Health Financing in Guatemala:
A Situation Analysis and Lessons from Four Developing Countries

Final Report

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1. Introduction

This paper has two main goals. The first is to provide a broad overview of the health care financing and provision system in Guatemala and in so doing, highlight some of the major challenges related to health financing that it faces. The second goal is to examine four developing country case studies that have addressed health financing issues similar to Guatemala and draw out lessons from their experiences for Guatemalan policymakers as they proceed to address their health policy goals.

In line with these objectives, the following section outlines the Guatemalan health care system including health services provided, the different entities involved in providing these services, the mechanisms by which health services are financed and the most recent figures on health sector financing. In section 3, we use data from the living standards measurement surveys (LSMS) 2000 and 2006 to generate additional supporting evidence for some of this descriptive analysis, and to highlight several challenge areas for Guatemala. These challenge areas include the inadequate health insurance coverage for its population, the equity (or lack thereof) of this coverage and the use of health system resources, the inefficiency with which health care is provided in Guatemala and the costs of health care. This section provides descriptive information on insurance coverage in Guatemala in the general population and among urban and rural populations, health care spending on outpatient care as well as overall health care spending for different income quintiles, an analysis of health spending and poverty ratios, heath spending and financial risk, and estimates of labor lost due to illness.

In section 4 we discuss four country cases – China, Colombia, India and Mexico, respectively – that have faced problems similar to Guatemala and have sought to devise innovative financing and payment mechanisms to address the health care and financial risk protection needs of their rural populations and those working in the informal sector. The case studies offer real world examples and are intended to illustrate some of the more interesting options available for consideration in the Guatemalan context. Section 5 concludes.

The paper also includes a technical appendix that discusses some of the major financing mechanisms along with their pros and cons to help guide the reader as they read through the case studies. We note specifically that these are not typically to be viewed as “either/or” options but instead as possible policy tools that work well in certain circumstance and not in others; and sometimes in combination. Nor are these tools to be implemented in isolation from other policy steps related to regulation, the organization of provision, and payment mechanisms.

2. The Situation in Guatemala

As in many developing countries, Guatemala’s health care system is characterized by three major sets of providers. These are facilities operated by the government, specifically, the Ministry of Public Health and Social Welfare (MSPAS); by the Guatemalan Social Security Institute (IGSS), or the social insurance organization; and the private sector.

Facilities operated by the MSPAS are located in both rural and urban locations around the country, and range from primary care services to high-end (tertiary) care in hospitals. MSPAS facilities generally are available free of charge to patients, excep for certain hospitals where “donations” are accepted. In 2005, at the primary care level MSPAS had 926 health posts and 281 health centers (Flores 2008). At the secondary level, there were a total of 335 health centers under various classifications.[1] At the tertiary level, MSPAS had 43 hospitals, of which 7 were specialized hospitals. Collectively, MSPAS hospitals had a total bed capacity of 6,030 in 2005.

In order to further expand basic health care services to those without access, the government began implementing the Integrated Health Care System (SIAS) in 1996. The SIAS system is based on contracts to private providers for the delivery of health care services (International Society on Equity and Health 2006). Most of these private providers are non-governmental organizations in remote rural areas with no public health facilities (European Commission 2007). Each private institution is responsible for the care of approximately 10,000 residents (Icu 2000; WHO 2007). Each jurisdiction is serviced by a health team consisting of physicians, a nurse, and community workers. Some of the team members work voluntarily (Pan American Health Organization (PAHO 2001; Icu 2000). The SIAS program is intended to provide access to health care services to the large and remotely located indigenous populations found in 12 Guatemalan departments. A majority of the recipients of the SIAS services are from the indigenous population.

Health care services offered by the IGSS are available mainly to employees who pay into the system, with spouses of employees and children under 5 years of age receiving limited services[2]. IGSS also covers retired workers and survivors of deceased recipients as well as older workers who are not able to work due to work related illness or disability (Estrada Galindo 2008). This latter group also receives an “invalidity” pension that is equal to 40% of their average monthly salary during the previous five years. Accident insurance for work related injuries is provided through IGSS as well as medical benefits for those with work related injuries or disabilities (Dixon and Scheurell 1990).

Because IGSS facilities cater to employees of the organized sector, they tend to be concentrated around (mostly urban) areas where formal sector employment is high. In 2005, IGSS facilities included a total of 145 Medical Centers, of which 23 could be classified as hospitals. IGSS has also sought to implement the provision of the government’s SIAS program, by extending services (in the form of health promotion, development, and preventative health services) to cover the general population in two departments (Escuintla and Suchitepéquez) (WHO 2007; Estrada Galindo 2008).

In addition to the MSPAS and IGSS facilities, there is a significant and growing private sector. During the period 1995-2004, 292 new hospitals were set up in the private sector and during the period from 1996 to 2006, an additional 2,614 clinics were put in place by the private sector (Estrada Galindo 2008; Flores 2008). The providers include both not-for-profit institutions and for-profit institutions. Private sector providers range from high-end tertiary hospitals, individual practices, pharmacists and traditional providers. Community based traditional and alternative health care services are often provided by nongovernmental organizations (WHO 2007). Although the use of private sector providers involves out of pocket payments, many households do so. Indeed, it is

[1]There were 3 women and child centers, 32 health centers of Type A, 249 health centers of Type B, 16 “maternidades cantorales”, 3 “clínicas periféricas” and 32 integrated health centers (Estrada Galindo 2008).

[2] Spouses and children receive limited care for services related to maternal needs, “common illnesses”, and immunizations.

worth noting that, no matter the level of income, the first remedy for most Guatemalans when confronted with illness is to visit a pharmacy or private clinic (Garcés 2007). Most private sector hospitals and clinics operated by practitioners of modern medicine are concentrated in urban areas. NGOs also provide health care services in Guatemala, either under the auspices of religious organizations, or via international organizations, often in coordination with MSPAS. Although evidence was not found specifically for Guatemala, the authors assume that there is "dual practice" in Guatemala, as is found in other Latin American countries, where doctors in the public sector also practice in the private sector (Ferrinho et al. 2004).

Health Sector Financing

Total health spending as a share of GDP fluctuated between 4.3% and 5.5% during the years 1999 and 2005[3]. In 2005, total health spending comprised 5.1% of GDP (Estrada Galindo 2008). The most recent national health accounts data in Guatemala (for 2004-2005) point to four main sources of health financing: households (with a share in total health expenditures of 69%), the government (18%), the business sector (11%) and international aid (2%) (Estrada Galindo 2008).

Government spending on health as a portion of GDP over the period 1999 to 2005 declined slightly from 2.3% to 1.9% (Estrada Galindo 2008) (both figures are low in comparison to average government health care spending in Latin America: 2.6%[4] (CEPAL 2006). The share of MSPAS spending in total government expenditures also decreased over the period 1999 to 2005, from 14.4% to 11.8% (Estrada Galindo 2008). The government portion of health care financing in Guatemala comes from tax revenues. The magnitude of tax revenues distributed to MSPAS is based on historical budgets and an expenditure plan written each year—not on needs, or adjusted for population size, or its composition.

Private health care spending as a percent of total health care spending increased from 52% in 1999 to 69% in 2005 (Estrada Galindo 2008). The business sector portion primarily comprises employer and employee contributions made through the Guatemalan Social Security system (IGSS). IGSS collects their contributions based on salary levels. Workers who opt for the Accident, Disability, Retirement and Survivorship Program pay 3% of their salaries while workers who also opt for the Maternity and Common Disease program pay 3.85% of their salaries. Employers pay 7% of the total amount of each worker's salary (Estrada Galindo 2008; WHO 2007).

Private financing agents include households with out of pocket costs, private insurers, and non-profit organizations serving households, with households accounting for 91.4% of all private expenditures (WHO 2007). The largest expenditures are in the form of out-of-pocket spending, most of which (72.7%) goes for drugs, tests, and doctor's visits, according to the national living standards survey (ENCOVI-LSMS) (Gragnolati 2003). In 2000, households in rural areas allocated 1.8% of total consumption to out-of-pocket health consumption, while urban households allocated 3.0% (Gragnolati 2003). As can be noted by the table below, between 2000 and 2006, the

[3] Total health spending as a share of GDP from 1999-2005: 1999: 4.3%; 2000: 5.5%; 2001: 5.4%; 2002: 5.2%; 2003: 5.4%; 2004: 5.2%; 2005: 5.1%.

[4] Constructed by authors from CESPAL data 2006 for the following countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Paraguay and Venezuela

proportion of health sector financing by of out-of-pocket expenditures has increased, while coverage by social security and private prepaid plans has reduced.

Table 1. Trends in health system financing, Guatemala, 1999-2005

Indicator	1999	2005
Public Health Expenditures as a % of total public expenditures**	17.2	15.2
MSPAS expenditure as % of TGE[+]	14.4	11.8
Private expenditures as a % of THE[+]	52	64
IGSS expenditure on health as a % of THE[**,--]	26.5	20.5
Out-of-pocket expenditure as % of private expenditure on health[+]	85.6	89.1
Private prepaid plans as percentage of private expenditure on health[+]	5.4	5.3
Total expenditure on health as percentage of gross domestic product[+]	4.3	5.1
Government spending on health as a percent of gross domestic product[+]	2.3	1.9
MSPAS expenditure per capita (US$)**	108.6	146.3
Total expenditure on health Per capita (US$)**	576.7	988.9

[+]Estrada Galindo 2008, ** MSPAS 2004-2005, [--]MSPAS 1999-2003.

In terms of health care financing, over the last 10 years the household's share in health care financing has increased by 60%, while government's share has decreased by 40% (Estrada Galindo 2008). The Guatemalan health care system has changed from being one financed by government, business, and international funding to one financed mostly from out of pocket household expenditures.

3. Challenges that Guatemala's Policymakers face with regard to Health Financing

3.1. Large numbers of people are not covered by any form of insurance except by means of access to subsidized public services of mixed quality thus leading to high shares of out of pocket spending by households in aggregate health spending

Health insurance coverage is limited in Guatemala. According to the 2000 Living Standards Measurement Survey (LSMS), only 11% of Guatemalans had some type of insurance coverage, whether through IGSS or private insurance. According to the 2006 LSMS, insurance coverage was 15.1% which amounts to an increase over coverage rates based on the 2000 survey, unfortunately confounded by the differences in the sampling frames used for the two surveys. In any event, the proportion of total population with access to formal insurance remains small in Guatemala.

Because access to free and/or subsidized health services provided via the public sector is, *de facto*, insurance, limited coverage via IGSS and/or private voluntary insurance need not be problematic in and of itself. However, there appear to be serious concerns about the quality of services available in public facilities as reflected in the (lack of) availability of drugs and diagnostics, and overcrowding and long waiting times are the norm. One (indirect) indicator of quality of public health services is the distance traveled by people to obtain care when sick. As per the 2006 LSMS, nearly 35% of sick Guatemalans traveled more than one hour to seek care, suggesting either that public services are not available in close proximity (indicating a problem with access), or if available locally are considered to be of low quality, leading individuals to seek care from providers located some distance away. To the extent that such care seeking behavior indicates a preference for private care, it is not surprising to find amounts of out of pocket spending on health care by households.

