

Resource Mobilization for the Health Sector in Bolivia

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List of Acronyms

ABOSMEP	Bolivian Association of Pre-paid Medicine
APS	Primary Health Care.
BID	Inter-American Development Bank.
CELADE	Latin American Center of Demography.
CFS	Railroad Workers Health Fund.
CISS	Inter-American Conference of Social Security
CNPV	National Census of Population and Housing.
CNS	National Health Fund.
CPS	Oil Workers Health Fund.
CSBE	State Banking Workers Health Fund.
CSBP	Private Banking Workers Health Fund.
CSCAM	National Road Service Health Fund.
CSCORDERS	Regional Development Corporations Health Fund.
DGA	General Customs Directorate.
DGII	General Internal Revenue Directorate.
DIDES	Departmental Health Directorate.
DILOS	Local Health Boards.
DNVCER	National Directorate of Alert Watch and Control of Diseases and Risks.
DS	Supreme Decree.
EDAS	Acute Diarrheal Diseases.
EIH	Living Standards Measurement Survey (LSMS).
ENDSA	Demographic and Health National Survey.
EPF	Household Budget Survey.
FIS	Social Investment Fund.
GAC	Consolidated Customs Tariff.
IBIVA	Real State and Automobiles Tax.
IBSS	Bolivian Institute of Social Research.
ICE	Specific Consumption Tax.
IEHD	Hydrocarbons and Derivatives Tax.
ILDIS	Latin American Institute of Social Research.

IMT	Municipal Transactions Tax.
INASES	National Institute of Health Funds.
INE	National Statistics Institutes.
IRAS	Acute Respiratory Diseases.
IT	Transactions Tax.
IUE	Corporate Profits Tax.
IVA	Value-Added Tax (VAT).
IVE	Foreign Travel Tax.
LDA	Administrative Decentralization Law.
LPP	Popular Participation Law.
MDH	Ministry of Human Development.
MPSSP	Ministry of Social Welfare and Public Health.
NBI	Unsatisfied Basic Needs.
OMS	World Health Organization (WHO).
ONG'S	Non-government Organizations (NGO).
OPS	Pan-American Health Organization (PAHO).
PAE	Strategic Actions Program.
PIAAS	Integrated Plan of Health Sector Activities.
PIB	Gross Domestic Product (GDP).
PNC	National Chagas Program.
PNL	National Leshmaniasis Program.
PNM	National Malaria Program.
PNT	National Tuberculosis Program.
PNUD	United Nations Development Program (UNDP).
PPA	Purchasing Power Parity (PPP).
PROISS	Integrated Health Services Project.
PSF	Integrated Program of Basic Health Services and Sector Institutional Strengthening.
RC-IVA	Complementary VAT Tax.
SBSP	Bolivian Society of Public Health.
SDDH	Departmental Secretariat of Human Development.
SISFIN	International Financing Information System.
SISIN	National System of Public Investment.
SNIS	National System of Health Sector Information.
SNS	National Health Secretariat.
SPS	Public Health System.
SS	Social Security (= Health Funds plus Pension Funds).

SIPFE	Public Investment and International Financing Under-Secretariat.
TGB	Free Transaction of Goods.
TGN	National Treasury.
UDAPE	Economic Policy Analysis Unit.
UDAPSO	Social Policy Analysis Unit.
UNICEF	United Nations Children Fund.
UPP	Population Policy Unit.

Executive Summary

As part of its overall strategy of conducting policy-relevant research into matters that are likely to be of importance to government policy-makers and USAID missions in Africa, the Africa Bureau in USAID under its Health and Human Resources Analysis for Africa project commissioned the Data for Decision Making project (DDM) at Harvard University to conduct five case studies on resource mobilization for the health sector. Three of these case studies were carried out in sub-Saharan Africa, and two outside of Africa. One of the countries selected for this outside of Africa is Bolivia, and the present report describes Bolivia's experience with resource mobilization.

Located near the center of South America, Bolivia (area 1.1 million square km) has a population of approximately 7.0 million, of which 58% live in urban areas (table 1). Over 75% of Bolivians have indigenous roots, and are primarily Quechua and Aymara, though other ethnic groups can also be found in the Bolivian Amazon. Close to one third of the population is functionally illiterate (20% never attended school), and is concentrated in rural areas and among women. Approximately half of urban households and over 90% of rural ones have unsatisfied basic needs such as access to drinking water, sewage, and basic education and health services. The infant mortality rate is high by Latin American standards (75 per 1000 live births). Diarrhea and acute respiratory diseases continue to be the main sources of infant mortality, accounting for 32% and 19% of all deaths, respectively. The maternal mortality rate is also high by South American standards, at 390 per 100,000 live births.

Bolivia experienced an economic crisis in the beginning of the 1980's, with inflation averaging 46% monthly. In August 1985, Bolivia began a drastic structural adjustment program that stabilized the economy, reduced the role of the State in directly productive activities, and controlled its public finances. Inflation has remained steady between 8.5% and 14.5% over the last six years, and in the last three years the public sector deficit has not exceeded 3.2%. In the second phase of reforms in 1993 the "Popular Participation and Administrative Decentralization Reform" was introduced, which transferred resources and primary responsibility, with respect to planning and implementation of public investment projects, from the central government to the prefectures and municipalities. This includes the public health care system previously administered centrally by the National Health Secretariat (SNS). As part of the structural adjustment program, Bolivia will begin a "Health Sector Reform" within the next few years, for which preliminary design studies and planning have already started.

The main sources of health care financing in Bolivia are (i) central government tax revenues, channeled through the National Treasury, and municipal revenues, including funds received from the central government, referred to as "co-participation funds,"; (ii) public health insurance funds; (iii) private health insurance and pre-paid medicine schemes; (v) user charges; and (vi) international cooperation funds.

Total tax collections of the central government have shown a steady increase over time, from Bs. 1166 million in 1989 to Bs. 2,435 million (approximately US\$530 million) in 1994 (all figures in 1990 Bs.). Internal revenue has contributed to most of this growth, more than doubling over the five year period, while tariff revenue has registered only a modest 10% growth.

Public spending on health has increased from Bs. 226.10 million in 1989 to Bs. 346.31 in 1994 (all figures in 1990 Bs.), which represents a fall from 19.4% of total tax collection in 1989 to 14% in 1994. In 1995, the SNS spent about Bs. 477 million (US\$99 million) at an average of Bs. 68 (approx. US\$14) per person on recurrent costs related to health care. A bulk of this expenditure (around 85%) is on staff salaries (both medical and administrative), with the remaining going to other recurrent costs.

Central tax revenues support a vast network of public sector health institutions, which are administratively under the control of the National Health Secretariat. However, since the implementation of the Popular Participation Law, all SNS institutions have been transferred to Municipal Governments. According to the National System of Health Information, the number of registered institutions in the public health sector grew from 1,304 in 1990 to 1,788 in 1994, with a total of 7,203 beds, so that in 1994 there was one public sector health care provider for every 2,758 persons, or one bed for every 685 persons. SNS uses its tax funds to employ 2,011 doctors, i.e., 2.9 doctors for every 10,000 people.

In terms of utilization of SNS facilities, the 1992 national census indicates that 30% of the ill population seeks treatment from SNS facilities. SNS facilities have been particularly successful in immunization programs and mother and infant care. However, there remain a number of concerns regarding the equitable use of SNS facilities, since only 10% of those who sought treatment from SNS facilities belonged to the lowest per-capita spending quintile.

Another major source of financing for health care services in Bolivia is the system of public health funds (insurance) known as "Cajas de Salud". There are 7 health funds and 10 integrated insurance plans, and jointly they have 236 facilities with 3,123 beds. All public agencies are required by law to contribute to some public health fund, while private sector organizations have the option of affiliating themselves to a health fund, or contributing to pre-paid medicine schemes on behalf of their employees. Contribution rates to health funds are fixed at 10% of gross salaries. The system of public health funds receives no transfers from the National

or Municipal Governments. In 1995, the public health funds system had a budget of approximately US\$108 million, which represented an expenditure of US\$67.8 for each potential beneficiary.

There is very limited use of private health insurance in Bolivia. Only a handful of companies offer health insurance policies, and these require very high annual premia. Pre-paid medicine programs are gradually becoming very popular. These programs charge an annual entry fee which gives the client the right to a given package of limited services. The average annual premium for these centers is US\$215 per person. The most common packages are gynecological, pregnancy, dentistry, and geriatric services. These are low-risk health services, characterized by fairly predictable demand, for both the user and the provider.

Private physician offices and pre-paid medicine provide medical care primarily to the upper middle class, and are found almost exclusively in urban areas. According to repeated rounds of LSMS surveys, households with the highest disposable incomes use private health care providers in urban areas. Around 70% of all private sector users belong to the wealthiest 40% of the population, while only 15% belong to the poorest 40%. A disproportionately large 43% of all users belong to the fifth quintile, while less than 5% belong to the poorest 20% of the population.

There is little information available regarding out-of-pocket household expenditures on health care. According to the Survey of Household Budgets (EPF) carried out in La Paz, Cochabamba, Santa Cruz and El Alto in 1990, households spend an average of Bs.45 per month (approx. US\$14) on health care, which is less than 4% of total household expenditures (Urquiola 1994). This proportion varies from 2.4% in the poorest quintile (quintile 1) to 4.9% in the richest quintile (quintile 5). Differences across quintiles is more pronounced in absolute terms; average monthly per capita spending in the first quintile is US\$ 3.11, while in the fifth quintile it is US\$38.3. On average, 40% of these expenditures are for drugs and the remaining 60% is for services (figure 6). These shares are similar to those in other Latin American countries (OPS/OMS, 1994). On the assumption that households in smaller cities and rural areas have lower expenditure patterns than the average household in the four main cities, total household expenditure on health in Bolivia can be estimated to be of the order of magnitude of between Bs. 375 million (US\$117 million).

International cooperation funds also play an important role in the financing of the health sector, especially in terms of fixed investments, and several large projects have been funded by support from these funds. These projects have had a significant impact on construction of new health centers, and have generally improved the quality of health care in these centers. International cooperation funds have contributed US\$27.7 million per year at an average over the last six years.

Bolivia has an interesting private sector experience in financing primary health care. PROSALUD is a private, non-profit association that was born as a result of an USAID project in August 1985. PROSALUD offers: (i) health care services to the community; (ii) social marketing of health products; (iii) training services; (iv) applied research; and (v) technical assistance. At present, it has 28 health centers that serve a population of 300,000 people. Of the total operating costs, approximately 75% are covered by PROSALUD funds generated by user fees. The remainder 25% of operating costs are paid for from the income generated from marketing of health care products (such as contraceptives, eye-wear, etc.). Training activities and applied research generate minor additional resources. PROSALUD appears to be a sustainable model for the provision of comprehensive and ongoing primary health services through decentralized, multi-purpose and permanent facilities.

Bolivia has recently started a National Mother-Childhood Insurance program for women of child-bearing age and children under five. This insurance covers maternity care and complications resulting from pregnancy and childbirth. It also covers children under five in the case of diuretic illnesses and acute respiratory infections. The program is partly financed by funds from the Treasury, and partly by the co-participation funds that municipalities receive from the Treasury. Loans and donations from the international donor community cover infrastructure, equipment, training, follow-up and evaluation costs. The estimated total cost of the insurance program is US\$14.1 million annually.

