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MONGOLIA

The Mongolian Health System at a Crossroads

An Incomplete Transition to a Post-Semashko Model

January 2007

Working Paper Series on

MONGOLIA

THE MONGOLIAN HEALTH SYSTEM AT A CROSSROADS
AN INCOMPLETE TRANSITION TO A POST-SEMASHKO MODEL

Paper No. 2007-1

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CURRENCY EQUIVALENTS

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Currency Unit	=	Mongolian Tugriks
1 MNT	=	US$0.0008584
US$1	=	1,165 MNT

FISCAL YEAR
January 1 to December 31

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
aimag	Province
Bagh	town or village
CIS	Commonwealth of Independent States
DMS	Division of Medical Services
DMS	Directorate of Medical Services
DOTS	Directly Observed Treatment Smart Course
ECPS	Essential and Complimentary Package of Service
EGSPRS	Economic Growth Support and Poverty Reduction Strategy
EU	European Union
FGP	Family Group Practice
FSU	Foreign Soviet Union
GDP	Gross Domestic Product
GFATM	Global Fund on AIDS, Tuberculosis, and Malaria
GMP	Good Manufacturing Practice
HIF	Health Insurance Fund
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HMIS	Health Management Information System
HSDP	Health Sector Development Program
HSMP	Health Sector Strategic Master Plan
IMR	Infant Mortality Rate
LSMS	Living Standards Measurement Survey
M&E	Monitoring and Evaluation
MMR	Maternal Mortality Rates
MOH	Ministry of Health
MPRP	Mongolian People's Revolution Party
NGO	Non-government Organization
NHA	National Health Accounts
NSO	National Statistics Office
OECD	Organization for Economic Cooperation and Development
PHC	Primary Health Care
PLSA	Participatory Living Standards Assessment
PSMFL	Public Sector Management and Finance Law
RDF	Revolving Drug Fund
RDTC	Regional and Diagnostic Treatment Centers
RHS	Reproductive Health Survey
SARS	Severe Acute Respiratory Syndrome
SES	Sanitary Epidemiology Services
SIA	State Inspection Agency
soum	district
SPC	State Property Committee
SSIA	State Specialized Inspection Agency
SSIGO	State Social Insurance General Office
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
SWAp	Sector-wide Approach
UB	Ulaanbaatar
U5MR	Under-five Mortality Rate
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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EXECUTIVE SUMMARY

Health Care in Mongolia: At A Critical Crossroads

Mongolia's health system is in disarray, but not for lack of money. The government, in concert with its international partners, is in the process of implementing a new Health Sector Strategic Master Plan (HSMP) 2006-2015. This report is independent of the Master Plan documents (Volumes 1-4), but it is intended to be complementary resources for policymakers and practitioners during the implementation of the plan. The report includes a detailed assessment of challenges for the Mongolian health sector, and an in-depth discussion of key strategic issues for medium and long term.

The main faults in the Mongolian health system are low quality of care and high levels of inefficiency. Without improvements in the financing and delivery of health services, Mongolia's health indicators are unlikely to improve. Like all transition countries, Mongolia has been unable to stem the deterioration in adult mortality, particularly in adult males. Alcohol plays an important role in this, along with cigarettes, high fat diets, and high levels of hypertension and diabetes. In addition, maternal mortality — a good marker of health system performance — continues to be a problem, particularly in rural and remote mountainous regions.

The crux of the problem is the legacy of the Soviet period, during which, the health system was organized according to the Semashko model. In this model, the state is responsible for both the financing and delivery of health care. The system emphasized the provision of health services mainly through hospitals, and as a result, Mongolia has inherited a large, inefficient hospital network that provides a low quality of care. Mongolia has more hospital beds than almost any country in the world. In Ulaanbaatar (UB), the number of hospitals and hospital beds is staggering and in rural areas, the hospital system is over-developed in a peculiarly Soviet way, with large numbers of poorly trained health personnel operating virtually without any equipment or modern pharmaceuticals. Many of these hospitals are almost empty shells and cannot provide the level of health services needed to affect health outcomes.

The story of Mongolia's health outcomes is difficult to interpret. On the surface, it appears promising, with apparent year-on-year declines in infant and child mortality. These statistics, however, have not been accepted by the World Health Organization (WHO), which has recorded much higher numbers for infant and child mortality than appear in the Mongolian state statistics. WHO rates are consistent with the one household survey that actually measured infant and child mortality in Mongolia, and the 1998 United Nations Fund for Population Activities (UNFPA) Reproductive Health Survey yielded infant and child mortality rates that were nearly double the rates reported in Mongolia's official statistics. In comparison, the official statistics appear slightly unreliable. If the household survey is correct, then infant and child mortality rates may be stagnating or even increasing. This is conceivable given the recent fluctuations in the maternal mortality rate and the decline in life expectancy. The fact that large numbers of affluent Mongolians are traveling to China and Russia to seek better medical care is consistent with the perception that the Mongolian health care system is little more than an empty shell.

The traditional approach to solving problems is to increase funding to the health sector, but this will not significantly improve the health system in Mongolia as it is already absorbing close to six percent of GDP, which is higher than in most transition countries. Therefore, it is more logical to improve the operating efficiency of the system, such that the same outcomes could be achieved with smaller expenditures. In fact, it does seem likely that, with significant reorganization, the health system could attain substantially better outcomes with lower costs.

The reforms necessary to achieve this greater efficiency are complex. Hospitals will need to be combined to create a smaller number of larger and better hospitals. We have calculated that millions of Tugriks could be saved by rationalizing the hospital sector in UB (the capital city). This money could be used to fund public health programs to improve rural health care particularly at the *bagh* (town, village or sub-county) level, and to fully fund the family group practice (FGP) experiment.

FGPs provide primary health care services to a catchment/community population (usually consisting of 1,200 to 1,440 people), where the practices act as a referral point to secondary levels of care. The FGPs are organized *private* entities providing services on the basis of capitation-based contracts they hold with local administrations, who in turn, give FGPs performance incentives to ensure service to the poor. If properly structured, the primary care system can decrease hospital admissions by treating medical conditions before they become serious, and at less expense. This is particularly important in the case of chronic conditions like diabetes and heart disease, which affect adult mortality.

Rationalizing Hospitals

The HSMP strategy document, or Volume 1, notes excess hospital capacity as a current problem specifically in UB, and proposes a response over the medium-term (2006-2011), but does not propose specific solutions. In fact, many different solutions to the problem of hospitals are possible in Mongolia. The simplest approach is the surgical approach, which would close most of the small, specialist hospitals or merge them with larger hospitals. This would lead to very significant savings. The other solution is to merge all of the hospitals into a single system. This would include hospitals from other ministries (for example, defense and interior) and industry. A more radical solution would be to merge several of the hospitals together into networks. At the *aimag* (or province) level, hospitals are too big, but the bigger problems are their low levels of staff training, their overstaffing, and their lack of equipment and pharmaceuticals. Hospitals at the *bagh* level are little more than clinics with beds, as they have no x-ray machines, only very basic laboratories, and cannot perform surgery. Under these circumstances, it would be better to transport patients to either *aimag* or UB hospitals, which can administer anesthesia and perform surgery.

Family Group Practices Need Strengthening and Increased Funding

The fate of family group practices is a sad one. These were originally set up, with the support of an Asian Development Bank (ADB) loan, to improve the provision of primary care at the *soum* (or county) level. Unfortunately, the FGPs have been neglected. They do not have the clinical capacity to make any serious inroads into hospital admissions and their funding is not sufficient for existence as fiscally viable entities. At the moment, most patients bypass the FGPs and go directly to hospitals for primary care. Unless significant corrections are made, this experiment in family medicine is likely to fail. The new Master Plan has correctly focused on FGPs to form the core of the emerging primary care system, and outlined five strategic actions. Recommendations in this report support those actions, with specific options for the financing and management of a reformed FGP delivery system.

Health Insurance: Where Is It Headed?

One of the most problematic areas in the Mongolian health system is health insurance. Health insurance was supposed to be a panacea and, in the early stages of the transition, it was an important source of revenue for health care. Unfortunately, health insurance has not evolved and Mongolia is caught between a budgetary system inherited from its Soviet past and a partial insurance model, in which the insurance fund is very weak and cannot play the role of purchaser.

At the moment, it is very difficult to make any recommendations about which direction to move the health insurance system whether back to a budgetary system as represented in the new Public Sector Management and Finance Law (PSMFL) or towards a universal social insurance model similar to those in continental Europe, Japan, and parts of Latin America. Without deciding the larger question, many changes could be done in the short run to make the system more efficient and functional. At the very least, the system needs coordinated information and payment systems. The introduction of coordinated payment systems would increase the efficiency of the hospital sector, since the current hospital payment system provides little incentive or scope for the same. The government's Master Plan has made provisions to study the health insurance system towards a plan of reform in the future (during 2008-09). This reform will target the information and payment systems, as a part of a longer-term strategy to determine a sustainable position for health insurance in the health financing continuum.

The Privatization of Health Care: Proceed with Caution

The unrestricted growth of private health care organizations, especially in UB, should also be noted. Mongolia now has more than 500 registered private providers. Most are clinics, but some are hospitals with very few beds. The unregulated growth of the private sector is a recipe for future disaster as Mongolia already has too many hospitals and health professionals.

Fragmented Stewardship

In the recent past, the stewardship function of the Ministry of Health (MOH) had all but disappeared under a continuing process of governmental reorganization. Health functions were split between the MOH, the Directorate for Medical Services, the Health Insurance Fund (HIF), and the State Inspectorate, with areas of overlapping authority and power. Sadly, the Sanitary Epidemiological Service (SES), the great public health success story of the Semashko era, was dismantled with no replacement. The reorganized public health system splits responsibility between the MOH and the new State Inspection Agency (SIA). This may fragment health sector planning authority even as the HSMP envisages the adoption of a Sector Wide Approach (SWAp) to manage the ongoing restructuring of the Mongolian health sector. In addition, sector wide decentralization is proposed, with one intended payoff the increased responsiveness of the institutional mechanism to emergencies. The MOH will face challenges of authority and effective stewardship to undertake these significant and large-scale reforms, such as restructuring the hospital sector.

The Government's Role in Regulating the Health Sector

To strengthen the health system, the government will need to improve its ability to regulate as well as to monitor and evaluate the health system's performance. It must have the ability to implement a wide range of public health programs, from immunization to the primary prevention of cardiovascular disease. A unified Health Management Information System (HMIS) is proposed in the HSMP which will end the currently unsystematic or purely program-driven supervision. This development should help move towards more routine Monitoring and Evaluation (M&E), while also allowing the monitoring of unique, focused national programs. Additionally, the government needs to have the power and information to regulate the nascent private sector. The HSMP proposes to establish new mechanisms for legal and financial regulation of the private health care sector, within an overall plan for its development.

The Link between Financing and Service Delivery

Although large structural changes are needed in the health care delivery system, these cannot be accomplished without concomitant changes in health care financing. Health financing and service delivery issues are inextricably intertwined. The historically low level of specific funding seems to have

negatively impacted both the achievements of the FGPs and the public health system. Meanwhile, the hospital sector absorbs over two-thirds of health spending, but cannot boast commensurate achievements. An urgent need exists to improve the quality and efficiency of the hospital sector by linking financing and service delivery and by improving the quality of the care provided. This paper's recommendations on restructuring the hospital sector would free up resources if implemented, reducing the pressure on traditional sources such as the HIF in the Medium Term Expenditure Framework of the government.

CHAPTER 1: HEALTH OUTCOMES AND CHALLENGES

Key Facts

- **Nearly half of all Mongolians are engaged in herding or agriculture. Harsh winters and periodic droughts have adverse effects on livestock and agricultural output, which together account for at least 20 percent of GDP.**
- **Per capita income is under US$600 and one-third of the population lives below the poverty line.**
- **A severe economic downturn (from 1990 to 1994) increased unemployment, crime, homelessness and alcoholism and reversed improvements in health and education indicators achieved during the Soviet era.**
- **Adult mortality is rising, with cancer, cardiovascular disease and accidents acting as the biggest contributors to this rise.**
- **Maternal mortality rates are fluctuating instead of gradually decreasing and are particularly high for women giving birth in hospitals.**
- **MOH statistics reporting a steady decline in infant and child mortality rates appear to be inaccurate, raising concerns about the country's health information systems.**
- **Poor people and those living in rural areas are the worst affected by health system failures.**

1.1. INTRODUCTION

Situated in the Central Asian steppes, Mongolia is landlocked between Russia to the north and China to the south. It is a vast country (1.6 million square miles), with a total population of about 2.5 million people, making it one of the least densely populated countries in the world. Nearly half of the population lives in rural areas, while one-third lives in the capital city of UB. The fertility rate has decreased in the last decade, while the population continues to age. According to the Population and Housing Census of 2000, 35.8 percent of the population is between the ages of 0 and 14, and people over 65 constitute 3.5 percent. The principal ethnic group is Khalkh Mongols (86 percent). Seven percent of the population is Khazakh and the remainder is of various ethnic groups (Tuvans, Chinese, Buriats, Russians, and Uighars). Most of the population is Buddhist; the Khazakhs, however, are Muslim. Administratively, the country is divided into 21 provinces, known as *aimags*, and one autonomous municipality, UB. The *aimags* are broken down into *soums*, and the *soums* are subdivided into *baghs*. UB is made up of eight districts.

With Soviet support, Mongolia won its independence from China in 1921. Three years later, the Mongolian People's Revolutionary Party (MPRP) assumed power. Mongolia remained a one-party socialist state, supported by the Soviet Union, until 1992. At its height, Soviet economic assistance accounted for one-third of Mongolia's GDP. After 1992, Mongolia became a parliamentary democracy, and since then its government has been controlled by either the MPRP, or a democratic coalition. In the July 2004 elections, the MPRP was unseated and another coalition government was established. Mongolia's transition to a democratic society and a market economy since 1992, while beset by many problems and setbacks, compares favorably to those of most transition countries. Between 1990 and 1994, however, the country suffered an economic depression of considerable magnitude. Widespread poverty, unemployment, and inflation exacerbated a host of social problems such as homelessness, street children, crime, and alcohol

abuse. The economy began to rebound in 1995 and continued to improve until 1999 when severe winter weather combined with droughts (a climatic occurrence known as *dzud*) plagued Mongolia three years in a row. An improvement in the weather and a gradual diversification of the economy — with less reliance on agriculture — has led to annual increases in GDP since 2001. And with a per capita income of US$590 (in 2004), Mongolians earn more than average East Asian low income countries (average US$510). One third of the population lives below the poverty line.[1] Some 46 percent of Mongolians are engaged in herding or agriculture which together account for approximately 20 percent of GDP — down from 30 percent in 1993.[2]

Mongolia's health system, like the country as a whole, is in transition. The move to a free market from a centrally planned economy has had a negative impact on most social welfare services, including the country's Soviet-modeled health care, which made great strides in improving health outcomes. Prior to the dismantling of the Soviet Union, Mongolia boasted a public health infrastructure that reached into every village and was particularly effective against communicable diseases. In spite of the Soviet Union's collapse, the sudden loss of subsidies and the subsequent shift to a market economy, the health system still reflects Mongolia's socialist legacy. The health care system is weak on primary care and continues to be saddled with a large, inefficient hospital sector. Mongolia spends more on health care than any other transition country, but health outcomes for the poor and those in rural areas appear to be declining.

In this report, we present the state of health of the Mongolian population and of the challenges facing the government as it reforms the health system. This chapter examines the recent deterioration in certain key health outcomes. Chapter 2 explores the factors that have contributed to these outcomes, while Chapter 3, provides recommendations for both short-term and long-term actions that the Government of Mongolia can take to rectify many of these perceived problems in the health sector. Finally, in Chapter 4, several specific ways in which the international donor community can support the government in carrying out these reforms are put forward.

1.2. HEALTH INDICATORS

Despite its low per capita income, Mongolia has relatively strong health indicators (Table 1); a reflection of the important health gains achieved during the socialist period. On average, Mongolia's infant mortality rate (IMR) is less than half that of other low income countries with similar GDP per capita. Whether utilizing official government numbers or WHO estimates, the under-five child mortality rate (U5MR) is well below the average of other low-income countries, and its life expectancy at birth (66 years) is higher than the average for low income countries, and only slightly lower than its East Asian neighbors.[3]

[1] Data sourced from background report for PRSP I, the World Bank.

[2] Products derived from livestock (estimated at 10 heads per person) provide rural Mongolians with food, clothing, and shelter as well as cash goods such as cashmere, other wools, meat, and leather products. Other sources of the country's revenue are copper and gold mining, manufacturing, and services.

[3] Large discrepancies exist, however, between the government's own statistics on infant and child mortality and those reported by the World Health Organization (WHO), raising questions about the accuracy of the official statistics and suggesting that Mongolia may be seriously off track in achieving the Millennium Development Goals for health.

Table 1: Key Health Indicators of Mongolia and Selected Regions, 2002

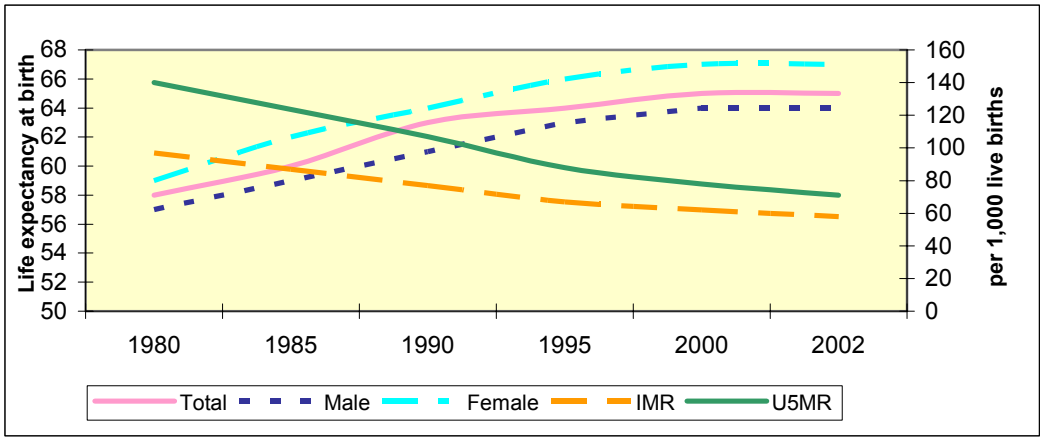
	Mongolia	Low-income countries	East Asia and Pacific	Russia	Kyrgyz Rep
IMR (per 1,000 live births)	30	79	32	18	52
U5MR (per 1,000 live births) WHO estimates	39 75 male 66 female	121	42	21	61
Life expectancy at birth (total)	66	59	69	66	65
GDP per capita (USD)	442	484	1,050	3,257	457

Source: World Development Indicators, Mongolian Ministry of Health data, WHO World Health Report 2002.

1.2.1 Decreasing Infant and Child Mortality

Infant and under-five mortality rates have fallen substantially in the last 15 years. Figure 1 indicates that large improvements were taking place until 1995, but that the IMR and U5MR have relatively leveled off in the past few years. When the data is disaggregated by region, all aimags are shown to have experienced a significant decline in infant and child mortality. For example, in 1990 20 out of 21 aimags (except Tuv) and UB had child mortality rates of greater than 50, but in 2002, only one aimag had a U5MR of over 50 (Gobi Sumber), and only four with rates above 40. The year-on-year rate of change does not suggest that the decline in these rates is slowing.

Figure 1: Improvements in Life Expectancy Compared with Infant and Child Mortality Rates



Source: MOH.

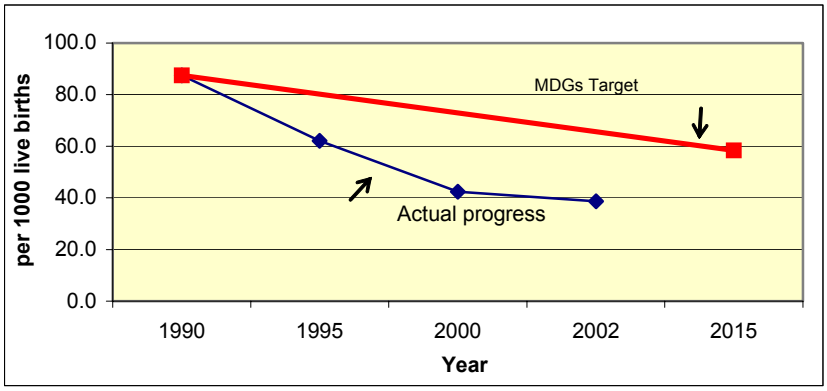
For infants, the main causes of death are respiratory infections, birth trauma, diarrhea, congenial malformations; for children between the ages of one and four, the main causes are respiratory infections, diarrhea, and injuries. One contributing factor to the decline in infant and child mortality might be the high rate of vaccination. This includes vaccinations for measles, diphtheria, pertussis, tetanus, polio, mumps, rubella, and more recently, hepatitis B. No cases of pertussis, diphtheria, and tetanus have been reported since 1995, and in 2000, Mongolia received the WHO certificate for polio eradication. Another protective factor is the high rate of breast-feeding, as routine information indicates that 98 percent of children are exclusively breastfed (MOH, 2002).

Box 1: Improving Data on Infant and Child Mortality

Infant and child mortality rates data from MOH convey a positive picture. Infant and child mortality rates appear to have fallen steadily since 1990, even though the decline began during the Soviet period. In 1980, infant mortality at the national level was 78.9 [per 1,000 live births] and had declined to 63.42 by 1990. By 2002, the rate had dropped even further to 30.42. As for the U5MR, in 1990 the national average was 87.48 [per 1,000 live births], but by 2002 the rate dropped to 38.7.

The steady and continuous decline in both infant and child mortality, as reported by the National Statistical Office (NSO), suggests that Mongolia is on track for achieving the Millennium Development Goals target.

Progress in Under-five Mortality in Mongolia, 1990-2015



Source: MOH Health Statistics.

Other data sources, however, call into question the reliability of the government's data. While these data undoubtedly capture the overall trend, they are less accurate regarding the magnitude of that trend. The 1998 Reproductive Health Survey (RHS),[4] and the WHO find significantly higher infant and U5MR than was represented in the official statistics. According to WHO, under-five child mortality in Mongolia in 2002 was 75 (per 1,000 live births) for males and 66 for females — both figures much higher than the rate of 38.7 per 1,000 as reported by the MOH and the NSO.

The development of an effective health information system based on surveillance and related to infant and child mortality is urgently needed to assist Mongolia in making informed decisions regarding interventions. The best strategy is likely a combination of household surveys and sentinel surveillance sites. Local health information systems need to be improved and their scope widened to include the collection of data on all deaths. When national household surveys are conducted, over-sampling in sentinel site areas would complement the data previously collected in the population laboratories. Sentinel sites could provide the kind of detailed and qualitative information needed to understand what is happening in terms of health outcomes in Mongolia.

[4] The 1998 Mongolian Reproductive Health Survey was the first nationally representative population and health survey carried out in Mongolia with a sample of 6,003 households, in which 7,461 women of reproductive age (15 to 49) were interviewed, as well as a sub-sample of 1,557 husbands.