The share of household out-of-pocket expenditures on health services in total health spending in Guatemala increased from 52% in 1999 to 69% in 2005 (Estrada Galindo 2008). As per the most recent NHA statistics, the bulk of this spending was used for purchasing drugs, diagnostic exams and consultations. Urban residents spend equally in these three areas of private spending. In rural areas, three-quarters of the out-of-pocket spending on health care is for medicines, with smaller shares for consultations (11%), diagnostic exams (8%) suggesting a lack of availability of medicines in public facilities. Another 3% is for travel and lodging expenses related to health care (Flores 2007). The significance of out of pocket spending on medicines is apparent across all income groups, with those in the highest income quintile paying on average 63% of out of pocket spending on medicines and those in the lowest income quintile paying on average 80% of out of pocket spending on medicines. Out of pocket spending on consultations in the highest income quintile is on average 31% and in the lowest income quintile is on average 32% (LSMS 2006). Thus the poor are allocating a much greater portion of their out of pocket spending on drugs compared to the rich.

3.2. Heavy concentration of the uninsured among the economically worse-off and rural populations

The insured population (with IGSS and/or private voluntary insurance) in Guatemala is concentrated in the two highest income quintiles. In the year 2000, insurance coverage rates were only 5% among the poorest 40% of the population (Gragnolati 2003). According to the 2006 LSMS, 38.3% of Guatemalans in the highest income quintile had some type of insurance coverage, whether through IGSS or private insurance. This is considerably greater than the share of the insured of only 1.7% among members of the Guatemalan population who belong to the lowest income quintile. The disparity in insurance coverage can also be seen between populations living in urban and rural areas, respectively. According to data from the 2006 LSMS, 23.4% of Guatemalans living in urban areas had IGSS or private insurance, while only 7.5% of Guatemalans living in rural areas had IGSS or private insurance.

These findings are not surprising given that 75% of the Guatemalan population works in the informal employment sector, making them ineligible for insurance coverage through IGSS. Specifically, small businesses with less than five employees, self paid workers, and those who live in departments with no IGSS services cannot pay into IGSS (OPS/PAHO 2001).

3.3. Health expenditure inflation

It is difficult to assess whether health care costs are increasing in excess of the inflationary rate in the economy as a whole, primarily because of the difficulty of disentangling quality of care from costs of care (that also depend on quality). However, the combination of rising numbers of private sector providers and the rising share of health spending as a proportion of GDP as in the table in section 2 both would suggest that health expenditure inflation is occurring in Guatemala.

The fragmented health system in Guatemala with multiple providers and a profit-oriented private sector is unlikely to be spending its available financial resources efficiency and therefore constitutes another factor in expenditure inflation. On the supply side, at least in the private sector and to the extent there is dual practice, even in the public sector, there are likely incentives to provide high-end (including advanced diagnostics) but not necessarily clinically or cost-effective care. Moreover, we imagine the referral linkages between high-level and primary care facilities to be quite weak, with an over-reliance on hospitals. Some support for this comes from the anecdotal evidence on long waiting times at public hospitals and the long distances that people often travel to reach health services, as indicated by data from the LSMS.

3.4. Significant Economic Impact of Illness

The lack of insurance coverage and possible health expenditure inflation suggest a large and rising share of out of pocket payments on health care in the National Health Accounts data for Guatemala raise obvious concerns relating to households' capacity to cope with major health expenditures in Guatemala. Out of pocket payments for outpatient treatment (e.g., visits made to doctors, nurses, health promoters, traditional healers, self medication) are surprisingly large, particularly for the poor. The poorest 20% of the population spent US$18 (13% of consumption expenditures) and US$22 (11% of consumption expenditures) per episode of illness in 2000 and 2006, respectively. The richest 20% of the population also spent large amounts of money and substantially more than the poor in absolute terms – US$79 (3% of consumption expenditures) and US$88 (3% of consumption expenditures) in 2000 and 2006, respectively. Similar patterns of outpatient spending emerge among rural and urban populations. In terms of inpatient care, findings from the LSMS indicate that a single episode of hospitalization was on average 56% of the per capita consumption expenditure of a household in the poorest 20 percent of the population in the year 2000 (rising to 131% more than the per capita consumption expenditure of a household for the poorest 20 percent of the population in the year 2006). And even among richer groups, the burden of inpatient health care spending tended to be quite high, ranging from 21% to 70% of per capita income in the year 2000 and 53% to 82% of per capita income in the year 2006. In sum, illnesses associated with hospitalization impose a significant financial risk on Guatemalan households, particularly among poorer groups—and this risk seems to have worsened over the period 2000 to 2006.

In the absence of adequate levels of insurance coverage, health care spending may also be leading to increased impoverishment in Guatemala. To assess whether health care spending is impoverishing in the Guatemalan context, we performed a rough calculation to assess the extent to which health care spending pushed households below the poverty line. Our method follows that of recent research on this subject (e.g., Doorslaer et al. 2006), which requires the assumption that expenditures/income inclusive of health spending would have remained at their observed levels in the households did not have to incur any health-related spending. Under these conditions, a simple way to estimate the impact of health spending on poverty is to compare poverty rates calculated in two ways: using consumption expenditure data inclusive of health spending, and consumption expenditure after taking out health spending. The difference between the two estimates of poverty ratios is the *impact* of health spending on poverty. Our analyses indicate that before adjusting for medical spending, estimates of the poverty ratio in Guatemala were 23.59% in 2000 and 11.74% in 2006 (based on *reported* income). After adjusting for medical spending, estimates of the poverty ratio in Guatemala increased to 25.31% in 2000 (an increase of 1.7 percentage points) and to 12.65% in 2006 (an increase of 0.9% in 2006). These results indicate that health-related spending contributes to poverty in Guatemala.

The burden of health care spending among Guatemalan households can also be assessed by using measures of 'catastrophic health spending.' Following recent research on this subject (e.g., Xu et al. 2003), we assessed the burden of health care spending by estimating the proportion of households that incurred 'catastrophic' health spending – assumed to be a situation where health spending (equals or) exceeds 40% of ability-to-pay (where ability to pay is defined as total yearly consumption less a survival expenditure[5]). We find that roughly 5.3% of all households were faced with catastrophic spending related to health care in 2006 while 5.0% incurred catastrophic spending in 2000. The incidence of catastrophic spending remains greater among poorer households than among richer ones: Catastrophic spending on health amounted to 4.5% in 2006 and 5.6% in 2000 for the poorest income quintiles, and from 2.4% in 2000 to 3.1% in 2006 for the richest income quintile.

In addition to increasing health spending, ill health can lead to households incurring a variety of adverse work-related consequences (particularly among the poor), such as losing days of work due to poor health and withdrawal of children from school. There is also the possibility that ill health imposes adverse employment-related economic consequences. For those working on farms and in the unorganized sector, lost work days cannot be compensated for by sick leave allowance or other forms of compensation available to members of the organized sector with access to social security/IGSS. Our analyses find that while lost work or school days per illness episode remained high whether we consider the LSMS data in 2000, or in 2006 (see Table 2), lost wages due to ill health have increased over the same time period (rows 3 – 4). Lost wages also affect the poor to a greater degree than the rich when taken as a proportion of their monthly or annual wages (row 5).

Table 2. Productivity Consequences of Ill Health

Consequence of ill health	Poorest quintile		Richest quintile	
	2000	2006	2000	2006
Lost work/school days per illness episode	8.93	7.11	7.32	6.92
Lost work/school days per capita per year	15	12	9	9
Wages lost in last month due to illness (those working)	US$4	US$9	US$62	US$122
Wages lost in last year due to illness (those working)	US$6	US$8	US$94	US$138
Annual Wages lost as a proportion of per capita income	6.8%	3.1%	3.7%	2.7%

5 Survival expenditure is defined as – (1) median food expenditure for those individuals/households for whom health expenditure is less than income/consumption expenditure (2) actual food expenditure for those individuals for whom health spending or median food expenditure exceeds consumption expenditure.

Note: Differences in sampling frames used for the LSMS in the two years make it difficult to make inferences about trends between 2000 and 2006 from this data

The future impact of health expenses on Guatemalan households is likely to be felt even more acutely as the population ages. The proportion of the population aged 60 years and older has risen from 5.3% in 1990 to over 6% currently and is projected to rise to 13.3% by 2050. Further, the dependency ratio (i.e., the proportion of the Guatemalan Population aged 60+ years divided by the proportion of the population aged 15-59 years) is projected to increase after 2025 (UN, World Population Prospects). With an ageing population, Guatemala is likely to face an increasing financial burden from non-communicable conditions. Cerebrovascular diseases, diabetes and ischemic heart disease, for instance, were ranked seventh, eighth and ninth, respectively, among the leading causes of general mortality for the period 2001-2003 (WHO 2007). Data from the 2000 LSMS suggest that the growing burden of non-communicable diseases may affect all socio-economic segments of society: even among the poorest 20 percent of the population, obesity rates for men and women were roughly of the order of 16% (while 21% among men and 25% among women in the richest 20 percent of the population). Further, because much of the employment in Guatemala's economy is provided by the unorganized sector, its elderly (or their household members) cannot expect to rely on social security or health insurance provided by IGSS, and an estimated 6% of older adults live alone and have no family support network. According to a recent study, only 12.2% of Guatemala's elderly received any pension or retirement benefits (WHO 2007).

3.5. The Economic and Political Context

The challenges highlighted above occur in the context where a high degree of income inequality exists (Guatemala has one of the highest inequality indexes, with a Gini coefficient of 0.54 (WDI, WB, 2006)), over 50% of the population lives in poverty (per capita daily income of less than US$ 1.60) and over 15% live in "extreme poverty" (per capita daily income of less than US$ 0.70), and the incidence of poverty is much higher in rural areas (74.5% of the population) than in urban areas (27.1%). The high levels of economic inequality limits the population base from which to raise tax revenues, with any efforts to raise revenues likely hampered by high levels of tax evasion (Cely 2003). The wealthier minority which relies on private providers has little interest in funding a public (health) sector whose services it is unlikely to utilize. These inequalities are likely to become more severe over time as the population ages and more chronic diseases emerge – making it all the more important to find additional financing alternatives to out of pocket payments.

4. Case Studies

As Guatemalan policymakers seek to address the health sector challenges that their country faces, it can be useful to learn from the experience of other countries that have faced (or are currently facing) similar challenges. In this section we discuss four case studies: China, Colombia, India and Mexico and draw out their lessons for Guatemala. Each of these countries has had to face the problem of a large and underinsured informal sector population and each of these countries is either low-income or middle-income. Colombia and Mexico belong to the Latin America and the Caribbean region and offer cases of country with contexts that may be closer to Guatemala. China and India are two of the most heavily populated developing countries in the world and their experience with regard to health sector financing and inadequate insurance coverage are relevant owing to the innovative approaches adopted by their policymakers, and the enormous scale of the challenges they face.

4.1. The Case of China

Prior to the period of its post-1979 economic reform, the organization of health services and their financing in China reflected an economic structure characteristic of a communist society, including overwhelming state presence. In rural areas, health care was financed primarily via the welfare funds of communes/collective farms to which individuals and their dependents belonged. The welfare funds were used to directly support primary care activities by means of 'health stations' and village doctors. The welfare funds also partially reimbursed expenses on hospital care incurred by commune members. This was known as the rural cooperative medical scheme (RCMS).

In the urban areas, the government insurance scheme (GIS) provided cover for health services (including catastrophic expenses) for government employees, university teachers, students and retirees. The Labor Insurance Scheme (LIS) covered employees of state enterprises, which accounted for the vast bulk of the industrial sector. Under the LIS, the enterprises were essentially 'self-pooling' just as the communes – that is, financed care for their employees/members from their own resources. Typically, the larger of these enterprises had their own health facilities, ranging from primary care units to hospitals. In contrast, the smaller enterprises reimbursed medical expenditures incurred by their employees, particularly for hospital-based care. Medical expenditures of employees (and retirees) were fully covered by the relevant enterprise. Expenses for dependents were typically covered at 50 percent of the cost. The GIS too had elements of 'self pooling' with local governments being responsible for the medical care of their employees. GIS beneficiaries enjoyed similar medical care coverage to those of the LIS.