There are several important lessons from this study. First, given the new financing structure of public services, combined with the strict fiscal discipline in place since 1985, an increase in Central Government expenditures in the health sector is very unlikely. The Government is taking important steps to increase tax revenues, through better collection mechanisms and enforcement, but this increase is more likely to reduce the fiscal deficit rather than increase expenditures. Second, thanks to Popular Participation, Municipal Governments now have primary responsibility for the delivery of health services which, combined with greater social pressure at the local level, will most likely result in an increase in tax revenues at the municipal level. However, given the historical neglect in all public services in most municipalities, only part of this increase in revenue will go to health care. Third, there is a significant proportion of users of public health care facilities in urban areas (SNS and health funds) who belong to the highest income quintiles and could potentially pay higher user fees for the services they receive. At the same time, many high income patients who are eligible to use facilities belonging to public health funds actually choose private providers instead.

Our findings suggest that equity and efficiency issues in Bolivia's public health care system can be better addressed by more careful rationing of service delivery according to income. There is also some potential for increasing the contributing base to public health funds (medium and large size private firms, as well as micro-

enterprises and the informal sector) which, combined with more careful rationing of users, would increase significantly the access to health care by the poor, especially in urban areas. At the same time, the government should evaluate different ways of making facilities belonging to health care funds more accessible to the rural poor. Also, it is recommended that the current financing structure (which separates staff costs from investment and other recurrent costs) be evaluated carefully in terms of the efficiency and sustainability of health care delivery. The strict fiscal constraints of the Central Government will limit the amount of staff costs that can be borne by the state, and the Municipalities will have to find alternative sources of finance for covering staff costs, such as increased user fees at their local health care facilities.

The Bolivian experience provides many important lessons for other countries considering decentralization in their health sectors. Decentralization certainly provides a more effective incentive structure for public health care facilities, and encourages more careful attention to finances, quality control, and defining priorities, though there is always the danger that national health priorities could be neglected. Decentralization also encourages local decision-makers to seek alternative sources of funds for health care. This may include higher user fees, specific taxes, or other mandatory locally-administered contributions. The Bolivian experience also highlights the importance of carefully defining the financing responsibilities of central and local governments, since a purely technical separation of budget items by financing source may result in a sub-optimal mix of the various factors required for health care delivery.

1. Introduction

As part of its overall strategy of conducting policy-relevant research into matters that are likely to be of importance to government policy-makers and USAID missions in Africa, the Africa Bureau in USAID under its Health and Human Resources Analysis for Africa project commissioned the Data for Decision Making project (DDM) at Harvard University to conduct five case studies on resource mobilization for the health sector. Resource mobilization includes a range of strategies for raising funds, such as enhancing government revenues, user charges, insurance, and community financing. Briefly, this project has three main objectives: (a) to review existing experiences with resource mobilization strategies in developing countries and the documented experience to date; (b) to analyze the impact of these strategies in a number of different countries in terms of their effect on equity, quality, revenue generation, sustainability and feasibility; and (c) to generate a set of guidelines which will assist African decision-makers and USAID missions in the formulation of policies to mobilize resources. Three of these case studies were carried out in sub-Saharan Africa, and two outside of Africa. One of the countries selected for this outside of Africa is Bolivia, and the present report describes Bolivia's experience with resource mobilization.

The primary goal of the present study is (i) to present an overview of health care financing, production and delivery in Bolivia; (ii) analyze flow of funds, with particular emphasis on the contribution of taxes, insurance, user fees, donor assistance etc. to financing healthcare, over the last 5-10 years; (iii) analyze contribution of different financing methods, like general taxes, special taxes, social insurance, private insurance, user fees, donor assistance, and (iv) discuss specific case studies, on communal funds and PROSALUD.

Bolivia started sweeping stabilization and structural adjustments in 1985, following it up with a second phase in 1993. The adjustment program included an Education Reform, a Capitalization Program, and a revolutionary Popular Participation and Administrative Decentralization Reform. The health sector is due to undergo reforms of its own in the next couple of years, though some general transformations in administrative and financing mechanisms are evident even now.

This study describes the various mechanisms of health care financing, and is organized as follows. A general overview of Bolivia, its geography, population, and economy is presented in chapter 2. The health status of Bolivia is discussed in chapter 3, and the health sector is described in chapter 4. Health care spending is

analyzed in chapter 5, and a national health accounts matrix is presented in chapter 6. Different methods of revenue mobilization for the health sector are discussed in chapters 7 to 11. Two interesting initiatives, one private and one public, on financing the delivery of primary health care are described and analyzed in chapter 12, and the study ends with concluding remarks in chapter 13.

2. Overview

Located near the center of South America, Bolivia (area 1.1 million square km) has a population of approximately 7.0 million, of which 58% live in urban areas (table 1). Over 75% of Bolivians have indigenous roots, and are primarily Quechua and Aymara, though other ethnic groups can also be found in the Bolivian Amazon. Yet, much of the "criollo" population (that is, of mixed indigenous and European descent) no longer speaks any indigenous language. According to the 1992 census, only 12.5% of the population was monolingual in an indigenous language, 42.4% were bilingual (Quechua-Spanish or Aymara-Spanish), 41.9% only spoke Spanish, while the remaining 3.2% spoke more than two languages. Close to one third of the

Table 1

Bolivia: Basic Indicators

Territory	1.1 million km. ²
Population (1996, est.)	7.0 million
Population Density	6.9 Inhabitants/km. ²
Percentage Urban (1992)	42 %
GDP per capita (1994)	US\$ 770
GDP per capita (1993) (Using PPP Method)	US\$ 2,510
Exports (1995)	US\$ 1,187 million
External Debt / GDP (1995)	76 %
External Debt/ Exports (1995)	381.4 %
Rate of Functional Illiteracy (1991-94)	
Rural Men	58 %
Rural Women	70 %
Urban Men	20 %
Urban Women	27 %
Percentage of Households with Unsatisfied Basic Needs (1992)	69.8 %
Urban	51.1 %
Rural	94.0 %

Source: UDAPSO, UDAPE, INE, World Bank, UNDP.

population is functionally illiterate (20% never attended school), and is concentrated in rural areas and among women.

Geographically, Bolivia can be divided into three different regions: the Altiplano, the inter-Andean valleys (some arid, some humid), and the eastern lowlands. These climactic regions cover 20%, 20% and 60% of Bolivia's territory, respectively. The large majority of the population is concentrated in the highland regions of the country: 42% in the Altiplano and 26% in the semi-arid valleys. The population density in the lowlands is less than 2.9 persons per sq. km.

Politically and administratively, Bolivia is divided into nine departments and 311 municipalities. The departments are administrated by department prefectures who are part of the executive branch, while the municipalities, which have both urban and rural jurisdictions, are autonomous governments elected directly by the people.

With a per capita income of US\$770 in 1994, Bolivia ranks alongside such countries as Lesotho and Indonesia (World Bank 1996). In terms of purchasing power parity, however, Bolivia ranks alongside Guatemala and Honduras in Latin America or Swaziland and Namibia in Africa, with a per capita income equivalent of US\$2,510 (UNDP 1996). There are no reliable statistics on income distribution in Bolivia; there is a general impression in Bolivia that there is great inequality with regard to wealth, income and opportunities for social mobility between high income groups (basically urban) and the poor (overwhelmingly rural and peri-urban). According to the Poverty Map, which uses data from the 1992 Census, the basic human needs of 51% of urban households and 94% of rural ones are not met, and almost half of the families living in urban areas and almost all of those living in rural areas do not have access to drinking water, sewage, and basic education and health services.

Historically, the mining sector has been the major source of Bolivia's economic growth, with most of its income being derived from exports of high value-per-weight natural resources. Silver was the predominant export till the 1970's, and has since been replaced by natural gas and some agricultural products. The total value of Bolivia's exports in 1995 was US\$1,187 million, of which 43% came from minerals, 13% from hydrocarbons, and 44% from non-traditional goods, such as soybeans, coffee, beef, forestry products, and others.

Bolivia experienced the worst socio-economic crisis in its history in the beginning of the 1980's. Between August 1984 and August 1985, inflation reached a monthly average of 46% and an annual compounded rate of 24,000%, the world highest hyperinflation since World War II and the seventh ever in history. In August 1985, Bolivia began a drastic structural adjustment program that stabilized the economy, reduced the role of the State in directly productive activities, and controlled its public finances. Inflation has remained steady between 8.5% and 14.5% over the last six years, and in the last three years the public sector deficit has not exceeded 3.2%.

A second phase of reforms was initiated in 1993, and included such reform interventions as the "Education Reform", "Capitalization Reform", and "Popular Participation and Administrative Decentralization Reform". The Education Reform seeks to reassign public expenditure to basic education, improve primary and secondary education, increase the access to education to rural women, improve teachers' performance, and begin the process of basic education in the mother tongue of students. The Capitalization Program transfers the management and 50% of the equity of public enterprises to a "strategic" partner (through an international public competitive bidding process), in exchange for an equivalent investment in the capitalized enterprise, while the remaining 50% of the equity is distributed among all Bolivian adults. The Popular Participation and Administrative Decentralization laws transfer resources and primary responsibility, with respect to planning and implementation of public investment projects, from the central government to the 9 Prefectures and 311 Municipalities. As part of the structural adjustment program, Bolivia will begin a "Health Sector Reform" in the coming years. Preliminary design studies and planning for this change have already started.

3. The Health Status of Bolivia's Population

Bolivia's health profile is characterized by the coexistence of traditional and modern pathologies. Among the former is a high incidence of acute infections (respiratory and intestinal), parasites and nutritional deficiencies. Among the modern pathologies is a gradual increase in the number of accidents and degenerative diseases.

Bolivia faces serious problems linked to the high incidence of endemic diseases. Vector-transmitted diseases, among them malaria, chagas and leishmaniasis, are found in some 75% of Bolivia's territory. In fact, 40% of the Bolivian population lives in areas well-suited for the transmission of malaria. In 1995, the incidence of parasitic infection in the malarial region (3.1 million inhabitants) was 1.5% (DNVCER-PNM 1995), which represents a total of 46,911 cases nationally (Appendix 1).

It is estimated that 55% of the Bolivian population is at risk of chagas infection. The mortality rate for those infected with chagas is 4% (after 15 years of being infected), and accounts for around 13% of the deaths among 15 to 74 year-old men and of 29% of the deaths among 25 to 44 year-old men (National Chagas Program, PNC, 1991). Many of the non-fatal chagas cases are usually accompanied by chronically incapacitating cardiac and digestive complications.

Leishmaniasis is an infectious disease caused by a parasite of the same name, with an incidence rate in Bolivia of 26.3 cases for each 100,000 inhabitants. Some 1,500 new cases are discovered each year (National Leishmaniasis Program, PNL, 1996).

Tuberculosis continues to be a problem in Bolivia, with 10,000 infections each year (Appendix 1). The incidence rate for tuberculosis in Bolivia for 1995 was 129 cases for each 100,000 inhabitants (National Tuberculosis Program, PNT), accounting for some 5,038 deaths (Cardenas et al. 1995).