1.2.2 Rising Adult Mortality

While infant and child mortality rates appear to be declining, adult mortality rates are on the rise. Similar to other industrialized countries that have experienced the epidemiological transition, the major causes of death in Mongolia are cardiovascular disease, cancer, and injuries. Table 2 shows causes of death by age groups.

Table 2: Leading Causes of Deaths by Age Group

0 to 1	Respiratory	1 to 4	Respiratory	5 to 14	Injury
	Birth trauma		Digestive		Respiratory
	Digestive		Infectious and parasitic		Nervous system
	Congenital		Nervous system		Digestive
	Infectious and parasitic		Skin and subcutaneous		Cancer
15 to 19	Injury	20 to 45	Injury	45 to 64	Cardiovascular
	Infectious and parasitic		Cardiovascular		Cancer
	Cancer		Cancer		Injury
	Cardiovascular		Digestive		Digestive
	Digestive		Infectious and parasitic		Respiratory
65+	Cardiovascular				
	Cancer				
	Digestive				
	Respiratory				
	Genito-urinary				

Source: MOH Annual Report, 2000.

Cardiovascular disease is the number one cause of death for people over the age of 45, and number two for people between the ages of 20 and 45. The incidence of circulatory disease has been rising rapidly ─ from 162.30 in 1990 to 449.52 in 2002. Outstanding diagnostic issues, such as differences in disease definitions, make the rise in incidence of cardiovascular disease difficult to interpret. Definitions of hypertension, myocardial infarction, congestive heart failure, and cerebro-vascular accident vary within the country. The high incidence of cardiovascular mortality, however, is consistent with the rates that prevail in other transition countries (McKee, 2003).

The second major cause of death is cancer, with high rates of liver cancer and low rates of colon, cervical, and breast cancer. Although rates for cervical cancer are relatively low, the death rate is high, suggesting the need for greater testing for cervical cancer at the primary care level. The high rate of liver cancer can be partially due to the relatively high rates of alcoholism, as a link is suspected between liver cancer and cirrhosis of the liver. For this reason, the government should review its policy on alcohol and consider introducing stringent taxes on alcohol to curb consumption. Furthermore, a need to strengthen existing alcohol treatment services also exists.

Estimates claim over 50 percent of adult males smoke, and the prevalence rates of women smokers is rising. Smoking combined with indoor air pollution, common in Gers[5], significantly increases the relative risk of lung cancer. Note that smoking is also a risk factor for cardiovascular disease. Further research on the potential of increased taxation on tobacco products, public information, and cessation interventions for decreasing smoking are needed.

[5] Gers are tents used by nomads in Mongolia (sourced from URL: http://www.buryatmongol.com/ger.html).

Table 3: Types of Cancer and Prevalence within the Mongolian Population

Rank	All	Male	Female
1	Liver (37.4%)	Liver (40.2%)	Liver (34.1%)
2	Stomach (15.1%)	Stomach (18%)	Cervical (14%)
3	Lung (12.1%)	Lung (16.2%)	Stomach (11.5%)
4	Esophagus (9.2%)	Esophagus (8.7%)	Esophagus (9.7%)
5	Cervical (6.3%)	Testicular (1.5%)	Lung (7.2%)

Source: MOH Annual Report.

The third largest cause of death in Mongolia is injury. High rates of injuries are prevalent at all ages, but particularly in young adults. Better information is needed about what kinds of accidents are occurring, but many are related to the combination of motor vehicles and alcohol. Many new drivers are not well trained, and many accidents in rural areas are related to herding. The high rate of accidents illustrates the importance of strengthening emergency services at all levels, including at the primary care level in rural areas.

With respect to communicable diseases, the greatest threat comes from tuberculosis. The registered incidence of tuberculosis almost doubled from 79 to 141 per 100,000 between 1990 and 2001. This rise in the incidence rate of tuberculosis is due partly to an increase in poverty, but also to improved detection and reporting. Mongolia introduced the Directly Observed Treatment Short Course program (DOTS) in 1995, and by 1999 it covered all of the *aimags*. Since the introduction of DOTS, the cure rate for new cases of tuberculosis has increased steadily from 31.4 percent in 1990 to 83.4 percent in 2002.

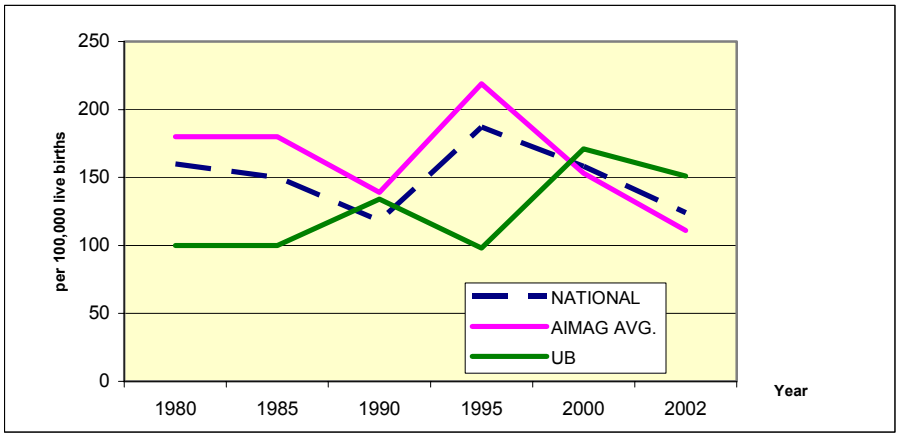
Recently, Mongolia was awarded a grant from the Global Fund on AIDS, tuberculosis, and malaria (GFATM) to fund programs to fight tuberculosis and HIV/AIDS. HIV/AIDS does not appear to be a problem, as only four cases have been registered since 1992, and two of whom died of HIV/AIDS. Although HIV prevalence is very low, some factors indicate potential risk for the spread of the disease in the future. A surveillance study carried out in collaboration with WHO found that 58.8 percent of male clients at sexually transmitted infection (STI) clinics did not use condoms with commercial sex workers. Commercial sex workers are common in industrial towns and in UB. In addition, injecting drug users risk a potential epidemic of HIV/AIDS. Little is known about injecting drug users in Mongolia, though their numbers appear to be small, as fewer than 20 drug users are registered in the narcology service. Given Mongolia's long border with Russia, particularly near Irkutsk, which had a serious outbreak of HIV/AIDS among injecting drug users, HIV/AIDS could potentially spread through injecting drug use. The MOH with the support of WHO and GFATM currently is running an extensive program of condom promotion among commercial sex workers. A program of harm reduction among injecting drug users does not exist, and drug treatment services in Mongolia are poorly funded and underdeveloped.

The situation seems particularly worrisome in light of the rapid growth in STIs in recent years. The reported incidence of STIs increased from 10.96 per 10,000 in 1990 to 62.78 per 10,000 in 2002. In UB, the reported increase was even higher, rising from 14.59 per 10,000 to 88.96 per 10,000 in the same period. These figures likely underestimate the actual increase, since many people receive treatment for their STIs from private health care providers. Mongolia would benefit from the establishment of sentinel surveillance sites for STDs. These sites are necessary to determine the particular organisms that patients have contracted and their bacteriological resistance. Given the growth in STIs, it would be prudent to incorporate the treatment of STDs into primary care and to provide first-line drugs free of charge.

1.2.3 Fluctuating Maternal Mortality

Maternal mortality rates (MMR) in Mongolia are many times higher than in the former Soviet Union, in Eastern Europe, or in the OECD.[6] In 1990, on the cusp of Mongolia's transition, MMR was 118 per 100,000 live births. Three years later, the rate had more than doubled to 243. The introduction in 1992 of WHO-recommended reporting standards, which required countries to include deaths due to abortions, stillbirths, and extra-uterine pregnancies in the maternal mortality rate, may be partly responsible for the increase. Nevertheless, the rate did not drop back to its 1991 ratio of 124 per 100,000 live births until 2002. For the country as a whole, the rate appears to be declining, or perhaps fluctuating, given the inherent statistical instability of the indicator. National statistics, however, mark the worsening of MMR in some provinces, including Tuv, Uvorkhangai and Zavkhan.

Figure 2: Trends in Maternal Mortality in Mongolia, 1980-2002



Source: MOH.

The high rate of maternal death among women with good access to health services is particularly interesting. According to the MOH's statistics**,** 99.6 percent of babies were delivered in hospitals, and the reported coverage of antenatal care was 98.5 percent of pregnancies in 2002.[7] The high rates of hospital births and antenatal care were validated by the UNFPA reproductive health survey, which found that 96 percent of women giving birth during the previous five years received antenatal care and 94 percent of births took place in hospitals. The data then imply that maternal deaths are occurring in hospitals. Specifically, two-thirds of the deaths are occurring in *aimag* and tertiary hospitals. These high death rates in hospitals suggest possible problems with the quality of care. At the *soum* and *bagh* levels, the MOH attributes the problems to "a shortage of medicines and equipment, poor communications and referral systems, and low skilled medical personnel and inadequate capacity to deal with the complications during pregnancy and delivery**."**[8] An official explanation for the high rate of mortality at the *aimag* and tertiary facilities is not given.

Improving maternal care should be a high priority for both primary care facilities and hospitals. First, it would be useful to introduce a more systematic method of gathering information on maternal deaths. All deaths should be investigated to understand their causes and what could be done to rectify similar problems in the future. Other countries investigate by carrying out a confidential inquiry into every maternal death. These inquiries are useful in discovering the failure in the causal chain that lead to the mother's death. In

[6] The MMR is not the most informative indicator because maternal death in childbirth is relatively rare, and because the denominator is per live births, the indicator is also affected by the decline in births. However, even with these caveats, the increases in maternal mortality since transition are striking.
[7] MOH, Annual Report 2000.

addition, the government should consider including "near-misses," that is, when a mother almost dies during childbirth, as part of the group to study. In this manner, the hospital could see what procedures are used in successful cases, as well as what could be pursued differently in unsuccessful cases.

These high death rates suggest that better clinical protocols for labor and delivery, particularly for managing complex pregnancies, may be needed. The government will need to decide whether *soum* hospitals have the capacity to carry out more complex interventions associated with obstetric complications such as caesarian sections. If *soum* hospitals cannot reach this level of care, the women in question, particularly at the *bagh* level, will need to be transported to *aimag* or UB hospitals.

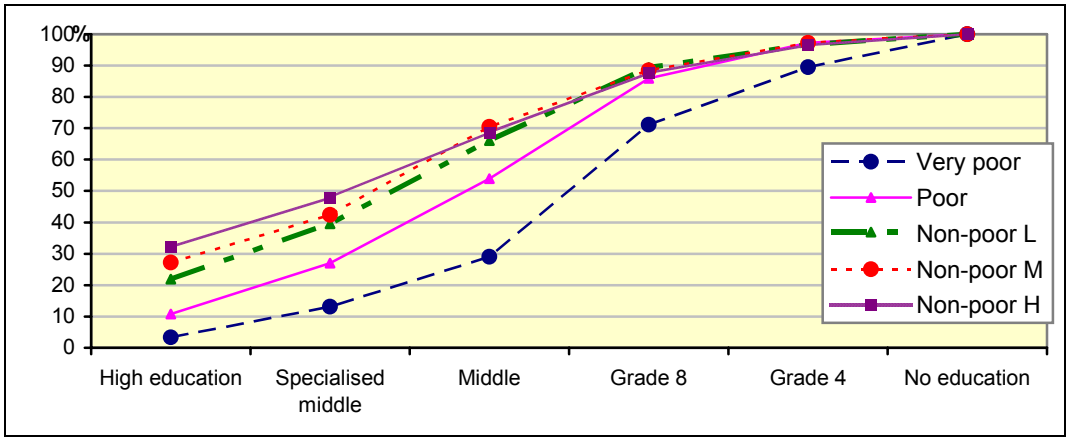
The relatively high rates of death in secondary and tertiary hospitals are particularly troubling. The causes behind these trends are still largely unknown as research is lagging. One way to improve labor and delivery services would be to increase funding to equal the real costs of providing services and to set payment rates to cover the real costs of the services specified in protocols. This topic is discussed more fully in Annex 4 on payment systems.

Another important reproductive health issue is the high rate of abortion. In 2002, the official statistics indicate that one abortion occurred for every five live births in Mongolia, but the actual number may be higher since many are carried out in the private sector, and therefore, are not reported. Many women have multiple abortions,[9] and the high rate of abortion may be a contributing factor to the high MMR.

1.3. CORRELATION BETWEEN POVERTY, EDUCATION, AND HEALTH OUTCOMES

This section focuses on the relationship between poverty, education and health outcomes. Mongolia's poor currently spend a higher proportion of their income on health care than the wealthy and an estimated 20 percent postpone seeking health care or do not follow prescribed regimens of care due to lack of funds.[10] As in all countries, there is a strong correlation in Mongolia between educational level, poverty, and in turn, health outcomes. In Mongolia, only 3.4 percent of household heads of the poorest quintile have any type of higher education, compared with 32 percent of non-poor household heads. People with lower education levels are less likely to know how to prevent illness and promote their own good health, less aware of their rights to services, and less articulate in expressing their needs for and expectations of service. With respect to expressing one's needs and concerns, in the 1998 RHS, the poor reported an unwillingness to ask questions of care providers or demand better service for fear of being denied service (NSO-NDP, 1999).

Figure 3: Cumulative Education Level of Heads of Households by Poverty Category



Source: Tungalag, 2001.

[9] UNFPA, Reproductive Health Survey, 1998.
[10] PRSP I background report.

A prominent health problem deeply correlated with poverty is malnutrition among children, which in Mongolia, seems to especially affect rural areas. In 1990, it was estimated that 6 percent of children were underweight (weight for age), but by 1999, it was estimated that 12 percent were underweight.[11] According to the 1998 Living Standards and Measurement Survey (LSMS), the total expenditure of the poorest 20 percent of the population fell below the amount required to buy adequate food, even if all of the households' expenditure were to be allocated to food. Another study concluded that those below the subsistence level met only two-thirds of their necessary minimum calorie consumption. In the countryside, people tend to consume too much fat due to their dependence on meat and dairy products and it is estimated that over 50 percent of children are anemic (MOH). The main problem is inter-household distribution of food, as a wide discrepancy is present between the daily dietary consumption for men on one hand, and for women and children on the other.

The health care system can play an important role in reducing malnutrition. Primary health care providers should track children's weight and height per age with growth charts (the Integrated Management for Childhood Illness protocol requires that all primary care facilities have scales for infants and children) and provide advice to parents on improving dietary practices Primary care providers should also be diagnosing micronutrient deficiencies, particularly iron deficiency, as anemia is common among pregnant women and children, and should provide iron and folate supplementation as part of the essential package of services.

At the broadest level, the health system can assist in educating the population on health-related risks. The system could pursue public information campaigns that aid in discouraging risky behavior such as smoking and high fat diets. Such campaigns could further be re-enforced by health information at the primary care level.

1.4. GEOGRAPHIC VARIATION IN HEALTH OUTCOMES

Mongolia's health outcomes differ not only across income groups, but also geographically. The 21 *aimags* vary substantially from one another in terms of size, wealth, population numbers, and density. Evidence also indicates that the quality of health services is far from uniform across *aimags*. For example, the increase in MMR during the transition has been highest in rural areas (MOH, 2003). In addition, IMR differs widely across the aimags, ranging from 19.9 in Darkhan-Uul to 57.5 in Govi symber (Table 4).

Disparities may be explained by the significant decline in health care quality in rural areas. The 1998 LSMS revealed that people in rural areas attended health facilities only half as frequently as those in urban centers due to the perceived low quality of care. In 1999, 63 percent of *feldshers* (village health workers with limited formal training generally funded by the collective farm) in the *baghs* either were not operating or did not exist (UNICEF, 2000). The 2000 PLSA (NSO-World Bank, 2001) elaborated on some of the reasons why poor people do not utilize public health services:

- The high costs of care even for insured people;
- A shortage of drugs in stock (often meaning that drugs of questionable quality have to be purchased from private traveling salespeople at high prices);
- The remoteness of most health facilities; and
- The perceived poor quality of services (particularly in *soums* due to a shortage of trained staff, equipment, and drugs).

[11] MOH, Situational Report, 2002.

Table 4: 2003 Mortality Rates

	MMR/1000	PMR/ 1000	IMR/ 1000	<5yr MR/ 1000	Pop Density
Arkhangai	1.05	15.1	24.6	30.9	1.7434
Bayan-Olgii	1.4	38.0	37.3	49.0	0.7273
Bayan Khongor	0.6	28.6	44.5	61.2	0.7273
Bulgan	0.0	16.3	27.3	38.2	1.2641
Govi-Altai	0.8	25.7	33.0	46.1	0.4578
Dornogovi	1.1	23.9	29.6	38.3	0.4651
Dornod	0.8	29.6	40.6	50.4	0.5909
Dund govi	0.0	10.9	26.9	28.9	0.6874
Zavhan	2.6	23.0	39.5	49.2	1.0123
Ovork hangai	2.8	20.3	31.7	40.1	1.7379
Omno govi	0.0	9.5	48.5	59.1	0.2840
Sukh baatar	1.0	22.6	32.5	44.9	0.6626
Selenge	2.2	19.0	29.5	39.9	2.3270
Tov	3.0	20.0	21.2	29.2	1.2997
Uvs	1.6	19.7	30.9	40.8	1.1969
Khovd	0.5	27.5	35.0	42.5	1.1782
Khovs gol	0.4	24.6	30.4	41.0	1.2252
Khentii	0.7	25.7	41.2	47.8	0.8459
Darkhan-Uul	0.0	10.6	19.9	27.1	26.6671
Orkhon	0.0	21.8	28.1	31.9	94.0524
Govi symber	4.5	43.3	57.5	62.0	2.3428
Average Aimag	**1.1**	**23.0**	**33.0**	**42.3**	**1.0326**

Source: Else, 2004.

CHAPTER 2: UNDERSTANDING MONGOLIA'S HEALTH SYSTEM

Key Findings:

- **Mongolia is spending enough on health care, but not achieving strong outcomes.**
- **The HIF is not fiscally sustainable.**
- **Existing data on health outcomes and out-of-pocket spending are questionable.**
- **Allocative efficiency (the proportions of spending devoted to hospital care, primary care, and public health) and service delivery need to be improved.**
- **Mongolia's bloated hospital sector (which currently accounts for more than 70 percent of health spending) is inefficient and is handling cases that could more efficiently be dealt with by smaller health care institutions.**
- **Primary care and family group practices are under-funded, under-regulated, and suffer from poor public perception.**
- **Spending on public health appears to be too low, but with current budget categories, it is impossible to track public health expenditures accurately.**

This chapter discusses the main constraints facing the health system, their impact on accessibility, health financing options and the quality of service delivery. In the first part of the chapter, we study the potential causes of allocative inefficiency afflicting the health financing sector and investigate how the inadequacy of this model can, in turn, affect service delivery, primary care and the pharmaceutical sector. In connection with this analysis, we more specifically assess the main issues that negatively affect the public health sector. In the second part of the chapter, we focus on the structural problems plaguing the health sector from budgetary, legal and administrative perspectives. We find that the issues affecting the budget process, while keeping it disconnected from policymaking are deeply intertwined with the uncertainty surrounding the legal system. These drawbacks can be seen as a result of the weakening of MOH authority and the fragmentation of the regulatory framework. Given the complexity of the analysis, we addressed the issues from a holistic point of view, trying to emphasize the many linkages and externalities that can make the difference in health sector reform.

2.1. CONSTRAINTS DUE TO THE SOVIET LEGACY

Mongolia inherited a health care system based on the Soviet Union's Semashko model,[12] in which the state was responsible for both the financing and delivery of health care. All health facilities were publicly owned and were staffed by civil servants on a uniform pay scale. This legacy consists of strengths and weaknesses: a strong system of public health care for communicable diseases; a weak system of primary care; an extensive rural health system; a large, fragmented, and inefficient hospital sector; input-based line-item budgeting for health facilities; public financing through taxation; and publicly owned health facilities. The positive results of the Semashko system include the significant progress that was made in reducing

[12] The Soviet Union introduced the first National Health Service, known as the Semashko model, the first Minister of Health of the USSR. All health care facilities (such as hospitals and primary care practices) were nationalized and became the property of the state. The health services shifted from being financed by employment-based insurance to being funded from general taxation. All citizens were eligible for free medical care at the point of access. This model is also known as the Beveridge model, which refers to the United Kingdom's National Health Service introduced in 1948. The NHS of the UK is actually a variation of the Semashko model, which was introduced in the late 1920s.

infant, child, and maternal mortality, and infectious diseases prior to the transition. As a result, health outcomes in Mongolia were much better than in other countries with similar per capita incomes, which given its low-density population was a remarkable achievement. Mongolia, like many former Soviet countries, however, has failed to cope with the epidemiological transition and health outcomes for noncommunicable diseases among adults are of growing concern.

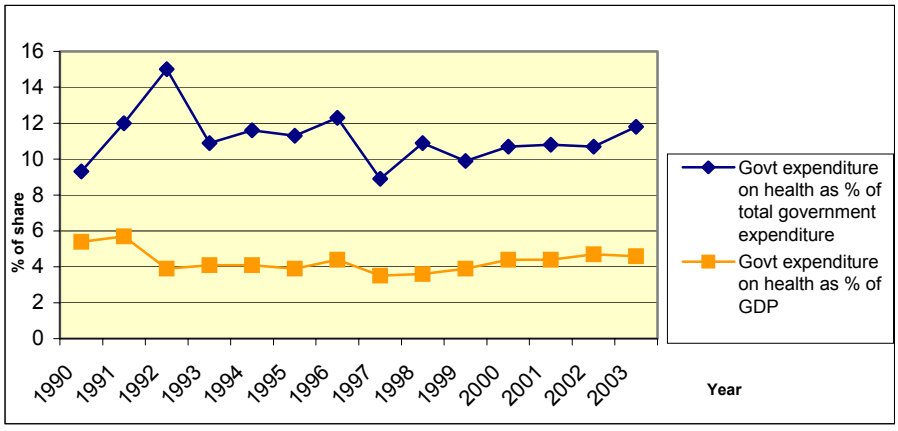
Box 2: Mongolia Health System Pre-Transition

Pre-transition, the primary care system in urban areas was based on polyclinics. Separate polyclinics existed for children, adult men, and women. Each polyclinic had catchment physicians, responsible for health and preventive care within a defined geographic area. Each polyclinic had diagnostic services and a laboratory, as well as a large group of ambulatory sub-specialists such as gastroenterologists and cardiologists. Generally, the first contact physician referred most patients to the sub-specialists in the polyclinic. In rural areas, polyclinics were associated with particular hospitals, whereas in urban areas, they were often legally independent entities. In the lower level of the rural system, there was either a small rural hospital that provided primary care or a stand-alone primary care unit without beds. At the village level there was a *feldsher*. Part of this success can be attributed to the extensive health care system that reached all of the population, even in Mongolia.

