the rural areas. In 1996, among households in Greater Bangkok, 63% of health expenditure was used to purchase care from private clinics and hospitals, while only 21% was spent in public health institutions (Teerawattananon *et al*., 2003).

To date, Thai healthcare system remains is a mix of public and private provision. Those insured under CSMBS have a choice of any healthcare provider, public or private and the majority seek private healthcare (Somkotra & Lagrada, 2008). The SSS requires insured people seek care from the providers with whom they are registered. Half of these authorized providers are public and half are private. Under UC, patients are to present at their primary care facility first and seek all referrals and further care from there. While most of these primary care facilities are public (especially in rural areas) the government is increasingly open to contracting out healthcare to independent public and private institutions, rather than to directly manage the entire network of care itself.

The supply of medical devices such as MRI, CT and mammography devices is dominated by the private sector, especially smaller private hospitals and standalone centres such as independent X-ray units providing X-rays only (Teerawattananon, Tangcharoensathien, Tantivess, & Mills, 2003). Pharmacies are a mix of public and private.

Regulation in the Thai Medical System

The Thai Medical Registration Division (MRD) and Food and Drug Administration (FDA) regulate medical institutions, professionals, and drug producers, suppliers and sellers directly through registration, licensing, setting rules, renewal requirements, and standards, and monitoring quality, safety, public information and advertising.

The Thai Ministry of Public Health (MoPH) regulates private healthcare institutions through the MRD, in accordance with the Medical Premises Act 1998 which controls the licensing and renewals of private clinics and hospitals. Public hospitals require no registration. However, according to Teerawattananon *et al*. (2003), MRD records show that almost all requests were approved making renewal basically automatic and thus not a strong form of regulation. All private hospitals and almost all the clinics that enrolled with MRD were able to obtain their licenses and no hospitals or clinics have been temporarily closed or had their licenses revoked since 1995.

Professional organizations such as the Medical Council, Dental Council, Nursing Council and Pharmacy Council serve a government sanctioned regulatory function

through setting and enforcing rules and standards and examining ethical issues. The Medical Council can make sanctions in the form of official reprimands and probations for mild transgressions and suspension and revocation of licences for severe ones (Teerawattananon, Tangcharoensathien, Tantivess, & Mills, 2003).

Health-care purchasers such as the Social Security Office (SSO) and Health Insurance Office (HIO) play an indirect regulation role by setting financial incentives and disincentives and choosing payment mechanisms.

Consumers and the media can express their discontent with health care services by seeking care elsewhere ('voting with their feet') or complaining to the government or professional organizations. The media can assist in the complaints process through publicizing issues.

How Does the System Pay Healthcare Workers?

Physicians in Thai public and private hospitals are employees of the hospital and are thus paid according to that institution's budgetary structure (Puenpatom & Rosenman, 2008). Capitation payment comes as a sum per person covered by the institution. Determining the salaries of contracted health personnel is administratively complex, especially for public health facilities. Various models of how to deduct salaries of health personnel through the capitation system created an unstable situation at the beginning and affected performance of district health system in many areas (Jongudomsuk, 2008).

How is Cost Contained?

For those insured under the UC scheme, primary health facilities are meant to serve as gatekeepers to more expensive care. All referrals are to be made through PHCs to prevent unnecessary treatment-seeking by patients. UC has led to an increased rate of hospital usage by 2.2% per year since 2001. This improved access to healthcare increased the workloads of health personnel at public health facilities substantially and became one of the major causes of internal brain drain during this period (Sirikanokwilai, Aarbansrang, Hanworawongchai, & Thammarangsi, 2003).

For those insured under CSMBS, the insured must make a co-payment for any drugs that are not on the essential list and for private rooms in both public and private facilities (Teerawattananon *et al*. 2003). The capitualation payment structure of both UC and SSS mean that the per capita per year payment provides a price control. In addition, several Royal Colleges have set standard prices for surgeries in private instituitions.

However, costs have risen for the UC scheme since inception in 2001. The payment to CUPs per insured member was set at B1202 (about Rs. 1730) in 2001 and has risen year-by-year to B2202 (Rs. 3170) in 2009 (Hughes, Leethongdee, & Osiri, 2010).