Health care services at the primary, secondary and tertiary levels were in the public sector, or controlled by state enterprises/communes. Because the salaries for medical personnel at public sector facilities were supported by the government, user fees at these facilities that were reimbursed by communes and by individuals directly out of pocket were much less than the cost of the service received. Moreover, official salaries of health personnel were also low, keeping overall health care costs, inflation and the financial burden on individuals receiving treatment under check. In general basic medical care was available at low cost to a vast majority of the Chinese population.

4.1.1. The Impact of Economic Reform Post-1979 in China

With the onset of economic reform and the promotion of the so-called 'household responsibility system,' the agricultural collectives/communes collapsed. So did most of the commune welfare funds that had been used to support health care in the rural population, given their reliance on commune funding. From an almost 90% RCMS coverage in the late 1970s, only about 10% of the rural population was covered by some form of insurance in 1998 (Liu 2002). Voluntary community insurance programs (or, more precisely, what was left of the RCMS and its offshoots) were characterized by an inability to fund catastrophic expenses and significant adverse selection and limited resources.

The situation was somewhat similar for employees of state enterprises. Faced with the competitive pressures of the market, many state enterprises ran into financial difficulties and were no longer able to meet their health financing/care obligations to their employees and retirees. Liu (2002) pointed out that during the 1990s the proportion of urban residents who reported being insured fell from already low levels of 54 percent to 42 percent.

These dramatic declines in the proportion of Chinese population that was insured were accompanied by changes on the provision side that led to inefficiency in the provision of services and health cost inflation. Government budgetary constraints during the 1980s forced a drastic cut in budgetary allocations to health facilities, which fell from about 60 percent of facility costs prior to the reform, to about 10% after. Thus, public facilities faced a great shortage of financial resources, a situation compounded by continued controls of the government over the prices health facilities could charge for services. To address this concern, the central government created a two-tier pricing structure. Under this setup, health facilities would charge for defined basic services at prices fixed by the government, but for diagnostics and other high-tech interventions, the enterprises could set their own prices. In addition, health facilities were allowed to charge a 15% mark-up over the cost of drugs.

The consequence of this pricing structure was the creation of provider incentives to divert patients towards high-end diagnostics, and over-prescription of drugs, including more expensive drugs. There is also some evidence of kickbacks received by health personnel from drug companies related to promote more expensive drugs. Yip and Hsiao (2008) argue that this type of payment system for health services in China has been a major driver of its health care costs and associated diagnostic technology diffusion, and associated inefficient health spending. Inefficiency also resulted health facilities' competing with each other to attract patients and to retain them.

The situation was exacerbated on the demand side by the existing benefit structure LIS and GIS schemes that provided few incentives for patients to limit their consumption of medical care (Liu 2002). These rising health care costs dramatically increased the risk of China's population to the risk of catastrophic expenditures associated with illness and impoverishment (Yip and Mahal 2008). Over a period of nearly 20 years, health care sending in China rose at a rate that was more than double that of nominal GDP.

4.1.2. Health financing reforms in the 1990s and after

Faced with these challenges, the Chinese government began the process to reform the urban health insurance system. After a series of pilot programs, demand-side cost sharing initiatives and policy discussions, it launched a new urban (social) insurance scheme in 1998. The scheme pooled risks (urban sector employees in enterprises and the government) at the city level – some cases at the county level - and covered both private enterprises and small public enterprises. Members of other groups, such as the self employed, could participate on a voluntary basis (Liu 2002). However, in contrast to the old LIS/GIS, dependents of workers were not covered by the new scheme.

The new urban insurance scheme was funded by employer and employee contributions – about half of these contributions are paid into a medical savings account, and another half into a 'social risk pool' fund. Funds from the medical savings account could be used to pay for outpatient care, and once exhausted, subsequent outpatient expenses would have to be out of pocket. Inpatient expenses have to be first funded by a deductible up to10% of the employee's annual wage, and subsequently by the risk pool fund, with an upper limit of 4-times the average wage of the city. Any additional expenses are out of pocket, or supported via supplementary insurance, that needs to be purchased separately. In addition, essential drugs and services lists limit how the funds from the risk pool can be spent.

The scheme(s) are administered by the local government usually via social insurance bureaus that are responsible for collecting premiums, contracting with providers and making payments. Deficits in the risk pool are made up by local governments. Supplementary insurance above and beyond the coverage provided by the social risk pool is provided by a mix of the government (for their employees), enterprises, social insurance bureaus and private insurers.

More recently, the Chinese government has begun an effort to develop community health centers that can provide primary/outpatient care to both the insured and the uninsured. The funding for these centers would come from a mix of uninsured user fees, government subsidies and urban insurance. This is an effort to promote primary care and presumably to address concerns about health cost inflation.

Reforms in rural insurance

In 2006, the government launched the New Cooperative Medical Scheme (NCMS). The aim of this program was to cover rural residents against catastrophic expenses and the risk of impoverishment. Of the total premium (which was roughly one-third of per capita health spending on health), about 40% was subsidized by the central government, 40% by the local government and 20% was paid by the farmer. The scheme covered 87% of the rural population by the end of 2007 and is expected to reach 100% coverage shortly. Local governments, who have the administrative responsibility of operating the scheme, are free to choose the administrative structure and benefit packages as long as the scheme is voluntary and catastrophic expenses are covered.

Public sector expenditure allocations

These reforms (and additional ones to follow) are underpinned by a massive increase in government spending on health. Between 2006 and 2007, public health spending rose by nearly 90% in China. Ultimately, it is expected to increase by as much as 1-1.5% of GDP – a trebling of government spending on health in China from its pre-2006 levels.

4.1.3. Why is the Chinese case of interest to Guatemala?

China's case ought to be of interest to Guatemala. Above all, many of the same challenges that China's policymakers are concerned about are also those that attract attention from Guatemala's policymakers. These include, firstly, the need to protect a large section of its rural population and workers in the urban informal sector against the risk of incurring high levels of out of pocket medical spending. Although China has made important strides towards addressing this objective in recent years, the specific issues that arose in the process of doing so potentially hold important lessons for Guatemalan policymakers, should they contemplate addressing similar goals.

Secondly, Guatemalan policymakers are (or ought to be) concerned about the growing role of the private sector and waste and inefficiency in both the public and the private sectors, and attendant health expenditure inflation. Although China has a very small private health sector (Liu et al. 2006), its public sector functions in ways that have clear parallels with the working of the mixed public and private provision system that is characteristics of Guatemala. For instance, profit motives that drive health care providers to over-prescribe medicines and promote high-end diagnostic technology are familiar to Guatemalan experts. Thus, dual practice by public-sector doctors in Guatemala potentially leads to outcomes similar to those in the Chinese "public" health sector, mainly because in both cases, providers seek to redirect patients towards services the quantity and prices of which they have greater control.

As the Chinese sought to expand insurance to cover the rural population, they were faced with the very same challenges that Guatemalan policymakers likely will face when they do proceed in this direction, namely: how should insurance risk pools be organized, who should manage these funds, how should revenues be raised, should the schemes be voluntary or compulsory, how should insurers contract with providers, how to address concerns about moral hazard and adverse selection, how equipped are local governments to be fund administrators, and so forth? The Chinese experience with these issues as they have progressed towards providing rural and informal sector insurance coverage hold important lessons for Guatemala.

Finally, China's fragmented health care provision system – with multiple without systematic linkages between primary and higher level care – has been a source of major concern about inefficiency. The resulting debate in China has laid bare many of the issues linked to fragmented provision of health care that may be relevant to Guatemala's situation.

4.1.4. What are the main lessons for Guatemala from the Chinese experience?

The major lessons emerging from the collapse of the RCMS (the rural cooperative medical scheme) in the 1980s and beyond were that voluntary insurance programs (which was essentially what the RCMS effectively came to be) are unlikely to be viable without government support and are also characterized by heavy levels of adverse selection. In urban insurance, what came through was the lack of an adequately sized risk insurance pool, given the "self risk pooling" of individual enterprises and governments. This led to renewed thinking in China at least about ways of expanding the size of the risk pool, effective 'reinsurance' of rural financing mechanisms in the form of increased government subsidies. Even the reformed urban insurance scheme was characterized by low rates of designated contribution not adequate to provide catastrophic risk protection, suggesting either a need to increase contribution rates, or government subsidies. Supplementary insurance to cover costs that exceed the limits of the basic urban insurance plan have emerged – in some cases by private providers; and in other cases by social insurance bureaus that operate the urban schemes.

Other lessons relate to the role of payment mechanisms in influencing health sector spending. The dual pricing structure created by the Chinese government in order to make health facilities more viable led instead, to greater inefficiency and health expenditure inflation. Problems with payments have led experts on the Chinese health sector to speak about alternative ways of paying health care providers – such as via pay for performance, GP-fund holding type mechanisms with capitation payments and so forth, instead of a fee-for-service approach.

The Chinese experience with the implementation of reforms in urban and rural insurance also help shed light on difficulties of process. For instance, social insurance organizations in some cities and counties did not have the capacity (and legal authority) to collect premiums from enterprises. This led to a *de facto* voluntary participation process which was often characterized by firms with healthy workers staying away and those with a greater burden of older workers and retirees contributing. The situation was exacerbated by the lack of authority of organizations (be it counties or social security) to be able to collect revenues or impose taxes for supporting the rural and urban insurance schemes. Thus progress towards the goal of universal insurance has tended to be slow in urban settings. In rural areas, heavy government subsidies under the new reforms seem to have overcome resistance to the 'voluntary' New Cooperative Medical Scheme (NCMS).

More recent debates in China have focused on issues of who ought to manage the funds and payment systems of the reformed rural insurance program. It is not clear if the government (MOH) is the appropriate authority to do this, especially if the MOH also owns the hospitals, so that there may no incentive on their part to improve hospital functioning. Alternative ideas have included the setting up of an 'independent purchaser' that controls the funds and organizes pay for performance rules, and quality controls for providers using some sort of capitation payment and other oversight mechanisms. Other options being discussed include competing independent purchasers along the lines of the GP-fund holding system in the United Kingdom. The last option may also address concerns about developing an integrated health care delivery system that is considered an importance cause of waste and inefficiency in the Chinese health system.

4.2. Mexico

Mexico's health system has been historically characterized by a high degree of segmentation and fragmentation. Since the Mexican health system took its shape in the 1940s until recent insurance reforms, there has been a structural split in financing and service delivery between the insured and uninsured. Two social security institutions are responsible for providing vertically integrated services for beneficiaries comprised of private and public sector workers. The Ministry of Health (MOH) is responsible for attending to those who are uninsured. With the decentralization reforms of the 1980s and 1990s, this segmented system has become fragmented across state lines, with significant inequities in relative contribution of resources among states.

Several adverse financial consequences and imbalances stemmed from the framework of this system. There has been historically an overall low level of health spending and underinvestment in infrastructure. Before the introduction of insurance reforms, over half the population was uninsured. The poor uninsured were obviously prone to financial impoverishment under this system, with over one half of financing coming from out-of-pocket spending. Wealthier households who were unsatisfied with the quality of public providers and sought care in the private sector also contributed to high rates of out-of-pocket spending. There were also wide inequities in public health spending, both between the insured/uninsured (in 2003, the insured received 1.5 times as much federal funding for health as the uninsured) and states (in 2003, there were 100-fold differences in state funding for health) (Secretaría de Salud (SSA) 2004).