Close to one third of Bolivian children under three years of age suffer from chronic malnutrition. In 1994, the infant mortality rate was 75 for each 1,000 live births, which represents a significant improvement since 1976, when the infant mortality rate was 169. The mortality rate for children under five also improved to 116 per 1,000 live births in 1989-94 from 150 in 1984-89 to 1989-94 (table 2). These

statistics, however, do not show the great disparities between different regions of the country. For example, the mortality rate among rural children was 162/1,000 in the 1984-89 period, while the urban rate was 104. In the inter-Andean valleys, the rate was 158, in comparison to 142 in the Altiplano and 84 in the lowlands.

Additionally, there is a strong correlation between the mother's educational level and the probability of childhood mortality. During the 1984-89 period, childhood mortality was 187/1,000 when the mother lacked education, 158/1,000 when she had basic education and 97/1,000 when she had intermediate level education (National Demographic and Health Survey, ENDSA, 1994). In all cases, however, the national average is much higher than the childhood mortality rates of other countries in the Andean region, such as 76/1,000 in Peru, 57/1,000 in Ecuador, 37/1,000 in Colombia and 28/1,000 in Venezuela (UNICEF/CELADE 1993).

Table 2**Bolivia: Selected Health Indicators, 1989-1994**

<i>Indicator</i>	<i>1989</i>	<i>1994</i>
Infant Mortality Rate (per 1000 live births)*	99/a	75/b
Urban	78/a	60/b
Rural	121/a	92/b
Prevalence of Acute Respiratory Infections	25	19
Percentage of Children Under 5 with Moderate Malnutrition	13.3	15.7
Percentage of Children with Complete Immunization	13.3	36.6
Global Fertility Rate	5.6/a	4.8/b
Rate of Maternal Mortality (x 100 thousand live births)	416/a	390/b
Percentage of Prenatal Care by Medical Personnel	44	49.5
Percentage of Women Using Modern Contraception Methods	12.2	17.8
Urban	17.9	25.3
Rural	5.2	6.9

Source: ENDSA 1994

(*) a/ 1984-89

The main causes of childhood mortality in Bolivia are diarrhea and acute respiratory infections. It is estimated that 35.7% of deaths of children under five are a result of acute diarrheal illnesses and 20.4% of acute respiratory infections (Aponte 1996).

The maternal mortality rate in Bolivia (390 for 100,000 live births in the period 1984-89) is very high in comparison with other Latin American countries (for 1980-

91, maternal mortality in Columbia was 200 for 100,000 live births, 170 in Ecuador and 59 in Venezuela). As with other indicators, the maternal mortality rate also hides regional differences. In rural areas, maternal mortality reaches 524 for 100,000 live births, as opposed to 274 for urban areas. The regional differences are even more pronounced between the lowlands (110) and the Altiplano (602) (ENDSA 1994). Every year, about 1,000 women die in Bolivia as a result of pregnancy, delivery and post-partum related complications, leaving approximately 3,000 orphaned children (Strategic Actions Program, PAE, 1996).

Modern health problems are associated with accidents and other traumas which constitute the main causes of hospitalization, resulting in strong budgetary pressures on the health system and requiring investments in complex and expensive technical equipment.

4. The Health Sector

Background

The first public initiatives in the health sector in Bolivia occurred in 1909, when the government created the National Directorates and Departmental Authorities of Health. With the Revolution of 1952, which nationalized mines and brought about agrarian reform and universal suffrage, a National Health Service (SNS) and a sanitary code were created. In 1960, the SNS was made operational with the centralization of planning norms and the decentralization of executive actions. The basic functions of health services and community participation were integrated into the National Directorate for Health.

In the 1960s the idea of integrating the social security system into the SNS was promoted without much success. There were several other proposals, such as the creation of a National Council for Health, enactment of a sanitary code, and the creation of decentralized health zones and districts, some of which were accepted. Following these proposals, a Medical Supply Center, the Statute for Medical Functionaries, a Committee for Hospital Planning, and a National Inoculation Bank were created. Nevertheless, the development of a regionalized SNS is relatively recent in Bolivia, and the basic health needs of the majority of Bolivians continues to be unmet (Dabdoub 1994).

The Strategy for Economic and Social Development of 1989 proposed the decentralization of health services with the objective of correcting the administrative deficiencies of the system. Nevertheless, the lack of coordination between central planning and regional operations, combined with the Ministry's absolute power to hire, fire and fix staff salaries throughout the entire system, were the chief obstacles to consolidating a truly decentralized model (Dabdoub 1994).

The new government that was elected in 1993 created the Ministry for Human Development (MDH). The National Health Secretariat (SNS), previously known as the Ministry of Social Welfare and Public Health (MPSSP), is a part of the MDH. The MDH, as the regulating entity, dictated new norms to adjust the health system to the mandates of the Popular Participation and Administrative Decentralization reforms. The Popular Participation Law (LPP) of April 20th, 1994, established that 20% of the national tax revenues be distributed among the country's 311 municipalities. Likewise, the power to levy taxes on urban and rural properties,

automobiles, boats, and airplanes was also transferred to the municipalities, and rural communities and urban neighborhood councils were given a supervisory role through "Vigilance Committees" of the Municipal Government.

The Administrative Decentralization Law (LDA), promulgated on July 28th, 1995, transfers and delegates the jurisdiction of "technical/administrative and non-exclusive" functions from the national executive branch to the department executive branch. This decentralization seeks to improve the quality and efficiency of publicly-provided services at the local level.

Through the redistribution of public funds, the transfer of responsibilities and decision-making authority, and the increased social control over public finances at the local level, these two laws (LPP and LDA) are transforming in a radical way the political and administrative structure of the country. Not surprisingly, these two laws have had important repercussions in the health sector.

The National Health Secretariat (SNS) was divided into 12 regional Health Secretariats before the implementation of the Popular Participation and Administrative Decentralization Laws. With the LPP and LDA, the Ministry for Human Development (which oversees the SNS) was decentralized into nine Departmental Secretariats of Human Development (SDDH), each of which has a Departmental Health Directorate (DDS) (Figure 1). The main functions of the DDS are to implement health policy, design national strategies and programs and special projects in the Department, administer the health service network within their geographic jurisdiction, set user charges and fees based on SNS technical criteria, develop the Departmental health plan, and support the investment needs of Municipal Governments. DDS consists of an Epidemiological Vigilance Unit and a Planning and Programs Unit, responsible for organizing and administering the Departmental health service networks and implementing national programs (SNS 1996). National priorities (table 3) set by the Ministry for Human Development are administered through the SNS.

At the municipal level, there exist Local Health Directorates (DILOS) which, along with DDS, are co-responsible for implementing national health programs. DILOS consist of representatives from the Municipal Government, the Vigilance Committee, and the Departmental Prefecture.

Production of health services depends on the physical and human resources used by the public and private sector providers, as well as those resources used by the public and private sector insurance mechanisms (Figure 2).

Overall, Bolivia has 2,128 health care facilities with 12,581 beds nation-wide, i.e.,

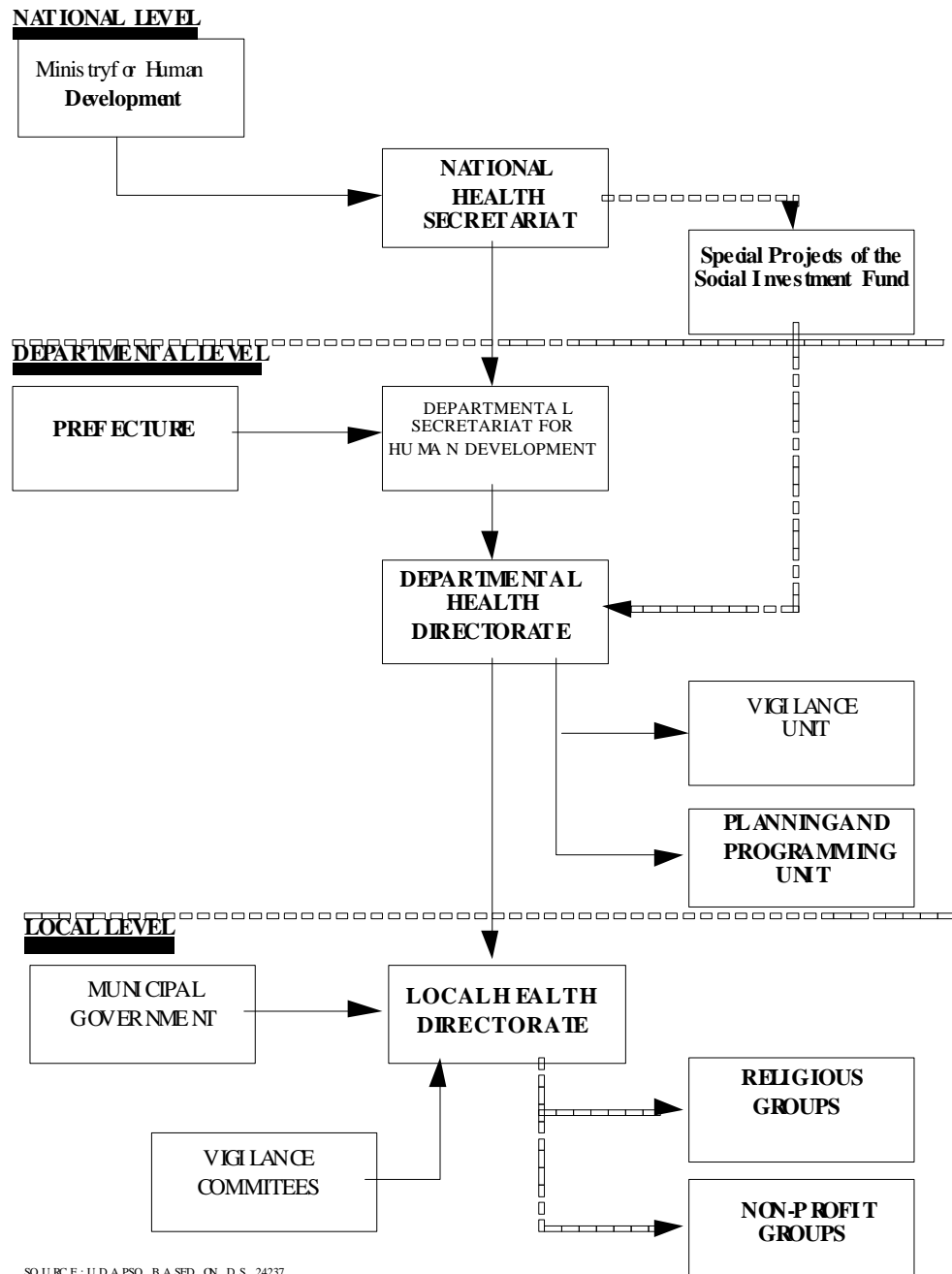
Table 3

The national priorities with regard to health, as defined by the Ministry for Human Development, through the National Secretariat for Health

-
1. Infant-Mother Care, with the aim of reducing the morbidity and mortality rates of women and children.
 2. Nutrition, with the aim of reducing the caloric and nutrient deficiencies of iodine and micro-nutrients.
 3. Control of vector-transmitted diseases, with an emphasis on Malaria and Chagas.
 4. Control of transmissible chronic illnesses, with the aim of reducing tuberculosis and intestinal parasitosis.
 5. Prevention and control of cholera, sexually-transmitted diseases, and AIDS.
 6. Mental health, with the aim of preventing alcoholism and drug-addiction.
 7. Primary care, with an emphasis on prevention and education.