Containing the Costs of Drugs

The price of drugs obtained through public facilities is set by the MoPH standards board while the price in private clinics and hospitals is determined by market forces. The Thai Medical Premise Act 1998 was revised in September 2000 to require that prices of products and services produced by private hospitals be disclosed upon request by consumers. However, Teerawattananon *et al*. (2003) found that price notification upon request by consumers did not function because vendors provided biased information and, during emergencies, there was not enough time to seek price information.

Patient Activism and Expensive Care

Patient movements have successfully lobbied the government to add more expensive treatments, including ART and renal replacement therapy (Treerutkuarkul, 2010). The National Health Security Office's benefit subcommittee for drugs and treatments set a 100,000 baht (Rs. 144,000) per quality-adjusted life year threshold. The cost of haemodialysis is about 400,000 baht per year, four times more than the government calculated that they could afford. However, patients argued that the two other government funded healthcare schemes (CSMBS and SSS) cover renal replacement therapy, UC coverage ought to as well. In 2008, the public pressure resulted in renal replacement therapy being included in the UC. By early 2010, 2% of the budget was going to renal replacement therapy for 8000 patients receiving haemodialysis and 4000 receiving peritoneal dialysis. Dr. Tangcharoensathien, Minister of Public Health, is concerned about this escalating cost, saying: "Without alternatives, renal-replacement therapy, when fully scaled up to target end-stage kidney patients, could consume more than 12% of the Universal Coverage Scheme annual budget, and push it to the verge of financial crisis" (Treerutkuarkul, 2010). The government has launched a prevention program to increase the country's renal health in hopes of avoiding this situation.

How is Quality and Rationality of Care Maintained?

Quality of Healthcare Institutions

All private healthcare institutions are licensed by the Ministry of Public Health through the Medical Premises Act 1998. Private institutions must renew their premises registration biannually (Teerawattananon *et al.*, 2003, p. 329).

Rationality of Healthcare Provision

Within the UC system, doctors are paid through capitation financing and thus have no incentive to offer more services than are needed. Uncommon procedures must be granted permission through the central government. However, medical lawsuits against practitioners in private urban hospitals are becoming increasingly common and professional protection insurance is becoming increasingly popular. The avoidance of liability leads some private sector doctors to order unnecessary investigations and treatments. These procedures raise insurance premiums and lead to wasted resources.

Conduct of Healthcare Providers

The conduct of physicians, dentists, nurses and pharmacists is regulated primarily by the Thai Medical Council, a professional organization. They licence physicians and nurses and demand re-licensing throughout each professional's career. They also play a regulatory role by responding to complaints made by consumers, other healthcare professionals or raised in the media. Their sub-committee on ethics investigates each complaint and the sub-committee of inquiry penalizes professionals through reprimands, probation, licence suspicion, or licence revocation.

Problems with Quality

There is some debate about whether quality of care in public facilities has been sacrificed by the cost containment measures taken. Because public pay for physicians is substantially lower than private sector pay, many doctors in public facilities also work privately and give lower priority to their public sector patients (Teerawattananon, Tangcharoensathien, Tantivess, & Mills, 2003).

A paper by Mills et al (2000) examined the quality of care offered to patients who were covered by the Social Security Scheme's capitualation payment system, as opposed to patients with fee-for-service reimbursement (under CSMBS or out-of-pocket payment). Their findings suggest that capitation payment systems create incentives to skimp on care for patients, so that more funds are available for staff bonuses and facility ungrades (to attract patients that pay on a fee-for service basis). They found that public hospitals did not differentiate between patients covered by different schemes. However, private healthcare institutions had commonly developed seperate, parallel and inferior facilities for SSS patients. For instance, SSS patients were often only treated by a generalist while other patients accessed specialist phycisians. SSS wards (in private facilities) tended to have poorer staff to patient ratios and a greater use of nurse aids rather than qualified nursing staff. In addition, SSS patinets were more likely to recieve generic drugs and to recieve fewer drugs. Some private hospitals were also found to try to 'dump' higher cost SSS insured patients and discourage them from re-registering using techniques such as by delaying non-emergency surgeries. Overall, Mills et al (2000) cautioned that creating a larger capitualion based insurance scheme (which was in fact introduced the

following year as UC) would require careful regulation and would benefit from strong public sector involvement, since public healthcare institutions responded more positively to capitualion financing.