4.2.1 Seguro Popular

Mexico's Popular Health Insurance (or *Seguro Popular* (SP)) was introduced in 2004 as a means to addressing some of the more undesirable financial consequences of the Mexican health system as it existed then. The introduction of SP was part of a larger reform financing reform that created the System of Social Protection in Health (SSPH). The SSPH finances both population-based and personal care interventions, with the SP directed at the latter. The introduction of SSPH and SP are intended to re-orient the fundamental organizing principle of health system financing in Mexico from a vertically organized system to a horizontally integrated approach. Instead of segmenting financing and delivery by population group (i.e., insurance status) the new system is intended to segment by function. The Ministry of Health is intended to play the stewardship role over both the insured and uninsured, with a universal social approach to cover financing and both public and private sector involvement in delivery of services (Frenk, Gonzalez-Pier et al. 2006).

Coverage

SP is a voluntary insurance mechanism offering coverage to Mexicans currently not protected by the other two publicly subsidized insurance schemes that provide coverage to workers in both the private and public sectors. It was designed to be phased-in over seven years, beginning in 2004 and culminating in universal coverage by 2010. A maximum of around 14% of the uninsured can be added each year during the initial transition period, with SP to be offered on a voluntary basis to all remaining uninsured thereafter.

Eligibility of enrollment during the transition period is based on means testing. State health ministries are tasked with affiliating beneficiaries through application of a socio-economic questionnaire that identifies and classifies respondents into income deciles according to statistical modeling of responses (Scott 2006).

Contribution

There is a tripartite division of financing for the SP. The federal government contributes a "social quota" (entitlement) of around 1.5% of the country's annual minimum wage (around $225 in 2004) to all enrolled in SP. The federal government provides additional resources in conjunction with matching contributions by states (federal and state "solidarity" contributions). The federal government's solidarity contribution uses a formula based mainly on capitation (around 80%), with adjustments made for state-level health needs (20%) and health system performance (5% or less). On average, the federal government's share is 1.5 times the social quota, with poorer states receiving relatively greater federal financing and richer states receiving relatively less. The state contribution level is fixed at one-half the social quota. SP users contribute on a sliding scale, ranging from no contribution for the lowest two income deciles to no more than 5% of disposable income for higher income deciles (Secretaría de Salud (SSA) 2004).

Provision of care

Coverage of SP is divided between two pools of funding for primary/secondary and tertiary care services, respectively.[6] The first pool covers delivery of an essential package of primary and secondary services. While delivery of the essential services is decentralized to states, the actual benefits package must cover primary-level ambulatory care and secondary-level outpatient consultation/hospitalization for basic specialties (e.g., internal medicine, ob-gyn). In 2004, around 200 medicines and 100 health interventions were included in this package. By law, this package is to be continually expanded. Around 90% of "solidarity" contributions by the federal/state governments as well as user contributions are directed towards this pool.

The second pool, the Fund for Protection of Catastrophic Expenditures, covers a package of high-cost tertiary care determined by cost-effectiveness analysis and resource availability and is updated annually based on epidemiological changes. A General Health Board takes responsibility for defining diseases (and therefore the treatments) deemed catastrophic, with coverage determined by resource availability. At a minimum, catastrophic diseases must cover cancers, cardiovascular and cerebrovascular conditions, severe accidents, long-term rehabilitation, HIV/AIDS, neo-natal intensive care, organ transplants and dialysis. Eight percent of the federal social quota, federal/state matching contributions and user financing goes to this pool.

Health services are to be provided by state ministries of health, other public health institutions that have signed agreements with states, or contracted private providers. All providers must be certified by the federal MOH to guarantee that they comply with quality standards.

4.2.2. Achievements and challenges

The introduction of SP has met with success in a variety of ways. Under the SPHH/SP reform, public expenditure in health grew almost 20%, and SP has substantially increased funding for the uninsured, by around 60% in real terms between 2001 and 2006 (Gonzalez-Pier, Gutierrez-Delgado et al. 2006). Between 2000 and 2006, an estimated 16% to 18% of the uninsured population were enrolled with the largest fractions of new affiliates coming from the two lowest income deciles (Gakidou, Lozano et al. 2006). Evidence from one study suggests that SP enrollees have higher levels of utilization, lower levels of out-of-pocket expenditures, and a lower degree of catastrophic health expenditures compared to the uninsured (Scott 2006)

The voluntary nature of SP nevertheless presents challenges to the aim of achieving universal coverage. First, SP may face financial difficulties related to adverse selection. Should the sickest of the uninsured – either poor or non-poor – choose to enroll in SP while healthier individuals do not, costs of SP in the form of higher claims per capita may rise. Second, it is not clear that eligible families will be willing to pay premiums for SP. As previously stated, many households in Mexico pay out-of-pocket to private providers because of dissatisfaction with services in the public sector. Though premiums for SP are capped at 5% for the richest households, this can be substantially

[6] Two other pools of funding exist: one, equal to 2% of the social quota, is directed towards infrastructure improvements in poor communities. A second, 1% of the social quota, is a reserve fund

higher than premiums for the social security insurance schemes.[7] Because SP is not mandatory, it is unclear whether its benefits will be attractive enough to encourage enrollment among eligible households (Laurell 2007).

4.2.3 The Mexico Case: Lessons for Guatemala

The Mexican case, like the Chinese example, highlights a number of steps that the governments need to take to address the needs of their underinsured populations in the formal sector. Key among these is a need for additional government funds/subsidies if schemes for the poor are to take off. A second interesting policy area highlighted by Mexico's case and the debates currently under way in China is the challenge of addressing health care needs of adequate quality in remote areas. Mexico's efforts relating to the contracting of private providers are noteworthy in this respect.

In addition, Mexico's case highlights some fairly unique and innovative approaches to addressing the financing needs of the SP scheme. For instance, while the federal government did recognize the need to contribute additional resources, it also recognized an important problem characteristic of decentralized systems. On the one hand, provinces vary in their capability to contribute to the SP scheme creating a need for differential federal contributions to provinces based on their economic situation. On the other hand, providing federal resources to make up for revenue shortfalls creates a classic 'moral hazard' problem in that federal support creates incentives for provinces not to raise resources on their own. By linking a portion of federal grants to matching contributions to state resources, the Mexican government took an innovative step to address both of these concerns.

There are other features of the creation of the SP process that are worth noting by Guatemalan policymakers. Just as in China, the government made the program voluntary, an important step in a setting where there exist concerns about social solidarity and trust in government institutions. Presumably, over time, as the SP enlarges and meets the needs of its members, this issue will become less salient. Related to this issue is the long period of time it takes to achieve coverage of all of the uninsured.

A final unique feature about the Mexican case is the attention paid to the content of the benefits package. As Guatemalan policymakers think about the content of any insurance program to address the needs of the uninsured, they will need to prioritize in terms of conditions that can, and those that cannot, be covered by the insurance program. Even as it was considered about reducing catastrophic spending as a policy goal, the approach that Mexico used as a way of choosing across benefits that could help reduce the risk of catastrophic spending – cost effectiveness analysis – is quite innovative.

4.3. India

India is a country with population in excess of 1.1 billion, with nearly 70 percent of its population living in rural areas. It has been one of the fastest growing economies in the world in the last decade. According to the most recent statistics available, the average real income per person grew at about 4.8% annually over the last decade. This rapid growth notwithstanding, some 300 million Indians continue to live below the poverty line

[7] For instance, premiums for one of those two schemes ranges from 71 to 1,280 pesos/year, while SP's ranges from 661 to 10,540 pesos/year for paying beneficiaries.

of which nearly 220 million reside in rural areas (Reserve Bank of India 2008). Moreover, rapid economic growth has not been accompanied by a significant increase in employment in the organized sector. Agriculture and informal non-agricultural activities account for about 90 percent of all employed individuals in India, and this share of informal sector employment has remained essentially unchanged over the last two decades (Unni 2006).

It is estimated that no more than 15 percent of India's population has access to formal health insurance, be it in the form of social health insurance (the so called Employees' State Insurance Scheme, or ESIS) through contributions paid by the employee and the employer, private health insurance, or other informal sector insurance schemes. Some employers, such as the armed forces and the Indian Railways offer their own subsidized health services to their employees. In principle, Indians (including those lacking insurance) can access subsidized health services provided by the public sector. However, by almost all accounts, public sector health facilities in India offer care of poor quality (including long waiting times, high rates of absenteeism, particularly in primary care facilities in rural areas, unavailability of drugs, etc.). The poor quality of health services are the result of a mix of factors, including (until recently), declining public sector health spending, low salaries, and a variety of organizational characteristics that limited transparency and accountability (Yip and Mahal 2008). The social insurance scheme (ESIS) in India has also come under severe criticism for poor quality health facilities operated by it.

A major consequence of low insurance coverage and poor quality of publicly financed (and provided) care is a high level of reliance of India's population on private sector health providers by means of out of pocket payments. Some 80 percent of all health spending in India takes the form of out of pocket payments to health care providers by households. One consequence is that all groups other than the urban rich spent more than 10 percent of their income on out of pocket payments for health in 2004 – highlighting the extent of financial risk to Indians associated with ill health. Among Indians who did not seek care when ill, one-sixth cited lack of adequate financial resources as the reason, mostly in the poorer groups. Recent estimates suggest that health spending increased the proportion of population estimated to be living in poverty in India by 3.7 percentage points (Yip and Mahal 2008).

Just as in Guatemala, India faces a growing share of elderly in total population in the future – from about 8 percent at present to nearly 21 percent by 2050. There is also a significant burden from non-communicable conditions that are expensive to treat, such as diabetes, heart disease and cancer.

4.3.1 Addressing the needs of the informal sector employees and rural populations

The large numbers of the poor and individuals working in the informal and the agricultural sectors in India has motivated a number of innovative schemes to address the health-financing related concerns of these groups. Given that the provision of health services in India is primarily a provincial responsibility, one way in which this has occurred is in the form of provincial-government led initiatives. At the same time, the large amount of financial resources controlled by the central government imply that it is often the driver of major initiatives be it in health or another sector. Thus, in 2005, the government of India embarked on the "National Rural Health Mission" (NRHM) which is intended to treble the public sector's contribution to health (as a proportion of GDP) by 2012 via expenditures on personnel, health facilities, health insurance programs and so forth, in collaborations with provincial governments (Government of India 2005). In addition, there have been a many private sector efforts, whether by for-profit enterprises, or by non-governmental organizations, of which there are large numbers in India.

In the reminder of this country case, we highlight some key examples of health financing initiatives directed towards the rural and informal sector populations in India, a concern that Indian policymakers clearly share with their counterparts in Guatemala.

Improving Public Sector Provision

Efforts to improve the functioning of public sector health services in India have taken a variety of forms. These included in the 1990s, with the help of World Bank funding the introduction of user fees in secondary hospitals in several provinces in India. The central idea underlying the user charges was that provided the user fees were not 'too high' and were not imposed on poor patients, the additional funds so obtained could be used to finance quality improvements in public facilities without any adverse equity impacts. Moreover autonomous oversight bodies were established to ensure that the funds were appropriately spent. Although an evaluation of the user fee intervention was not undertaken at the time it was introduced, a later study suggested that user fees in India's did lower utilization and did not distinguish between the better off and worse off patients. Political considerations ensured that user fees remained so low in some states so as to be meaningless in terms of effects on health services. In the Indian province of Maharashtra lawsuits filed by non-governmental organizations effectively halted the user fee program (Mahal and Veerabhadraiah 2005).