2.2. HEALTH FINANCING DIAGNOSTICS

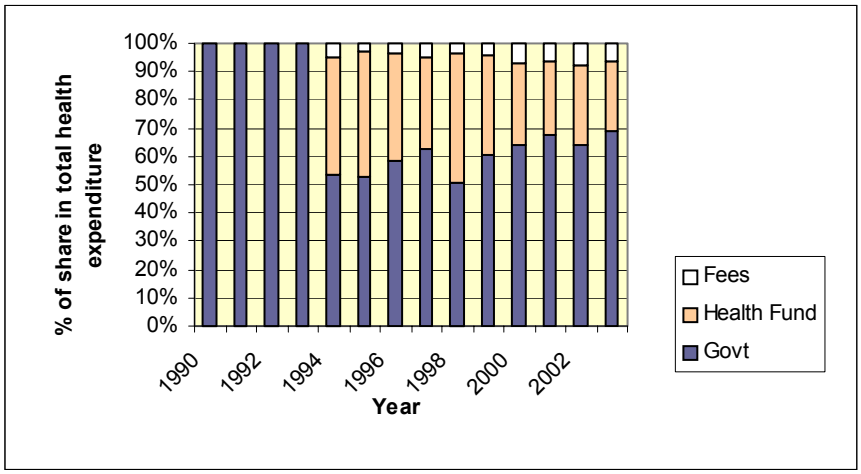
Over the decade, Mongolia has been able to keep health spending at a higher level than most other transition countries, even though its spending is low by Eastern European (5.84 percent) and European (8.86 percent) standards. On average, countries in the former Soviet Union spent 2.91 percent of GDP on health in 2002, compared with 4.7 percent for Mongolia. As a percent of total government expenditure, health has accounted for roughly 10-12 percent over the past decade (Figure 4).

Figure 4: Trends in Health Expenditure



Source: MOH.

Figure 5: Sources of Health Expenditure



Source: MOH Annual Statistics.

Since independence, Mongolia has moved away from the Semashko model by introducing in 1994 a social health insurance plan modeled after those of continental Europe (known as the Bismarkian model).[13] As yet, this health insurance initiative has not been fully developed, and health care is financed mainly from the budget. In 1995, health insurance accounted for 44.2 percent of health spending, but has since fallen to 24.9 percent (2003), while fees have slightly risen.[14] This increase in fees is due to the decrease in government employment (as in all transition countries) as government employees are the most reliable source of income for the HIF.

Private or out-of-pocket spending data as reported by MOH, is unusually low as compared with other transition countries. Statistics provided by the MOH in the HSMP Volume 1 suggest that out-of-pocket payments have ranged between 2.4 to 3 percent of total health spending in recent years. Data from a 2003 household survey, confirm this low level of out-of-pocket spending, even though the household survey data may not be capturing the full extent of out-of-pocket spending on health, particularly informal payments.

Table 5: Household Spending (actual per month)

	UB	Aimag	Soum	Rural	National
Total Drugs	2084	1560	1286	931	1468
Hospital Stays	1089	405	178	71	454
OP Clinic	96	26	42	6	41
Ambulatory exams	162	97	53	17	84
Dental	218	69	31	36	97
Other care	128	80	34	22	69
Total Avg.	**3776**	**2236**	**1624**	**1085**	**2214**
% of Total Population	**34%**	**13%**	**14%**	**39%**	**100%**

Source: Household Survey, 2003.

[13] The Bismarkian model, the first social insurance model, was introduced to provide health care to the new organized industrial proletariat. Bismark, the 19th century German Chancellor**,** introduced health insurance through sick funds, non-governmental organizations made up of both employers and unions. This model is still widely used throughout most of continental Europe and Japan, and variants of it are in operation in Latin America. Most Eastern European countries have abandoned the Semashko model and returned to this model since the fall of the Soviet Union.

[14] MOH.

Table 6 presents estimates of monthly spending by households on health care from the 2003 household survey. Some of this spending is already captured in the National Health Accounts (NHA) data as user fees and co-payments, and the 2003 household survey can be roughly reconciled with the NHA data. Differences between spending in the household survey and in the NHA arise in regard to pharmaceuticals. The data from the household survey indicate that the lion's share of out-of-pocket spending is spent on pharmaceuticals. If pharmaceutical spending is added to the current NHA, out-of-pocket spending doubles from 3.6 to 6.5 percent of overall health spending.[15] The recalibration of the NHA spending is provided in Table 6.

Table 6: Recalibration of National Health Accounts, Out-of-pocket Spending, 2002

Preliminary NHA Data	**State Budget**	**Insurance**	**Out-of-pocket**	**Other**	Percentage of GDP
	33,824,970,000 tug	20,168,323,600 tug	2,069,116,200 tug	1,599,808,700 tug	
	US$29,034,309	US$17,311,865	US$1,776,065	US$1,373,226	*4.64%*
	58.7%	*34.9%*	*3.6%*	*2.8%*	
Adjusting preliminary NHA data to reconcile Household Survey	*56.9%*	*33.9%*	*6.5%*	*2.7%*	*4.79%*

High levels of out-of-pocket pharmaceutical spending are consistent across geographical areas, suggesting that there are probably underlying problems in the pharmaceutical system, which are discussed more fully later in this chapter. The proportionally high level of spending on pharmaceuticals by the poor (particularly in rural areas) is particularly striking.

The knowledge base on out-of-pocket spending in Mongolia needs to be increased and a more detailed understanding of private spending on pharmaceuticals is required. It is important to know if households are spending money on drugs that they ought to have received from the hospital. Are households buying essential drugs? Are they buying brand-name drugs rather than generics? Are they spending money on traditional medicine? Only with more detailed knowledge of private spending will the government be able to design policies to decrease the regressive aspects of out-of-pocket spending and to align private and public spending.

2.2.1 *Health Spending Allocation*

Many providers make up the core building blocks of the Mongolian health system (Table 8). The use of funds by provider type reflects the legacy of the Semashko model. Figure 6 below reveals the relative share of spending on hospitals, primary care, and public health. The most striking aspect of the distribution of funds is the high level of expenditure on hospital care vis-á-vis the low level of spending on public health and primary care.

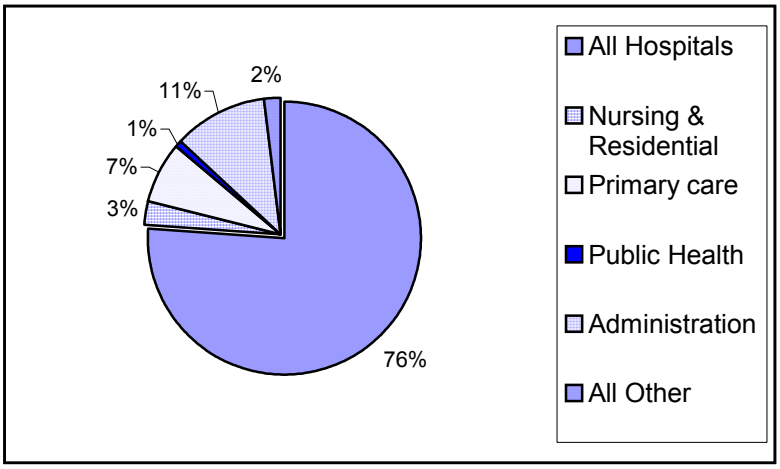
[15] There has been no attempt in this report to reconcile spending data from the household survey with those in the NHA. The household survey data probably overestimate out-of-pocket spending, because some current out-of-pocket spending is captured as user fees in the MOH categories, including co-payments and other fees. However, the MOH data will not capture any under-the-table payments, which are inherently unofficial and thus, undocumented.

Table 7: Health Care Institutions

Health Institutions	Number
Specialized hospitals in UB	17
District hospitals in UB	12
Aimag hospitals	21
Soum hospitals	323
Family group practices	233
Fixed *feldsher* posts	18
Feldshers	(1278)
Private clinics	536
Drug wholesalers	57
Pharmacies	150
Total	**1367**

Note: *Feldshers* are included, but only fixed posts are legal entities.

Figure 6: Use of Funds, 2002



Note: Some public health expenditures may be "buried" in some line item hospital costs. Weaknesses in the accounting and chart of account structure preclude adequate analysis.

It is widely acknowledged that the expenditure shares for primary care and public health are not accurate estimates, as they are underestimated because many of their functions are delivered through hospitals. So while public health spending exceeds the current NHA estimate of one percent, it is, nevertheless, well below what one might expect. Table 8 below illustrates total and per capita health spending in US dollars.

Table 8: Spending by Type of Service

Type of Service	Total	Per capita US dollars
Public Health	1% US$589,387 686,637,000 tug	$0.24
Ambulatory Care	7% US$3,544,223 4,129,020,000 tug	$1.46
Hospital	76% US$37,614,363 43,820,734,000 tug	$15.47

For the last decade, donors have funded the immunization program, possibly explaining the continually high immunization coverage.[16] Although primary care spending varies according to how it is allocated locally (for example, how much primary care is provided by a particular *soum* hospital), the broad picture remains the same: two-thirds to three-quarters of public funding is going to the hospital sector. Although spending on public health and primary care is probably underestimated, it is currently too low and ought to be increased, in large part through a restructuring of the existing budget, as opposed to "new" funding sources.

2.3. SERVICE DELIVERY DIAGNOSTICS

This section turns to key issues in service delivery. In the HSMP, the new Essential and Complementary Package of Services (ECPS) framework[17] adopted by the government is used to define the extent of future public sector health services provision versus. services that must be funded from other sources including out of pocket. In this report, the ECPS is not explicitly referred to, with the focus being on the substantive challenges within each service delivery mechanism at present. The main challenges for improving the efficiency of the health system are the provider payment system, the lack of gate-keeping mechanisms, and the absence of an information system focusing on the content and quality of the health system. This section also examines the factors affecting the performance of the FGP, which provides primary health care in Mongolia.

The need to make hospital services more efficient in using existing expenditures is well documented and has been reported on for a number of years.[18] Relative to its population of 2.5 million, Mongolia has too many hospitals, which possess an excess of beds and are overstaffed. The number of hospitals per 100,000 people in Mongolia is over double that of the European Union (EU) and the Commonwealth of Independent States (CIS) averages. The hospital structure differs between UB and rural areas (aimag and soum hospitals), so the approach taken to optimize the sector should be different. In UB, an emphasis on rationalization (merging and closing smaller hospitals) is necessary, while in rural areas increased

[16] Donor funding needs to be included in the NHA and in the health care budget. The ADB health projects are already included, but many other donor activities are not.

[17] The ECPS, formulated based on discussion and dialogue with a variety of stakeholders, is stated as guiding the HSMP. The ECPS is also being used to guide business and operational plans, as well as serve as the basis for costing services for budgeting. (Source: HSMP, Volume 1, pp. 37).

[18] There has been a shift in terminology from rationalization to optimization. Rationalization is the closure of hospitals and in particularly the merger of single, specialist facilities into multi-functional general hospitals. Optimization includes shifting resources from hospital to ambulatory/primary care. This necessitates increasing capacity in the ambulatory sector, particularly in the area of primary care.

efficiency and a structural shift from inpatient to outpatient care would aid in producing a more cost-effective system.

Table 9: Hospital Norms, 2002

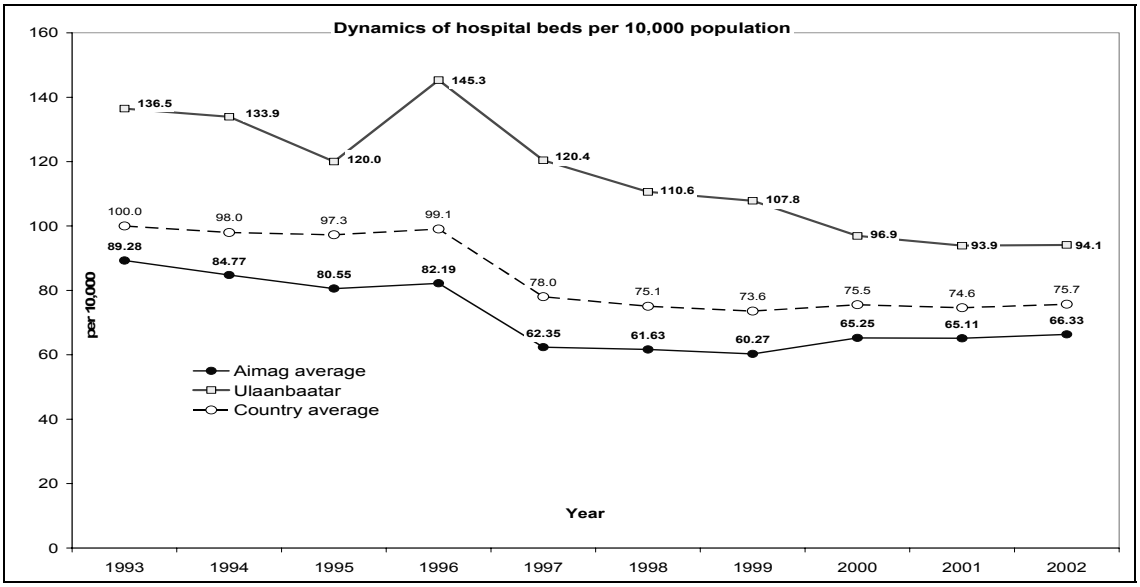
	Hospitals per 100,000	Beds per 100,000
EU Average	3.29	611
CIS Average	6.26	917
Russian Federation	6.76	1,071
Mongolia- Total	14.86	765

Source: World Health Organization: Regional office for Europe: *European Health for All Database*.

Notes: (a) All private facilities with beds are excluded from this figure. See Annex 4 for a detailed list of facilities in Mongolia in 2002. (b) It is estimated that there are 120 private facilities with beds in UB.

With respect to the number of beds per 100,000, Mongolia averages more beds per 100,000 than the EU and less than CIS countries (Table 9).[19] While the total number of hospital beds declined from 100 to 73 per 10,000 people between 1994 and 2003, no substantial reduction in the number of beds has taken place since 1997 (Figure 7). The aimags show an increase in beds per population, although this can partially be explained by a decline in population in the aimags due to migration.[20]

Figure 7: Time Trends in Hospital Beds



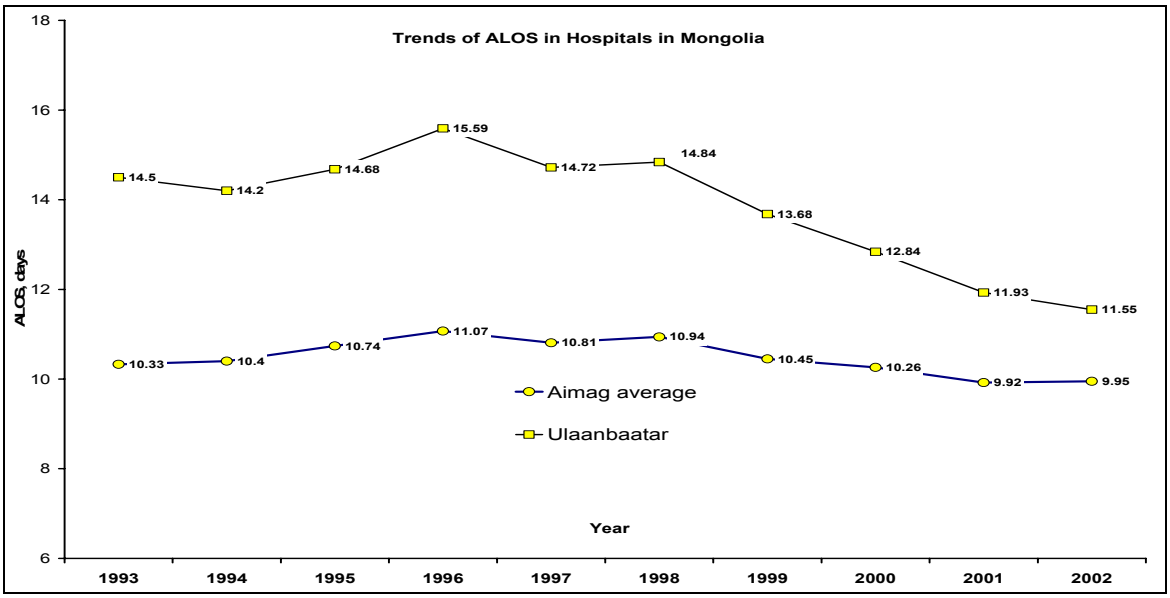
Source: MOH, DMS Statistics.

Figure 7 above includes both private and public hospital beds. Although the number of beds in public hospitals has declined slightly, this has been offset by an increase in private hospital beds. Private hospital/clinic beds were first introduced in 1995 and have increased steadily in number until in 2002, 536 private hospitals had 1,768 beds, averaging 3.3 beds per private clinic (Health Statistics Annual Book, Health Sector 2002).

[19] *Feldsher* facilities with beds are excluded from these calculations.

[20] In UB City, the actual population (registered and unregistered) may be more than is shown in Figures 7 and 8 due to unregistered internal migration. According to the UB City Health Department, in 2002 there were 700,000 registered people in UB, and this increased to 890,000 in 2003. Data from the FGPs, however, suggests that over one million people live in UB.

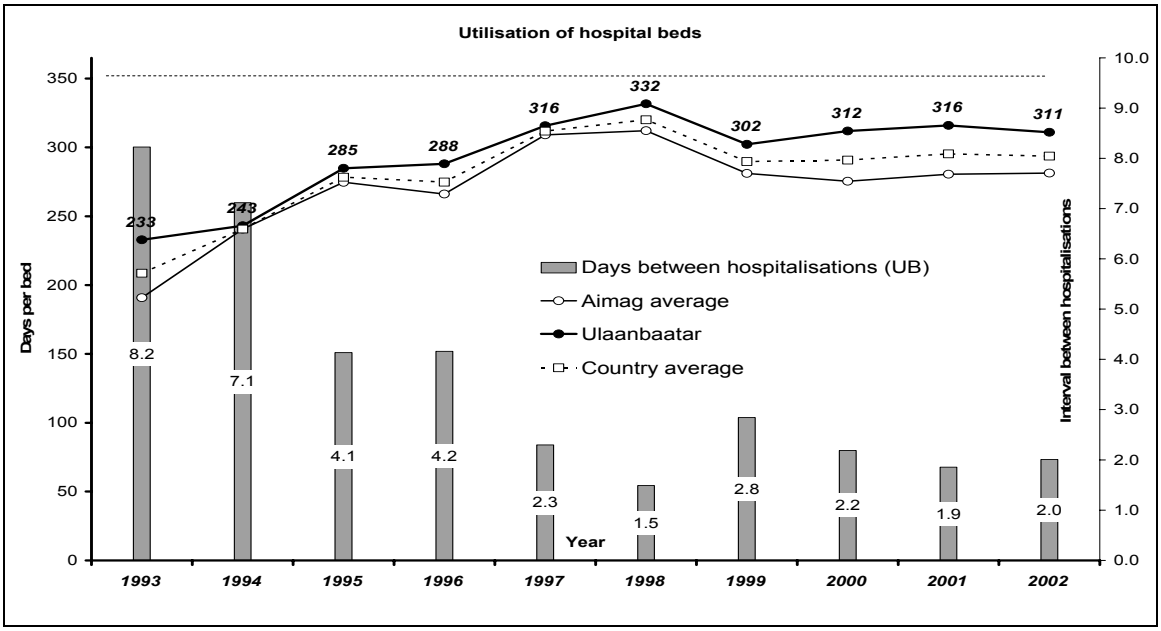
Figure 8: Average Length of Stay in UB City and at the Aimag Level



Source: DMS, 2004.

The average length of stay has decreased steadily, particularly in UB (Figure 8). Since the introduction of health insurance in 1994, at which time more than 30 percent of beds were vacant, there has been an increase in occupancy rates and a decrease in the time when beds are vacant between hospitalizations (Figure 9).

Figure 9: Utilization of Inpatient Bed Capacity



Source: DMS, Mongolia.

Plenty of scope exists to increase efficiency in the hospital sector. Hospitals are absorbing 70 percent of health spending, but are not performing at optimal efficiency. First, the provider payment system creates incentives for inefficiency. This payment system is based on a fixed price per case from the HIF and from the government's line-item input-based budget. The budget is set based on the number of beds and the occupancy rate. The health insurance payment system creates incentives for hospitals to treat patients more quickly since every admission generates a payment, which may account for the fall in the average length of stay. The budget system, however, is based on occupancy rates, so this creates a counter-incentive to maintain lengths of stay to keep beds occupied.

Secondly, at present, methods do not exist for restricting the overall volume of hospital services. A system of gate-keeping is not present and the population is allowed to select any hospital provider they desire. The insured can also use the private sector. Public hospitals do not possess incentives to cut their costs since they receive guaranteed funding from the budget for fixed costs and some variable costs. Thus, hospitals also do not have incentives to increase efficiency. Moreover, the simple case-based payment system encourages tertiary hospitals to treat patients with simple medical problems since the rate of payment does not change depending on the complexity of the medical problem in question.

Third, relevant information on the content and quality of health services in the hospitals is generally unavailable. More information is needed on the medical conditions for which people are being hospitalized and on what interventions are being performed in the hospital. With high hospital admission rates, as compared with other countries, there is room for decreasing the overall number of admissions. The admission rate is more than double that in the United States, and admissions in Mongolia tend to be for less sophisticated interventions. Overall, policymakers need a more thorough understanding of hospital care to make decisions.

2.3.1 *Primary Care Diagnostics*

The concerns related to the hospital sector are strictly interrelated with primary care services, as the latter is mainly channeled through a group of family physicians known as FGP. This is meant to increase the quality of care and reduce the number of patients in hospitals. Inadequate institutional and legal environments coupled with the low level of funding contribute to the poor performance of FGPs. In this section we investigate the main factors behind the partial accomplishments of FGPs.

During the socialist period, primary care was provided in urban areas by polyclinics for adults, children, and pregnant women. In *aimags*, an ambulatory clinic associated with the *aimag* hospital provided primary care; in *soums*, *soum* hospitals provided primary care; and in *baghs*, primary care was provided by *feldshers*. The Mongolian government, during the transition period, began an experiment in the reform of primary care based on the principles of family medicine. The idea was to replace specialists with one physician who could treat the whole family. A group of family physicians would form a FGP, similar to a general practice in the United Kingdom, independent from the hospital. The aim was to shift the emphasis of the health care system from hospital care to primary care and from curative to preventive services.

The development and implementation of the FGP system in Mongolia was financed through the ADB HSDP. The first part of the program (HSDP I) lasted from 1997 to 2002 and cost US$14.9 million, while the second and current portion (HSDP II) started in 2003 and is scheduled to end in 2008, costing US$17.5 million. FGPs were established in UB and in all *aimag* centers between 1998 and 2002; over 238 practices with 835 doctors and 762 nurses were created.

FGPs provide services to a catchment/community population (usually consisting of 1,200 to 1,440 people), where they act as a referral point and gatekeeper for secondary levels of care. The FGPs are organized *private* entities providing services on the basis of capitation-based contracts with local administrations, which provide performance incentives to FGPs to ensure service to the poor. Initially, FGPs received a

subsidy from the HSDP I loan, but since the end of phase I, FGPs are presumed to be self-sufficient. Starting in January 2003, the HIF finances 60 percent of the capitation bill, while local governments fund the remaining 40 percent. The HIF also finances 50 percent of the drugs prescribed by the FGPs.