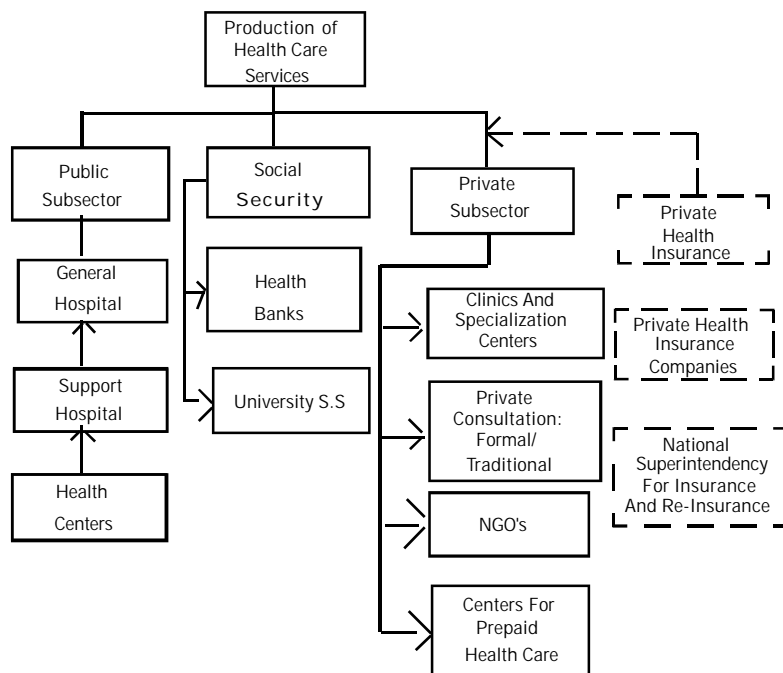
Local priorities are set by those responsible for health posts, the Municipal Government, neighborhood councils, peasant communities and indigenous groups, taking into account the incidence, prevalence, magnitude and risk factors associated with morbidity and mortality.

Figure 1
 Institutional Organization of the Health Sector - 1996



SOURCE: UDA PSO, BASED ON D.S. 24237

Figure 2
Health Subsectors - 1996



one health care facility for every 3,401 inhabitants, or one bed per every 575 inhabitants (table 4). There are 23,086 people employed in Bolivia's health sector, of which 52% work in the public sector (SNS), 38% in the public health funds system and only 10% in the private sector (table 5). (These figures do not take into account the fact that a large number of medical personnel actually work in both the public and private sectors). Regional imbalances are quite significant, in that of the 4,433 medical doctors practicing in Bolivia, 1,704 are in La Paz, 976 in Santa Cruz, 813 in Cochabamba, and only 850 in the remainder of the country.

Table 4**Total Number of Health Care Facilities, 1994**

	1994
National Health Secretariat	
Institutions	1,788
Beds	7,203
Health Funds	
Institutions	236
Beds	3,123
Private Sector	
Institutions	104
Beds	2,255
Total Institutions	2,128
Total Beds	12,581

Source: SNS and INASES

Table 5**Total Staff in the Health Sector**

	SNS	Health Funds	Private	Total
Doctors	1,976	1,631		3,607
Nurses	1,003	891		1,894
Other Prof.	2,212	767		2,979
Infirm Asst.	3,134	1,606		4,740
Admin. and Serv.	3,596	3,880		7,476
Total	11,921	8,775	2,390	23,086

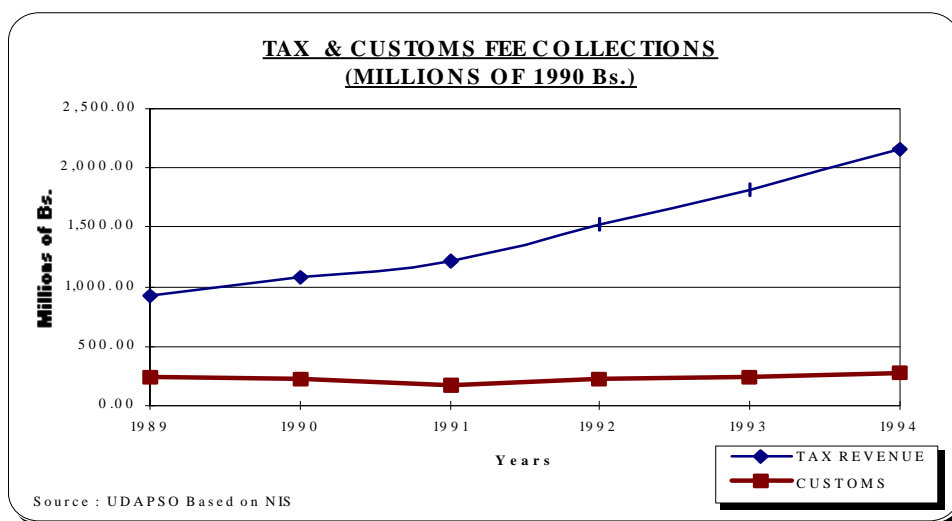
Source: UDAPSO, based on SNS and INASES

5. Health Care Spending in Bolivia

Public spending on health in Bolivia fell continuously between 1980 and 1986, from Bs. 354.29 million in 1980 to Bs. 53.87 million in 1986 (in real 1990 prices), registering a fall of around 85%. As a percentage of GDP, health spending reached an all-time low of 0.4% in 1986, down from 2.32% in 1980. With the economy stabilizing in 1987 and registering a positive growth rate (2.6%) for the first time in seven years, public spending on health also increased to Bs. 225.49 million (1.7% of GDP). Public health spending increased during the period 1990 to 1995, and today stands at Bs. 401.28, or around 2.16% of the country's GDP (figure 3).

As a percentage of total public spending, the health sector accounts for approximately 8% of all spending, which compares unfavorably with the 20%

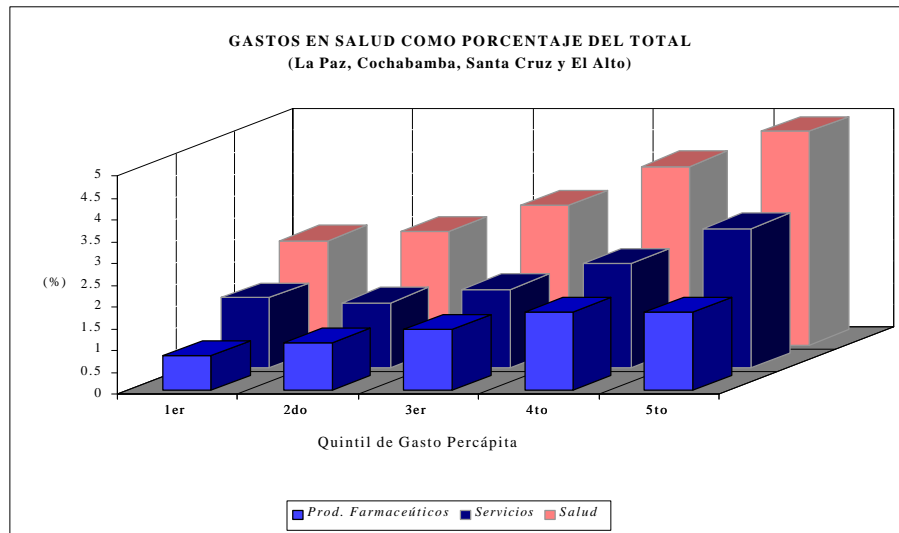
Figure



3

allocation that goes to the education sector. With the exception of the crisis years (1981 to 1986) health spending has been more or less around 10% of all government spending (figure 4).

Figure 4



According to the 1992 National Census, 67% of all individuals reporting an illness sought treatment in a formal setting, while 12% sought traditional treatment; 30% of all individuals indicated that they visited an SNS facility, 14% went to public health fund facilities, while 23% relied on a private facility. The percentage of people seeking traditional medicine was particularly high among the rural population (25%), while the public health funds, with approximately one-and-a-half million beneficiaries, served approximately 21% of the urban population, but only 4% of

Table 6
Utilization of Health Services (% of ill population)

	<i>SNS</i>	<i>Health Funds</i>	<i>Private</i>	<i>Traditional Medicine</i>	<i>Other</i>	<i>Do Not Seek Treatment</i>
Total	30	14	23	12	10	11
Urban	26	21	31	2	10	10
Rural	35	4	13	25	10	13

Source: UDAPSO, based on the 1992 National Census

MPSSP: Ministry of Social Welfare and Public Health

the population in rural areas (table 6).

According to the National Demographic and Health Survey (ENDSA, 1994), 49% of infants received pre-natal care in 1994 and only 43% of the births were delivered

with the assistance of medical personnel. Of a total of 434,546 pre-natal visits recorded by the National Health Information System (SNIS), 63% were provided by the public sector (SNS), 16.8% through the public health funds system, and 20.2% in the private sector. Likewise, of 71,051 reported deliveries, 71.2% were in the public sector, 9.6% in public health funds facilities, and 19.2% in the private sector (SNS 1995).

6. Financing Health Services in Bolivia

There are six sources of financing health care services: (i) central government tax revenues, channeled through the National Treasury; (ii) municipal revenues, including funds received from the central government, referred to as “co-participation funds,” as well as municipal taxes; (iii) public health insurance funds; (iv) private health insurance and pre-paid medicine schemes; (v) user charges; and (vi) international cooperation funds. We will discuss each of these in detail in the following chapters.

These funds finance government facilities, health funds facilities, non-government organizations and private physicians. Preliminary estimates indicate that Bolivia spent Bs. 1564 million (4.9% of its GDP) on financing health care. The public sector consumed 73% of all expenditure, of which the SNS facilities accounted for about 40% of all expenditure, and health funds facilities 33%. Private physicians received 15.9% of all expenditure on health care, while the pharmacies accounted for 8%. Out-of-pocket expenditure contributed 26% to total expenditure, while social insurance and government taxes accounted for about 36% each. The private insurance market contributed only 1.5%, most of which came through pre-paid medicine plans. A national health accounts matrix is presented in table 7.

Table 7**National Health Accounts Matrix (Bs. millions), 1995**

	<i>Sources of Funds</i>						<i>Total</i>
	<i>Central Govt.</i>	<i>Municipal Govts.</i>	<i>Social Insurance</i>	<i>Private Insurance</i>	<i>Households</i>	<i>Internat'l Cooperation</i>	
SNS Facilities	477	39			25	81	622 (39.8%)
Health Funds Facilities			515				515 (32.9%)
<i>Total Public Sector</i>							1,137 (72.7%)
NGOs						54	54 (3.5%)
Pharmacies					150		150 (9.6%)
Private Physicians				23	200		223 (14.3%)
<i>Total Private Sector</i>							373 (23.8%)
Total	477 (30.5%)	39 (2.5%)	515 (32.9%)	23 (1.5%)	375 (23.9%)	135 (8.7%)	1,564 (100%)
% of GDP	1.5%	0.1%	1.6%	0.1%	1.2%	0.4%	4.9%

Source: UDAPSO estimates

7. Central Government and Municipal Tax Revenues

Revenue from taxes has been the traditional means of financing the health sector, and will probably continue to play an important role in health financing. The main sources of central government revenue are the taxes collected by the General Internal Revenues Directorate (DGII) and the General Customs Tariffs Directorate (DGA).