Other mechanisms by which the functioning of the public sector has sought to be improved was a process of whereby hospitals were allowed to be autonomous with respect to the uses to which their expenditures could be put. The most ambitious of such efforts was in the Indian state of Andhra Pradesh where more than 100 secondary hospitals were put under the authority of a "commissioner" of hospitals with independent authority over a budget. As a matter of practice, the degree of autonomy tended to be quite limited. For instance, medical personnel in these hospitals continued to be employees of the state, and given that personnel costs accounted to the bulk of spending, the net result was very limited flexibility in terms of budgetary allocations. While it is true that (at least until the data were on customer satisfaction stopped being collected) the hospitals were well regarded by patients, that may be more likely the result of the extensive infrastructural improvements financed by World Bank loans than due to any autonomy-related improvements.

In some states, the governments have actually outsourced the operation of primary health care centers to non-governmental organizations. These are typically remote areas where rates of poverty also happen to be extremely high. While no independent evaluation of these arrangements appears to be available, the repeat government funding of these arrangements suggests that the NGOs are performing their tasks satisfactorily. The scale of such partnerships is still small, probably reflecting the limited number of NGOs capable of implementing primary health care delivery services credibly.

Apart of organizational changes, the national government has sought to directly increase the number of health personnel available in rural areas under its National Rural

Health Mission through increased financing, and hiring from within villages where the services are to be delivered as a way to address absenteeism. This enormous exercise – there are 565 thousand villages in India - is still ongoing, although the major challenge appears to be the adequacy of training imparted to these personnel.

Enhancing insurance coverage via private insurance companies

In 1999 India allowed for the entry of private firms in the market for health and other categories of insurance, following early 30 years of state monopoly in the insurance sector. As part of the regulatory framework permitting private firms to offer insurance products in the Indian market, all such firms were required to issue a certain proportion of their policies in the rural sector.

This strategy of requiring firms to have a certain proportion of their business in the rural sector has not proved particularly effective. Indeed the requirement may have been one major reason why the private sector insurance business as a whole has grown only slowly in India. According to the most recent estimates of the Insurance Regulatory and Development Authority of India (IRDA), private health insurance coverage as a whole des not exceed one percent of the Indian population.

In an effort to expand their reach into rural/informal sector groups, some insurance companies have teamed up representatives of large groups of informal sector workers to provide insurance coverage for hospitalization expenses to group members, such as nearly 200 thousand members of the Self Employed Women's Association (SEWA) of India. This mechanism of promoting insurance has the advantage of addressing problems of adverse selection that might otherwise hamper the viability of the insurance pool. Moreover, using the medium of informal sector organizations has helped to enhance the reach of insurance companies among populations where they have had little experience marketing products. These efforts have been confined, however, to unstable relationships with a few large organizations. Moreover, the coverage available under the health insurance packages provided in these arrangements also is limited, owing to the small amounts that individuals members can pay, and hardly adequate to be considered as catastrophic insurance. Because members are typically voluntarily enrolled, even in these group schemes, the have often faced the problem of adverse selection – namely, that individuals who chose to be insured have a greater than average likelihood of seeking health care and thus affect the viability of the group insurance plan.

Challenges to these efforts include the non-familiarity of potential enrollees to the concept of insurance that may involve getting nothing 'tangible' (in any given year) in return for the payment of an insurance premium. Other factors include the inadequate reach of good quality health providers in interior/remote areas, making purchasing health insurance coverage an unattractive proposition for many potential customers.

Non-government (non-profit) health insurance schemes

In some cases, insurance coverage to individuals in the informal sector has been directly provided by organizations that are members of those organizations. For instance SEWA, mentioned above, after repeatedly experiencing problems with its (private) insurance company partners decided to go it alone for some time and function essentially as an insurance company to its members. To make insurance more attractive to its members, however, it offers its members a package – of health, survivors' and asset insurance – for which they pay a single premium.

A particularly large scheme that covers in excess of 1 million individuals is the Yeshasvini Cooperative Farmers Health scheme in the Indian province of Karnataka. The scheme insures members of farmers' cooperatives covering them against the risk of expensive surgeries. The scheme relies on both contributions from members of cooperatives as well as subsidies from the government. The funds collected in this manner are managed by a Third Party Administrator responsible for paying out claims, maintaining records, approving claims and so forth. The scheme has been able to attract several good quality private hospitals to provide the necessary surgeries covered by the insurance package as 'network' hospitals. In this the scheme is different from SEWA, whose members can essentially visit any hospital, provided the admission is approved. Moreover, the Yeshasvini scheme covers expenditures for surgeries that are nearly 50 times as high as the cap (maximum limit) under the SEWA insurance.

Both the Yeshasvini and the SEWA schemes have benefited from subsidies, whether from the government, or from international funding agencies. This is not surprising given the relative low economic status of many of the participating individuals. Both organizations have faced challenges with ensuring re-enrolment of members. There is also the challenge of ensuring that providers do not indulge in 'supplier-induced' demand. SEWA, for instance, found that many of its members were being hospitalized for conditions that would not ordinarily require inpatient care – malaria, diarrhea, etc. On the other hand, these and other organizations highlight a key feature of programs that are likely to be viable in the informal sector – the need to insure groups of individuals and/or households (both schemes cover household members), rather than individuals. The challenge, however, is in ensuring that participation is broad enough to be not subjected to adverse selection pressures.

Tax funded insurance schemes

The large experiments with non-government providers of health insurance notwithstanding, it is apparent that such schemes (along with private insurers) currently address the needs of only a small portion of informal sector employees and rural households in India. Note that the scale may be sufficient for Guatemala which has a relatively small sized population compared to India. The type of financing interventions required in India, however – in particular their large scale – is likely to come from the governments at the national and provincial levels.

Of the two recent schemes we will discuss in this country case, the first is the Arogyasiri scheme introduced by the government of Andhra Pradesh. Begun initially as a pilot project in 2004, the scheme is currently in the process of being scaled up to all districts in the state, encompassing individuals living below the 'poverty line' which has been liberally defined to include some 64 million people (out of a total population of roughly 80 million) in the state. The scheme is managed as an autonomous entity (under the overall supervision of the state government) and fully tax financed. There is a network of over 200 approved hospitals to which enrolled individuals can access, following referral by a primary health center, their first contact point. Care is provided by a network of high quality public and private hospitals provided in a completely 'cashless' manner, so that poor individuals obtain completely free care related to hospitalization.

The government owing to its larger purchaser status has negotiated extremely favorable rates for a large range of inpatient and surgical interventions with hospitals. Additional oversight is provided by panel of doctors employed by the scheme who help to ensure whether the medical interventions proposed by hospitals are appropriate for enrolled member patients. Network hospitals are also expected to undertake routine health check ups and health promotion camps in rural areas. The Arogyasiri scheme is complemented by an ambulance network (also funded by the government) that provides free ambulance services to transport patients from their place of residence (or first contact with a health care provider) to the hospital. Innovative features of the scheme include the use of call center technology to ensure rapid response time to emergencies. Another important benefit of the scheme has been the development of software for maintaining electronic medical records of an extremely large group of potential beneficiaries.

Another large scale scheme financed primarily by India's central government is the so called 'Rashtriya Swasthya Bima Yojana' (RSBY). The scheme is intended to cover all below poverty line individuals/households in India. Although 'poverty line' is not defined as liberally as under the Arogyasiri scheme, this would still amount to some 280-300 million Indians. The scheme essentially involves the government paying premiums to insurers on behalf of the poor who are then issued a unique 'smart card' that they can use to access care at both public and private hospitals after paying only a small registration fee. A large range of interventions are covered subject to maximum of Rupees 30,000 per year (about US$600). The 'smart cards' are also expected to create a medical history for their holders in addition to be useful as device to monitor health spending by insurers. The scheme is currently still being rolled out in different states of India.

Neither scheme has been systematically evaluated in terms of its effects on catastrophic expenses faced by the poor, although we are aware of at least three sets of independent evaluations that are currently planned or in process. We believe that although well planned, the major challenge to these schemes would be the containment of health care costs, particularly as consumers' expectations rise along with technological advancements in the health sector.

4.3.2. The India case: Lessons for Guatemala

India's situation offers a number of interesting insights into the challenges Guatemala's policymakers might face as they consider the expansion of insurance coverage to the informal sector. The first insight is the limited role that private voluntary insurance is likely to play in this endeavor, given particularly the incentives that drive the process. In the presence of a subsidized public sector and the substantial administrative costs of promoting rural and informal sector insurance this may be even less likely. The second interesting insight from the Indian case (and similar to the situation in Mexico) is relates to the appropriate role of public sector providers. Specifically, efforts to enhance public sector efficiency via experiments at promoting autonomy and so forth are likely to run into challenges from a group – public sector health personnel – who may have strong interests in maintaining the status quo. This issue can turn out to be important when a government seeks to introduce competition among providers as a means to promote efficiency in care provision. The third lesson from India's case is the limitations of community financing in addressing the key concern of India's uninsured – the need to address catastrophic expenses associated with ill health. Specifically, one would have to think of much larger risk pooling mechanisms and government premium subsidies if the need to provide protection against this type of risk. India's recent experience like the previous two cases, China and Mexico, highlights the need for increased government resources. As noted, under the National Rural Health Mission, India plans to raise its current public spending on health (as a proportion of GDP) by about 150 percent.

The other innovative element of recent reforms in India is the reliance on tax financing as way to develop a large pool of funds to provide protection against catastrophic spending incurred by households. This is very much in line with recent trends in OECD countries (Wagstaff 2007) where there is increasing discomfort with the traditional approach of social health insurance. Not so worthy of emulation is the strategy adopted by Indian state of Andhra Pradesh of reimbursing (competing providers) on a fee for intervention basis. Although no research is as yet available on the subject, one would imagine that just as in China, the Arogyasri scheme is likely to result in considerable reliance on expensive (but not necessarily effective) care that yields high margins to consumers. India's case raises fresh doubts about relying on user fees as a way to address poor quality of health care provision in public facilities while not adversely affecting equity.

Finally, the example of the Indian state of Andhra Pradesh offers an interesting contrast with the Mexican case when it comes to identification of potential beneficiaries of state subsidies. Specifically, by covering almost 80% of the province's population, the scheme essentially does away with the 'identification' or 'targeting' problem. In addition, this way of defining the beneficiary population has the advantage of garnering political support across different economic groups. On the other hand, this looks like a very inefficient approach to fund such a scheme for the uninsured especially when the tax systems in developing countries such as India are regressive.

4.4. Colombia

Colombia is a lower middle-income Andean country of 46.1 million inhabitants, with 74% living in urban areas as of 2007 (World Bank 2008). Currently, the country is divided into 32 departments, one capital district (Bogota), and 1,119 municipalities. The number of municipalities increased from 1,050 in 1995. Per capita GNI (PPP, International $ 2006) is approximately $7,620, and both the literacy rate (93%) and basic service coverage (93% for water and 86% for sanitation) are higher than Latin America and the Caribbean (91% for water and 77% for sanitation)[8] (World Bank 2006). The infant mortality rate is 17 per 1,000 live births, and average life expectancy is 73 years at birth in 2007. In general, the relative impact of chronic—particularly cardiovascular—diseases in Colombia's mortality profile indicates that the country is well along in the epidemiological and demographic transition. However, the unusual prevalence of violence, which is responsible for nearly a third of all deaths among males, is noteworthy (PAHO 1998). Colombia has one of the highest Gini coefficients (inequality) in the world

[8] Data from year 2006

(Colombia Human Development Report 2008) with almost $2/3^{rd}$ of their population living below the poverty line.