The primary health care (PHC)/FGP system has laudable objectives and also great potential for transforming the health care system. To date, these objectives have only been met partially. A recent audit by the Mongolian National Auditing Board illustrates some of the problems with the FGP model:

> "The project objective 'to reduce the number of patients in hospitals by improving the services provided by family clinics' has not been fully implemented. According to NSO data in 1998, 468,300 people stayed in hospital and in 2002, this number increased to 515,700 or an increase of 47,400. The project-implementing unit in 2002 conducted a survey to find out the reasons why people tend to skip family clinics and refer to higher level institution. The survey revealed that 53.6 percent of citizens preferred to go to the high level clinics, 66.9 percent thought that central clinics would provide better services" (National Auditing Board, 2001).

The audit also concluded that few physicians in Mongolia want to become family doctors. In 2002, the project studied the attitudes of graduates of the Medical University to family medicine. Only 13.9 percent expressed an interest in becoming family doctors, while 86.1 percent said they were not interested in working in family group practices.

2.3.2 *Implementation Issues for FGPs*

Although the concept of the FGP is good, there have been critical issues regarding its implementation. The new structure was introduced without proper institutional and legal arrangements in an environment where people prefer hospital care. The family doctors have no social recognition, their working conditions and income are not satisfactory, and the referral system has not worked properly. The level of funding for FGPs is low, which means that they cannot attract high-quality physicians from the hospital sector to enter primary care. Table 10 below shows the PHC/FGP objectives with comments on their implementation.

Table 10: Status of the Objectives of the FGP Model

Objective*	Comments on Implementation
Promotion of Primary Health Care	Primary health care has, indeed, been promoted, although its effectiveness is questionable. In 2004, hospitals continue as the main providers of primary health care. In UB, people continue to refer themselves directly to hospitals, bypassing FGPs. Over 50 percent of the non-poor refer themselves to hospitals for outpatient care. The poor are more likely to seek the services of the FGPs.
Cost-containment through the control and reduction of hospital expenditures (by addressing most needs at the primary care level rather than at hospital level)	There seems to be no evidence of cost containment through the control and reduction of hospital expenditures. Optimization of public hospitals has not taken place; and the number of small private hospitals is growing.
Reduction of the number of personnel in the public services (members of the FGPs, who were previously salaried civil servants, will leave the civil service to become independent and private)	The reduction in personnel has only taken place with regard to those who are now employed by FGPs (a total of 835 doctors and 762 nurses).
Development of the private health sector	FGPs cannot be considered to have contributed to the development of the private sector. The private sector is competitive and has freedom of contracting, whereas FGPs have only public sources of income from the HIF and capitation/performance contracts with local governments and are precluded from signing any other services contracts. FGPs seem to be more a restrictive form of outsourcing primary health care from public hospitals than a form of privatization.

Source: *Jeugemans, 2003.

The various issues regarding FGPs include the following:

- The resolution creating FGPs as private entities has not sufficiently been practiced, as FGPs are not wholly private.[21] FGPs can only perform primary health care services under capitation contracts with the HIF and local governments. They have no freedom to contract with any other entity and cannot compete in the market with other private health providers. FGPs are in practice a *sui generis* form of limited and controlled outsourcing of a publicly financed primary health care service to restricted private entities. The FGP experiment in Mongolia shows the limitations and weaknesses of creating legal models by decree without giving full consideration to all legal and institutional issues. For future success, the "private" nature of FGPs needs to be clarified.

- The peculiar legal status of FGPs is illustrated by their problems with local authorities. Finance inspectors consider FGPs as budgetary institutions because they receive capitation payments partially financed from the state budget. Inspectors apply the same standards to FGPs as they apply to ministries and other public entities financed from state and local budgets, thus inspectors consider it illegal for FGPs to distribute savings among their members. Therefore, currently no legal method for supplementing the income of FGP personnel for good performance exists.

[21] Government Resolution 149/1999 introduced rules to govern family practices. According to these rules, family practices had to operate as private economic entities on the basis of contracts concluded with the *aimag* health authorities and would receive funds based on their performance indicators.

Furthermore, equipment purchased by the FGPs is state property and is inventoried as such. In practice, FGPs are caught somewhere between private and public status, as some local authorities even tax FGPs with a 15 percent levy as private entities.

- Family doctors and family nurses are licensed to practice medicine, but it is unclear if they are qualified to provide the full clinical package of services expected to be shifted from hospitals to primary care providers. The licensing process was conducted rapidly and without thorough investigation. The required training for doctors and nurses as a precondition for licensing consisted only of short courses with no follow up, support, or supervision. Family medicine protocols are now limited in number, content, and are of questionable quality, with no system for monitoring and enforcing protocols.

- Official standards for FGP infrastructures have not been devised and FGPs often operate out of apartments, shops, and public buildings. In many cases, local governments provide premises in public sector establishments/buildings. Despite the civil works investments made under HSDP I, most PHC/FGP facilities are generally less than satisfactory, which is an indication that inspections are not rigorous**.** If standards existed, few premises would pass the test.

A future alternative in provision of primary care is likely to arise with the establishment of "real private" primary care clinics, likely to be established as private for profit enterprises in UB and other affluent centers. Relatively comprehensive primary care providers might refrain from signing contracts with the HIF and local governments by simply registering individuals under subscription payments and charging fees or entering into service contracts for primary care services with private enterprises. The growing middle and upper classes in UB provide a potential market for the growth of private primary care practices. This process, alongside the growth of private hospitals, may cause the health system to become a dual system in which public facilities are used by the poor and private facilities by the affluent.

The introduction and consolidation of family medicine in Mongolia is particularly complex and difficult because there is no tradition of family medicine, whereas there is a long-standing culture of hospitalization. The success and acceptability of the FGP model will depend on the ability of FGPs to provide high-quality and accessible services capable of attracting patients away from hospitals. To date, FGPs have not been able to address issues that prevent people from seeking FGP care. The current approach is largely supply-driven, and should be shifted towards stimulating demand, based on social marketing and on research into the population's knowledge, attitudes, and practices. Important work can also be done on the supply side in improving the quality of care. As discussed above, the clinical capacity of FGPs is low, particularly the capacity of primary care physicians. The government needs to therefore introduce an intensified program of clinical training and widen access to diagnostic services.

The most important issue, however, is the provision of adequate funding for FGPs. Training and equipment are not valuable in a system where health personnel do not receive competitive wages and incentives to improve performance and provide high-quality care. Table 11 below demonstrates the requirements necessary for successful implementation of FGPs.

Table 11: Privatization Requirements and Implementation Issues in Primary Health Care

Legal status	Clear legal status for FGPs is needed and must be *written* into the Mongolian legal system. FGPs should have freedom of contracting and be able to build equity as effective private entities. If not possible, the notion of FGPs as private entities should be revised.
Training	The PHC/FGP program started with very short and limited training of doctors and nurses. No in-service training; no follow up. The Department of General Medicine at the Medical University needs to be strengthened to provide continuous education, in-service training and training at distance in primary health care.
Scope of Work	It is very limited, given the scant training of primary care doctors and nurses, restrictive premises and equipment, and the near absence of family medicine protocols.
Licensing	Primary care practitioners were licensed automatically without a thorough process of qualification. If this trend is not corrected, primary care will not be accepted by the population.
Accreditation	Premises have largely been provided by local governments and other public entities and would not pass a serious accreditation process. In general, they are inadequate. Satisfactory premises and equipment are essential for the development of acceptable primary health care.
Open/Closed Financing	Closed financing with capitation contracts with the HIF and with local governments is insufficient for PHC/FGPs to operate as private entities. Options for multiple sources of revenue need to be explored or for reversing the process and having PHC/FGPs as decentralized public entities.
Referrals	Weak system, with limited protocols, no rewards for containing referrals and no punishment for bypassing primary health care referrals. No strict observance of referral and counter referral notes.
Quality Assurance	Specific guidelines and procedures for primary health care need to be established and implemented reasonably.
Supervision	Undefined. Need to raise the responsibility and accountability of *aimags* and Capital City Health Authorities for primary health care in monitoring and supporting the primary system.
Public Awareness	Extensive and continued public information campaigns are needed to modify negative beliefs and attitudes (low quality and for the poor) among the population, health professionals, and health authorities about primary health services and to counter the perception that good services are only provided by specialists in hospitals.

Funding for FGPs accounts for 5.23 percent of the total health sector budget (see Table 12). The FGPs, as mentioned previously, are funded by means of capitation. The current formula is:

- For each poor person, FGPs receive 3,200 MNT per year: (1,920 tug from HIF and 1,280 tug from the state budget); and
- For each non-poor person, FGPs receive 2,300 MNT per year: (1,380 tug from HIF and 920 tug from the state budget).

Initially, a more complex risk-adjustment formula based on age and sex was used, but this was recently replaced with the above formula. Theoretically, in addition to the above, FGPs should receive performance-related bonuses for reaching certain targets, but in practice, the limited funding to FGPs makes these adjustments meaningless. Capitation payments, regardless of the complexities of the formulas used for their calculation, need to be sufficient for FGPs to provide primary health services of reasonable quality, and this does not appear to be the case at present. Table 12 presents data on FGPs from the NHA.

Table 12: Analysis of Family Group Practices, 2002

FGPs	*Aimag*	UB	National Totals/Average
Total Expenditure	1,407,412,300	1,589,836,600	2,997,248,900
Amount financed from Health Insurance Fund	844,340,900	953,901,900	953,90,1900
Amount financed from budget	563,071,400	635934700	635,934,700
Number of Entities	117	120	237
Total Budget % Share	2.44%	2.76%	5.20%*
Average Cost per FGP	12,029,165	13,248,638	12,646,620

Note: *There are other ambulatory expenditures besides FGPs, including health centers.

Table 13: Estimated Average Components of Costs for an FGP, 2002

	Average Estimated Allocation	Average Estimated Allocation	2002 Average Wage/Month (tug)	2002 Average Wage/Month (USD)
Salary/Benefits/Dr./Year for 4 MD's	3,793,986	30%	79,041	$67.85
Nurse/Other Salary/Benefits/Dr./Year-2:1 ratio	2,529,324	20%	26,347	$22.62
Utilities	2,149,925	17%		
Meds	1,770,527	14%		
Other	1,896,993	15%		
Capital	505,865	4%		
Total	**12,646,620**	**100%**		

Table 13 presents the average component costs for FGPs, illustrating their dramatic underfunding with low salaries, little for pharmaceuticals and supplies, and almost no funding for capital improvements. These findings are consistent with interviews carried out by the World Bank with family physicians who complain that their salaries are only half as much as the salaries of hospital physicians.

FGPs also have administrative costs similar to small businesses. They need to manage and account for the funds received from HIF and from contracts with local governments. FGPs also need to manage practices in a manner that: (1) fulfills contractual requirements; (2) makes resources stretch to cover services; and (3) pays accountant fees. In addition, FGPs have to pay part of the social insurance contributions on the salaries of their staff. Because they are technically private entities, FGPs pay 19 percent of each employee's contribution while the employee pays 10 percent, whereas in the state sector, the state pays 26 percent of each employee's contribution and the employee pays three percent.

Given the current level of financing in Mongolia, an increase in funding to FGPs and primary care is possible. It is important to remember that FGPs only provide primary care in UB and *aimag* centers. In *soums*, primary care is still provided by the *soum* hospital. We argued in the earlier section that *soum* hospitals should be redefined to make the provision of primary care their primary function, thus becoming officially "FGPs with beds."

In short, without adequate funding and incentives, it is unlikely that the FGP model will succeed. FGPs need sufficient financing to motivate health personnel and provide essential drugs. Likewise, FGPs need adequate equipment and enhanced clinical skills, particularly if they are to take on a greater burden of clinical care from hospitals.

2.4. PUBLIC HEALTH DIAGNOSTICS

The provision of clinical care is only one aspect of the health system. Preventative services and public health regulations are also critical. Public health has a very prominent role in Mongolia. Two main issues face the public health sector: (1) the unclear classification of public health spending, which hampers transparency and a more efficient allocation; and (2) the uncertain definition of roles and responsibilities for disease surveillance and health inspection.

2.4.1 *Public Health Spending*

The current budgetary categories do not allow the government to track spending on public health. Current spending is reportedly only one percent, but a general consensus agrees that this is an accounting artifact, as much public health spending is buried in expenditure categories like hospitals. In the NHA system, only three centers are currently classified as "public health" — the blood center, the center for research on diseases with natural foci and research centers. Many research centers, however, are not classified, including offices for inspection. It would, therefore, be useful for the government to revise its budgetary classifications to ensure the accurate calculation and monitoring of spending on public health services. Ideally, this classification system would also include functions such as communicable disease surveillance, noncommunicable disease surveillance, water testing, and the inspection of food handling facilities.

Table 14: Total Expenditures by Provider Type, 2002

	Provider	TOTAL 2002 Expenditures '000 tug	% of Total Expenditures
Categories officially listed as 'Public Health' in Government Budget			
Pub Health*,UB, None	Blood center	65,700	0.11%
Pub Health*, UB, None	Center for research of diseases with natural foci	203,232	0.35%
Pub Health*-Shared,UB, None	Research centers	417,704	0.72%
Total		**686,636**	**1.18%**
Other Government Health Expenditures not labeled as 'Public Health'			
Admin, UB & *Aimag*, None	Health inspections office	62,482	0.11%
Amb, *Aimag*, OP	Infectious disease research center	135,488	0.23%
Amb, *Aimag*, OP	Natural infection disease research center	149,067	0.26%
Hosp, *Aimag*, IP/OP-Mostly OP-few beds	Quarantinable disease station	248,426	0.43%
Other Ind, Natl, None	Criminal research center	215,340	0.37%
Hosp, UB, IP/OP	Infectious disease research center	1,923,291	3.34%
Admin, Aim, None	Regional health inspections office	140,846	0.24%
Admn, UB, None	State health inspections office	369,073	0.64%
Total		**3,244,013**	**5.62%**

Note: UB or aimag, inpatient or outpatient (IP/OP).

2.4.2 *Disease Surveillance and Health Inspections*

The government has a crucial role in disease surveillance and public health inspection, as it provides core public services like epidemiological surveillance, maintenance of water quality, and control of infectious disease. The government is also responsible for the control of infectious diseases, although this control is often exercised through individual health services. In light of the recent outbreaks of Severe Acute Respiratory Syndrome (SARS), Avian Bird Influenza, and Foot and Mouth Disease, it is important for Mongolia to have a strong system of communicable disease surveillance, along with a command and control system that can respond to public health emergencies.

During the Semashko system, the SES reached every region of the country. The head of the SES was the chief sanitary physician of the Mongolian Republic and was also usually a deputy minister of health. The SES was responsible for all communicable disease surveillance and bacteriological laboratories. The service also carried out public health inspections of water quality, food establishments, and factories. Informal payments from these inspections were often an additional source of income for the SES.

Mongolia has restructured the SES: the Health Inspectorate has been separated from the MOH and is now under the newly created State Specialized Inspection Agency (SSIA). This large new bureaucracy, possibly one of the largest public civil service agencies in Mongolia, was designed to coordinate the various inspections that previously were under different public sector entities responsible for health, hygiene, labor, insurance, and fire. SSIA was to create economies of scope and scale, and to decrease costs.[22]

Two main issues of concern arise. First, while this system of "comprehensive" control may be suitable for the public sector (which is questionable), it may have a negative impact on the development of the private sector, as visits from teams of inspectors can paralyze an enterprise and be perceived as policing rather than as a legitimate means of verifying compliance with laws and regulations. Second, it is not clear who inspects and controls the inspectors themselves. The inspectors are civil servants who are not knowledgeable about modern techniques and procedures, and they apply standards regardless of their usefulness and appropriateness. The number of inspectors is limited and their training is brief. The system has 160 inspectors for the three departments nationwide with UB (including the headquarters of the Health Inspection Department) having 60 inspectors (six for health quality, four for traditional medicine, and 50 for hygiene), and UB Central having 30 inspectors. In contrast, a typical composition within an aimag would be one medical doctor for health quality inspection, one inspector for traditional medicine, and two or three inspectors for hygiene. Given the current extensive reorganization of the health sector in Mongolia and the apparently low level of public health funding, a comprehensive review of the functions, financing, and effectiveness of public health is needed.

2.5. PHARMACEUTICAL DIAGNOSTICS

The pharmaceutical sector is a key part of the health system and is currently facing several challenges. Its current flaws may have serious consequences in terms of service delivery, quality of care, and accessibility. The pharmaceutical sector is currently facing key challenges. First, the quality of drugs produced in Mongolia is often questionable. Quality control for homogenous standards is first needed in order to investigate production standards. Second, more clarity is needed regarding funding for in-patient pharmaceuticals. Third, access and availability of drugs need to be improved, especially in the rural areas, as the system of prescription medicines has collapsed. People can buy almost any drug directly from pharmacies. Several reports recommend the re-establishment of a system of prescriptions, but as long as the majority of funding is out-of-pocket, enforcement would be difficult.

[22] The new State Specialized Inspection Agency has very good refurbished offices and new equipment.

2.5.1 A Restructured System

In the socialist period, one state enterprise, Mongolemimpex, was responsible for the production, importation, and distribution of pharmaceuticals. This monopoly owned all of the country's pharmacies, the wholesale network, and all drug producing factories. Every *aimag* had a warehouse and pharmacies were present in almost every *soum*. As a result, Mongolemimpex was able to deliver pharmaceuticals to the most remote regions. Some drugs were imported from other socialist countries, but many were produced in Mongolia.

The quality of drugs provided during the socialist period was always questioned. Because of concerns that the drugs may only be of limited potency, many people preferred to be given drugs by injection or intravenously rather than orally. This distrust of oral medicines persists in Mongolia today, seen in the fact that Mongolia has one of the highest rates of injected medicines usage for all the countries in the world (WHO, 2002).

The government has dramatically restructured the pharmaceutical system in Mongolia. First, the responsibility for the manufacturing of drugs was removed from Mongolemimpex and privatized. Now approximately 25 manufacturers of "western" drugs are present in Mongolia, none of which are multinational pharmaceutical firms. None of these manufacturers of either western or traditional medicines have received a good manufacturing practice (GMP) certification from the WHO.

The wholesale and resale distribution system was also opened to market competition. Although Mongolemimpex maintains a nationwide distribution network, now Mongolians have many alternatives for buying drugs wholesale. The entire retail network was segmented from Mongolimempex and privatized. Thirty-six wholesalers and approximately 500 retail establishments are now selling drugs in Mongolia.

The health system is supposed to provide all necessary in-patient pharmaceuticals. Outpatient pharmaceuticals are partially covered by HIF, which is supposed to reimburse beneficiaries for the cost of drugs. The benefit package is generous on paper, but appears different in practice. Although no systematic review of pharmaceutical availability has been pursued, it is presumed that acute shortages of drugs at all levels exist. A 1999 study of the availability of essential drugs found that such drugs were available in less than 25 percent of retail outlets and even less in health facilities.[23]

In theory, hospitals receive funding for drugs through their health insurance payment. Based on a new procurement law, hospitals are now expected to purchase pharmaceuticals through an open tendering process. Under this law, procurement is governed by several different rules depending on the size of the tender. Currently, every *aimag* carries out its own tender for purchasing drugs. UB City carries out a tender for all of its district hospitals. The larger national hospitals carry out their own tendering, and the smaller hospitals are clustered together in a combined tender. The purchase and distribution of controlled substances and dangerous drugs (anesthetics/narcotics) remains under the control of Mongolimempex.

The tendering process has only been in operation for two or three years depending on the *aimag,* and its level of effectiveness is not yet clear. Many believe that the success of the process depends on the individual *aimag*, as the process is long and complex, and many *aimags* do not have the expertise to prepare tenders. Furthermore, the process is open to corruption because the tender can be split into different packages, and the law does not specify how to define the packages.

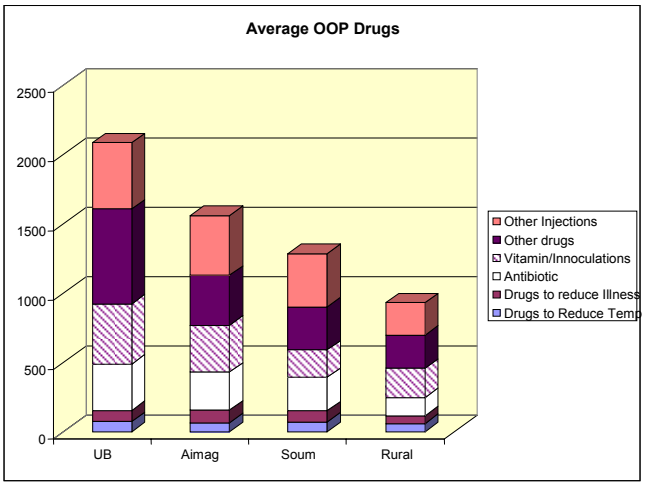
[23] WHO Report, 1999.

2.5.2 Household Spending on Pharmaceuticals

As mentioned earlier, significant out-of-pocket spending on pharmaceuticals is prevalent in Mongolia. The 2003 household survey revealed that spending on pharmaceuticals represented over 60 percent of households' out-of-pocket spending, with this share being larger in areas with smaller total spending for health.

According to the 2003 household survey, the categories of drugs being used by households are consistent across all areas of the country (Figure 10). A large percentage of spending is on injections and vitamins, indicating the need to train health personnel and the population on the specific use of certain drugs. Further information on the percentage of drugs used for in-patient consumption (in-patient drugs are supposed to be free), which drugs are being purchased, and whether a health professional recommended the drug to the patient. More detailed studies are needed to gather the background information necessary to interpret the household survey data.

Figure 10: Household Spending on Pharmaceuticals by Type



Source: 2003 Household Survey.

2.5.3 New Initiatives

In the early phase of the transition, the system for financing and distributing drugs collapsed causing access to medicines to decrease dramatically in rural areas. To address this problem, UNICEF, with a grant from the Nippon Foundation, established Revolving Drug Funds (RDF) in two *soums* in each of six *aimags*. A favorable assessment of this pilot project (by MOH) led to the expansion of the project to all 99 *soums* in the six *aimags*. A UNICEF evaluation in 1998 found the project to be successful, having increased the availability of drugs in project areas compared with non-project areas. The project was expanded so that by 2003 it covered 221 *soums* in 13 *aimags*. The RDFs are implemented at the *soum* level through a project pharmacy managed by a pharmacist. The project is supervised by a committee, consisting of the *soum* governor, the project pharmacist, the *soum* hospital chief, an accountant from the *soum* government, and a community member.

Numerous problems in implementation of the RDF have arisen. As with FGPs, problems with the legal status of RDFs are present as the RDF is not a legal entity. The alternatives are to absorb the RDF into the *soum* hospitals, to make the pharmacy a separate legal entity, or to turn the RDF into a private corporation or a non-government organization (NGO).