DGII collects the following taxes:

a. IVA (value-added tax)

It is levied on economic activities that involve sales, rent of goods and real estate, general services, imports, and financial leasing. This tax is paid by individual and corporations. It is set at 13% over the net sale price of the goods or of the services provided.

b. Complementary IVA:

Levied on salaries, bonuses, per-diems, overtime pay to employees, as well as other payments to individuals and inheritances, all formal sector employees pay this tax through payroll deductions. The rate is 13% of total income. The tax is also levied on individuals who commonly receive income through rentals; interest payments; *anticreticos* (swaps of real estate usufruct rights in exchange of an interest-free loan); honoraria paid to locally-hired individuals by diplomatic missions, and international organizations and foreign governments.

c. Transaction Taxes

Levied on gross income obtained through the exercise of any profit-generating or non-profit activities, such as sales, rentals, interest earnings, transfer of goods and rights, this tax is paid by individuals and corporations. The tax rate is 3% of the total value of the transaction.

d. Specific Consumption Tax

This is levied on sales in the domestic market and imports of consumer goods, such as cigarettes, tobacco, motor vehicles, refreshments, beer, and other alcoholic beverages.

e. Gratuitous Transfer of Goods

Levied on inheritances, transfers of real estate and vehicles, capital gains, and copyrights, it is paid by individuals and corporations who are beneficiaries of the transfer.

f. Foreign Travel Departure Tax

Levied on those traveling abroad by air; it is paid by all residents leaving the country. The amount is Bs.100 for travel to neighboring countries and Bs.150 for the rest of the world.

g. Tax on Hydrocarbons and Derivatives

Levied on domestic sales of hydrocarbons and their derivatives, it is paid by individuals and corporations who trade in these products. The value of the tax is Bs.1.35/liter for premium gasoline, Bs. 0.40/liter for diesel, and Bs.0.56/liter for oils.

h. Corporate Profit Tax

This tax is levied on companies, free-lance and trade professionals and foreign beneficiaries, and is paid by individuals, corporations, publicly- and privately-held companies, mining and hydrocarbon companies, electrical power companies, free-lance professionals, notaries public, registered professionals, commissioned workers, and sales and real estate agents. The rate is 25% of net profits or income for most categories.

The DGA collects the consolidated customs tax, which is levied on all imports and is based on cost-insurance-freight value.

Municipal revenues are derived mainly from three sources:

- (i) Transfers from the Central Government (known as "co-participation tax revenues" equal to US\$22 per inhabitant in 1995;
- (ii) Municipal taxes; and,
- (iii) Transfers from the various investment funds for specific projects (Social Investment Fund, FIS, for the case of health sector infrastructure) which require matching funds from the municipality.

In 1994, Municipal Governments received Bs. 600 million (approximately US\$135 million) from Central Government transfers. Municipal tax revenues were US\$70.7 million, while social investment funds transferred to municipalities were approximately US\$58 million. The implementation of the PPL also permits the mobilization of resources from the larger cities to the rest of the country (table 8). Before the law, departmental funds per person varied from Bs. 58 in Pando to Bs. 115 in La Paz. With the implementation of the PPL, co-participation funds per

Table 8
Co-participation Resources - 1994

<i>Department</i>	<i>Population</i>	<i>Municipalities</i>	<i>Co-participation Funds (Bs.)¹</i>	<i>Co-participation Funds Per Capita</i>	<i>Co-participation Funds (Bs.)²</i>	<i>Difference</i>
La Paz	1,900,786	75	218,624,933	115	177,424,514	(41,200,419)
Santa Cruz	1,364,389	47	138,897,345	102	127,355,765	(11,541,580)
Chuquisaca	453,756	28	31,957,867	70	42,354,814	10,396,947
Cochabamba	1,110,205	44	103,892,678	94	103,629,542	(263,136)
Tarija	291,407	11	22,194,354	76	27,200,719	5,006,365
Oruro	340,114	31	26,564,973	78	31,747,162	5,182,189
Potosí	645,889	38	37,853,445	59	60,289,029	22,435,584
Beni	276,174	17	17,122,323	62	25,778,829	8,656,506
Pando	38,072	14	2,226,200	58	3,553,744	1,327,544
Total	6,420,792	311	599,334,118	93	599,334,118	

Source: Secretariat of the Interior. Subsecretary of Budgets.

1/ Before PPL

2/ After PPL (Current)

capita have become equal throughout the country.

With the enactment of the Popular Participation Law of April 1994, municipal governments have become responsible for investments and the administration of health sector infrastructure. Over time, these reforms are expected to result in higher budgetary support from Municipal Governments, who have complete autonomy in determining budgetary allocations to the various sectors like health, education, urban infrastructure, irrigation, roads, etc. In the absence of well-recorded data, however, accurate figures of actual allocations to the health sector are not available. Available data indicates that in 1995, Municipal Governments assigned a significant portion of their resources towards urban infrastructure and housing (Bs. 576.66 million or 48.6% of total expenditures), while health received only Bs. 38.85 million (3.3% of the total expenditure). This figure is expected to rise over time.

Total tax collections of the central government have shown a steady increase over time, from Bs. 1166 million in 1989 to Bs. 2,435 million (approximately US\$530 million) in 1994 (all figures in 1990 Bs.). Internal revenue has contributed to most of this growth, more than doubling over the five year period, while tariff revenue has registered only a modest 10% growth (table 9, figure 5). These tax revenues, along with transfers from public enterprises, are channeled through the National Treasury to different public sector agencies, including the Ministry for Human Development, under which is the SNS.

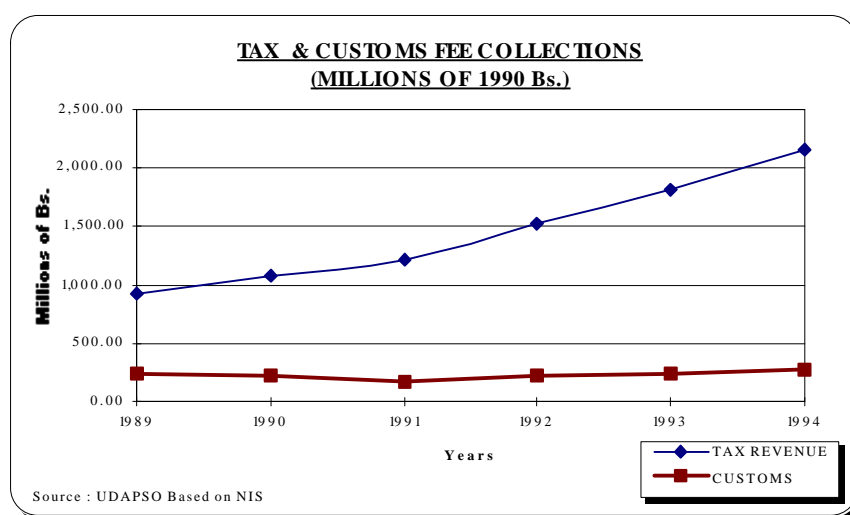
Table 9**Collection of Internal Revenue and Tariffs, 1989-1994**

	1989	1990	1991	1992	1993	1994
Internal Revenue	918	1,073	1,224	1,528	1,817	2,160
Tariff Revenue	248	221	173	218	233	275

Source: INE

Public spending on health has increased from Bs. 226.10 million in 1989 to Bs. 346.31 in 1994 (all figures in 1990 Bs.), which represents a fall from 19.4% of total tax collection in 1989 to 14% in 1994. In 1995, the SNS spent about Bs. 477 million (US\$99 million) at an average of Bs. 68 (approx. US\$14) per person on recurrent costs related to health care. A bulk of this expenditure (around 85%) is on staff salaries (both medical and administrative), with the remaining going to other recurrent costs.

Central tax revenues support a vast network of public sector health institutions, which are under the administrative control of the National Health Secretariat. According to the National System of Health Information (table 10), the number of registered institutions in the public health sector grew from 1,304 in 1990 to 1,788 in 1994, with a total of 7,203 beds, so that in 1994 there was one public sector health care provider for every 2,758 persons, or one bed for every 685 persons.¹ These numbers do not include the institutions nor population covered by the Social Security system (that is, the public health funds, called "Cajas" in Bolivia) which are described in the following section.

Figure 5

1/ Since the implementation of the Popular Participation Law, all SNS institutions (with the exception of eight National Research and Normalization Institutes) have been transferred to Municipal Governments. However, the national government is still directly responsible for the staff of the public health care system.

Table 10
Facilities Belonging to the National Health Secretariat,
1993-94

	1993	1994
Regional Hospitals		
No. Institutions	30	29
No. Beds	4,032	3,997
District Hospitals		
No. Institutions	57	58
No. Beds	1,493	1,528
Area Health Centers		
No. Institutions	423	430
No. Beds	1,678	1,678
Periph. Health Centers		
No. Institutions	1,271	1,271
Total Institutions	1,781	1,788
Total Beds	7,203	7,203

Sources: UDAPSO, based on SNS, 1993-94

With respect to human resources, SNS has a staff of 12,056 in 1995: 2,011 doctors, 1,020 nurses, 703 other professionals, 3,177 infirmity assistants, 1,359 technical staff and other assistants, and 3,786 administrative staff (table 11). In effect, therefore, tax funds provide for 2.9 doctors for every 10,000 people.

In terms of utilization of SNS facilities, the 1992 national census indicates that 30% of the ill population seeks treatment from SNS facilities. SNS facilities are more popular in rural areas, where 35% of the ill seek treatment from SNS facilities, as compared to 26% in urban Bolivia. While there is no data on specific diseases or programs covered by SNS facilities, there is documented evidence that shows a significant increase in the number of visits to SNS facilities, from 1.68 million in 1991 to 3.5 million in 1995. The number of people who sought treatment from SNS facilities went up from 1.27 million in 1991 to 2.69 million in 1995. Tax money thus funds health services that are utilized by over 38% of the population.

SNS facilities have been particularly successful in immunization programs and mother and infant care. Complete immunization of children (including polio, DPT-3, measles and BCG) went up from 16% in 1980 to 82% of children of immunization age, and most of these services are provided by the tax-funded SNS facilities. With

Table 11**Human Resources of SNS, 1991 - 95**

	1991	1992	1993	1994	1995
Doctors	1,580	1,948	2,008	1,976	2,011
Nurses	870	999	1,002	1,003	1,020
Other Professionals	792	858	669	692	703
Infirmity Assistants	1,606	3,107	3,136	3,134	3,177
Technical Staff	0	574	1,204	1,520	1,359
Admin. and Services	3,910	4,348	3,901	3,596	3,786
Total	8,758	11,834	11,920	11,921	12,056

Source: UDAPSO, based on SNS / SNIS, 1991-95

reference to pre-natal care, of a total of 434,546 visits recorded by SNIS in 1994, 63% were provided by SNS facilities. Likewise, of 71,051 reported deliveries in 1994, 71.2% took place in SNS facilities.