Colombia has a long history of investment in the public health sector. Its first Ministry of Hygiene was created in 1913. This became the Ministry of Public Health in 1953. In 1975, Colombia established a National Health System (SNS) through a semi-nationalization of departmental, municipal, and non-governmental hospitals. At this point, management and delivery of health services were 'de-concentrated' to the departmental level. Each department had its own Ministry of Health and was funded through the Fondo Seccional de Salud established under the 1965 Constitution (Bossert 2000).

During the 1980s, Colombia's health care system decentralized even further to the municipal level in order to expand primary care to the municipal level in accordance with the goals of the 1978 Alma Ata Conference on Primary Health Care and the Pan American Health Organization's Local Health Systems (SILOS) initiative (Bossert 2000). By the late 1980s, decentralization laws mandated the transfer of revenues from the central government to local levels (departments and municipalities). Task and management responsibility related to health service provision were also decentralized to lower levels (Guerrero 2008).

In 1993, Law 60 further solidified the process of decentralization especially with respect to funds for health and education. Under Law 60, municipal governments were allocated a fixed percentage of national income, starting at 15% in 1994 and increasing gradually to 22% by 2002. These transfers were exclusively for use in "social investment," and were earmarked as follows: 25% to health; 30% to education; 20% to water and sanitation; 5% to sports and culture; and 20% to discretionary investment (Bossert 2000). In this same year, the Colombian government also implemented Law 100, a comprehensive social security bill with a significant portion focused on health. Under Law 100, the Colombian government mandated that the entire population of Colombia should have health insurance with a standard and regulated coverage (Guerrero 2008). A more detailed description of this reform follows.

4.4.1. Health Reform in Colombia

In 1993, Colombia implemented an innovative (and drastic) health reform. The reform introduced a universal health insurance scheme allowing competition among public and private insurers and health care providers (Guerrero 2008). The health care coverage situation in Colombia prior to this reform is strikingly similar to the current situation in Guatemala. First, in the early nineties the Colombia system was comprised of the same entities as Guatemala's current system: a social security system to cover formal workers, a growing private sector, and a public sector made up of state owned hospitals and health facilities. Second, insurance coverage of health services in the early nineties was poor. Only 20% of the population was enrolled in social security, 10% had private insurance, and 70% had to rely on the public system. In Guatemala the situation is even more extreme. According to the LSMS 2006, 13% of the population is enrolled in IGSS, 3% has private insurance, and 84% has no insurance and relies on the public system. Lastly, in the early nineties in Colombia, the poor were paying a higher and higher percent of their income to cover health care expenses. At this point in Colombia, health care expenditures as a percent of total spending was five times higher in the poorest households compared to the wealthiest (Molina 1994). Although not as extreme, in Guatemala we find health care spending as a percent of household per capita expenditures to be 1.4 times higher in poor households compared to rich households (LSMS 2006).

The new insurance scheme was based on a “managed competition” model incorporating private and semi-public insurance and managed care organizations and cross-subsidies to the poor. While the original concept was to create a universal system, this would have meant a single uniform benefits package that would have fewer benefits than the current social security system, which covered 20% of the population offered. The Social Security Institute and its beneficiaries were politically powerful enough to prevent this reduction in their perceived benefits, forcing the government to create two different insurance schemes, the *contributory regime*, for employees (formal sector workers) and those who could pay into the system (this also included some self employed workers such as salespeople, small business owners, taxi drivers, and agricultural and construction workers (World Bank 2008). The *subsidized regime* was for low income Colombians who could not pay and was financed through public funds. This created a two-tiered system with the contributory beneficiaries having access to an ample benefits package and the subsidized beneficiaries with a limited benefits package at almost half the premium. In addition, almost a third of the population was ineligible for either regime.

Both schemes are still in place. In 2006, about 34 percent of the population was enrolled in the contributory regime. The contributory regime is financed as follows: individuals contribute a certain amount of their salary to a health insurance, or a managed care institution of their choice, also referred to as Health Promoting Companies (EPS). All the wage contributions received by the different EPS’ go into a fund called the Fondo de Seguridad Socia y Garantia (FOSYGA). This fund is used to pay the EPSs using a risk adjusted capitation rate called the Unidad de Pago por Capacitacion (UPC) for health care claims from the contributory regime. Health care services are either provided directly through the EPS and/or the EPS can contract with public or private providers (Guerrero 2008).

In 2006, 39 percent of the population was enrolled in the subsidized regime. One percent of the financing for the subsidized regime is a cross-subsidy from the contributory regime contribution to FOSYGA. The rest is funded by the national treasury (who allocated 1.1% of GDP (US$1.39 billion) in 2005), local tax revenues, and family benefit funds. Individuals qualify for the subsidized regime based on a proxy-means testing index called Sistema de Indentificacion de Beneficios (SISBEN). The insurance organizations for the subsidized regime are private and semi-private entities called the Subsidized Regime Administration Companies (ARS) also on a per capita payment basis.

Law 100 created a standard benefit package of health care services called the Plan Obligatorio de Salud (POS). At the outset two different plans were created, one for the contributory regime (POS-C) and one for the subsidized regime (POS-S). The services offered and covered under the subsidized package were to be eventually expanded until becoming equal to the non-subsidized package by 2001, when universal coverage was also to be achieved. This plan was not achieved and the inequities of the two-tiered system remain today.

Health Care Spending

Since the implementation of these reforms, health spending as a percent of GDP and public expenditures as a percent of GDP have both increased. Total health spending as a percent of GDP increased from 6.2% in 1993 to 7.8% in 2003. Total public expenditures in health as a percent of GDP increased from 1.4% in 1993 to 3.1% in 2003. As a comparison, in Guatemala total health spending as a percent of GDP was lower than Colombia in 2003 (5.4%) and fell to 5.1% by 2005. Total public expenditures in health as a percent of GDP were also lower in Guatemala than Colombia in the year 2003 (2.1%), falling to 1.9% in 2005 (Estrada Galindo 2008).

Coverage

As mentioned above, in 2006 34% of the population was enrolled in the contributory regime and 39% of the population was enrolled in the subsidized regime. At the time of implementation, enrollment was predicted to increase from 1994 to 2001, when universal coverage was predicted to be achieved. This date has passed and the Colombian government is now attempting to reach universal coverage under a Constitutional Court ruling requiring the Ministry of Health to develop a plan for unifying the benefits packages. It has taken Colombia almost 13 years to decrease the number not covered by any plan from 70% to 27% and this was with a major health reform. According to data from the LSMS 2006, only 16% of the Guatemalan population has private insurance or insurance through IGSS. This leaves 84% of the population without coverage. If Guatemala implemented a similar health reform in the next few years and saw similar increases in coverage as in Colombia, the number of people without health insurance coverage in Guatemala could decrease from 84 percent to around 40 percent by the year 2024.

Contribution

Upon implementation of Law 100 in1993, employees in the contributory regime were to contribute 12% of their earnings. This contribution was shared between employee (4%) and employer (8%) and was capped at 20 times 12% of the minimum wage. Currently, with the passage of Law 1122 of 2007, total contributions by the employee were raised to 12.5%, with 8.5% being paid by the employer. These contributions are mandatory even if the worker is covered by a spouse (Guerrero 2008). Currently those who do pay into health insurance in Guatemala through their employers, through IGSS, pay slightly lower percent of their salary than in Colombia. For example, workers who opt for the Accident, Disability, Retirement and Survivorship Program through IGSS pay 3% of their salaries while workers who opt for the additional Maternity and Common Disease program pay 3.85% of their salaries. Employers pay 7% of the total amount of each worker's salary (Estrada Galindo 2008; WHO 2007). Raising the amount paid by the employee and employers by 1 percent point (to the levels in Colombia) could possibly raise contributions enough to expand the IGSS program as was done in Colombia.

Provision of Care related to the scheme

In terms of medical care coverage under the POS-C is the most comprehensive, covering most interventions at all levels of complexity, all medications in the national formulary, and medical transportation expenses. The POS-S plan also covers first level interventions, catastrophic care, all medications in the national formulary, and medical transportation expenses, but covers less preventive services, ambulatory care and level 2 and 3 services. As mentioned above, under Law 100, the coverage under these two plans were eventually to be equalized by the year 2001, but that did not happen. The POS-S is approximately half the value of the POS-C based on enrollment figures and per capita costs in 2005 (Guerrero 2008).

Tutelas

A tutela is a protection writ that is available to the public in Colombia in order to protect individual rights and improve public access to the court system. It allows individual petitioners to ask the court to grant access to care that has been denied. Although health care coverage has improved with the passage of Law 100, with the availability of tutelas, there has been an increase in the use of the legal system in Colombia for individuals to gain access to services that their insurers have denied based on the limited benefits packages. For example, between 1999 and 2005 there were nearly 328 thousand tutelas related to the right to health (Yamin and Parra-Vera 2009). Many of these tutelas have been granted requiring the payment for provision of care that was not provided through POS/POSS. These reimbursements come from the FOSYGA. Not only have these payments caused additional financial stress on the Colombian health care system, but the increase in the number of tutelas has demonstrated some systematic problems with the Colombian health care reforms. Some of these problems relate to poor capacity and internal regulation. For example, a number of the procedures petitioned for through the tutelas are procedures and services already covered through POS-C/POS-S. However, the majority of cases have been granted access to drugs and services that were not included in the limited benefits packages. This situation threatens the financial stability of the system and weakens the ability of the traditional insurance method of rationing care through limited benefits packages. Based on these problems, the Colombian Constitutional Court has enacted a new proclamation (T-760/2008) that calls for a restructuring of the health system to clarify the benefits for all Colombians and to end the two-tiered system of benefits

The judicial system in Guatemala is similar enough to Colombia that lessons can be learned if Guatemala is considering a health reform. The number of tutelas in Colombia increased mainly because of three reasons: 1) the creation of a Constitutional Court in 1991; 2) the existence of a Human Rights Ombudsman Office; and 3) major health care reform in 1993. Guatemala has two of these three items. Guatemala has had a Constitutional Court for a number of years and actually in 1985 strengthened and extended the powers of the Constitutional Court (Sieder 2007). They also have a judicial council that acts in a similar manner to a Human Rights Ombudsman Office. In Colombia the Human Rights Ombudsman Office has been responsible for monitoring and tracking all the incoming tutelas related to health care coverage. The judicial system has been tested in terms of guaranteeing rights to the large indigenous population in Guatemala. An increase in the number of tutelas for health care could be a possibility if a health care reform in Guatemala guarantees a certain package of services but coverage remains low for certain groups.

There have already been some cases taken to the Supreme Court in Guatemala with respect to enrollees in IGSS' Disabled, Elderly, and Retired (I.V.S.) program with certain chronic conditions and catastrophic diseases that were not guaranteed services, as a precautionary measure, under the normal benefits package. In such cases, the Court decided that IGSS should have provided such drugs and treatment (Mendez Mendizabal 2006).