Given the previous discussion on health financing, the current fiscal envelope could provide funds for essential pharmaceuticals throughout the health care system. In the Primary Care Diagnostics section above, we discussed raising the capitation for pharmaceuticals in FGPs. We also discussed transforming *soum* hospitals into FGPs and shifting them to capitation financing, which would significantly increase *soum* drug budgets.

Mongolia received support from donors during the last decade to develop an essential drug program. In 1998, Mongolia adopted an essential drug list modeled on the WHO-developed model list and is now on the fourth version of that list. The essential drug list distinguishes between *feldsher* posts, *soum* hospitals, inter-s*oum* hospitals, district and *aimag* hospitals, and clinical hospitals. It is not clear whether the health care facilities adhere to the essential drug list. A small study of customers of pharmacies found that few were purchasing essential drugs.[24] There has been little training of physicians on essential drug use, leaving open the question of clinic protocols.

In this chapter, we analyzed how allocative inefficiency and the constraints inherited from the Soviet model affect service delivery, public health spending, and the provision of preventive and pharmaceutical services. We will now examine the legal, regulatory, and institutional environment of the health system.

[24] WHO, 1999.

CHAPTER 3: LEGAL REGULATORY AND INSTITUTIONAL FRAMEWORK FOR THE HEALTH SYSTEM

Key Facts:

- **The health system has been weakened by fragmentation of authority, with its functions now split between the MOH, the new DMS, the HIF, and the State Inspectorate.**

- **The government's lack of strategic vision for the public/private mix in health care delivery and financing is resulting in the unregulated growth in private health care organizations and is hampering the development of a modern insurance industry.**

- **Macro institutional reforms introduced in 2002 and 2003 including the introduction of the Government Implementing Agency, the creation of the SSIA under the Office of the Prime Minister, and the enactment of the PSMFL are likely to have a significant impact on all Mongolian public administration including the health sector.**

As is typical of transition countries, Mongolia is in the process of gradually developing its legal, regulatory, and institutional system to strengthen the stewardship of the health sector. Institutional reforms require leadership and stewardship. The government must have a vision for improving the health of the population. Achieving this vision will involve aiming for universal access to affordable quality health care, reorganizing the delivery of public health care, re-engineering public health care financing, strengthening the public health sector, updating medical and nursing education, medical protocols, and the coding system, providing a framework for the development of the private sector in the delivery and financing of health care, and configuring a balanced and equitable public/private mix.

3.1. LEGAL FRAMEWORK

The existing legal framework, the rule of law and the overall regulatory capacity are crucial factors behind successful implementation of health reform. The Mongolian Constitution guarantees certain rights and freedoms, including "the right to the protection of health and health care. The procedure and conditions of free medical aid shall be defined by law."[25] The wording of the constitutional provision is important. In many countries, the constitutional provision declares an open right to free health services, but the Mongolian Constitution does not, rather recognizing that the right to free health care should be fulfilled by the state, the guarantor of the right, according to the availability of resources. Thus, legislation has to determine from time to time what health services should be free and to whom.

The Health Act of 1998 states that: "certain types of health care and services shall be provided to the citizens by the state free of charge, as provided in the Constitution."[26] The Health Law lists the services that must be provided free of charge regardless of whether or not the person is insured. These include, *inter alia*, emergency and ambulance services; tuberculosis, cancer, mental diseases, pregnancy, birth, and post-partum care; and treatment for injuries caused by natural disasters, sudden accidents, or contagious diseases. The MOH has the authority to update the list of diseases whose treatment is free of charge and to issue regulations governing on the provision of free treatment.[27] The Health Act of 1998 also defines "the State policy and basic principles on health and to regulate the relations raised in connection with responsibilities of organizations, business entities, and individuals in safeguarding the social health and the rights of the citizens and officials of this country to health protection and medical aid and service, to regulate legal

[25] Constitution of Mongolia (1992), Article 16.6.
[26] Health Act, Article 4.1.4.
[27] Health Act, Article 28.

framework of activities of health organizations and employees thereof."[28] The Health Act is amended occasionally, most recently in 2002.

The Health Act contains imprecise definitions that would benefit from clarification. For instance, "public health care and services" is defined as "activities of health organizations, independently or jointly with government structures, public organizations, [and] business entities aimed at surveying, monitoring protecting, and promoting the health of the population, prevention of diseases, providing health education, organizing medical training and research, and studying and eliminating negative health factors."[29] This is a vast mandate ranging from public health to environmental health. Usually, public health care is defined as the organization and delivery of health care goods and services by the state and local governments. It is different from types of public health services like immunizations; sanitation; preventive medicine, quarantine, and other disease control activities; occupational health and safety programs; maintaining clean and hygienic air, water, and food; health education; and epidemiology. This can be contrasted with private health care — the organization and delivery of health care goods and services by private individuals and entities. Such distinctions are not in the Health Act.

The notion of public health care is repeated in the definition of "health organization" as an entity "whose main objective and mandate is the provision of public health care."[30] Doctors, *feldshers*, doctors' assistants, nurses, dentists, and other qualified personnel are defined as "social medical staff."[31] Thus, is a physician in private practice categorized as "social medical staff"? Are physicians and nurses working in family practices and in private hospitals also "social medical staff"? Why "medical staff" if nurses and others are included? These definitions are remnants from a time when health care was socialized and distinctions between health care and public health were purposefully not given. Even today in other countries, many public health care establishments have extensive clinical components that are usually incorporated into the relevant health care system.

Another important piece of legislation is the Drug Law of 1998, which is intended to "regulate relations in regard to the manufacturing, importing, storing, retailing, distributing, utilizing, and monitoring of drugs and brio-propagates for human being and livestock medicine."[32] The law was amended in 2002 to incorporate new elements such as the issuing of licenses for the private manufacturing of narcotic and psychotropic drugs, and the importation and registration of raw materials.

In 1994, Mongolia instituted health insurance to replace the budgetary financing of health care and to raise additional financial resources for health care. At the time, formal employment was high, and since health insurance is employment-based, the policy was sound. The Law on Health Insurance "determines the form of health insurance, insuring in health insurance and paying its premium and relation between insurance and health institutions, state, citizens and legal entities connected with the assembling, distributing, utilizing in the Health Insurance Fund."[33] The Health Insurance Law has been amended many times, most recently on 2002.

The Health Act needs revision to take into account the public and private mix of health care delivery, and to differentiate health care (both public and private) from public health and to sharpen its current definitions. Article 7.2 of the Health Insurance Law should be interpreted according to its letter, allowing accredited health care establishments to legally provide out-patient and in-patient care. The Law should not be interpreted as an obligation for the HIF to finance private hospitals. The Health Insurance Law should state

[28] Health Act, Article 1.
[29] The English texts of the Health Act are taken from an official publication of the Ministry of Health, although the translation is less than satisfactory. Some of the cornets here may be affected by the quality of the translation and may not be appropriate.
[30] Health Act, Article 3.1.6.
[31] Health Act, Article 3.1.7.
[32] Drug Act, Article 1.
[33] Law on Citizens' Health Insurance (2002), Article 1.

that the social health insurance system is unitary and managed by an autonomous HIF to avoid fragmentation. Health insurance financing needs to include the unemployed and efforts to attract the informal sector into the health insurance system should be explored. In 2003, contributions to the HIF by employees of economic entities and organizations (Article 6.1.1 of the Law) accounted for 76 percent of its revenue, but health care services paid from the HIF for this category of workers accounted for only 13 percent of expenditure. The contributions paid by the state on behalf of socially vulnerable groups such as children, the unemployed, the elderly, and the poor (Articles 6.1.3; 6.1.5; 6.1.6; 6.1.7; and 6.1.9 of the Law) represent 20 percent of the HIF's revenues, but 53 percent of HIF expenditure. The fiscal imbalance in the health insurance system is the result of low per capita premiums (particularly those paid by the government for health services for the non-working population) that do not cover the true costs of the benefit package mandated by the Health Insurance Law. The HIF should perhaps become a public "purchaser" of health care goods and services.

The PSMFL passed after almost five years of discussion. The PSMFL represents the government's strategy for public sector management; the main thrust of which is a shift from input to performance-based budgeting. The PSMFL assembles in one law all issues related to state and local budgets. The key components of the PSMFL include:

- The adoption of output-based budgeting, management, and reporting by ministries;
- The delegation of input management decisions to line ministries;
- The preparation of strategic business plans by ministries for which they will be held accountable at the end of the year; and
- The integration of current and capital budgeting throughout the budget process.

The PSMFL prescribe the setting of monitoring objectives, under the assumption that each sectoral ministry has the capacity to implement the recommendation. The main constraint to the implementation of the PSMFL will be a lack of capacity, particularly in the sectoral ministries.

The PSMFL has the potential to both improve and stymie health reform. On the one hand, it can strengthen public expenditure management, and on the other hand, the management and control/supervision of budgets under the new law are already having a potentially deleterious effect on health sector reforms. Finance inspectors consider the PHC/FGPs as budgetary institutions because they receive partial payments from state and, sometimes, from local budgets. Consequently, the inspectors have demanded that their assets (computers, desks, and phones) be inventoried in the name of the state and have pronounced it unlawful for any savings from capitation payments to be distributed among the family practitioners.

If applied in this rigid and literal manner, the law may also become a major impediment to the optimization of public hospitals. Eventually, the desired public/private mix in health care financing may be in jeopardy if inspectors treat hospitals strictly as budgetary entities.

3.2. ADMINISTRATIVE STRUCTURE

With the establishment of the separate State Inspection Agency, and decentralization to local governments, a fragmented institutionalized system is gradually weakening the competence, authority, and effectiveness of the MOH. The MOH is a health regulatory entity, and the Health Act sanctions this role.[34] The MOH issues orders and resolutions that are forms of regulation. These regulations are collected, published, and distributed internally within public entities, but policies are not in place to ensure public availability.

[34] Article 8: 8.1.1 "…to organize the implementation of the legislation on health at the national level"; 8.1.2. "To adopt rules on health protection and promotion…"; 8.1.3. "To develop standards on medical aid, health care services, production and inspection, and approve these standards independently or in collaboration with relevant state administrative bodies and organize their implementation."

Before the recent reorganization, the Directorate of Medical Services (DMS)[35] was a separate entity "responsible for directing the activities of health care organizations and assuring the quality of services to implement governmental health policies; and is in charge of providing quality and accessible health services to the population" (MOH, 2003, p. 24). The DMS (now the Division of Medical Services within the MOH) was not technically a regulatory agency, but it issued instructions that were forms of regulations. The proposed 'Alternative Organization Structure' (HSMP, Volume 1, Annex A, pp 94) sees the formation of a Division of Health Services under the MOH. This Division of Health Services would subsume the current DMS, and also include a Public Health Department, and a Department of Health Services and Nursing Care. The DMS itself was composed of departments typical of MOH in other countries; including Economics and Technology, Quality Assurance, Human Resources and Development, Health Promotion, and Health Statistics and Information. The proposed Alternative Organization structure needs to be evaluated for its value.

The Health Inspectorate has been separated from the MOH and is now under the SIA. It may be logical to consolidate all inspection services under one entity — the new SSIA — but its institutional and cost effectiveness should be evaluated as soon as possible. Large institutions that are themselves not under any clear control could be detrimental to the development of Mongolia's public administration.

Lastly, the decentralization of the delivery of public health care to local governments has also contributed to weakening the MOH, because the ministry has lost its ability to oversee local health budgeting and spending. Local governments make budgets based on their expected local revenues, submitting expenditure proposals directly to the Ministry of Finance and Economy, and thereafter, controlling their own expenditures. Unfortunately, most local governments do not have enough institutional, managerial, and technical capacity to budget properly, nor to allocate resources according to needs. This imperfect decentralization makes it difficult for the MOH to design, implement and assess national policies, and to set proper priorities. Consequently, policymaking has become less relevant, information has become less reliable, and regional inequities in access and quality of services have emerged.

To conclude, the health sector would benefit if the MOH had the stewardship of health regulation. The regulatory role of the SSIA needs to be clarified. The Health Inspectorate should not have greater authority to regulate health than the MOH, but rather should call the attention of the MOH to the needed changes in laws and regulations, with the initiative resting firmly within the MOH. This administrative fragmentation is compounded by the fiscal fragmentation of the health system. The HIF, the state budget, and budgets of local governments all finance health care. Who is the purchaser of health care goods and service — the MOH, the HIF, or the State Social Insurance General Office (SSIGO)? This fragmentation — administrative, regulatory, and fiscal — has important implications for stewardship of the health system.

3.3. REGULATING THE PRIVATE SECTOR

In principle, the private delivery of health care can improve the quality of care and increase efficiency in terms of treatment techniques, clinical management, and financial administration techniques (and income incentives). Private investment can contribute to improving the health sector by upgrading purchased or leased facilities, introducing new and efficient medical and administrative management tools, and by giving everyone, including the poor, access to services provided. Eventually, a private/public mix can be used in financing, delivery, and regulation of health care. By developing the private health care sector, it is competing with public health care services. The private sector is unlikely to compete with free public health services, but instead is likely to target those segments of the population that can afford to pay for private health care either with out-of-pocket money or with health insurance premiums. An appropriate institutional and regulatory environment is needed to facilitate the involvement of the private sector in the delivery of health care services, particularly in terms of access to capital and credit and to adequate physical

[35] Parliamentary Resolution # 58/2002 and Government Resolution # 162/2002.

facilities. In addition, the emergence of private health care financing through health insurance and subscription pre-payment schemes will also need to be properly regulated.

Privatization began in the early 1990s with several small medical practices and a private pharmaceutical factory, and UB retail pharmacies were privatized in 1997. Also in 1997, two hospitals in Bayanzurkh district in UB merged, and their management was contracted out to a private management group. Non-clinical hospital services have also been widely contracted out to private sources.[36] As previously discussed, a rapid increase in the number of private hospitals has taken place in Mongolia. Private hospitals are financed by the HIF and by out-of-pocket payments. In general, the tariffs are the same for public and private providers depending on the level of complexity of the hospital.

Since the role of government *is* to regulate and monitor service quality, proper laws and regulations for the private health sector are needed as well as a policy regarding its development. This policy should encompass: (1) the privatization of public health care facilities; (2) the authorization of private hospitals; and (3) the shift towards primary health care.

Currently, the privatization of public (state) assets in the health sector by the State Property Committee (SPC) includes sanatoria, hospitals, and health-related industries/factories. Two basic forms of privatization are applicable to the health sector, namely, full privatization including property rights, and management contracts in which the state retains full property rights. The differences between full privatization and management contracting are not clear. Under full privatization, property rights (over land, buildings, and all assets) are supposed to be privatized. Nevertheless, in the case of public hospitals, the exercise of property rights is severely limited since the hospitals must accept referrals from the public health sector. The advantage of this is that a hospital may be able to deliver private services with private financing and also receive financing from the HIF. The 2003 targets set for privatization by the SPC were not met, and 2004 targets were set at achieving 2003 targets.

Table 15: Main Features of Principal Privatization Modes

	Full Privatization	Management Contracts
Property rights	Privatized	State
Investments	Privatized entity	State
Service charges (tariffs)	Market	Set by the state
Probation period	Three-year probation contracts; contracts extended case-by-case.	Fixed-term renewable contract with probation clauses.
Hospital management	Keep public hospitals within public health care system.	Keep public hospitals within public health care system
	Use of premises for private care allowed.	Private care possible only if in contract.
Health-related industries	Keep as a health-related industry, allowed to expand and diversify.	

[36] The MOH estimates that around 20 private enterprises have received contracts from public hospitals to carry out their laundry and kitchen services.

Table 16: Health Services Privatization List, 2003

	Item	Results
1	Sanatorium SHARGALJUUT	Bidding considered unsatisfactory
2	Sanatorium HUJIRT	Bidding documents ready; assessment pending
3	Drug factory	Privatized 100 percent
4	Mongol EMINPEX	Privatized 49 percent
5	MONSAM (disposable syringes factory)	Korean partners in the joint venture asked for postponement of privatization
6	Hospital No. 3 UB	Postponed after mid-2004 elections

Private investors are keenly interested in acquiring health-related factories and industries, but not necessarily in acquiring major health care facilities. It is believed that Korean, Chinese, and joint ventures with local investors may be interested in bidding in the hope of attracting the business of the population that currently seeks its health care abroad. At the same time, the SPC is aware that one or two major private hospitals may be built in the very near future with the aim of capturing the business of the same segment of the population. For its part, UB City has proposed to the MOH that a list of its health institutions be privatized (see Table 17).

Table 17: List of UB Health Institutions to be Privatized (Proposal to the MOH)

	Name of institution	Location	Type of Privatization
1	Traditional Medicine Liver Center	Songino Khairkhan District	Management contract under condition of additional investment.
2	Traditional Medicines, Medicinal Herbs company	Songino Khairkhan District	Full privatization through open competitive tender.
3	Bayanzurkh General Hospital	Bayanzurkh District	Considering results of evaluation of management contract.
4	Children's Nursing Clinic-3	Khan-Uul District	Decline of state-owned shares equal to the state budget under condition of carrying on the activities.
5	Rehabilitation Clinic	Khan-Uul District	Management contract.
6	Children's Nursing Clinic-20	Chingeltei District	Management contract.
7	Outpatient Clinic-2	Songino Khairkhan District	Management contract.
8	Sukhbaatar District Hospital with Beds	Sukhbaatar District	Management contract.
9	"Khandgai air" sanatorium of Bayangol DHA	Sukhbaatar District	Management contract.
10	Substance Abuse Hospital	Songino Khairkhan District	Management contract.
11	Building rented by Bolor Melmii Ophthalmology Hospital (former Childrens' Liver Sanatorium Building)	Sukhbaatar District	Proposed renting with option to purchase, if privatization auction fails.
12	Chingeltei District Health Alliance	Chingeltei District	Management contract.
13	Gachuurt Sub-district Hospital	Bayanzurkh District	Management contract.
14	Khan-Uul District Health Alliance	Khan-Uul District	Management contract.
15	Stomatology Center	Chingeltei District	Management contract.
16	Childrens' Nursing Sanatorium–4	Khan-Uul District	Management contract.
17	Childrens' Nursing Sanatorium –40	Bayanzurkh District	Management contract.
18	Childrens' Nursing Sanatorium –41	Songino Khairkhan District	Management contract.

Few private investors are likely to be interested in buying public health care facilities to keep them open as hospitals or clinics or to operate them under very stringent contractual conditions, even as a mix of public hospital and private health care center. Sometimes investors are more interested in the real estate value of the land on which the premises are located than in the hospitals as economic entities.

One basic objective of the FGP reform was to "privatize" PHC services, as FGPs were to be constituted and operated as private entities.[37] To a limited extent, FGPs are indeed private since doctors and nurses in a FGP are not public employees. But the fact that FGPs can only contract with the HIF and local governments for their income in a non-competitive environment makes them imperfect models of privatization. FGPs do not have the freedom to make reallocations within their own budgets, and any purchased equipment is state property. Thus they appear to function as public entities and are private in name only.

Overall, the privatization of public health care facilities in Mongolia does not seem to be based on any mid-term or long-term strategy that would encourage the private sector to invest in existing health care infrastructure. In the socialist period, insurance was in the hands of the state, and state property was insured by the state. The State Insurance Company (Mongol Daatgal Insurance Company) was privatized in November 2003 by Russian investors. It is the largest in the country with around 80 percent of the insurance market. Mongolia has 23 insurance companies in total, 22 of which are very small, competing for 20 percent of the market. Closures, possibly bankruptcies, and mergers are likely.

The current insurance legislation is considered underdeveloped and insufficient for the development of a modern insurance industry. The latest amendments (approved by Parliament on April 16, 2004) introduced two main reforms, one on long-term insurance, which sets the basis for providing life insurance (which is currently non-existent in Mongolia) and another on reinsurance. For now, all that is available is general insurance for property, casualty, fire, and documents. With life insurance products now coming onto the market (at least one insurance company, NOMIN, is intending to ask for a life insurance license), health insurance as a rider may begin.

Only a few insurance companies so far offer health insurance. The ERIL insurance company, part of a holding that also owns a private hospital, has sold 493 health insurance policies with premiums of one year and paid in advance. The company makes no inquiries about the insured person's medical condition, income, business or profession, or place of work. One only needs to pay the premium in advance to be insured. The average annual premium is around US$110. This is reimbursement indemnity insurance (for expenses incurred) both at public and at private health care facilities. The loss ratio for 2003 was 25 percent. The company has its own private hospital but finances it with out-of-pocket payments and payments from the HIF, not from its health insurance policies.

The insurance industry is hoping to develop products that will be attractive to the emerging middle-income and upper-income classes. It also hopes to capture the business of the people who currently go abroad for treatment (mainly to China). Towards this end, some in the industry are calling for the building of modern and efficient private hospitals and for the networking of private medical consultations, to combine the financing and delivery of care. It would not be surprising to see the development of an incipient managed-care type of health care financing in the next five years.

Mongolia has limited capacity to regulate the emerging insurance industry. The State Insurance Supervisory Agency is considered by the industry to be weak and staffed with personnel who are not qualified in the private insurance business. The lack of actuaries to calculate risks and premiums is currently a major constraint for the development of health insurance (and, for that matter, life insurance). A new Association of Mongolian Insurers has been formed to represent the interests of the industry and to

self-regulate. A revised, modern and comprehensive insurance law differentiating between public and private insurance is needed.

3.4. GOVERNMENT STRATEGIES AFFECTING THE HEALTH SECTOR

As its vision for reducing poverty by accelerating sustained and equitable economic growth, the Mongolian government developed the Economic Growth Support and Poverty Reduction Strategy (EGSPRS). EGSPRS represents the government's commitment to reducing poverty and to moving from annual to medium-term planning. The EGSPRS was developed with the participation of a wide cross-section of the population and the plan has strong public support. The EGSPRS has the following health objectives:

- To reduce maternal and child mortality and achieve the Millennium Development Goals by implementing the National Program on Reproductive Health and Child Health;
- To improve the quality of basic health services and increase access to them, particularly for the rural population;
- To strengthen rural hospitals; and
- To strengthen regional diagnostic centers.

For the government to meet these logistical and funding challenges, it will need to expand health insurance to cover a larger proportion of the population by including workers' dependents, and expand the role of the private sector, accelerating the privatization of government-owned health facilities.

The direction taken to achieve most of the reforms presented in the EGSPRS are broadly agreed upon. One possible exception is the government's current approach to regional development, which harks back to the pre-transition era of command and control. The basic premise of the regional development strategy is that the first and second tiers of the territorial government (*aimags* and *soums*) are too small in terms of population to be the building blocks of a strategy to address regional and rural/urban imbalances. Instead, the regional development strategy relies heavily on large infrastructure investments and the development of urban centers as growth poles. A major strand of the strategy is the selection of two towns or cities within each region to be the regional centers of economic growth, and to forge close links among these centers across the country by substantially improving the transport network. Hence, one major project is to complete the Millennium Road, an artery linking the north, south, east, and west of Mongolia. The strategy also designates production activities such as animal husbandry, tourism, mining, or the processing of animal products and minerals for each region and earmarks the additional investments (for example, in new energy stations hospitals and schools) needed to make this happen.