Public care is generally subject to fewer complaints but is also subject to fewer regulatory controls. While some suggest that public healthcare institutions and providers are more ethical practitioners, since they are not driven by profit (because of capitation rather than fee-for-service payment), Teerawattananon *et al*. (2003) suggest instead that sub-par practice is equally common to public and private facilities. However, the public facilities serve to a poorer population with a lower sense of entitlement. In fact, public care providers may be less driven to provide good quality care because they cater to a captive population and have a standard payment system determined by the number of people in their catchment area, rather than a demand-driven funding source that requires attracting consumers.

Professional organizations have been accused of protecting professional interests, failing to enforce standards and failing to make severe penalizations (Teerawattananon *et al*. 2003). Kick-back payments between private medical professionals surrounding referrals are said to be common (*ibid*). The Thai Medical Council has been found to be administratively inadequate to handle regulation, licensing and compliance (*ibid*).

How is Quantity and Diffusion of Care Regulated?

Institutions

There is no policy controlling where private facilities will be developed and how many private facilities can exist. The MoPH has no authority to refuse to licence a private facility on the basis of over-provision in that locality (Teerawattananon et al 2003). This lack of regulation has facilitated the development of the current situation where the vast majority o f private healthcare facilities are in urban centres. The MoPH seeks to correct this urban bias by their policy that all districts of Thailand must have a district hospital and corresponding primary health facilities.

Healthcare Providers

The MoPH controls the distribution of healthcare professionals through a system of compulsory service requirements. Medical and dental graduates must work in community hospitals for 3 years, nurses for 4 years and pharmacists for 2 years. Those who do not abide by this rule are fined (Teerawattananon, Tangcharoensathien, Tantivess, & Mills, 2003). Once a healthcare provider completes this service, there are no policies controlling their diffusion in the private sector. However, the government has sought to attract physicians to rural areas through increased recruitment to medical school from rural areas and added incentives in the form of a

hardship allowance for rural service, accelerated progress through the civil service ranks and additional payment for on-call time, out-of-hours duties and community work away from the hospital (Hughes, Leethongdee, & Osiri, 2010). The Thai Medical Council controls the number of specialist through placing quotas on specialist training.

Problems with Quantity and Diffusion

A disproportionate proportion of larger hospitals and trained personnel are located in the affluent Central Region, leaving the North East and North under-served (Hughes, Leethongdee, & Osiri, 2010).

A special advisor to the Thaksin Government, who headed the team responsible for devising the UC policy implementation plan, put the issue in the following terms.

> Because the hospitals are unequally spread the personnel are also unequally spread because they go with the hospitals. And so areas like the [Isaan] provinces would have very few doctors and if you ruthlessly apply the 1300 baht per capita [the capitation rate at that time] to every single province these guys – the [Isaan] provinces – would have plenty of money but no personnel. And the burden on doctors in these provinces is enormous because there is plenty of money but no doctors. Areas in the central plains were in a panic because, if 1300 baht is given to them also, the salaries alone would gobble up that amount. Whereas if ruthlessly applied it would mean that the government must be willing to transfer doctors from these areas and plonk them in [the Isaan] provinces (Hughes, Leethongdee, & Osiri, 2010, p. 449).

Despite these concerns, the MoPH decided to continue with the capitation payments in hopes that healthcare staff would relocated to adjust for the lack of funding in over-staffed urban centres and over-funding of understaffed rural centres. However, workforce redistribution continues to be a problem.

Lessons from the Thai System for India

- First and foremost, Thailand proves that less-developed countries can create universal access healthcare systems and can almost completely abolish out-of-pocket spending on healthcare for the poor.
- Thailand's system has been very successful in increasing access to healthcare for the poor and increasing financial protection for catastrophic illnesses. The effectiveness of the Thai system can be attributed in part to the extensive knowledge base from past health systems in Thailand (VHC, SSS, MWS, CSMBS) and from studying other countries' systems. India can perhaps use

lessons learned from the RSBY and other schemes to inform a broader system of universal coverage

- It is noteworthy that the 30 baht co-payment was abolished five years into Thailand's UC system; this offers further support for a healthcare system with no out-of-pocket or up-front payment for health services to encourage the poor to seek care as needed.
- Capitation payment offers a strong model of cost containment health financing that drastically reduces the prevalence of irrational care. However, it also creates an incentive for providers to provide minimal, perhaps even deficient, care. Capitation payment has been found in the Thai system to work best when there are strong monitoring and accountability measures and an active public rather than private healthcare system.