SNS facilities have been making concerted efforts to improve and monitor quality. In one such endeavor, the Project for Complete Health Services (PROISS) has developed a system of quality control that has been implemented in La Paz, Cochabamba, Santa Cruz and El Alto. There are currently 18 Health Districts currently applying the system. Evaluations of quality control are conducted in the Health Centers through a survey that evaluates infrastructure, data and information, admission, cleanliness and maintenance, equipment, healing consultations, popular participation, essential medicines and inputs, technical and administrative procedures, outreach and prevention, odontology, and prenatal care.

However, there remain a number of concerns regarding the equitable use of SNS facilities. According to the information collected by the National Institute of Statistics, only 10% of those who sought treatment from SNS facilities belonged to the lowest per-capita spending quintile. Over 50% of those who used SNS facilities belonged to the third and fourth quintiles, while over 75% of those who used SNS facilities belonged to the richest 60%. More than 25% of all users of these facilities belonged to the highest income quintile.

8. Social Insurance and Public Health Funds

The second major source of financing for health care services is the system of public health funds, known in Bolivia as “Cajas de Salud”. The genesis of these funds can be traced back to the pension fund that was set up at the beginning of the century. With this, the Government started a social security system that initially covered education workers (in 1905), but was extended to military personnel (in 1906), and workers in the Judiciary Branch (in 1911). The Work-Related Accidents and Illnesses Law was promulgated in 1924, and the Mandatory Social Security Law was passed in 1954. The Social Security Code was passed in 1956 and formed the basis of the Bolivian social security system. The Bolivian Institute for Social Security (IBSS) was created in 1973 and made responsible for supervising the social security system. Short-term social security, covering health and allied matters, was entrusted to the system of health funds in 1987, while long-term social security, related to retirement issues, was placed under the responsibility of the system of pension funds. In 1994, IBSS was replaced by the National Institute for Health Funds (INASES), under the jurisdiction of the Ministry of Human Development.

At present, the public health funds system is composed of seven health funds (“cajas”) and ten integrated insurance programs, the latter being supplementary funds for particular institutional arrangements, such as the public universities (table 12). Larger than the SNS system, the public health funds system consists of 236 centers, of which 141 are owned and 95 are rented. Jointly, they have a total of 3,123 beds, most of which are concentrated in the country’s larger cities. The total staff strength is 7,848, of which 1,445 are doctors, 809 nurses, 444 other professional, 1,453 infirmary assistants, 334 technical staff and other assistants, and 3,363 administrative personnel (table 13).

Health funds receive most of their contributions from public and private employers. The law requires all public agencies to contribute to some public health fund, while private sector organizations have the option of either affiliating themselves to a health fund, or contributing to pre-paid medicine schemes on behalf of their employees. Contribution rates to health funds are fixed by statute at 10% of gross salaries, and it is not customary for companies to offer additional coverage above and beyond what is required by law. The system of public health funds receives no transfers from the National or Municipal Governments. It has, however, received

Table 12
The Public Health Funds System

	<i>Total</i>	<i>Out-Patient Consultation</i>				<i>Hospitalization</i>				<i># Beds</i>
		<i>Polyclinics</i>		<i>Medical Offices</i>		<i>Hospitals</i>		<i>Clinics</i>		
		<i>Own</i>	<i>Rented</i>	<i>Own</i>	<i>Rented</i>	<i>Own</i>	<i>Rented</i>	<i>Own</i>	<i>Rented</i>	
CNS	119	28	2	36	20	21	12	0	0	2,278
CPS	24	6	3	0	9	5	0	1	0	299
CFS	16	0	0	0	0	10	0	5	1	355
CSBP	11	0	8	0	0	0	0	0	3	8
CSBE	9	0	0	0	0	0	1	1	7	32
CSCORD	26	8	4	1	3	3	2	0	5	91
CSCAM	20	8	4	0	5	0	3	0	0	30
Others	11	7	2	0	0	0	0	1	1	30
Total	236	57	23	37	37	39	18	8	17	3,123

Source: UDAPSO, based on CISS, "Social Security in Bolivia," Monograph 22, 1995.

CNS = National Health Fund
 CPS = Oil Workers Health Fund
 CFS = Railroad Workers Health Fund
 CSBP = Private Banking Workers Health Fund
 CSBE = State Banking Workers Health Fund
 CSCORDES = Regional Development Corporations Workers Health Fund
 CSCAM = National Road Service Workers Health Fund

occasional direct contributions from international donors, especially in the form of medical equipment.

The public health funds system includes active contributors and their dependents, retirees and non-contributing beneficiaries (disabled persons, veterans, widows,

Table 13
Public Health Funds Staff

	1991	1992	1993	1994
Doctors	1,579	1,608	1,621	1,631
Nurses	870	865	878	891
Other Prof.	786	809	797	767
Infirmary Asst.	1,560	1,536	1,568	1,606
Admin. and Serv.	3,956	3,836	3,842	3,880
Total	8,750	8,654	8,705	8,775

Source: UDAPSO, based on INASES

former high-level public officials) and their dependents. In 1994, there were 346,127 active contributors and a total of 1,575,913 persons insured by the system. In 1995, approximately 1.6 million people (close to 22% of the country's population) had some affiliation to some public health fund. The total budget of the public health funds was Bs. 514.8 million (approx. US\$108 million), equivalent to an expenditure of US\$67.8 for each potential beneficiary, or US\$310 per active contributor (INASES 1996).

The largest health fund is the National Health Fund (Caja Nacional de Salud, CNS), which has 199 health care facilities with 2,278 beds and accounts for approximately 85% of the beneficiaries of the system. In 1995 CNS had a budget of Bs.364 million (approximately US\$76.6 million). The next largest health fund is the Oil Workers Health Fund, which had a budget of Bs.96.5 million in 1995.

The public health funds system offers rehabilitative and curative services, and are primarily located in urban areas. The facilities of the public health funds cover approximately 21% of the urban population, but only 4% of the rural population. For the country as a whole, public health funds cover approximately 14% of the entire population (table 14).

Although much of the urban formal sector labor force participates in the public health fund system (the total number of beneficiaries is equal to 40% of the urban population), many upper-middle and high income households do not utilize its services. There are many significant non-market rationing mechanisms (coupons for visits and long queues) that limit access, and many potential beneficiaries use the services of private sector providers, either private medical offices or pre-paid medicine programs. It is commonly observed that high income health fund members use private sector providers for routine consultations (e.g. pediatric and gynecological visits), but rely on the health fund system for more expensive treatments. Private sector providers are also often preferred for specialized care (e.g., ophthalmologic care, surgery) if they are perceived to be of better quality and reliability. The main clients of the public health insurance system are thus the lower and middle-income urban formal sector, and public bureaucracy.

In terms of utilization of public health funds facilities by income quintiles, 56% of all public health fund facility users belonged to the wealthiest 40% of the population, while only 23% belonged to the poorest 40%. A disproportionately large 35% of all users belonged to the fourth quintile.

Table 14
Members of the Public Health Funds

	<i>Cont.</i>	<i>Benef.</i>	<i>Retirees</i>	<i>Benef.</i>	<i>Non-Cont Member</i>	<i>Dep.</i>	<i>Total</i>
1980	323,842	902,292	62,119	52,435	43,536	27,983	1,412,20
1981	334,916	944,021	67,387	59,489	45,357	27,230	1,478,40
1982	353,861	999,182	70,079	62,616	40,269	25,592	1,551,59
1983	367,608	1,117,89	72,716	63,942	43,222	23,926	1,689,30
1984	340,603	952,123	74,552	63,215	41,373	22,798	1,494,66
1985	342,534	942,703	76,817	60,167	41,365	22,143	1,485,72
1986	318,552	881,071	82,223	73,431	40,402	21,000	1,416,67
1987	267,653	740,064	85,281	92,803	39,918	19,874	1,245,59
1988	281,344	775,366	93,245	94,930	39,246	18,730	1,302,86
1989	294,475	815,429	99,165	99,960	36,841	16,724	1,362,59
1990	317,691	868,745	105,601	105,886	35,978	15,456	1,449,35
1991	330,519	902,106	112,913	114,476	34,607	14,286	1,508,90
1992	330,593	897,435	120,362	120,500	34,426	13,492	1,516,80
1993	335,546	905,974	115,234	127,910	32,562	12,212	1,529,43
1994	346,127	935,609	118,228	134,352	30,624	10,973	1,575,91

Source: UDAPSO, based on INASES, 1995

9. Private Health Insurance and Pre-Paid Medicine Programs

Use of private health insurance in Bolivia is very limited, and only a handful of companies offer private health insurance policies. On the other hand, pre-paid medical care (which is often regarded in Bolivia as health insurance) is gradually becoming more prevalent in the country. Strictly speaking, the prepaid plans are not an insurance; rather, they are a system of prepaying for medical services. Beneficiaries do not buy policies with the objective of protecting themselves against unforeseen expenses; instead, they primarily buy the right to reduced rates for services that they almost invariably utilize or expect to eventually utilize. As far as the centers are concerned, their main objective is to secure a certain number of repeat customers who know they will need medical services. Anyone can join this system provided they do not exhibit severe health conditions.

The pre-paid medicine programs charge an annual entry fee that gives the client the right to a given package of limited services. The average annual premium for ABOSMEP affiliates is US\$215 per person per year. The amount of the premium depends on the user's age, medical history, and desired "package" of services, and usually carries a copayment for each visit. The per-visit fee can be adjusted in the course of the year depending on the frequency of visits and the evolution of the client's clinical history. Pre-paid medicine systems are not subsidized, and thus must recover all costs through annual premiums, service charges and drug charges. Most service-packages include preventive care and simple curative care, including child-delivery, gynecological, dentistry, and geriatric services and other services which are low-risk health services characterized by fairly predictable demand.

This system of prepaid medicine began ten years ago with the creation of URME, a private provider, on the model of Argentina's prepaid medical plans. This was soon followed by the Medicentro, and gradually many more centers emerged. An Association for Prepaid Medicine in Bolivia (ABOSMEP) was formed in 1993, and currently there are seven members and approximately 22,000 affiliated persons in this association. Almost all pre-paid medicine system centers were started as group practices by doctors, who make an initial investment in infrastructure and medical equipment. These centers do not specialize in complicated or high-risk treatments, since these require greater investments in infrastructure and equipment and tend to attract higher risk populations; instead, these centers provide high quality simple curative and preventive care.

Private physician offices and pre-paid medicine provide medical care primarily to the upper middle class, and are found almost exclusively in urban areas. According to repeated rounds of LSMS surveys, households with the highest disposable incomes use private health care providers in urban areas. Around 70% of all private sector users belong to the wealthiest 40% of the population, while only 15% belong to the poorest 40%. A disproportionately large 43% of all users belong to the fifth quintile, while less than 5% belong to the poorest 20% of the population.

10. User Charges

There is little information available regarding out-of-pocket household expenditures on health care. According to the Survey of Household Budgets (EPF) carried out in La Paz, Cochabamba, Santa Cruz and El Alto in 1990, households spend an average of Bs.45 per month (approx. US\$14) on health care, which is less than 4% of total household expenditures (Urquiola 1994). This proportion varies from 2.4% in the poorest quintile (quintile 1) to 4.9% in the richest quintile (quintile 5). Differences across quintiles is more pronounced in absolute terms; average monthly per capita spending in the first quintile is US\$ 3.11, while in the fifth quintile it is US\$38.3. On average, 40% of these expenditures are for drugs and the remaining 60% is for services. These shares are similar to those in other Latin American countries (OPS/OMS, 1994). On the assumption that households in smaller cities and rural areas have lower expenditure patterns than the average household in the four main cities, total household expenditure on health in Bolivia can be estimated to be on the order of magnitude of between Bs. 375 million (US\$117 million).