As part of this regional development strategy, three Regional and Diagnostic Treatment Centers (RDTC) have been established in the east (Dornod), the south-central area (Uvorkhangai), and the west (Khovd). The location of UB enables it to serve the north-central region. The RDTCs are supposed to provide tertiary health care in the regions, and they have received equipment worth 5.5 tug (US$5.5 million) to help them to do so. The regional development strategy specifies that the existing RDTCs are to be expanded and additional centers established, though there is currently no plan to carry out this intention. Indeed, sufficient funding to pay for the increased running costs of these facilities is unavailable. When we examine the cost structure of the RDTCs, it becomes clear that the cost per bed and cost per employee of these regional facilities are less than the *aimag* average (see Table 18). It also appears that the RDTCs have not received any additional recurrent funding to finance the costs of tertiary care. Given that the payment formula does not vary by case-mix, there is currently no method for increasing funding to pay for tertiary care in *aimags*.

Table 18: Spending in the Regional and Diagnostic Treatment Centers

	Population	Regional Beds	Per Capita Spend 2002	% Under or Over Per Capita *Aimag* Average	Beds/ 1000	MMR/ 1000	PMR /1000	IMR / 1000
Dornod	73035	405	23.9	0%	7.14	0.8	29.6	40.6
Uvorkhangai	109316	200	19.7	-20%	5.02	2.8	20.3	31.7
Khovd	89664	255	0.0	-15%	6.20	0.5	27.5	35.0
Aimag Avg	76687	198	19.6	0%	6.63	1.1	23.0	33.0

Given the size of Mongolia, improving diagnosis and treatment in the regions, particularly for cardiovascular disease and cancer is possible. Unless the RDTCs receive adequate funding for tertiary care, however, tertiary patients will bypass these regional facilities. One alternative approach is to develop satellite centers of national referral centers in the *aimag* hospitals that would oversee the quality of care.

An important constraint in translating government strategy into action is the disconnect between policymaking and budget realities. Without a strategic policy framework grounded in fiscal realities, budget discussions often are reduced to wrangling over allocations. The imposition of an aggregate resource constraint too late in the process has meant that there was little or no debate on trade-offs and priorities, and budget discussions have often been accomplished through across-the-board cuts in operating and capital expenditures. These structural problems in the budgeting process were the impetus behind introducing health insurance.

The coherence and comprehensiveness of the budget is undermined by extra-budgetary funds and quasi-fiscal activities. Extra-budgetary revenues include fees, charges, and license payments collected by budget entities which often keep separate bank accounts. Health insurance is an example of an extra-budgetary fund, which bypasses the budgetary process. Also, while some multilateral funding is included in the budget, most bilateral funds are not and are simply spent on an *ad hoc* basis during the fiscal year.

CHAPTER 4: RECOMMENDATIONS

Key Steps in the Short Term:

- **Undertake a new household survey and other quantitative and qualitative research to reconcile WHO and Mongolia health statistics and discover whether infant and maternal mortality are rising or falling.**

- **Bring all hospitals in UB under a unified regulatory framework with improved information and payment systems that would provide strong incentives to increase efficiency and quality of care.**

- **Quickly reorganize the hospital network in UB by merging small, specialist hospitals into larger tertiary clinical hospitals, thus generating savings that can be invested in public health and primary care.**

- **Improve the coordination between the MOH and the HIF and create unified information, payment, and quality systems.**

- **Introduce an accreditation system for private health facilities.**

- **Create a taskforce to reexamine the strategy of family group practices focusing on their level of financing, their quality of care, and their legal status.**

Key Steps in the Longer Term:

- **Develop a strategy for health financing that addresses the limitations and the sustainability of the HIF.**

- **Optimize Mongolia's hospital sector by creating hospital networks.**

- **Increase funding for and the clinical capacities of FGPs.**

- **Change the public's perception of FGPs and create ways to enforce the referral system.**

4.1. HEALTH FINANCING OPTIONS

Fiscal fragmentation in health financing in Mongolia is largely caused by the structure and operation of the HIF. The medium- and long-term financial sustainability of the health insurance fund is questionable due to the absence of a large, formal workforce making continuous insurance contributions. The lack of trained actuaries to calculate risks and premiums is a constraint not only to the development of private health insurance, but also to the fiscal reform of the publicly run HIF.

In the short run, this situation could be rectified by improving planning and coordination between the MOH and the HIF. The two key agents need to create a coordinated payment regime detailing which services they will fund. The MOH budget should fund only true public goods and public health services.[38]

[38] True public goods are generally non-excludable with significant degree of externalities. A good example would be environmental control for malaria (removing still water and spraying for mosquitoes). There are also important individual health services that have very powerful externalities such as infectious disease. Treatment of tuberculosis is a personal health service, but it has important public health implications, as does the treatment of sexually transmitted diseases and other communicable diseases.

Improving the payment system and the quality of care should also increase the coverage of primary care and rationalize the large, inefficient hospital sector.

The government's HSMP has made provisions to study the health insurance system towards a plan of reform in the future (during 2008-09). This reform will target the information and payment systems, as a part of a longer-term strategy to determine a sustainable position for health insurance in the health financing continuum. In this context, Mongolia must decide the general direction that it wishes to take in terms of reshaping the delivery and financing of its health services. The country's leaders and policymakers need to decide if they want to move towards a Bismarkian system of social insurance, maintain some kind of hybrid system, or move towards a public sector management or single-payer model. We now discuss some possible options in turn:

- *Social Insurance.* One option is to require the HIF to finance the purchase of hospital, ambulatory, and primary services while leaving public health as the responsibility of the government budget. This has been a viable model in many Eastern European countries, including Hungary and the Czech Republic. The HIF could collect employment-based contributions and all state and local budget subsidies in one fund. The HIF would then make all purchases of health care goods and services as an autonomous entity guided by a policy and supervision board. Adopting this model would require the government to shift an even larger amount of funding to the HIF than it does currently in order to cover the whole population, including to those not in the formal labor market.

- *Hybrid System of Social Insurance*. The two-tiered system in the United States — with health insurance for the working population and public services financed through the budget for the poor — is one example of a hybrid system. Just such a two-tier system is already emerging in Mongolia. Private hospitals take care of those middle- and upper-income households that are not satisfied with public health care. These services are paid either by the insurance fund or by out-of-pocket payments. Because the private health insurance industry is preparing to enter the market, this two-tier system is likely to expand.

- *Public Sector Management/Single-Payer Model.* Mongolia could model its health care system after systems in the United Kingdom or New Zealand. This would mean returning all funding to a unitary budgetary system based on the principles of the new PSMFL. Shifting health insurance funding back into the budget would require repealing the health insurance law. The emphasis in financing health provision would change from inputs to outputs and outcomes. Public service agreements would be needed between the government and the MOH to ensure the achievement of certain outcomes, and between the MOH and health care providers to ensure the production of outputs and the achievement of outcomes.

- *Kyrgyz Model.* The Kyrgyz Republic in Central Asia, which resembles Mongolia in terms of its income and level of development, has a single-payer model that is worth examining. The Kyrgyz Republic began to introduce health insurance in 1998, but in the face of opposition from the development community (including the World Bank, USAID, DFID, and WHO), the government agreed to modify the implementation to include the HIF within the MOH. The ministry and the HIF agreed to use the same information system and payment regime. The Kyrgyz reforms have been very successful in restructuring almost the entire system of primary care based on the family medicine model, which includes open enrollment into FGPs in urban areas, thus creating competition among primary care providers. The FGPs are capitated and their practitioners receive intense clinical training as well as equipment. The additional

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This should be the focus of public funding. Once this is fully funded, then other areas should be considered for public spending. This is likely to include insurance for the poor to cover hospital services.

revenues raised by the small health insurance tax are being used to pay for pharmaceuticals. The Kyrgyz government has replaced the flawed input-based system with an output-based hospital payment system that uses hospital discharges and a simple case-mix classification (Kutzin, 2003).

4.2. SHORT-TERM OPTIONS FOR IMPROVING SERVICE DELIVERY

Improving service delivery in the short term will require changes in hospitals, family group practices, public health, and pharmaceuticals.

4.2.1 Hospitals

In reforming the hospital system, one must distinguish between UB and the rest of the country. In rural areas, the structure of the system is sound. The *aimag* hospitals only need to become more efficient and *soum* hospitals to be redefined as FGPs with beds. The HSMP states that the *Soum* Hospital Development Programme will be the vehicle for further improvement in provision of essential health care through that system (a part of the Rural Health Services Initiative). It is the hospital system in UB, however, that needs to be fundamentally reformed. The government has indicated that it will use the prism of 'complementary services' under the ECPS to view the restructuring of the secondary and tertiary hospital sector in UB[39].

In the short term, the emphasis should be on administrative rationalization, that is, the merging and closing of small, specialist hospitals. The savings made by increasing the efficiency of the hospital sector can be used to fund improvements in public health and primary care. Potential savings through rationalizing the UB hospital system in the first year are estimated to be in the 978,600,000 tug range. Continued efforts over the medium term (three to five years) could yield additional savings up to approximately 2,912,500,000 tug.

Two rationalization scenarios are likely to yield results in the short term (one to two years). Relative to other scenarios that were explored, these two are much simpler to implement — administratively, functionally, and from the standpoint of the facilities and patients. The first of these short-term scenarios involves calculating the savings generated if hospitals with fewer than 75 beds (as well as the single 100-bed traditional medicine facility within the optimization subset) were closed and their patients referred to other UB health facilities.[40] In total, 15 facilities would be closed with nine of them having fewer than 50 beds (many with only 10 or 15 beds). These facilities are widely spread across the city. Under this scenario, an across-the-board cut would be made. The medication budgets from these closed facilities could then be transferred to other facilities. Under this scenario, savings could amount to 1,262,224,000 tug or US$1,083,454. The second scenario aims to further expand rationalization by closing all UB facilities within the subset of optimization hospitals with 135 beds or less. This scenario, net of any medication costs, resulted in savings of 2,865,872,000 tug or US$2,459,976, representing a notable 18 percent cost reduction in the UB group targeted for optimization.

Cost and financial accounting need to be improved in order to support optimization. Costing information is needed to set rates for health providers. It is also important to have a better understanding of the true costs of providing quality health services in Mongolia. Health providers need better financial systems to manage their facilities and to improve efficiency. A standardized system of cost-accounting has yet to be established, and limited use of step-down costing to allocate overhead to cost and revenue centers occurs.

[39] With the additional focus being on reducing the top five leading causes of morbidity and mortality.
[40] By excluding from this list those facilities that, for whatever reason, would not be appropriate for optimization in the short term, an even greater variation in cost structure emerges. This represented 13 facilities that vary in size from 10 beds to 75.

Without the backbone of costing and financial accounting, it will be difficult to optimize the hospital network.

Currently, little or no information is available on the content and quality of the health services provided by hospitals. More information is needed on the medical conditions for which people are being hospitalized and the interventions being performed. Given high hospital admission rates compared with other countries, it is possible to decrease the overall number of admissions. The admission rate is more than double that of the United States and admissions in Mongolia are generally for much less sophisticated interventions. Despite the dearth of hospital-level information, it is clear that health outcomes for cardiovascular disease and cancer are poor; it would, therefore, be useful to study these conditions and the treatment provided for them in more detail.

If the Mongolian public and private health care system is to be modernized, the government needs to take strong and decisive action to revise licensing and accreditation given to the numerous recently established private hospitals. The government needs to set parameters for the operation of private hospitals and clinics, and to enforce all licensing and accreditation regulations honestly and objectively. Facilities that meet the licensing and accreditation standards should be encouraged to merge. "Hospitals" that do not meet minimum standards should be closed or upgraded to meet standards. In addition, the MOH should enact and enforce effective regulations to monitor the performance of private health providers and ensure the quality of the care that they provide.

Privatization of hospitals has been limited, though the government is very interested in more expansive privatization. The government has considered privatizing one of the large national clinical hospitals that provides tertiary care (Hospital Number 3), but because the government does not yet have a coherent strategy for the privatization of hospitals, the process should be delayed until it develops one. If the government decides to rationalize hospitals through geographic networks, it should form the networks before commencing with the privatization. Once privatization is completed, administrative rationalization will become all but impossible. When hospitals are grouped into networks, privatizing could occur through management contracts.

In addition to formulating a policy on health care privatization, the government will also need to develop guidelines for tendering, privatization contracts, and monitoring and control. In order to successfully privatize some sanatoria, the government must be flexible regarding their present and potential uses (for example, a sanatorium could be used as a resort and partially as a rehabilitation center). In addition, the MOH should carefully define which hospitals should be kept as public hospitals within the public health care system and which should be used for the private delivery of care outside the public system. The government should introduce public information campaigns to counteract the vested interests within the health care community that oppose hospital privatization. Finally, failure to strengthen and raise the status of PHC will put a heavier burden on public hospitals and increase opposition to privatization.

4.2.2 Primary Health Care

At present, hospitals continue to be the main providers of PHC. As previously discussed, people largely refer themselves directly to hospitals bypassing the FGPs. In UB, over 50 percent of the non-poor refer themselves to hospitals for outpatient care. The poor are somewhat more likely to go to an FGP for health care, but in general, public perception of FGPs and PHC is low, with people assuming inferior quality of these services. In order to shift the burden of primary care away from hospitals and onto smaller, less costly facilities, the government will need to make several changes on both the supply and demand sides. An emerging posture on this issue in the HSMP is that both the *soum* and the FGP facilities be used to provide the *essential* part of the ECPS. However, this will need further definition, such that public and private provision is clearly demarcated. The government has indicated that it will study the role, funding, organization and legal position of the FGPs further over the course of the Master Plan period. For instance,

there is a need to develop a more coherent approach to the role the private sector should play in providing primary care and to clarify the "private" nature of FGPs. For the moment, the FGPs are private only in name and are strictly controlled by the government's budget. Thus, they are taxed as private entities, but are run and regulated like public entities with no profit incentives.

The HSMP provides for the following 'strategic actions' for strengthening the FGP- and soum hospital-based primary case system. The actions will be implemented over a time horizon that leads, in some cases until 2015. The primary responsibility for the reform lies with the MOH, with support and guidance from the international partners.

- Restructure and sustainably deliver essential health services at the soum and FGP health facilities in accordance with the essential part of the services of the ECPS;
- Continue and upgrade the Soum Hospital Development Program under the Rural Health Services Initiative to ensure provision of *essential* health care services at the soum health facilities and the FGPs;
- Develop and implement a policy to clearly define the role, funding, organizational and legal position of the FGP system in the health sector to deliver the essential package of services;
- Systematically mobilize the community and the community health volunteers to ensure that mothers and children, and elderly in particular, fully utilize the soum and FGP health services; and
- Routinely include relevant national program activities into services of the soum and FGP health facilities.

These actions are still at a general, structural level. This report recommends some specific, short-term reform options for the government to consider, including:

- Increasing capitations to fund increases in FGP staff salaries and improvements in the quality of care;
- Revising the legal code to allow FGPs to contract freely, thus expanding their revenue source beyond capitation contracts with the HIF and local governments and to build equity;
- Establishing clear family medicine protocols;
- Creating standards for the accreditation and licensing of primary health care providers;
- Devising public information campaigns to modify negative beliefs and attitudes about PHC providers and FGPs, and to persuade patients away from hospital specialists; and
- Allowing FGPs to provide essential drugs free of charge.

4.2.3 Public Health

One of the most perplexing aspects of the Mongolian health system is the diminished status of public health. It is difficult to find the public health function in the NHA data. Mongolia appears to have dismantled the traditional organization of public health inherited from the Soviet Union — the strong vertically organized SES — which has potentially grave implications for communicable diseases such as SARS. Public spending on public health is low and a comprehensive assessment of the public health system is needed, including data gathering and the compilation of statistics. It would be advisable to carry out a study on the effects of restructuring the SES and to review the public health system's funding and organization.

4.2.4 Pharmaceuticals

Few reviews of the pharmaceutical sector have been conducted. A 1999 study showed that essential drugs were not available in hospitals or primary care centers, but the study did not elucidate the underlying causes of the problem. Unfortunately, the 1999 study is the most recent review of the sector, and significant changes have taken place since then, particularly in the implementation of pharmaceutical tendering throughout the country. To inform future policies on pharmaceuticals, the following areas need further study in the short term:

- The availability and prices of essential drugs;
- The tendering process for pharmaceuticals;
- Out-of-pocket spending on pharmaceuticals, including the percentage of drugs purchased for in-patient use;
- Hospital spending on pharmaceuticals;
- Options for increasing funding for essential pharmaceuticals in FGPs; and
- The role of Mongolemimpex in the logistical system.

The HSMP has a substantial section on proposed work in the pharmaceuticals area, arrayed under the headings of: ensuring continuous and equitable access, establishing a quality assurance system, ensuring rational drug use, and ensuring the availability of good infrastructural support. A review of the strategic actions under these heads reveals that many of the areas of study recommended in this report will be accounted for. However, rationalizing hospital spending on pharmaceuticals still needs to be kept in view.

4.3. LONG-TERM SERVICE DELIVERY ISSUES

Long-term service delivery is key to successful health sector reform. Aspects to be addressed include optimization of the hospital sector through the creation of hospital networks, improved funding at the primary care level, and pursuance of public perception campaigns to alter the current view of primary care.

4.3.1 Hospital Optimization

Once a quick administrative rationalization of public sector hospitals has been carried out in UB, the next step should be the further optimization of Mongolia's hospital sector, which is likely to involve the creation of hospital networks. The network concept of hospital rationalization could yield significant savings, but the implementation will be long and complicated by underlying political considerations. Annex 2 of this report lays out the potential for network rationalization, but also points out that many other factors will be needed to ensure the sustainability of the networks, including a strong legal and regulatory framework, licensing and accreditation, improved management, a new method of financing, and capital investment. We have developed two scenarios (for UB alone) that demonstrate alternate approaches to geographic networks.

Table 19: Mongolia Optimization Issues

• Formal approval of an optimization plan to make it official state policy. The legal instrument could be a MOH Order, a Government Decree, or a new Law on Public Hospitals. • A Law on Hospitals would be useful to set out proper definitions for hospitals, clinics, and polyclinics, criteria for the classification of public hospitals, inter-system referrals, accreditation requirements, licensing of functions (tertiary functions in a secondary care hospital, for instance), and norms for the public/private mix in delivering care (lease of space, use of treatment and surgical facilities, etc). • A unified authority to conduct and supervise the optimization process. • A unified system of non-local hospital payments (social insurance fund and State budget allocations). • New models for the management of individual hospitals and for the management of integrated hospitals and networks. • New model for the management of the optimized system (an autonomous public hospitals' board). • Effective accreditation and licensing norms objectively applied. • Definition (class or type) and number of public health care buildings and corresponding engineering and architectural standards; and plan for the best use of utilities. • Definitions of standards for medical equipment, laboratories, and diagnostic centers. • New budgeting norms differentiating fixed costs and cost sharing among hospitals, multiple sources of income, accounting and reporting.	• New policies on salaries with performance incentives, and policies and regulations on contractual services for health care professionals. • Norms for contracting out non-clinical services. • Norms, standards, and tariffs for external physicians to access the services of the public hospitals with private patients. • Definition, standards, and number of specialists in optimized public hospitals. • Contingency plan for personnel made redundant, considering issues such as, severance payments, early retirements, continuity of pension contributions and other benefits, etc. • Approval of clinical protocols, coding, and medical records. • Policies and regulations on drugs (essential drugs list, use of generics, co-payments, purchasing and importing of drugs and their registration). • Norms on referrals from PHC, inter-hospital referrals, and referrals from the private health care sector. • Norms for the integration of health care services among public hospitals, cross sharing of costs and inter-payments. • Norms on public hospitals networking, relations with PHC and private health care delivery. • Clear norms on the relations between primary health providers and hospitals at all levels, both public and private. • Guidelines on public/private mix in delivery and financing.

Scenario 1: Geographic Networks. The 32 UB hospitals were combined into three to six catchment areas resulting in an optimization target group with a gross expenditure budget (in 2002) totaling 17,771,256,000 tug. The target group represented 7,151 staff members and 5,203 beds or 31 percent of all health service costs, 30 percent of all staff, and 38.4 percent of all beds (again in 2002). The beds per 1,000 people for this particular group of 32 facilities in 2002 were 6.33, with a total staff to bed ratio of 1.37 staff members per bed. A summary of this particular potential optimization scenario is shown in Table 20 below.

If the beds per 1,000 people ratio were reduced from 6.331 to 4.5, the number of beds would drop from 5,203 to 3,698, a reduction of 1,505 beds. Maintaining the same staffing ratios would result in an estimated

staff cost savings of 2,624,650,000 tug or 2,068 fewer staff members.[41] However, it is unlikely that such staff savings would be realized in the first year. More likely, a targeted reduction in bed to population ratio would result in a more gradual reduction in staff as facilities and functions were combined and streamlined, probably in the region of 25 percent of staff savings in the first year with appropriate changes in the staffing mix. As functional, operational, and physical facility integration occurs, greater staff savings could be realized.

The savings profile for non-staff expenses such as medications and medical supplies would also be affected by optimization. If we make the assumption that a modest 10 percent improvement could be made in productivity efficiency in the first year by applying more consistent prescription protocols (lowering variation) the likely result would be savings of 111,063,000 tug. Adding in a modest 20 percent savings in utility costs (heat/electric) and a 15 percent savings in other indirect costs would result in total non-staff cost savings in the first year of 434,997,000 tug. Adding an expected staff savings of 547,337,000 tug (25 percent productivity) would yield a total potential first year saving of 982,334, 000 tug or about US$843,205.

Table 20: Networks for Optimization

	Catch 1	Catch 2	Catch 3	Catch 4	Catch 5	Catch 6
Potential Facilities Being Merged	9	5	4	4	5	5
Total Budget of Facilities ('000 tug)	5,024,054	1,018,628	892,280	1,438,079	3,744,496	5,653,718
Staff Members	1,912	513	392	711	1,511	2,112
Current Beds	1,247	328	298	505	1,163	1,662

Scenario 2: Enhanced Geographic Network (Increased Staff Reductions). More assertive first-year staff adjustments (50 percent) combined with more consolidation of physical facilities could increase utility cost savings to 40 percent. Assuming medical supply and pharmacy savings remain at 10 percent; total savings would increase to 1,722,000,000 tug or about US$1,478,112 in the first optimization year. This represents a 10 percent cost improvement in the overall target group. Considering that the average cost of a four-person FGP in 2002 was about 13,500,000 tug, this signifies a considerable structural shift.

The first scenario is more conservative in terms of staff reductions and potential cuts, whereas the second scenario is twice as aggressive, yielding significantly more savings. Both scenarios involve complex administrative, facility, functional, and patient re-distributions. While both scenarios are doable, it is likely to take three to five years to obtain the full optimization value of either one.

4.3.2 Primary Care

FGPs are supposed to provide primary care in UB and *aimag* centers, whereas in *soum*s, hospitals are the health unit responsible for primary care. As mentioned earlier, *soum* hospitals should be reclassified and forced to focus exclusively on providing primary care, having the same mandate as FGPs, but equipped with beds.