3. Healthcare in Brazil

Basic Outline

The 1988 Brazilian Constitution made access to healthcare a universal right and led to the creation of the Sistema Único de Saúde (SUS, unified health system), the national primary healthcare system. Prior to 1988, only the 60% of Brazilians who worked and paid social security taxes and their dependents had health insurance. Now, everyone in Brazil has the right to use any public health service in the country at no out-of-pocket cost. The Brazilian government also allowed citizens to opt out of the SUS and buy private insurance linked to private health centres, which is regulated by the Agência Nacional de Saúde Suplementar (ANSS, National Supplementary Health Agency). About 20 to 25% of Brazilians chose to opt out and thus do not use the public health service (Kepp, 2008; Abbes, 2008). The remaining 75 to 80% of Brazilians use the free national healthcare through SUS. Out-of-pocket purchasing of health services is also allowed but most Brazilians use the SUS or have a private insurance plan.

The principles of SUS are those of universality, equity, public financing, decentralisation, popular participation and integrated service provision (Collins, Araujo, & Barbosa, 2000). The system is considered a 'public contracting subsystem' because public expenditure contracts care for citizens to both private (for-profit and not-for-profit) and public healthcare provider units (clinics, hospitals, family healthcare teams). The SUS operates through a three-tier system of devolved government: the Federal level, the states and the *municipios* (municipal level).

The municipios are divided into two categories: lower, less developed municipios have 'full management of basic care' and higher, more developed municipios have

'full management of the municipal system.' Both categories receive monthly public sector health funding transferred from the State and Federal Health Funds into the Municipal Health Funds and also raise money through taxes at the municipal level. Lower *municipios* have control over the public component of healthcare service provision and some control over the SUS contracted units of the private sector. Higher *municipios* have complete responsibility for municipal level health services, controlling both the public and private provider organizations and paying for hospital stays, ambulatory services and complex procedures. Lower *municipios* do not control the SUS funding for this specialised care. Instead the money is directly transferred to the hospitals through the Autorização de Internação Hospitalar (AIH, hospital stay authorization) or to the ambulance service.

Services Provided

Services through SUS are funded in three ways, two of which are based on per capita funding and one of which is fee for service but the fee is paid to the service provider by the municipality or federal government, not by the patient.

First, municipalities receive a set sum per person (in 1997 it was B10/year, i.e., Rs.260, $5.60 USD) to supply the following free, public services: health education, immunisation, nutritional care, consultation with physicians in basic specialities, emergency care, basic dental care, ante-natal care, minor surgeries, family planning activities and home birth attendance by a family physician.

Second, the municipalities also receive programme-specific funding for the following five initiatives:

- Community health worker programme and Family Health Programme (FHP);
- Pharmaceutical provision (basic);
- Programme against nutritional deficiencies;
- Basic actions of public health control;
- Basic actions of epidemiological and environmental control.

Third, as mentioned above, there are special additional resources for complex procedures, hospital stays and ambulatory services which are given from the federal, state or municipal government to the service provider on a fee-for-service basis.

Special Focus on the Family Health Program

The Family Health Program (Programa de Saúde da Família, PSF), created in 1994, is Brazil's main system of delivering primary health services and used 9% of the Brazilian government's healthcare budget. Today there are over 28 000 PSF teams, each of which features a general practitioner, a nurse, a dentist, an auxiliary nurse, and four health agents, and covers approximately 1000 families (Kepp, 2008). A total of 90 million people, over half of Brazil's population, receive their healthcare through

these teams. The health agents are responsible for regular home visits, with a variety of objectives which include detecting need for health care, especially among children, pregnant women and the elderly, encouraging visits to well-baby clinics, antenatal care, compliance with long-term medicine use, and participation in group meetings (Bertoldi, de Barros, Wagnerd, Ross-Degnand, & Hallal, 2009). PSF is considered one of the main reasons why life expectancy increased from 67 years in 1991 to 72 years in 2007 and infant mortality fell by 60.5% in the same period (Kepp, 2008).