The private health care sector consists of private providers, pre-paid medicine institutions, and non-profit organizations. Despite the fact that all private health care providers are required to be registered and supervised by the SNS, there are no reliable data on the number of private doctors' offices, clinics, laboratories or pharmacies. Available data (according to the National Hospital Directory of SNS) indicates that in 1994 there were approximately 104 private health care and NGO facilities in Bolivia, with a total of 2,255 beds, though the accuracy of this figure is difficult to determine.

Table 15 presents some user fees from health care facilities, public and private, in La Paz and Santa Cruz. There is substantial variation among public sector (SNS) facilities, health funds, and private sector providers. Among public sector facilities, the user fee for an out-patient consultation varies from Bs. 3 to 5 (US\$0.70 to 1.00), while in the private sector, the range is larger and has more variation (between Bs. 15 and 100 per visit). There is no explicit national policy with regard to user fees charged at SNS facilities, and the range of Bs. 3 to 5 per visit was generally arbitrarily determined. The contribution of user fees to the overall SNS operating budget is very low.

According to estimates based on the Fifth Complete Household Survey, the demand for health services is relatively inelastic with respect to price, though there are differences between the elasticities for children (relatively elastic) and adults

Table 15
Health Care User Charges at SNS and Private Providers, 1996 (in Bs.)

Services	S.N.S.		Private Medical Centers		
	La Paz	Santa Cruz	NGOs	Others	
			La Paz	La Paz	Santa Cruz
Medicine	3-5	10-20	7-17	70-100	15-50
Gynecology	3-5	10	15-25	70-100	15-100
Pediatrics	3-4	10-15	15-25	50-110	15-100
Dentistry	4-12	10-15	15-25	40-100	25-50
Normal Birth	0-60				
Prenatal Care	1.5-5				
Serum	5-7				
First Aid	3-15	5-20			10-30
Shots	2-4				

Source: Interviews by the authors

(relatively inelastic). Another point that should be emphasized is that the effect of price variation differs across spending quintiles, with the price elasticities for the higher income quintiles being lower. An increase in the fees charged for health services is thus likely to have the most adverse affect on children of poor families, while it will have little or no effect on rich adults.

11. International Cooperation

International cooperation funds come from two sources: public source (bilateral or multilateral) and private or non-government. Bolivia has received bilateral assistance on health issues from numerous countries, and has participated in several interventions with the support of several multilateral agencies, including UNICEF, the World Bank and the Inter-American Development Bank (IADB).

Total international cooperation funds committed to the health care sector were US\$312 million for the period 1989-1995. The average amount invested averaged US\$27.7 per annum during the period (table 16).

Table 16

Public Sector (SNS) and Health Funds

International Cooperation Financing Program, 1989-95 (in thousands of US\$)

<i>Funding Organization</i>	<i>Total Foreign Contrib.</i>	<i>Cum. Exec. 1989</i>	<i>Exec. 1990</i>	<i>Exec. 1991</i>	<i>Exec. 1992</i>	<i>Exec. 1993</i>	<i>Exec. 1994</i>	<i>Exec. 1995</i>	<i>Total Exec.</i>	<i>Balance of Disburs.</i>
OPEP	7,970	4,160	552	257	0	2,206	349	391	7,916	54
IADB	33,900	0	0	0	942	743	5,651	5,617	12,953	20,947
CAF	7,000	0	0	0	0	0	0	2,379	2,379	4,621
IDA	132,083	0	1,083	4,729	6,551	15,498	17,598	14,192	59,651	72,432
JICA	4,890	4,890	0	0	0	0	0	0	4,890	0
USAID	102,663	22,246	5,975	8,510	12,903	16,063	9,869	10,065	85,631	17,032
KFW	3,529	0	122	153	833	1,236	555	390	3,289	240
ESP	10,350	0	0	0	5,004	5,167	180	0	10,350	0
HOL	8,953	0	1,382	1,595	556	963	976	619	6,091	2,862
ASDI	1,000	0	0	0	0	0	0	1,000	1,000	0
General Total	312,338	31,296	9,114	15,244	26,789	41,876	35,178	34,653	194,150	118,188

Source: UDAPSO, based on SIPFE

Most of the funds from international cooperation are channeled through non-government organizations (NGOs). The exact number of NGOs working on health issues is not known with certainty, as many of them are unregistered. The Directorate for NGO Coordination (Ministry of Finance) has 501 registered national and international NGOs. It is estimated that these NGOs channeled about US\$200 million in cooperation funds in 1993. Approximately 190 of these NGOs work in health care, of which the largest is the Catholic Church which has 357 health projects in the country (Conferencia Episcopal Boliviana 1994).

12. Case Studies

PROSALUD

The PROSALUD Project was initiated in 1983 with a team of 6 individuals and the support of USAID/Bolivia. PROSALUD, as a civil, private, and non-profit association that was born as a result of the project, was created in August 1985. This experience began as a result of three important factors: (i) the gradual deterioration of the health conditions of a significant part of the population due to the severe economic crisis in the early 1980's; (ii) the emergence of a transparent and deregulated market economy that came about with the structural adjustment of August 1985; and (iii) as an efficient alternative to the traditional public system of primary health care.

PROSALUD is a sustainable model for the provision of comprehensive and ongoing primary health services through decentralized, multi-purpose and permanent facilities, following as a guiding strategy Primary Health Care (APS). PROSALUD pursues its activities within the framework of National Health Policies, and through agreements with the SNS, the Departmental Health Directorates and municipalities. Currently, PROSALUD has 28 health centers: 13 in Santa Cruz, 6 in La Paz, 7 in El Alto, 1 in Tarija and 1 in Riberalta; serving a population of some 300,000 persons. In addition, there is a Referral Clinic and a Center for Infant Development in Santa Cruz. PROSALUD employs a total of 445 persons throughout the country.

PROSALUD offers: (i) health care services to the community; (ii) social marketing of health products; (iii) training services; (iv) applied research; and (v) technical assistance. With respect to providing health care services to the community, PROSALUD focuses on medical consultations, childbirth, short-term hospitalization, family planning, dental care, laboratory analysis and immunizations. Within childbirth services, PROSALUD offers gynecological consultations, pre-natal care, post-natal control and child development, and other services.

Community health care services are complemented by a marketing program for health care products, with the objective of increasing the access to and utilization of these products, through pharmacies and non-traditional sources. For this reason, PROSALUD has a factory for orthopedic products and an optical shop in La Paz.

PROSALUD also offers training services in health care administration that include technical and managerial training for maternal-infant care programs, family planning programs, and quality control of services. As part of an ongoing improvement process, PROSALUD conducts market research, as well as operations and epidemiological research. Finally, PROSALUD also offers technical assistance services to other organizations, in Bolivia and abroad.

The PROSALUD project originally received funding from USAID (Funds of PL-480, Title III) that served as seed funds for the initiation of the association. Once the project was successful, there was a positive evaluation in 1989 that permitted the expansion of coverage and the opening of new centers that also relied on the support of USAID. Initial costs of a new center are borne by external funds (USAID, buildings and equipment) and the municipality (granting an unused lot or a building in need of repair). Of the total operating costs, approximately 75% are covered by PROSALUD funds generated by user fees. The remainder 25% of operating costs are paid for from the income generated from marketing of health care products (e.g. contraceptives, glasses). Training activities and applied research generate minor additional resources.

In 1988-89, PROSALUD conducted detailed studies on the demand for health care services in areas of interest for future investments. These studies demonstrated three important aspects about demand for health care: (i) lower income groups in Santa Cruz and El Alto have similar behavior with respect to health care spending, which contradicts the popular assertion that cultural factors determine behavior in the market for health care services; (ii) the poorer the household, the more sensitive it is to the quality of health care; and (iii) in lower income groups the demand for health care services has very low price and income elasticities (Rosenthal et al 1988; Huff-Rouselle and Overholt 1990).

A socio-economic study of the local population usually precedes the opening of a new center in a neighborhood or rural community. These studies are funded in part by USAID and by PROSALUD'S own resources (basically staff time). The studies are based on a complete census of the populations, using socio-economic and marketing questionnaires. Information is sought on health, income, employment, socio-economic preferences, willingness to pay for services, etc. The results of these studies are the primary input for determining the fee schedule that will prevail in the area. Expected revenues are calculated based on this possible fee schedule. These in turn determine the costs that the center can sustain and the personnel that it requires. Once the center is open, PROSALUD maintains statistical data on its clients, where they come from, etc., and conducts periodic customer satisfaction surveys.

The LPP has simplified negotiations between PROSALUD and Municipal Governments to get a plot of land or an unused building. Municipalities have the autonomy and the incentives to negotiate with an agency such as PROSALUD that

provides primary health care services. This way the municipality does not have to incur large direct costs in building its own facilities, nor does it have to depend exclusively on a national public health care system.

Each PROSALUD center has autonomy, under certain basic rules, to fix user fees that are most adequate to their region. For example, the city of La Paz has PROSALUD centers in the southern neighborhoods (that are high-income areas) where a general consultation costs between Bs.15 and 17 (approx. US\$3 - 3.30) and for a pediatric visit, Bs. 20 and 25. The same visits in El Alto (a low income area and 45 minutes away from the center), cost between Bs.7 and 10, and Bs. 15 and 20, respectively. In other words, within the two extremes of the same city, a 20-50% difference in user fees may exist, without a corresponding variation in the quality of services provided.

The personnel structure of the 28 PROSALUD centers is quite standard. In each center, there are usually the equivalent of 3 full-time doctors: one full time general manager/physician, a half-time gynecologist, a half-time pediatrician and a full-time dentist. In general, the director has a guaranteed salary equivalent to pay for 8 hours of work per day. This salary tends to be greater than what he or she could earn as an employee of the SNS, but it is less than the salaries available at the health funds and much less than those earned in the private sector. Nevertheless, the doctors of PROSALUD have the option to work extra hours (emergency care or Saturday mornings, for example), using the infrastructure of PROSALUD centers, receiving in exchange 80% of the fees charged during these extra hours.

Approximately one half of PROSALUD's 96 doctors work under a "joint venture" program. The doctors receive 50% of the fees charged to users and PROSALUD receives the other 50%. The doctors thus have appropriate incentives to conduct their own marketing campaigns to attract clients to PROSALUD and take maximum advantage of PROSALUD's infrastructure. Dentists are required to bring their own equipment, but are allowed to retain 80% of fees charged for dental services. PROSALUD thus saves on equipment maintenance costs, and the dentist utilizes the PROSALUD market to establish a clientele base. PROSALUD has the added advantage of being able to provide highly demanded but relatively expensive services without incurring the investment and maintenance costs. The joint venture system thus works well for both the physician and the facility.