Table 21 presents a calculation of the level of resources needed in Mongolia to provide adequate funding to FGPs and *soum* hospitals for primary care services. The calculation, based on indicative numbers, assumes that the current average operating costs of FGPs would more than double — from 12,646,620 tug to 26,500,000 tug. This increase in funding would make it possible to give health personnel in FGPs the same

[41] This assumes that policymakers would be in favor of staff reductions. The current exchange rate is 1,165 tug to US$1 or 2,624,650,000 tug to US$2,252,918.

salary levels as hospital workers to attract better qualified personnel than currently tend to be employed in FPGs.

Table 21: Scenario Increasing the Average Cost of an FGP

	26,500,000/ tug	Average Estimated Allocation	Proposed Average Wage/Month tug	Proposed Average Wage/Month US$
Salary/Benefits/Dr./Year for 4 MD's	7,950,000	30%	165,625	$142.17
Nurse/Other Salary/Benefits/Dr./Year- 2:1 ratio	5,300,000	20%	55,208	$47.39
Utilities	4,505,000	17%		
Meds	3,710,000	14%		
Other	3,975,000	15%		
Capital	1,060,000	4%		
TOTAL		100%		

The clinical capacity of FGPs is low, particularly the capacity of primary care physicians. Low salaries that fail to attract the best and brightest are partly to blame. In addition to raising salaries, the government should ensure that FGP clinicians have more access to intensive programs of clinical training and diagnostic services. The PHC/FGP program started with very short and limited training of doctors and nurses. These medical personnel have had no in-service or follow-up training. The Department of General Medicine at the Medical University needs to be strengthened so that it can provide PHC/FGP staff with continuous education, in-service training, and distance training. Over time, increased training for PHC doctors and nurses will enable them to increase the scope of their work and improve the quality of their care.

The lack of a referral system is another longer term issue, which will take time to correct. Right now, limited protocols and the absence of rewards or punishments exist for adhering to or ignoring a referral system.

4.3.3 Public Health and Pharmaceuticals over the Long Term

It is not possible to make any long-term recommendations for improvements in these two sectors, because such will be contingent on research carried out in the short term.

4.4. STEWARDSHIP

As discussed in the diagnostics section, stewardship of Mongolia's health sector is weak because management has been split among the MOH and the HIF. Short of repealing recent reforms mandating the separation of policy formulation and implementation and the grouping of all inspectorates, including health, under one SIA, health sector stewardship could benefit from the following changes:

- Greater coordination among the MOH and the HIF, preferably with the MOH playing a supervisory role;
- A clear health reform strategy that determines which laws and/or regulations need to be changed as opposed to allowing new laws and regulations to dictate the course of the health sector; and
- Better regulation by the MOH of the private health sector, particularly in the area of licensing and accreditation with HIF funding for private providers contingent on meeting clear standards of care.

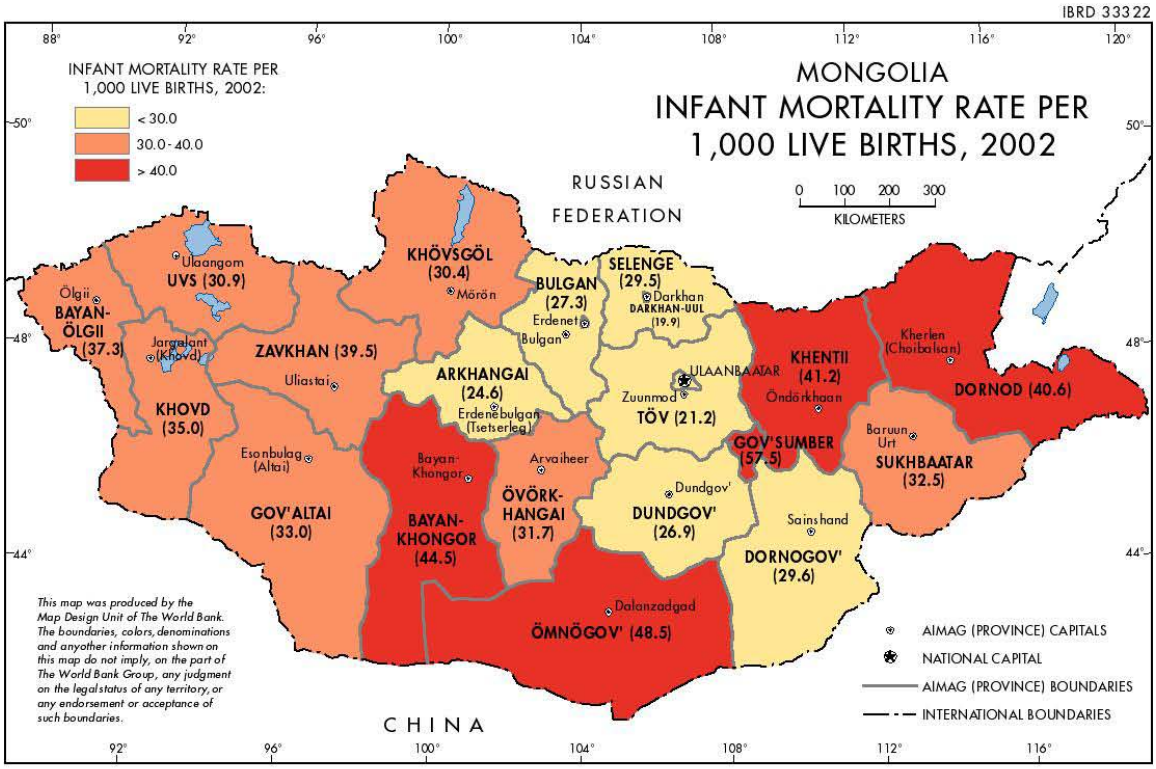
Mongolia needs to decide on its long-term vision of the organization and financing of health services, not only the public/private mix but also the long-run institutional framework. There are tensions between the model developed in the PSML and that implied by social health insurance. The following questions are relevant to the discussion that needs to take place:

- What is the role of the state in the delivery of health services? Should the state remain the major owner of health facilities? What is the role of the new, emerging private sector?

- What is the role of the MOH versus the HIF under the broader framework of governmental reform and PSML? Under the PSML, the government should set targets to be used to determine the effectiveness of spending. Under health insurance, however, social insurance funds health care, thus reducing the role played by the government. Mongolia needs to define clearly the relative roles and responsibilities of the MOH and the HIF.

The government should closely monitor the new inspectorate system to determine whether it is a good system for organizing public health. If not, then the government should consider reinstating a modified SES, which would include the monitoring and control of noncommunicable diseases.

ANNEX 1


IBRD 33322
MONGOLIA
INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS, 2002
INFANT MORTALITY RATE PER 1,000 LIVE BIRTHS, 2002:
< 30.0
30.0 - 40.0
> 40.0
RUSSIAN FEDERATION
0 100 200 300
KILOMETERS
Ulaangom
UVS (30.9)
Ölgii
BAYAN-ÖLGII (37.3)
Jargalant (Khovd)
ZAVKHAN (39.5)
Uliastai
KHÖVSGÖL (30.4)
Mörön
BULGAN (27.3)
Erdenet
Bulgan
SELENGE (29.5)
Darkhan
DARKHAN-UUL (19.9)
ARKHANGAI (24.6)
Erdenebulgan (Tsetserleg)
ULAANBAATAR
Zuunmod
TÖV (21.2)
KHENTII (41.2)
Öndörkhaan
Kherlen (Choibalsan)
DORNOD (40.6)
KHOVD (35.0)
Esonbulag (Altai)
GOV'ALTAI (33.0)
Bayan-Khongor
BAYAN-KHONGOR (44.5)
Arvaiheer
ÖVÖRK-HANGAI (31.7)
Dundgov'
DUNDGOV' (26.9)
GOV'SUMBER (57.5)
Baruun Urt
SUKHBAATAR (32.5)
Sainshand
DORNOGOV' (29.6)
Dalanzadgad
ÖMNÖGOV' (48.5)
CHINA
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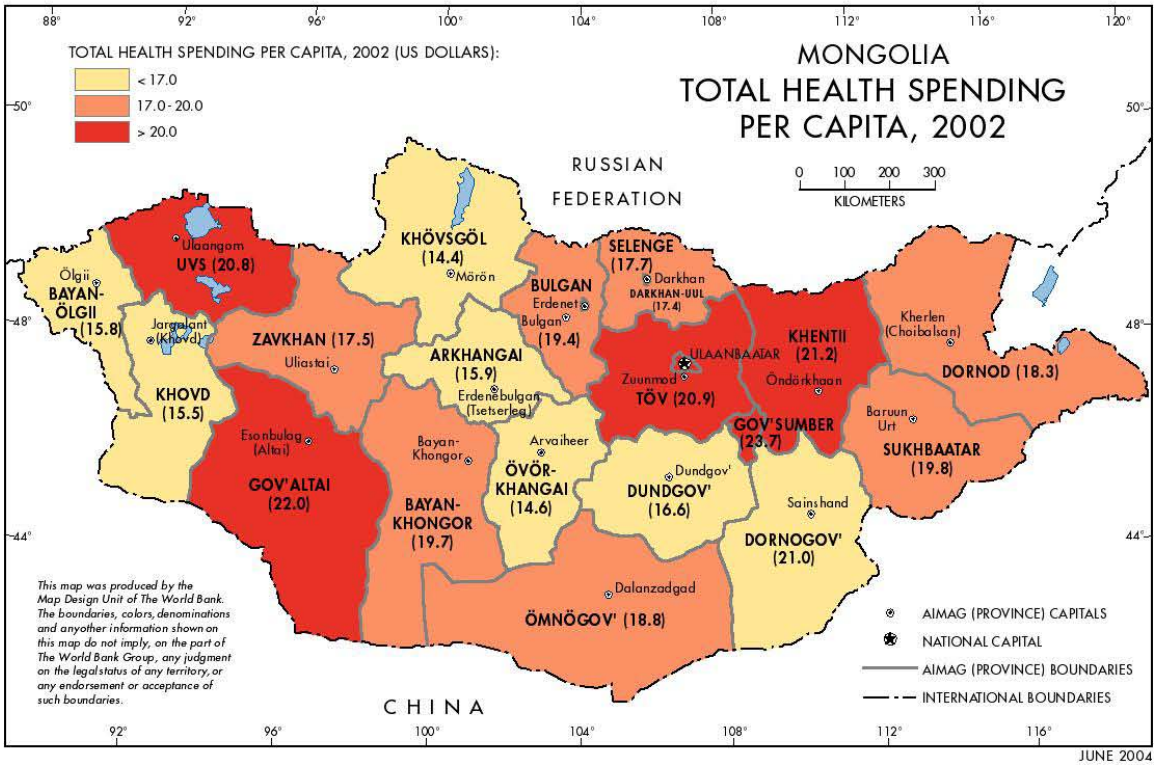
AIMAG (PROVINCE) CAPITALS
NATIONAL CAPITAL
AIMAG (PROVINCE) BOUNDARIES
INTERNATIONAL BOUNDARIES


MONGOLIA
TOTAL HEALTH SPENDING PER CAPITA, 2002
TOTAL HEALTH SPENDING PER CAPITA, 2002 (US DOLLARS):
< 17.0
17.0 - 20.0
> 20.0
RUSSIAN FEDERATION
0 100 200 300
KILOMETERS
Ulaangom
UVS (20.8)
Ölgii
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SUKHBAATAR (19.8)
Sainshand
DORNOGOV' (21.0)
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CHINA
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AIMAG (PROVINCE) CAPITALS
NATIONAL CAPITAL
AIMAG (PROVINCE) BOUNDARIES
INTERNATIONAL BOUNDARIES
JUNE 2004

ANNEX 2

Optimization[42]: *A Focus on UB*

Options for optimization shown by likelihood of implementation of the UB hospital sector include:

- Short-term rationalization based on closure of small, mono-profile hospitals;
- Medium-term optimization into three geographic networks;
- Inclusion of non-MOH public health facilities; and
- Inclusion of the private sector.

The optimal configuration for the Hospital sector in UB. The optimal configuration of hospitals for UB city would eventually be 7-10 multi-profile hospitals, each with between 250-600 beds, providing both secondary and tertiary hospital care.[43] This scenario is based on a norm of 35 beds per 10,000 and a population of UB of one million. The hospital normative is reasonable, but more radical rationalization is possible, if one used the levels in other countries like the United States. The level of hospitalization in Mongolia could fall more significantly, because of the low complexity of clinical interventions compared to hospitalization in OECD countries.

Most tertiary functions with the exception of cancer should be concentrated in one of the three multi-profile hospitals in the city of UB instead of having these functions divided over a larger number of hospitals. Some functions such as hemodialysis and oncology can be spread to a limited number of other hospitals in the country for reasons of geographical accessibility. Hospitals providing tertiary care will serve as teaching bases for the Medical Universities. These hospitals will, besides tertiary care, also provide secondary specialist care. The tertiary activities should be licensed (to allow hospitals to do them), accredited (to ensure quality), regulated by clinical protocols, and monitored regularly.

The ambulatory sector in UB would be based on reconfiguration of hospitals to encourage outpatient departments. Hospital-based specialists would practice in both hospital, but also have an outpatient clinic. Outpatient departments would also provide diagnostic services, laboratory tests, and single-day procedures.

The Current Situation

UB has a large number of hospitals absorbing almost 50 percent of health expenditures.

Table 1: Inventory of all UB Hospitals

Type of Hospitals	Number	Number of Hospital Beds
Multi-specialized hospitals	3	1088
Single-specialized hospitals	6	2392
District hospitals	19	1635
Maternity hospitals	3	360
Other State owned hospitals	8	991
Private hospitals	76	1053
Total	115	7519

[42] The analysis was conducted by Bradford Else, using NHA data.

[43] The optimum hospital has been studied in OECD, but not in transition countries. The general principles are that small hospitals are inefficient, because they do not achieve economies of scale in the production of health services or to develop "systems" for quality control. At a certain point, a hospital can become so large as to be unmanageable. The rule of thumb for hospital planners is between 250-600 beds.

There are three large clinical hospitals which have a large number of specialties. However, they are not true general hospitals, since they do not have obstetrics and gynecology, pediatrics, and most infectious diseases, or cancer, which are concentrated in other mono-profile hospitals. State Hospital 1 has the tertiary function of hemodialysis and has 498 beds. The hospital building is considered to be reasonable. State Hospital No. 3 has the tertiary functions of cardiac surgery and neurosurgery. This is the hospital which was planned to be privatized, but the privatization has been delayed.

State Hospital No. 2 with 190 beds is for government officials of a certain rank and other patients are accepted as private patients. This hospital is equipped with the most modern equipment including a CT scan.

Mono-profile Hospitals

Infectious Disease Hospital with 500 beds.
Cancer Hospital with 190 beds.
Trauma and Injury Hospital with 420 beds.
Maternal and Child Research Center with 662 beds.
Maternity Hospital No 1 with 240 beds.
Three other maternity hospitals with 240, 75 and 45 beds.

District Hospitals

The average capacity of the district hospitals is 86 beds. However, seven have a capacity of less than 50 beds, and three hospitals have a capacity of 60-70 beds. Only one hospital has a capacity of more than 200 beds (225) and eight hospitals between 100-200 beds.

The division of hospital beds over the nine districts of the city is not very equal. Taking the population per district and the number of hospital beds, we have the following bed population ratio.

Table 2: Bed-Population Ratio

District	Population	Number of Beds	Bed/Population
Bayanzurkh	172.824	1237	72 per 10.000
Songinokhairkhan	182.153	328	18 per 10.000
Khan Uul	81.140	298	38 per 10.000
Chingeltei	122.483	355	28 per 10.000
Sukhbaatar	106.167	1163	109 per 10.000
Bayangol	153.562	1707	111 per 10.000
Nalaikh	24.687	135	54 per 10.000
Bagakhangai	3.647	15	41 per 10.000
Baganuur	23.249	135	58 per 10.000

Hospitals from Other Ministries

Other state owned hospitals regard a group of hospitals belonging to other ministries (Ministry of Defense, Ministry of Interior, Railway) and some others.

Private Hospitals

The size of the average private hospital is very small (almost 14 beds per hospital). Only one hospital has a capacity of 80 beds and one of 40 beds. The remaining 74 hospitals have therefore an average capacity of just over 12 beds.

Private hospitals with a number of beds between 5 and 9: 14.
Private hospitals with 10 beds: 28.
Private hospitals with a number of beds between 11 and 20: 28.
Private hospitals with a number of beds between 21 and 30: 4.

Hospitals in the Pool for Rationalization: What is off-limits?

In discussions with the working group on rationalization, it was felt that only 32 hospitals out of a total of 56 public facilities would be eligible to participate in optimization. However, there is scope to reconsider and expand the potential pool of facilities that would participate. The 32 facilities have acute beds and are owned by central and local governments in the city of UB. The total number of beds of these targeted hospitals is 5373. Including the beds of the private hospitals, there are 6,426 acute hospital beds.

The decision as to what hospitals to include in the optimization pool and which ones to exclude is both a political and technical decision. On the technical side, the question is whether to distribute functions like psychiatric care and substance abuse to bigger hospitals or maintain a dedicated facility. An alternative might be to put the hospital under the jurisdiction of a large hospital. On the political side, the question is whether to include hospitals like the Railroad Hospital. This is clearly duplicative with other hospitals in UB, but it is not under the jurisdiction of the MOH.

Geographic Networks

Given the current hospital network, one approach would be to set up networks of hospitals around geographic clusters. Each cluster should have as its base a large "anchor" hospital. There are a couple of hospitals that potentially can serve as natural bases such as Clinical Hospitals 1, 2 and 3.

This implies a potential clinical base for three networks within UB. However, even this issue will involve many challenges. For example, Clinical Hospital 2, with 190 beds, is probably not large enough to serve as an anchor facility. The alternatives would be the Railway Hospital, which some feel is too small. This leaves only three hospitals with reasonable infrastructure. Other alternatives involve assessing some of the district hospitals such as the Bayanzurkh District Hospital with 225 beds. However, the building infrastructure is rather poor. In almost all cases, the functionality as well as the technical status of "anchor" hospital buildings will require major investments.

The following table shows the location of hospitals by administrative districts. The physical condition of most facilities is rated as poor with only a few in the reasonable category. One is classified as "good".

Table 3: Location of Hospitals by Administrative Districts

	Administrative District	Hospital	Bed capacity	Building condition
1	Bayanzurkh	State Hospital No 2	190	Reasonable
		National Cancer Center	190	Reasonable
		Infectious Disease Center	500	Reasonable
		Maternity Hospital No 3	45	Poor
		Bayanzurkh District Hospital	225	Poor
		UB Gachuurt Khoroo Hospital	15	
	Population	UB KhonKhor Khoroo Hospital	12	Poor
		Enerel Hospital	60	
				Poor
	Total 1,237 beds			
				Poor
2	Songinokhairkhan	Songinokhairkhan District Health Center	108	Poor
		Songinokhairkhan District Hospital		
		Songinokhairkhan District Hospital for Elderly	115	Poor
		Traditional Medical Liver Clinical Hospital	30	Poor
		UB Jargalant Khoroo Hospital	60	Poor
	Total 328 beds		15	Poor
3	Khan Uul	Khan Uul District Health Center	68	Poor
		Khan Uul District Hospital		
		UB Tuul Horoo Hospital	115	Poor
		Corporation of Traditional Medicine	15	Poor
	Total 298 beds	Research Center	100	Poor
4	Chingeltei	Chingeltei District Health Center	167	Poor
		General Hospital for Ministry of Interior		
			188	Poor
	Total 355 beds			
5	Sukhbaatar	State Hospital No. 1	498	Reasonable
		Hospital for Dermatology	170	Poor
		Maternity Hospital No. 1	240	Reasonable
		Maternity Hospital No. 2	75	Poor
	Total 1163 beds	Sukhbaatar District Hospital	180	Poor
6	Bayangol	State Hospital No. 3	400	Reasonable
		Trauma and Injury Hospital	420	Reasonable
		Maternal and Children Research Center	662	Poor
		Railway Hospital		
		Bayangol District Health Center	180	Reasonable
	Total 1707 beds		45	Poor
7	Nalaikh	Nalaikh District Health Center	135	Poor
	Total 135 beds			
8	Bagakhangai	Bagakhangai District Hospital	15	Poor
	Total 15 beds			
9	Baganuur	District Health Center	135	Poor
	Total 135 beds			

The working group on rationalization did not believe that these administrative regions could be used as the basis for the initial geographic networks. In fact, network definition in the short run more will depend on identifying existing hospitals, and what could serve as a strong center (anchor) of the network.

Optimization Modeling

The end of this section contains an additional table breaking-down the nation's sources and uses of funds by cost-type.[44] Using this table as well as detailed budgets from each facility, an average cost-per-bed was produced by location, by hospital type. These costs are without indirect ministry administration, retail, ambulatory or line-item public health costs. The significant variation in cost structures of facilities as shown below emphasizes the need to periodically address rationalization and restructuring so as to ensure a proper orchestration of policy, financing, and clinical demand.[45]

Table 4: 2002 Average Cost per Bed by Cost-Type ('000 tug)

	Sal/Wages	Meds	Utilities	Other	Capital	Avg. Total Cost/Bed
Nat'l & UB City Hospitals[46]	1322	654	577	588	0	**3141**
Aimag Hospitals	1121	504	749	317	0	**2591**
Soum Hospitals	1106	331	232	361	0	**2030**

By refining the above list to exclude those facilities that for whatever reason would be "off-limits" in the short term to an optimization effort, an even greater variation in cost structures occurs. [47]

Table 5: 2002 Average Cost per Bed by Cost-Type for Optimization Scenario ('000 tug)

	Sal/All Benefits	Meds	Utilities	Other	Capital	Avg. Total Cost/Bed
UB Optimization Potential	1455	738	639	583	0	**3416**
Aimag Hospitals Only	1121	504	749	317	0	**2591**
Soum-Level Beds Only	1106	331	232	361	0	**2030**

[44] Salaries, Benefits, Medications, Utilities, etc.

[45] Failure to periodically review the cost structures vis-à-vis policy, financing and demand would facilitate mal-allocation of limited resources.

[46] Includes all UB district, city, tertiary, secondary, sanatoriums and the prison, mental, military, cancer and invalid facilities (6752 beds), but excludes all private (1056 beds).

[47] This cost-per-bed analysis was then refined to exclude facilities that were not likely to be subject to an optimization plan, while including hospitals in UB that would likely be subject to optimization evaluation. This resulted in about 30 facilities under review for optimization representing about 5,200 beds. Given the "purer" tertiary and secondary nature of these facilities, this resulted in an increase in the cost per bed as shown below. To be more specific, the State Mental Hospital, the Prison Hospital, the National Cancer Hospital, the Military Hospital, and the Alcohol and longer-term care facilities were excluded from the optimization computations as were private facilities. Remaining were included into a new category called "UB Optimization Potential". While private hospitals were excluded in these initial calculations as financial data was/is not available, private facilities need to be included in the optimization plans.