The Public-Private Mix in Brazilian Healthcare

As mentioned above, 20 to 25% of Brazilians use private insurance and go to separate private hospitals and clinics. These private healthcare facilities are not regulated by the government but are generally of very high quality because they serve the most affluent people and charge more for their services.

Within the 75 to 80% of Brazilians availing the SUS free public healthcare system, there is also a mix of publically and privately run institutions. A shortage of hospital beds has led the government to contract out 65% of hospital care to private hospitals, most of which are underequipped (Kepp, 2008). In some cases, the government builds hospitals (as with the OSSE hospitals in Sao Paulo) and then tenders them for non-profit hospital organizations to run them. In addition to contracting out medical care, the government also tenders family planning and reproductive health services to the private sector (England, R & HSLP Institute team, 2008).

Brazil's SUS allows those who have opted out and purchased private insurance to use the SUS for services that are not covered by their private insurance. In many cases this means that more expensive procedures or treatment regimes (such as ART or haemodialysis) are sought from the SUS, leaving private health insur

The Challenge of Providing more Complex Care

The SUS has much to celebrate in terms of primary care provision. However, it has faced criticism for its poor capacity to handle health issues beyond primary care. For the 15% or so of the population that require more specialized care than can be offered by the PSF teams, the SUS's services fall short (Kepp, 2008). While Brazil's public hospitals are generally well equipped and well run, the private hospitals contracted by the SUS, which, as mentioned above, make up 65% of the SUS hospitals, are notorious for overcrowding and a lack of specialists.

Regulation in the Brazilian Medical System

SUS is regulated by the Lei Orgânica da Saúde (LOS, Health Organization Law), which is actually two laws—Law 8.080 and Law 8.142—both passed in 1990. Responsibility for SUS is shared by the three levels of government: the Ministry of Health and the state and municipal councils, as well as their respective secretariats,

which comprise an equal representation of providers and users. Inter-management commissions, Health Councils and Health Conferences contribute to integration, planning, management and accountability.

Integration between the different levels of government is carried out through an inter-management commission, composed of authorities from each (Lobato & Burlandy, 2000). Inter-management commissions set the amounts of resources for states and municipalities and establish their management situation. These commissions maintain transparency in financing because all levels of government participate and the representatives of the different governments, in turn, have to account to the Health Councils, which are legally responsible for health policy, at the executive level (Lobato & Burlandy, 2000).

Health Councils again operate at the three levels of government: federal, state and municipal. The National Health Council, for example, has a strategic development role and controls national health care policy implementation. It represents government, health care groups and suppliers, while service users take up 50% of Council places. The Health Conferences also operate at the three levels of government. The National Health Conferences, which take place every four years, have played an important role in the creation and development of SUS. They are important events attracting between 4000 and 5000 delegates elected in the municipal and state conferences which together gather more than one hundred thousand participants.

The SUS has faced challenges surrounding the division of roles and responsibilities of the federal, state, and municipal governments. The Organization Law 8.142/1990 governs the transfer of resources from the federal government, but does not delineate the responsibilities related to the different agencies and levels of government, leading to duplication of some activities and gaps in others.

Another major challenge facing the SUS is that its legislation is almost entirely restricted to the public sector. Although the government has the right to inspect and monitor both public and private sectors, neither the 1988 Constitution nor the Health Organization Law include any provision for private sector regulation (Lobato & Burlandy, 2000).

Drug Regulation, Cost and Quality

All SUS health facilities are required to stock essential drugs. The SUS's drug provision is effective for HIV, with almost every HIV patient on antiretroviral (ARV) drugs receiving them through the SUS (Kepp, 2008). Brazil has made headlines for their efforts to access ARVs at the lowest possible price, frequently butting heads with international pharmaceutical companies. Brazil has succeeded in accessing affordable ARVs through producing non-patented generic ARVs, procuring any patented ARVs with negotiated price reductions, and recently through issuing a compulsory license to import one patented ARV (Nunn, Fonseca, Bastos, Gruskin, & Salomon, 2007).