Market Failures

One of the defining characteristics of the Colombian reform was its pro-market, private sector focus. Prior to the reforms in 1993 workers contributed to compulsory, closed insurance schemes. After the reforms, workers were allowed to choose between different insurers (EPS and ARS). Managed competition was supposed to improve efficiency and quality. Despite their efforts, Colombia's new health care system, along with many other health systems around the world, has not been able to withstand the power of market failures. Even with continued attempts to avoid market failures (new regulations, risk adjusted community-rated premiums, standard benefits package etc.) the Colombian system has encountered cream skimming (insurers selecting the low risk and rejecting the high risk and poor) and adverse selection leading to high cost, inefficiency, and inequality (Castano and Zambrano 2006).

Some Emerging Problems

One of the major problems confronting Colombia and their social insurance is enrollment. They had initially predicted upon implementation in 1993 that they would have universal coverage by 2001. In the year 2006, they only have 73% coverage. One of the reasons for this is the because of independent workers in the informal sector. In order to reach universal coverage, Colombia had to have 90% of salaried workers enrolled and 85% of independent workers enrolled by 2000 (Gaviria 2006). By 2000, only 4% of independent workers were enrolled (Martinez 2002). Colombia is struggling with capturing this "informal" sector worker into the social insurance scheme.

Most of this non-compliance with the independent workers into the scheme is found in rural areas and in small businesses. Small businesses and workers in rural areas cannot make the premium payments required to join the scheme, so many have opted out for no insurance. Colombia needs to address the coverage and payment of these "informal" workers in rural areas and affiliated with small businesses. There is also anecdotal evidence of people refusing to accept jobs in the formal sector for "fear" of being enrolled in the contributory insurance (Guerrero 2008).

Results from the Human Development Report 2007/08 show that in Guatemala 39% of total employment is in agriculture, 20% is industry and 38% is in services over the period 1996-2005. Although there is no data available on the actual number of people working in the informal sector in Guatemala, some of its closest neighbors have levels as high as 57% (El Salvador), 58% (Honduras), and 55% (Nicaragua) for the same period (1996-2005) (UN 2007/08). Colombia had a rate of 58% during this period. Similarly to Colombia, Guatemala will also face the challenge of how to include these informal sector workers into an insurance scheme with proper and adequate health care coverage.

4.4.2. The Colombia Case: Lessons for Guatemala

Potentially there are several lessons to be learned in Guatemala through examination of the Colombian case. Colombia increased health care coverage for their population from 30% to 73% over a 13 year period. A health reform in Guatemala could similarly increase health care coverage for the Guatemalan population from its current rate of 16% insurance coverage for those with private insurance or IGSS. However, the health reform in Colombia has not been without its problems. The following lessons should be considered:

- Guatemala should try to avoid two-tiered system that generates inequities in access. As mentioned above, Colombia attempted to increase coverage by offering different packages of services to different populations. This has created inequalities in terms of coverage.
- Guatemala needs to find a means of addressing the informal sector contributions to the plan and proper coverage of the informal sector.
- Guatemala should conduct a political feasibility analysis of their political situation prior to implementing any reforms in order to assess the positions and powers of key players with respect to a potential reform. The PolicyMaker Software could help with this analysis. The reform in Colombia was highly politicized and some argue that the reform in Colombia was successful because of the political situation. The reform was led by a team of well trained economists from within the Planning Ministry who focused on brining about change through regulation and used market mechanism to fund the reform (Gonzales-Rossetti and Ramirez 2000).
- Guatemala should assess their judicial system and learn from Colombia's recent problems with Tutelas in order to be prepared in case a similar situation arises.
- Guatemala should examine closely the market failures that many countries, such as Colombia, have experienced in introducing market based, managed competition models. Such models lead to cream skimming and adverse selection which leads to higher health care costs, inefficiency, and inequality in access to services among the population.

5. Conclusions

Each of the cases above offers interesting insights into the Guatemalan situation and some of the likely issues that Guatemalan policymakers would have to address (and possible solutions) when they do decide to take up the challenge of extending health insurance coverage to the informal sector. The main areas that would have to deal with will essentially involve

a. Raising of funds and addressing questions relating to participation by individuals/firms and contributions of sub-state governments
b. The organizing of the links between financing and provision of care – should there be an independent purchaser with competing providers, should it be simple public provision, or some other
c. The payment system – should it be fee for service, capitation or some other
d. How should potential beneficiaries be identified
e. How can the legal system be used to achieve policy goals

The following box highlights the major themes from the four case studies highlighted above (China, Mexico, India and Colombia) that should be considered and discussed in analyzing the health system and possible health reform in Guatemala. The country case studies that provide the best information and examples of each of the issues are shown in parentheses.

Financing

- **Social Health Insurance (China, Mexico, Colombia, India)**
- **Community Financing (China, India)**
- **Tax Based Financing (India)**
- **User Fees (India)**
- **Medical Savings Accounts (China)**
- **Subsidization for the poor (China, Mexico, Colombia, India)**
- **The Role of Private Insurance (China, Mexico, Colombia, India)**

Regulation

- **Legislative Process (Colombia)**
- **Politics (China, Mexico, Colombia, India)**

Health Care Costs

- **Out of Pocket Payments (China, Mexico, Colombia, India)**
- **Catastrophic Payments (China, Mexico, Colombia, India)**

Coverage and Services

- **Benefits Package (Mexico, Colombia)**
- **Large uninsured population (China, Mexico, Colombia, India)**
- **Use of NGOs (India)**
- **Rural Insurance Schemes (India, China)**

Potential Market Failures

- **Adverse Selection (China, Colombia)**
- **Cream Skimming (Colombia)**
- **Moral Hazard (Mexico)**
- **Supplier Induced Demand (China)**
- **Managed Competition (Colombia)**

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Technical Appendix A

Health Care Financing: A Review of the Major Approaches

A.1. Introduction

To address the central concerns related to inadequate insurance coverage of Guatemala's population, health expenditure inefficiency and possibly rapidly increasing health costs, economic analysts typically have recourse to a variety of mechanisms. In this section, we briefly review some of the mechanisms related specifically to financing, indicating their relative strengths and weaknesses. It should be emphasized that these are not being posed as "either/or" options for Guatemala but rather as a set of tools that can help better understand the country case studies that are analyzed in section 4 of the paper. Indeed both national health accounts data and the case studies that we discuss demonstrate that countries typically employ a mix of different financing strategies instead of one or the other. Moreover, financing approaches need to be accompanied by other elements in the toolkit of policymakers – such as the organization of insurers and providers, regulatory approaches, the ways by which providers are compensated to be effective.

The most common ways in which health care provision is financed is the government, usually via taxes, insurance (both voluntary private insurance and social insurance) supported by contributions from individuals, employers and the government, community financing, and out-of-pocket payments in the form of *user fees*. We briefly look at each, underlining their main strengths and weaknesses.

A.2. Government Tax Revenues

Government tax revenues are a common method of financing health services, both in developed and developing countries. Tax revenues can be generated from both direct taxes (e.g., income and corporate taxes) and indirect taxes (sales taxes, VAT, excise duties, customs duties, etc.). Typically, governments use tax revenues to finance health care that is then made available to all (or at least a large subset) of its citizens.

The main advantage of tax funded health systems is(i) the *de facto* creation of a large risk pool since people are forced to pay their contributions (ii) inhibiting the risk of adverse selection (often found in voluntary insurance programs) given that large numbers are essentially "insured", and (iii) a more equitable distribution in the financial burden of health care especially if the tax system is progressive. Tax revenues need not be limited to financing government health facilities. Health sector allocations, in principle, can be managed by autonomous entities that can use the funds to support health providers, subsidize insurance contributions for the poor and effectively introduce performance requirements and quality controls by taking advantage of the size of the health budget that governments usually command.

On the flip side, raising adequate amounts of taxes in developing countries such as Guatemala is no easy task. Apart from rampant tax evasion, the presence of large numbers of people in low paid occupations in the informal and agricultural sector often renders the tax base to be quite small. Countries may not also possess the administrative capacity to collect tax revenues. Often this leads them to rely on indirect taxes that tend to be more regressive. Even when adequate amounts of tax revenues are available, there is the challenge of facing up to a political process that drives allocations to different activities, including health. When taxes are used to fund ministry of health facilities, inefficiencies commonly result since guaranteed fund tends to reduce accountability of public sector health personnel.

Compared to other countries in the region, Guatemala tends to spend a smaller share of government spending on health; and this share is declining over time. In Guatemala, both general government expenditures on health as a percentage of the total health expenditure, and as a percentage of total government expenditures, declined between 2000 and 2006. In 2006, Guatemala's government expenditure on health in 2006 was 37.7% of total the expenditure on health , while the average for the WHO Americas region was as high as 57.24% (WHO 2008).

A.3. Insurance (Voluntary and Social Insurance)

Prepayment through health insurance is another way to finance health sector spending. The idea is to pool the amounts collected via pre-payment. Funds from the pool are then used to reimburse, or directly pay providers for those members of the pool who fall sick and need treatment. Available evidence suggests that health risks tend to be highly skewed, so that for instance, roughly 10% of the population usually consumes 60% of total health expenditures, whereas 30% have little to no expenditures. Health insurance defined in this manner allows individuals to pay predictable and relatively small amounts when healthy, to cover unpredictable costs when sick or injured. Health insurance also pools risks together and generates resources to pay unpredictable large health bills, and may also serve achieving equity objectives by allowing healthy and wealthier people to cross-subsidize less healthy and poorer people.

Private insurance is usually the result of voluntary actions in the market when purchasers (or groups of purchasers) are willing to pay premiums to insurance companies. In return, insurance companies pool members' risks and insure them for health expenses while contracting and paying providers who provide treatment for members. *Social insurance* differs from private voluntary insurance in several ways. First, social health insurance tends to be mandatory for designated populations, and is based on a social contract between the government and enrollees. Enrollees are eligible for an established benefit package upon payment of the set premium. In some countries, participation in social insurance is limited to members of the formal sector work force and/or their dependents. In some other countries, efforts have been made to include the informal and the agricultural sector in the pool, with or without government subsidies for their share of premiums into the pool. Membership for the latter group is, in many cases, voluntary.

Moral hazard refers to the phenomenon when the magnitude of treatment provided exceeds the need – say via unnecessary diagnostic tests, surgical procedures and so forth. The main reason why this occurs is that insurance lowers the cost of seeking care to the patient. Sometimes, there is also 'supply side' inducement to provided excess care especially when they are reimbursed by insurance on a 'fee for service' basis. Moral raises the cost of care and can potentially be a major source of health expenditure inflation if its leads to rapid diffusion of new diagnostic devices and procedures in the health system. As is to be expected, moral hazard is common to both the private and social insurance systems.

Typical ways to address moral hazard include demand side methods such as introducing *co-payments* by patients (so that they pay part of the cost of service), medical savings accounts (MSA) – whereby individuals and their employers contribute into their own specific fund (with the contributions being tax deductible) to be used to pay for their own (usually outpatient) expenses. Once the MSA is exhausted, individuals pay out of pocket. Supply side mechanisms include paying health care providers on a fixed per capita basis (capitation), promoting organizations that combine both the insurance and the provision function, such as HMOs. Because a monopoly HMO (such as the government) would have no incentives to provide good services, some element of competition might be useful – perhaps by introducing multiple competing HMOs. Other possibilities that can be introduced in conjunction with the above methods are a *global budget* constraint that limits how much will be spent on health care in any given period. Both the private and social insurance systems face this

A second major challenge that health insurance pools face is that of *adverse selection* by enrollees (and its counterpart, *risk selection* by insurers and providers). Adverse selection refers to the phenomenon that unhealthy individuals have a greater incentive to pay contributions to and become members of an insurance pool than healthy individuals. As a consequence, unless there are appropriate safeguards, insurance pools are likely to run deficits – because payouts will tend to exceed premiums. The resulting need to raise premiums may create a 'death spiral' whereby healthy individuals (low risk) leave the pool, leaving a high risk-high premium package for a limited set of (high risk) individuals. Companies often address this by extensive efforts to separate the good risks from the bad – *risk selection* - through extensive pre-medical checkups, design of multiple insurance packages and so forth. These are sometimes a major factor in rising administrative costs of providing insurance (and rising premiums) with obvious consequences for coverage. Risk selection is common when governments pay insurers on a per capita basis (based on the population covered).