National Mother-Child Insurance Program

This is an insurance system recently started by the present government for women of fertile age and children under five years of age. It covers maternity care and complications resulting from pregnancy and childbirth, and covers children under five in the case of diarrheal illnesses and acute respiratory infections, which constitute the two primary causes of childhood mortality in Bolivia. The package of services provided by this insurance program covers:

- Four pre-natal visits
- Normal childbirth and Cesarean Sections
- Care for complications resulting from pregnancy and childbirth
- One post-partum visit
- Newborn care
- Diarrheal illness care
- Care for pneumonia

The National Mother-Child Insurance program is part of the Strategic Actions Program (PAE) of the Ministry for Human Development (table 17). The goal of this insurance plan is to reduce infant mortality rate by 25% and maternal mortality rate by 20% in the next two years. The insurance also propose to increase coverage and access to health care services, and to create conditions so that economic considerations do not constitute a barrier to professional care in these critical areas. The target population for each type of service is shown in table 18.

PAE is a national initiative that seeks to facilitate the implementation of social policies through a concerted and efficient assignation of resources to reach short-term human development objectives. Health is one of the principal areas of public

Table 17

Strategic Actions Program (PAE)

PAE is a national initiative that seeks to facilitate the implementation of social policies through a concerted and efficient assignation of resources to reach short-term human development objectives. Health is one of the principal areas of public intervention. PAE activities in the health sector focus on improving the health status of women and children, the provision of micro-nutrients, and the implementation of school breakfasts.

Within the health and nutrition program, there are three specific intervention areas: infant health, maternal health, and nutrition. In infant health, the priorities for intervention are (i) treatment and prevention of acute diuretic illnesses; (ii) treatment and prevention of acute respiratory infections; (iii) immunization programs; promotion of breast feeding; and (iv) treatments for the removal of parasites. The goal is to reduce by 25% the mortality rate of children under five, from 116 to 87 per 1000 live births.

In women's health, the priorities are (i) care before, during and post-partum (no complications); (ii) training in reproductive health; and (iii) administering of tetanus shots. The goal is to reduce maternal mortality by 20%, from 390 to 312 per 100,000 live births, saving an average of 200 lives each year.

The priorities in nutrition are to promote the consumption of iodized salt, administer vitamin A and ferrous sulfate to women and children, and implement the program of school breakfasts. The goal is to improve the nutrition of women and children through the provision of micronutrients.

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Table 18
Target Population for the Mother-Child Health Program

Service	Target Population
Prenatal Care	724,112
Post-Partum Visit	168,356
Vaginal Birth and Newborn Care	150,253
C-Section and Newborn Care	18,103
Premature Birth Warning	3,621
Hemorrhage	3,621
Puerperal Hemorrhage	5,431
Severe Eclamsia/Preeclamsia	3,621
Moderate Preeclamsia	9,051
Puerperal Infection/Sepsis	9,051
Ambulatory Diarrhea	925,402
Hospital Diarrhea	49,335
Ambulatory Pneumonia	86,371
Newborn with Severe Asfixia	37,016
Newborn Pathological Ictericia	3,367
Pneumonia/Sepsis in Newborn	16,836
Total	10,101

Source: UDAPSO from NHS

from 116 to 87 per 1000 live births.

In women's health, the priorities are (i) care before, during and post-partum (no complications); (ii) training in reproductive health; and (iii) administering of tetanus shots. The goal is to reduce maternal mortality by 20%, from 390 to 312 per 100,000 live births, saving an average of 200 lives each year.

The priorities in nutrition are to promote the consumption of iodized salt, administer vitamin A and ferrous sulfate to women and children, and implement the program of school breakfasts. The goal is to improve the nutrition of women and children through the provision of micronutrients.

The estimated total cost of the insurance program is US\$14.1 million annually (SNS 1996). This includes fixed costs, training, personnel, and drugs and supplies necessary for the treatment of the pathologies and conditions covered by the insurance plan. With the goal of providing care to 70% of pregnant women and 80% of children with acute respiratory infections and acute diarrheal illnesses, the Treasury contributes with 33% of the total funds needed in salaries for medical personnel and paramedics. Twenty-two percent of recurrent expenditures are financed with a loan from the World Bank, through the Integrated Health Services Project (PROISS) in La Paz, El Alto, Santa Cruz and Cochabamba; and with a loan from BID through the Integrated Program of Basic Health Services and Sector Strengthening (PSF), in the rest of the country. Public health funds contribute 7% of costs in maternal-infant care; and the municipalities cover 30% of the costs with co-participation funds (municipalities are free to buy into the program, by signing an agreement with SNS; so far, over 90% of municipalities have signed agreements with SNS). The balance is covered by UNICEF, UNFPA and OPS/OMS (Aponte 1996).

13. Conclusions

Bolivia is going through a phase of widespread reforms that have affected the financing and delivery of public services. Health care has been no exception, though most of the reforms specifically targeting the health sector are scheduled to happen only over the next few years. In any case, Bolivia's health sector has undergone many important changes as a result of the Popular Participation and Administrative Decentralization reforms.

One of the most significant changes is that the Municipal Governments are now the owners of public health facilities (previously under SNS management) and are responsible for their administration and maintenance. The Central Government remains responsible for covering the costs of medical personnel and administrative staff. This has encouraged local grassroots organizations and neighborhood councils in urban areas and peasant and indigenous people's communities in rural areas to get involved in defining municipal investment priorities, particularly with regard to social services. The decentralization process is likely to redefine availability, access and quality of health care for most low-income users of government health facilities. At the same time, the decentralization process will require much closer coordination between Central and Municipal Governments, since funding for health care delivery is a joint responsibility of both.

The main funding source for the public health system has always been transfers from the Treasury, i.e., from general taxes. With the reforms, some of this revenue is now transferred to Municipal Governments that enjoy autonomy over decisions of fund allocation. The municipal governments have much closer grassroots contacts and are thus likely to, under greater popular pressure, improve availability and quality. The Popular Participation process may encourage some "over-capitalization" of health care facilities, since Municipal Governments under popular pressures may invest in them more than the Central Government did in the past. The central government, however, will have strong reasons to monitor and control this trend, since the Central Government continues to be responsible for salaries and other staff expenses.

With regard to the public health funds (insurance) system, the only source of financing (except for occasional international donation of equipment) is employer contributions equivalent to 10% of gross salaries. This contribution is mandatory for all public organizations and many private firms also contribute, and the potential beneficiary population is large (40% of urban population). However, significant

numbers of middle to high income groups who are eligible beneficiaries do not use the services. This has a somewhat progressive effect in that this system provides health care to low income urban dwellers that is effectively subsidized by the higher income groups.

Private sector providers almost exclusively serve middle to high-income urban households. Pre-paid medicine programs have emerged as a way of providing private medical care to a greater number of people at lower costs (but higher than the public sector). These programs offer “packages” of health care services for illnesses or conditions that are fairly predictable for both the consumer and the provider. PROSALUD is an interesting private sector alternative of high quality health care for low-income urban groups who are willing to pay for quality care.

International cooperation funds play an important role in the financing of the health sector, especially in terms of fixed investments, and several large projects have been funded with support from these funds. These projects have had a significant impact on construction of new health centers, and have generally improved the quality of health care in these centers.

There are several important lessons from this study. First, given the new financing structure of public services, combined with the strict fiscal discipline in place since 1985, an increase in Central Government expenditures in the health sector is very unlikely. The Government is taking important steps to increase tax revenues through better collection mechanisms and enforcement, but this increase is more likely to reduce the fiscal deficit rather than increase expenditures. Second, thanks to Popular Participation, Municipal Governments now have primary responsibility for the delivery of health services which, combined with greater social pressure at the local level, will most likely result in an increase in tax revenues at the municipal level. However, given the historical neglect in all public services in most municipalities, only part of this increase in revenue will go to health care. Third, there is a significant proportion of users of public health care facilities in urban areas (SNS and health funds) who belong to the highest income quintiles and could potentially pay higher user fees for the services they receive. At the same time, many high income patients who are eligible to use facilities belonging to public health funds actually choose private providers instead.

Our findings suggest that equity and efficiency issues in Bolivia’s public health care system can be better addressed by more careful rationing of service delivery according to income. There is also some potential for increasing the contributing base to public health funds (medium and large size private firms, as well as micro-enterprises and the informal sector) which, combined with more careful rationing of users, would increase significantly the access to health care by the poor, especially in urban areas. At the same time, the government should evaluate different ways of making facilities belonging to health care funds more accessible to the rural poor. Also, it is recommended that the current financing structure (which separates staff

costs from investment and other recurrent costs) be evaluated carefully in terms of the efficiency and sustainability of health care delivery. The strict fiscal constraints of the Central Government will limit the amount of staff costs that can be borne by the state, and the Municipalities will have to find alternative sources of finance for covering staff costs, such as increased user fees at their local health care facilities.

The Bolivian experience provides many important lessons for other countries considering decentralization in their health sectors. Decentralization certainly provides a more effective incentive structure for public health care facilities, and encourages more careful attention to finances, quality control, and defining priorities, though there is always the danger that national health priorities could be neglected. Decentralization also encourages local decision-makers to seek alternative sources of funds for health care. This may include higher user fees, specific taxes, or other mandatory contributions administered locally. The Bolivian experience also highlights the importance of carefully defining the financing responsibilities of central and local governments, since a purely technical separation of budget items by financing source may result in a sub-optimal mix of the various factors required for health care delivery.

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S.D. 23813, July 1, 1994: Regulations for Economic and Patrimonial Aspects of the PPL.

S.D. 23858, September 9, 1994: On Civil Society and the Popular Participation Process.

It is estimated that in Bolivia there are 12,000 rural organizations and 8,000 neighborhood juntas.

S.D. 23818, July 8, 1994: The Demarcation Commission is created to LEVANTAR LOS MAPAS PROVISIONALES DE LAS DIFERENTES SECCIONES MUNICIPALES Y UBICAR SUS POBLACIONES.

S.D. 24182, December 12, 1995: Establishes the percentage which the municipalities should assign towards human development, with an end to accede the departmental resources and the development funds. The assignments are certified by the sectoral secretariats.

Appendix 1

Bolivia: No. of Cases of Malaria and Tuberculosis 1982-95

	<i>Tuberculosis</i>	<i>Malaria</i>
1982	4,777	6,699
1983	5,178	14,441
1984	4,131	16,338
1985	7,679	16,017
1986	6,837	20,993
1987	8,960	24,891
1988	10,664	22,257
1989	12,563	25,367
1990	11,166	19,680
1991	11,223	19,031
1992	9,520	24,486
1993	8,614	27,475
1994	9,392	34,835
1995	9,551	46,911

Source: UDAPSO, based on S.N.S

Appendix 2

Health Care Packages of the National Mother Child Insurance Program

Packages	Value (Bs.)
Normal Pre-natal (includes four visits)	5
Vaginal Birth	35
C-Section	220
Post-partum Care	2
Third Trimester Hemorrhage	110
Puerperal Hemorrhage	25
Eclampsia and Severe Pre-eclampsia	100
Pre-eclampsia	55
Puerperal Infection/Sepsis	210
Risk of Pre-mature Birth	250
Pathological Ictericia in Newborns	15
Newborn with Congenital Disorder (?)	35
Hospital Care for Pneumonia/Sepsis	85
Hospital Care for Pneumonia (Critical)	100
Hospital Care for Diarrhea	25
Ambulatory Care for Diarrhea	2
Blood Group Test	2
Hemogram	2
Partial Urine Exam	2
VDRL or RPR	2
Glycemia	2
X-Rays for Children's Thorax	10

Source: UDAPSO based on NHS