However, beyond ARVs, the stocking of many essential drugs at outpatient facilities is deficient, with the average availability of drugs found in 2004 to be less than 50% (Karnikowski, Nóbrega, Naves, & Silver, 2004). Thus many Brazilians must buy drugs from one of the country's 50 000 private pharmacies. The prices of drugs sold on the market is loosely regulated by the government but were found to be significantly more expensive than global averages (Nóbrega, Marques, Araújo, Karnikowski, Naves, & Silver, Retail prices of essential drugs in Brazil: an international comparision, 2007). Pharmacies mark up drugs by about 30% and taxes of about 24% are added to the cost. Data presented to a 2000 Parliamentary Commission of Inquiry in Brazil revealed that as little as 20% of the wholesale price was actually related to production costs (Comissão Parlamentar de Inquérito, 2000 in Nóbrega *et al*. 2007).

Brazil's drug quality regulatory body is the National Health Surveillance Secretariat (CNVS). The CNVS handles applications for registrations of drugs, food, cosmetics and other products. The agency receives more registration requests than it can process and has subsequently been unable to meet its responsibilities. For example, in 1994, 800 drugs were re-released under the same name but with different active chemical ingredients without undergoing re-review (Kumaranayake, 1998).

How does the System Pay Healthcare Workers?

All professionals working in public and private health centres are salaried. Brazil's social security agency Instituto Nacional de Assistência Médica da Previdência Social (INAMPS, national institute of medical care and social security) sets the price of all health services. This cost is billed through the institution and the healthcare worker's salary is given out of the billed amount.

How is Cost Contained?

Efforts to contain costs include focusing on primary and preventative care, with specialized procedures and hospital stays receiving very little funding.

Despite having diverse sources of taxation to find the system (individual income, property, goods and services and banking transactions), the cost of universal health care is at risk of outpacing the revenue needed to sustain it. The World Health Organization estimates that health expenditures in Brazil have risen from 6.7 percent of GDP in 1995 to 7.5 percent in 2006.

How is Quality and Rationality of Care Maintained?

Brazil's SUS is generally found to be of high quality when pertaining to preventative and primary care (Family Health Program) but of low quality for hospital and emergency care.

The Brazilian emergency medical service is called the "Serviço de Atendimento Móvel de Urgência" (Mobile Emergency Attendance Service). In 2002, the Ministry of Health outlined a document, the "Portaria 2048," which called upon the entire health care system to improve emergency care in order to address the increasing number of victims of road traffic accidents and violence, as well as the overcrowding of emergency departments resulting from an overwhelmed primary care infrastructure. The document delineates standards of care for staffing, equipment, medications and services appropriate for both pre-hospital and in-hospital. It further explicitly describes the areas of knowledge that an emergency provider should master in order to adequately provide care. However, these recommendations have no enforcement mechanism and, as a result, emergency services in Brazil still lack a consistent standard of care.

Rationality of Healthcare Provision

The SUS uses a capitation payment system where health centres receive a set amount per population in their care to provide basic services. All employees are salaried. These organizational characteristics both limit incentives for irrational care. Special procedures are funded on a case by case basis and thus are assessed carefully.

Among the 25% of Brazilians receiving care outside the SUS, most have private insurance that reimburses care at private institutions. Similar to India, there are major cases of irrationality within the private sector. The rate of caesarean deliveries in the private sector is extremely high (70%) and more than twice that in the public sector (Potter, et al., 2001). Potter et al (2001) concluded that "the large difference in the rates of caesarean sections in women in the public and private sectors is due to more unwanted caesarean sections among private patients rather than to a difference in preferences for delivery. High or rising rates of caesarean sections do not necessarily reflect demand for surgical delivery." There have been several national efforts to reduce unnecessary caesareans including the 2006 Incentive towards Normal Childbirth Campaign but little change in the caesarean rate. Wealthier patients frequently receive caesareans because of medical pressure and/or assumed or real preference. Many poorer women have been found to perceive caesareans to be

superior care since wealthier women receive them, thus driving up demand even in the SUS.

How is Quantity and Diffusion of Care Regulated?

In 1995, the number of physicians per 1000 population by region varied from 0.52 and 0.66 in the poorer regions of the north and the northeast to 1.75 and 2.05 in the states of São Paulo and Rio de Janeiro, in the richer southeast region. The average for the whole country was 1.19. This gap in favour of richer regions is smaller than it was 25 years earlier, thanks to efforts to expand the coverage of the population by public services. But poorer and rural regions continue to suffer from less accessible health services. Dussault and Franceschini (2006) report that Brazil has successfully adopted policies to reverse the trend towards specialization, with positive results in terms of geographical deployment of physicians.