There are other challenges that insurance plans face. Insurance companies tend to be hesitant in expanding their business into rural and remote areas – partly because of the *high administrative costs*, a factor quite separate from risk selection. On the consumer side, individuals may not choose to voluntarily participate in these schemes if health facilities of adequate quality are not present in the vicinity

The size of the Guatemalan private health insurance sector appears to be quite small. In 2006, health expenditures financed by Guatemala's private prepaid plans amounted to only 3.1%, compared to the regional average of 21.7% (WHO 2008). However, only 2% of the population in Guatemala reports having private insurance in 2006 (LSMS 2006). In 2006, Guatemala's health expenditure under social insurance was 45.4 percent of the total government expenditure on health, compared to the regional average of 27.1% in the Americas (WHO 2008). About 13% of the population in 2006 reported having IGSS insurance (LSMS 2006).

Private insurance versus social insurance

Compared to private insurance, some of the advantages of social health insurance include increased mobilization of funds for health and the consequent size of the risk pool and thus a greater degree of risk protection from catastrophic health expenses that often result in household impoverishment. Adverse selection and risk selection are partly addressed through mandatory participation in the social insurance pool so that administrative costs are likely lower than a private insurer. To the extent that a wide variety of firms – large and small – are members of this pool, and the poor are included in the pool via subsidized premium contributions, social insurance might help promote cross-subsidization from high-income groups to low-income groups and a more effective targeting of public funds to the poor (Hsiao 2007). A large size of the risk pool might also enable social insurance pools to more effectively bargain for better quality care from health care providers and at lower cost. In low income countries where insufficient tax revenues exist to fund health care for the entire population, social health insurance programs can help to target public funds to subsidize premiums for the poor rather than financing and providing universal coverage;

Hsiao (2007) identifies several key conditions for a social health insurance program to be successful. First there must be an *incentive for people to pay premiums*. People will not want to pay premiums unless user fees are high, if patients have to purchase drugs and supplies, or if public services are of such poor quality that many patients end up paying out-of-pocket for private providers. Second, there must *be certification of qualified providers*. The quality of care in both the public and private sectors can be highly variable. There is often a lack of government regulation of private care, and public facilities are commonly mismanaged in a bureaucratic fashion by government bodies. The social health insurance scheme must assure its members that they will in fact receive the promised health insurance benefits. Finally, *rapid economic growth* is important if social health insurance is intended to achieve universal coverage. Unless wage rates are also rapidly rising, premiums will have to be increased frequently due to inflation and increasing costs of health care.

Carrin (2002) suggests an additional list of factors for social health insurance to work. First, the general *level of income* of country can play a large role in the capacity of the population to pay insurance premiums. Second, the *necessary managerial or administrative capacity* to design and implement a social health insurance scheme must be present. Third, high levels of social *solidarity* must be present to enable contributions by groups with different levels of ability to pay into a common pool. Finally, the population receiving the benefits must have a *voice* in social policymaking, along with open political debate and trust in the government (Carrin 2002).

Social Insurance and Universal Health Insurance

Worldwide, 27 countries have established some degree of universal coverage through social health insurance. Their experience suggests that this process can be quite time consuming: from 127 years in Germany and 48 years in Costa Rica to 26 years in the Republic of Korea (Carrin 2002). A country's level of economic development and its economic structure influence how many people can be covered and how rapidly SHI can expand toward universal coverage (Carrin 2002). The recent introduction of a national health insurance scheme in Ghana has shown that steps towards attaining social health insurance can in fact be successfully implemented in some low-income countries over a short period of time. The program was introduced in late 2004, and by December 2006, 37.6% of the population had enrolled into Ghana's National Health Insurance Scheme (NHIS). A remarkable feat of Ghana's transition process was their use of previously existing district-level community-based health insurance schemes for rapid expansion of coverage (Rajkatia 2007).

General Revenues versus Social Health Insurance

A traditional argument is that health financing via general taxation in developing countries rarely generates sufficient funds to support a national health system because of their narrow tax base and low organizational capacity to enforce tax compliance. According to proponents of this view, social health insurance is a more attractive financing option than general revenues, as it does not put the whole financing burden on government and instead spreads the total cost of insured health care among various purchasers. Another major difference between the two financing models is that in the general taxation method, people contribute only in an *indirect* way via general taxes. In social health insurance, members are directly aware, through their social insurance contributions, that they are insured members of the scheme (Carrin 2002). This may lead to their demanding better quality of care owing to increased ownership in the program. Moreover, to the extent that general tax revenues are used to finance public health facilities, it leads to poor quality linked to the lack of accountability and guaranteed funding in public facilities.

In a recent paper Wagstaff (2007) argues that several social insurance purchasers of services have not done well in terms of being able to obtain better quality services for their members. He furnishes empirical evidence to suggest that the cost of collection of payroll taxes can turn out to quite substantial and that tax evasion is common. Moreover, social health insurance has done poorly in terms of expansion of the health insurance programs to the informal work force and agricultural sector workers. Social insurance programs can also lead to undesirable outcomes in labor forces as workers move from the formal to the informal sector to avoid the payroll tax burden.

In any event, in poor countries, with large proportions of people living in rural areas and working in the informal sector, it is not always straightforward to implement social insurance schemes without substantial tax financed support from the government. In this setting, social insurance schemes are likely to end up closer to a hybrid of substantial public financing plus traditional social insurance, albeit with a separation between financing and provision, so as to allow for competing providers. It is not as if social insurance is the answer to Guatemala's health financing challenges. More likely, a hybrid, generated from its own unique history and lessons learnt from other countries (some examples follow) will help in developing the appropriate model. As the case studies from Colombia, Mexico and India highlight, expanding social insurance so as to cover the vast mass of individuals who have traditionally been outside its ambit is no easy task, especially if the benefits from such a compact are not obvious, if incomes are limited and irregular and so forth. From our point of view, there are valuable lessons to be learnt from each of the different ways of financing health services. Tax financing becomes important, simply because there is likely to be no way around heavy government subsidies, at least in poor and low middle-income countries such as Guatemala. Lessons from the working of private and other (voluntary) insurance plans are important in terms of highlighting the role of risk pooling and adverse selection. The case studies also highlight the potential importance of negotiation and contracting with public and private providers to curtail costs.

A.4. Community Financing

In many low- and middle-income countries, a major concern is the provision of adequate and good quality health care for the rural population, much of which works in the informal sector. In these countries, inadequate access to preventive and public health services due to long distances to clinics, unaffordable prices, and fear of impoverishment when serious illness strikes are common problems. Moreover, governments of low-income countries have insufficient tax revenues to adequately fund care for the poor; and social insurance tends to be limited in these countries to employees in the small sized formal sector. Thus informal sector and low-income households tend to spend a significant amount for health care out of pocket.

In these circumstances, one partial fix is *community financing*, which can be defined as any scheme that asks community members to prepay for health services. In essence, to overcome the above-mentioned obstacles, communities can take collective action to finance and organize health care in a cooperative manner and either contract or directly hire health care providers with these funds. Some of the gains achieved through community financing include better access to trusted practitioners and drugs, sometimes including a reduction in distance to facilities, lower drug costs to households through the bulk purchase of drugs and a better technical quality of services. There are various types of community financing, including *private hospital-sponsored insurance* (covering their own services), *NGO-sponsored insurance* to cover services delivered by their own clinics (Bangladesh, India), *community funds*, where members prepay for government provided services (Burkina Faso), *Mutuales* (Mali), and *health card* schemes (Thailand).

Hsiao (2001) notes some important additional design principles that are needed to successfully implement a community financing scheme. In particular, the small size (owing to both few people and smaller premiums) of the risk pool means that some subsidization of financing from central and local governments may be necessary to ensure that the financial gains are readily visible to the enrolling population. It may also be desirable to put together several community funds in a larger (secondary pool), or have some form of reinsurance to address the financial risks that individual community finance pools might face. It is also important that the schemes be organized and managed by trusted community members, to assure members they have control over their money to be spent for their benefit (and not for the local power elite). Other requirements include developing an appropriate set of benefits to be covered that reflect local community needs and taking advantage of efficiency gains where possible, such as through the bulk purchasing and distribution of essential drugs. We are unaware of examples of community financing in Guatemala.

A.5. User Fees and Payments for Private Health Services

"User Fees" refer payments for services received at public health care facilities. User fees as a mechanism for financing health care saw a resurgence in the 1980s, mainly due to worsened economic circumstances of low- and middle-income countries that led to constraints on public spending for health. This was also a time where medical costs were rising and there was an increased awareness that government financing and delivery methods were neither efficient nor equitable.

The introduction of user fees promised both an increase in revenue generation, as well as improved quality and efficiency of care. The idea was the imposition of user fees would lead to declines in unnecessary visits or lengthier than normal hospital stays in public facilities that traditionally provided services free to the patient. Moreover, if some (or all) of these funds could be retained by the facility where the user charges were imposed, it could lead to improvements in quality both because of the increased financial autonomy that it provided health facility administrators and because of the incentives they now had to improve quality to attract more patients. Provided that the most vulnerable populations could be exempted from paying user fees, one could argue that equity in financial burdens could be fostered as well since the poor could continue to enjoy the same access to services as before, but with improved quality. According to a World Bank report, by 1995, 28 of out 37 countries studied in Africa had introduced user fees.

The impact of user fee financing has been debated since its inception. In regards to revenue generation, most available evidence shows that cost recovery in public facilities remained lower than expected, while central and local governments often mismanaged revenues due to a lack of community participation in the management of fund collection and use. User fees' impact on efficiency has also been debated. Although many proponents claim user fees lead to improved quality of care and thus increased use, there is strong evidence that elevated utilization rates were often influenced by supply-induced demand from providers. The China case study in the text offers a fascinating example of the impact of user fees on inefficiency and health expenditure inflation. Finally, although the introduction of user fees led to a reduction in the opportunity for providers to charge informal fees, its impact on equity is less clear cut as the India case illustrates. Although equity concerns were supposed to be addressed by exemption of the poor from user charges, this was never realized as a mater of practice due to a lack of political commitment and the limited administrative capacity of implementing governments.

Out of pocket payments at private facilities

Much more common than user fees are direct payments by households to health care providers in the private sector for consultation, diagnostics and drugs. For the insured this may sometimes take the form of co-payments. The main advantage of such out of pocket payments is that, all else the same, they would promote efficient use of health care. In practice, the informational advantages that providers of health services enjoy can lead them to promote unnecessary care, diagnostics and drug use as a way to raise revenues. When such charges are not reimbursed or otherwise covered by insurers, they will lead to inequity in access to care. The share of such payments as a proportion of total health spending is quite high in Guatemala – roughly in the region of 60%. Large out of pocket payments have adverse implications for financial risk protection and likely to result in significant impoverishment for households that incur them. We also find that the poor are paying 5 times more than the rich in terms of health payments as a percent of income levels.