The Family Health Program has been central to recruiting more full time health professionals into the public system because it offered a steady job with higher pay than previous public health system positions. This higher salary through the FHP is the main government effort to increase the number of health workers in rural and poorer regions; medical school education also emphasized primary and rural health issues.

Lessons for India from the Brazilian system

- The inter-management commissions, health councils and conferences are an important mechanism for arranging transparent financial transfers, setting standards and maintaining accountability in a large country.
- An argument to consider is that put forth by Wagstaff (2007). He suggests that allowing the rich to opt out and buy private insurance and access a higher quality tier of healthcare can benefit the entire public system in countries as stratified and unequal as Brazil (or India). He argues that general tax funding of healthcare can lead to the better-off accessing a disproportionate share of benefits from public services. He suggests that forcing the better off into the private sector if they want more sophisticated care, as in Brazil, Sri Lanka and Malaysia, would create a two tier system but is likely to be more equitable than the alternative of having richer groups skew public services in their favour. As Mills (2007 p17) points out, Wagstaff offers a more positive view of the role for private insurance, as a complement or supplement to general tax funding.

Key Terms

Capitation: A form of compensation in which providers receive a periodic fee (usually a per member, per month fee) in return for delivering as many necessary health care services as needed by the members of the population under their care.

Co-insurance: An agreement between the insured and the insurance company where payment is shared for all claims covered by the policy. A typical arrangement is 80%/20% up to $5,000. The insurance company pays 80% of the first $5,000 and the insured pays 20%. Usually after 80% of $5,000, the insurance company then pays 100% of covered expenses during the remainder of the calendar year up to any limits of the policy.

Co-payment: A small charge paid at the time a medical service is received. It does not accumulate toward a plan's deductible or out-of-pocket maximum and is designed to discourage utilization.

Cost containment: Efforts or activities designed to reduce or slow down the cost increases of medical care services.

Cost sharing: The sharing of costs between the payment of premium costs and medical expenses by the health care plan and its insured through employee contributions, deductible, co-insurance and co-payments.

Cost shifting: The increased cost of medical care to other patients to make up for losses incurred in providing care to patients who are under-insured or who have no coverage.

Cream skimming: The practice by insurance companies of insuring only those individuals least likely to make high claims (i.e., the young and healthy), thus reducing the risk sharing benefits of insurance.

Deductible: The amount that the covered insured must pay before a plan or insurance contract starts to reimburse for eligible expenses.

Fee-for-service: When doctors and other health care providers receive a fee for each service such as an office visit, test, procedure, or other health care service. Fee-for-service health insurance plans typically allow patients to obtain care from doctors or hospitals of their choosing, but in return for this flexibility they may pay higher copayments or deductibles. Patients frequently pay providers directly for services, then submit claims to their insurance company for reimbursement.

Fixed costs: Refers to those costs which are payable monthly and which do not relate to actual claims paid or incurred (for example, premium and administration costs).

Moral hazard: When the behaviour of the insured party changes in a way that raises costs for the insurer, since the insured party no longer bears the full costs of that behaviour. Moral hazard theory suggests that because individuals no longer bear the cost of medical services, they have an added incentive to ask for pricier and more elaborate medical service—which would otherwise not be necessary.

Single-payer: Financing of the costs of delivering universal health care for an entire population through a single insurance pool out of which costs are met. There may be many contributors to the single pool (insured persons, employers, government, etc.).

Single-payer health insurance collects all medical fees and then pays for all services through a single government (or government-related) source. In wealthy nations, this

kind of publicly-managed health insurance is typically extended to all citizens and legal residents. (Ex Canada's Medicare, Taiwan's National Health Insurance, United Kingdom's National Health Service, Medicare in the US for those over 65 or permanently disabled)

Socialized healthcare: Healthcare systems that are owned, operated and financed by the government. All doctors and hospitals work for and draw salaries from the government.

Ways to pay for healthcare

1. Direct or out-of-pocket payment
2. General taxation by the state, municipality or county
3. Social health insurance (SHI)
4. Voluntary or private health insurance
5. Donations or community health insurance

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