Consistent with lessons learned from previous optimization efforts and considering the concentration of multiple and often duplicative facility types in UB when compared to the aimag and soum areas, it is suggested optimization in UB begin with a rationalization initiative (closing and merging) that would facilitate restructuring (particularly a shift from secondary to primary care). Optimization in the aimag and soum areas should begin with restructuring (particularly a shift from secondary to primary care) with an emphasis on aimag network efficiency.

UB Hospital Rationalization

To model this effort, four scenarios were run based on a subset of 32 hospitals likely targeted for rationalization. Considering the many political and policy obstacles, Scenario 3 below is viewed as the most likely scenario to occur in the very near term.

Scenario 1:
The 32 UB hospitals were combined into six catchment areas resulting in an optimization target group with gross 2002 expenditure budgets totaling 17,771,256,000 tug. The target group represented 7,151 staff members and 5,203 beds or 31 percent of all Mongolian costs, 30 percent of all staff and 38.4 percent of all 2002 beds. The 2002 bed per 1000 ratio for this particular group of 32 facilities was 6.331 with a total staff to bed ratio of 1.37 staff members per bed. A summary of this particular potential optimization scenario is shown below.

Table 6: Optimization Scenario No. 1

	Catch 1	Catch 2	Catch 3	Catch 4	Catch 5	Catch 6
Potential Facilities Being Merged	9	5	4	4	5	5
Total Budget of Facilities ('000 tug)	5024054	1018628	892280	1438079	3744496	5653718
Staff Members	1912	513	392	711	1511	2112
Current Beds	1247	328	298	505	1163	1662

If the beds per population (000) were reduced from 6.331 to 4.5, computed beds would drop from 5,203 to 3,698 resulting in 1,505 fewer beds. Maintaining the same staffing ratios would result in an estimated staff cost savings of 2,624,650,000 tug or 2,068 fewer staff members.[48] However, it is unlikely that in the first year such staff savings would be realized. More likely, a targeted reduction in bed to population ratio would result in a more gradual reduction in staff as facilities and functions are combined and streamlined. A more likely result would be to achieve 25 percent of such staff savings in the first year with appropriate changes in the staffing mix. As functional, operational, and physical facility integration occurs more, but not all potential staff savings could be harvested.

The savings profile for nonstaff expenses such as medication and medical supplies would also be affected by optimization. A modest assumption of applying a 10 percent productivity efficiency in this category in the first year achieved through more consistent prescriptive protocols (lowering variation) would likely result in 111,063,000 tug in savings. Continuing the exercise across all expense categories with a modest 20 percent savings expected in year one utility (heat/electric) costs and a 15 percent savings in other indirect costs results in a total first year non-staff cost savings of 434,997,000 tug. Adding an expected staff savings of 547,337,000 tug (25 percent productivity) results in a total potential first year savings of 982,334, 000 tug or about US$843,205 in the first year.

[48] This assumes policy enables staff reductions. The current exchange rate is 1,165 tug to US$1 or 2,624,650,000 tug to US$2,252,918.

Scenario 2:
More assertive first year staff adjustments (50 percent) combined with greater degrees of physical consolidations among physical facilities could increase utility costs savings to 40 percent. Assuming medical supply and pharmacy savings remain at 10 percent, the total savings picture changes to a more robust 1,722,000,000 tug or about US$1,478,112 in the first optimization year. This represents about a 10 percent cost improvement in the overall target group. Considering the average 2002 cost of a four person FGP is about 13,500,000 tug , this represents considerable potential structural shifts.

The obstacles to implementing scenario 1 and 2 are considerable. The complexity of the process is significant and the geographic location of facilities as well as the existence of "anchor" facilities is limited.

Scenario 3:
A more straightforward scenario was calculated to determine the savings if hospitals that were under 75 beds as well as the single 100 bed traditional medicine facility within the optimization subset were closed with patients referred to other UB facilities.[49] In total, 15 facilities would be affected with nine of the facilities being under 50 beds (many are 10 and 15 beds). The facilities targeted are spread geographically over a wide area within the city. Under this scenario, an across the board cut would be made. Medication budgets would be transferred to existing facilities. Savings in this scenario were 1,262,224,000 tug or US$1,083,454.

Scenario 4:
Adjusting the Scenario 3 technique to close all UB facilities within the subset of optimization hospitals with 135 beds or less net of any medication costs, resulted in savings of 2,865,872,000 tug or US$2,459,976. This represented a notable 18 percent cost reduction in the UB group (subset) targeted for optimization.

Other Optimization Considerations

There is a need for cost accounting support. Costing information serves a variety of purposes, and it is suggested that Mongolian decision-makers address the potential *portfolio* of potential applications including the role of costing in facilitating optimization.

A clearer health care policy with more defined regulatory support needs to be established with regard to the position and functions of primary care, secondary and tertiary care within the curative health care provision. This planning function needs to be better linked to financing system across the public/private spectrum. In addition, the government will need to develop improved regulations or guidelines on type of hospitals and functions of hospitals, as well as minimal and maximum size of hospitals. Also, regulations or guidelines need to be advanced over human resource capacity planning, licensing and accreditation. Licensing indicates that minimum standards have been met, whereas accreditation means that the provider has gone beyond the minimum standards and is striving to achieve high quality care. Mongolia will need to improve and revise licensing and accreditation standards, particularly in relation to quality oversight and monitoring to support the optimization effort.

Finally, it is generally recognized that public expectations over the quality, scope, and location of service provision stemming from the Semashko model will be the tempering force to any change. Significant effort should be expected to accommodate any optimization effort with a supportive information, communication, and education endeavor.

[49] This represented 13 facilities with bed sizes from 10 beds to 75.

Conclusion

An optimization for UB hospitals will likely be evolutionary, not revolutionary in nature. There is the possibility of multiple permutations of providers with an initial (simple) administrative rationalization coupled with a closing of selected smaller facilities yielding significant savings in the early phases. Further savings and more complex optimization efforts will require more extensive remodeling of the architecture of the hospital system.

The Optimization Challenge: Leveraging Lessons Learned

The challenges presented in an optimization effort are considerable and common to all Former Soviet Union (FSU) countries. Yet, only a few countries have had success in moving to address the problem. Consolidating, merging, closing, and/or privatizing facilities and reassigning, retraining, or letting personnel go, is difficult. The process is highly political and solutions involve multiple levels of the health delivery system, as well as a need to integrate policy with financing tools. However, the present environment in Mongolia, with the existing budget constraints, civil service reform, a new PSMFL, a Poverty Reduction Strategy, a National Public Health Policy, a Health Sector Privatization Program, and other pressures have created a demand for change in this difficult area.

Lessons learned in the FSU can facilitate Mongolian optimization efforts. Selected lessons seen as particularly relevant include:[50]

- Align expectations with available resources. The process must be both top/down and bottom/up, with incentives and penalties developed for each level of the system; [51]
- Adapt optimization complexity to local conditions including taking a step-by-step approach and piloting of new ideas and new systems, with the requisite adjusting of policies and procedures before "rolling out" the change to the entire country; this is especially important in efficiency improvements and privatization;[52]
- Payment reform alone is not insufficient to bring about rationalization in the hospital sector, nor is it realistic to expect market forces alone to bring about the necessary hospital restructuring. However, there is a strong relationship between finances and optimization, and a single-payer system with pooling of funds from all sources (health insurance, local budget, and central budget) is one of the major keys to success;
- Continuous dialogue and the building strong stakeholder support, patience, and commitment is critical to assure support for reforms;
- Provide for adequate resources to fully implement activities initiated under projects but remember the need to demonstrate "early on" tangible savings in finance and cost; and

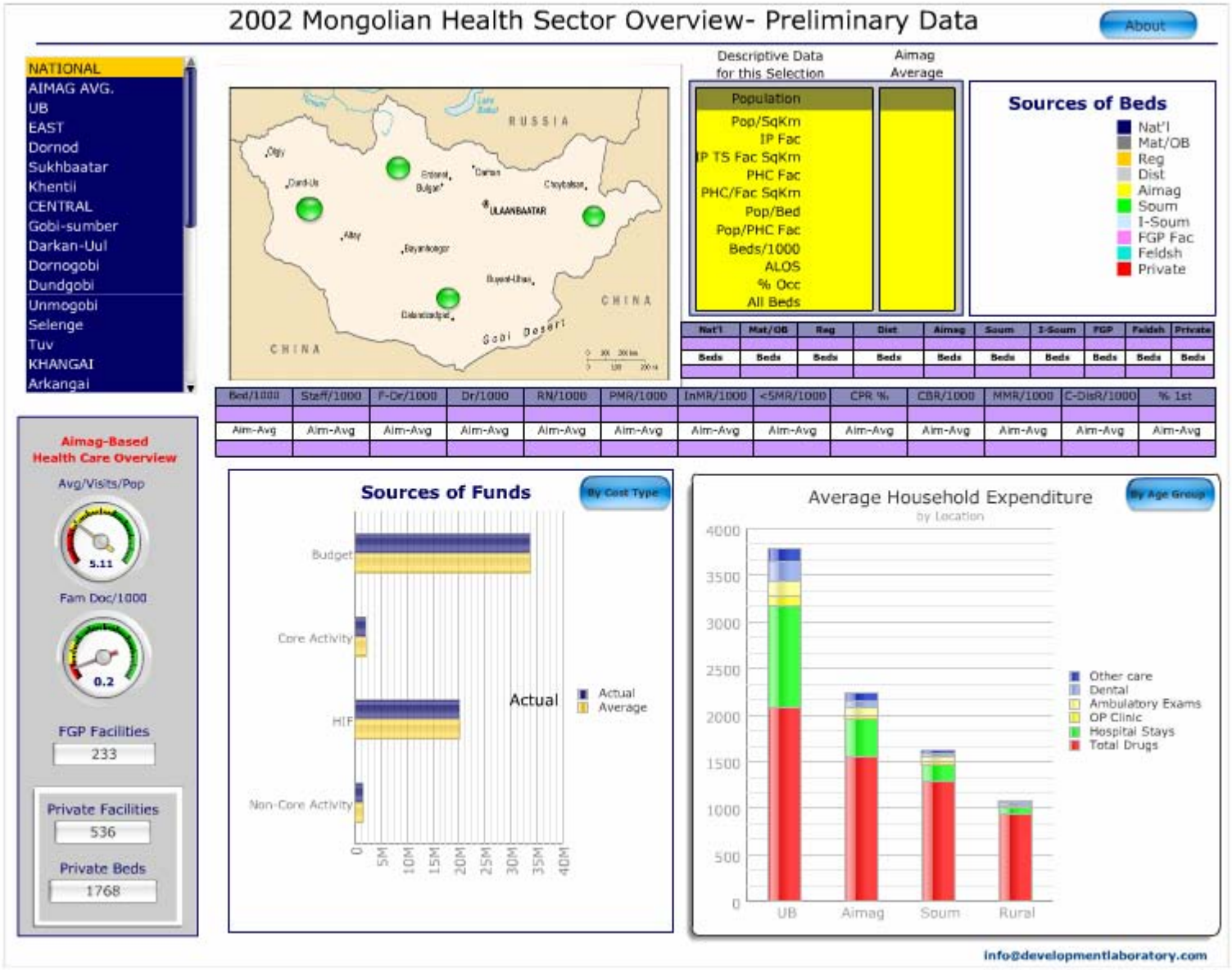
[50] Georgia Implementation Completion Report, Report Number 25994, GE-Health Project P008414, June 26, 2003.

[51] For Mongolia, this suggests an importance to work at optimizing the hospital sector from the top (UB) as well as from the bottom (soum and aimag) level. Facilitating a clearer and more cohesive payment policy across public and private providers, particularly in UB as well as implementing component financing initiatives such as the current effort led by ADB to establish a capitated payment system for soum facilities will support this important lesson.

[52] Optimization must be step by step or risk political obstacles. This suggests short-term efforts in UB should be very practical and "doable" by being geared toward rapidly achieving tangible financial results (see lesson #5) with minimal adverse reaction. Equally important, piloting soum and aimag efficiencies should be tested prior to a national rollout.

- Clearly outline expectations and roles of all involved in optimization and establish a mechanism to assure regular communication and coordination across project components. Of particular importance is a strong humanitarian approach including new human resource policies and funding to assist with personnel reassignment, retraining, and redundancy payment so as to nurture acceptance and success of the optimization efforts.

ANNEX 3


2002 Mongolian Health Sector Overview- Preliminary Data
About
NATIONAL
AIMAG AVG.
UB
EAST
Dornod
Sukhbaatar
Khentii
CENTRAL
Gobi-sumber
Darkan-Uul
Dornogobi
Dundgobi
Unmogobi
Selenge
Tuv
KHANGAI
Arkangai
RUSSIA
CHINA
CHINA
ULAANBAATAR
Gobi Desert
Descriptive Data for this Selection
Aimag Average
Population
Pop/SqKm
IP Fac
IP TS Fac SqKm
PHC Fac
PHC/Fac SqKm
Pop/Bed
Pop/PHC Fac
Beds/1000
ALOS
% Occ
All Beds
Sources of Beds
Nat'l
Mat/OB
Reg
Dist
Aimag
Soum
I-Soum
FGP Fac
Feldsh
Private
Nat'l
Mat/OB
Reg
Dist
Aimag
Soum
I-Soum
FGP
Feldsh
Private
Beds
Bed/1000
Staff/1000
F-Dr/1000
Dr/1000
RN/1000
PMR/1000
InMR/1000
<5MR/1000
CPR %
CBR/1000
MMR/1000
C-DisR/1000
% 1st
Aim-Avg
Aimag-Based Health Care Overview
Avg/Visits/Pop
5.11
Fam Doc/1000
0.2
FGP Facilities
233
Private Facilities
536
Private Beds
1768
Sources of Funds
By Cost Type
Budget
Core Activity
HIF
Non-Core Activity
Actual
Actual
Average
0
5M
10M
15M
20M
25M
30M
35M
40M
Average Household Expenditure
by Location
By Age Group
4000
3500
3000
2500
2000
1500
1000
500
0
UB
Aimag
Soum
Rural
Other care
Dental
Ambulatory Exams
OP Clinic
Hospital Stays
Total Drugs
info@developmentlaboratory.com

ANNEX 4
Summary Statistics 2002[53]

Locations	Population	Pop/Sq Km	IP Tert/Sec'd Facilities	PHC Fac	Pop/Bed	Pop/PHC Fac	Beds/1000	ALOS	Occ %	All Beds
NATIONAL	**2432229**	**1.55**	**53**	**574**	**132**	**4237**	**7.57**	**10.60**	**80.7%**	**18616**
AIMAG AVG.	**76687**	**1.03**	**1**	**17.8**	**151**	**0**	**6.63**	**9.95**	**78.9%**	**515**
UB	**821796**	**175**	**32**	**200**	**106**	**4109**	**9.41**	**11.55**	**85.4%**	**7808**
EAST	**195493**	**0.68**	**3**	**54**	**146**	**3620**	**6.85**	**10.74**	**88.2%**	**1339**
Dornod	73035	0.59	1	17	140	4296	7.14	10.67	82.1%	533
Sukhbaatar	54529	0.66	1	15	160	3635	6.24	11.62	86.9%	350
Khentii	67929	0.85	1	22	158	3088	6.34	9.94	95.6%	456
CENTRAL	**441754**	**0.93**	**7**	**106**	**137**	**4167**	**7.31**	**10.32**	**71.9%**	**3231**
Gobi-sumber	12979	2.34	1	4	99	3245	11.17	10.66	73.7%	139
Darkan-Uul	87468	26.67	1	5	158	17494	6.33	10.47	91.0%	550
Dornogobi	50929	0.47	1	15	138	3395	7.27	9.77	78.3%	376
Dundgobi	51347	0.69	1	18	144	2853	6.97	9.28	55.2%	357
Unmogobi	46981	0.28	1	17	153	2764	6.52	7.88	65.5%	308
Selenge	95874	2.33	1	20	143	4794	7.00	10.39	72.1%	714
Tuv	96176	1.30	1	27	122	3562	8.16	13.82	67.5%	787
KHANGAI	**553907**	**1.44**	**6**	**114**	**166**	**4859**	**6.03**	**9.76**	**83.5%**	**3339**
Arkangai	96408	1.74	1	23	158	4192	6.31	9.41	82.8%	618
Bayakhonogor	84364	0.73	1	23	139	3668	7.17	9.73	73.5%	610
Bulgan	61563	1.26	1	18	159	3420	6.31	10.37	85.5%	400
Orkhon	79004	94.05	1	4	176	19751	5.67	10.92	88.9%	436
Uvorkhangai	109316	1.74	1	21	199	5206	5.02	9.62	88.8%	572
Khuvsgol	123252	1.23	1	25	173	4930	5.79	8.52	81.3%	703
WEST	**419279**	**1.01**	**5**	**100**	**145**	**4193**	**6.91**	**9.46**	**72.1%**	**2899**
Bayan-Ulgi	98066	2.15	1	16	178	6129	5.62	9.87	92.9%	550
Gobi-Alti	64732	0.46	1	20	137	3237	7.30	8.91	64.9%	463
Zavkhan	83516	1.01	1	25	120	3341	8.31	9.62	53.8%	712
Uvs	83301	1.20	1	20	136	4165	7.38	9.78	70.1%	625
Khovd	89664	1.18	1	19	161	4719	6.20	9.12	78.8%	549

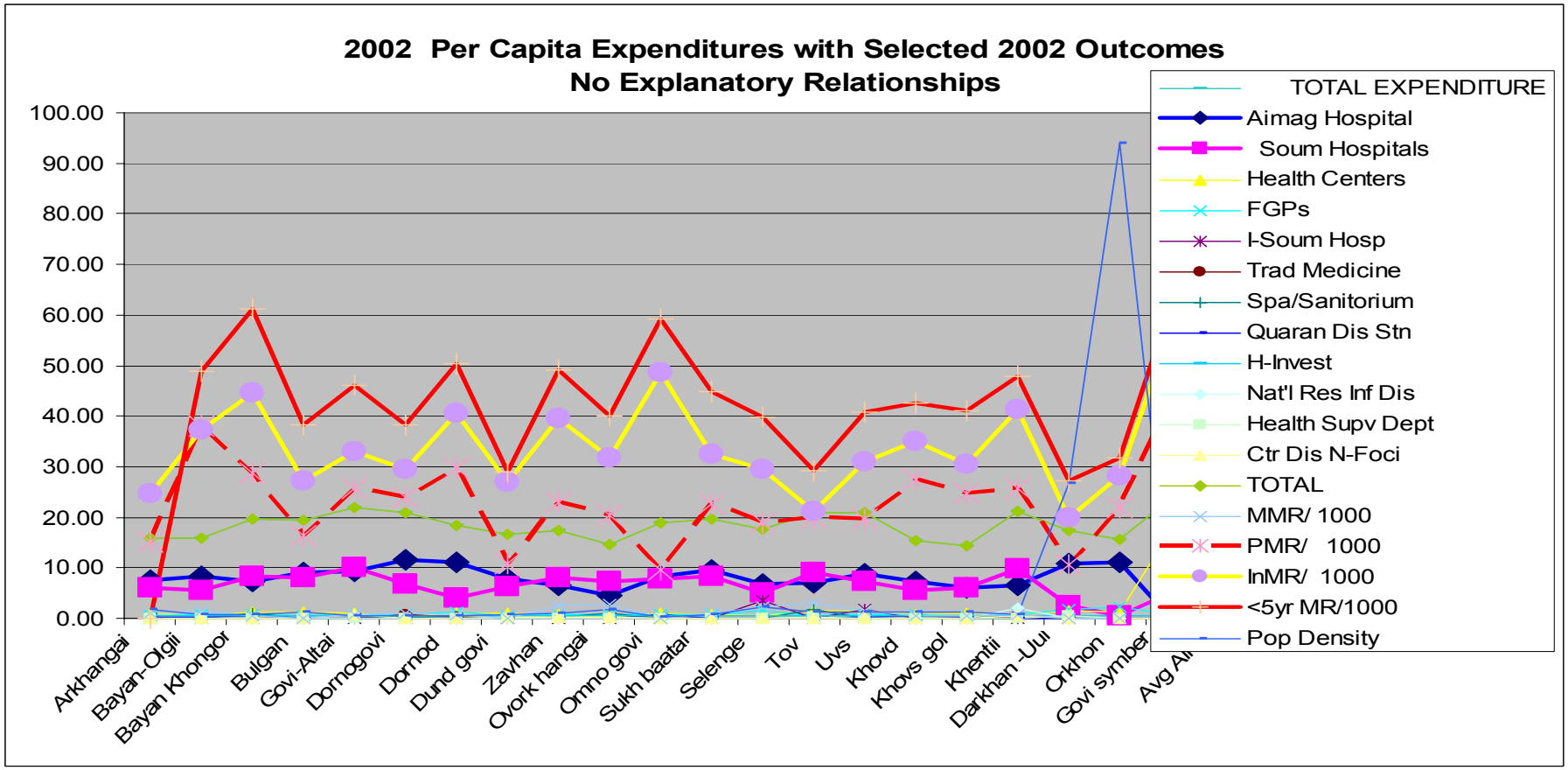
[53] Analysis conducted using NHA data.

Facility Statistics 2002

Locations	IP Tert/Sec'd Facilities	National Gen & Spec. Fac	Maternity Fac	Regional Fac	City & Dist Fac	Aimag Fac	Soum Fac	Inter-Soum Fac	FGP Fac	Feldsher w/ Bed Fac	Private Fac	Other Fac
NATIONAL	**53**	**17**	**3**	**3**	**12**	**18**	**305**	**18**	**233**	**18**	**536**	**22**
AIMAG AVG.	**1**	**0**	**0**	**0.14**	**0**	**1**	**15**	**0.86**	**1.57**	**0.86**	**7.8**	**0.00**
UB	**32**	**17**	**3**	**0**	**12**	**0**	**0**	**0**	**200**	**0**	**373**	**23**
EAST	**3**	**0**	**0**	**1**	**0**	**2**	**44**	**3**	**4**	**3**	**8**	**0**
Dornod	1	0	0	1	0	0	13	1	2	1	2	0
Sukhbaatar	1	0	0	0	0	1	11	1	2	1	3	0
Khentii	1	0	0	0	0	1	20	1	0	1	3	0
CENTRAL	**7**	**0**	**0**	**0**	**0**	**7**	**90**	**2**	**12**	**2**	**57**	**0**
Gobi-sumber	1	0	0	0	0	1	2	0	2	0	1	0
Darkan-Uul	1	0	0	0	0	1	3	0	2	0	21	0
Dornogobi	1	0	0	0	0	1	13	0	2	0	12	0
Dundgobi	1	0	0	0	0	1	14	1	2	1	7	0
Unmogobi	1	0	0	0	0	1	13	1	2	1	3	0
Selenge	1	0	0	0	0	1	19	0	1	0	10	0
Tuv	1	0	0	0	0	1	26	0	1	0	3	0
KHANGAI	**6**	**0**	**0**	**1**	**0**	**5**	**90**	**7**	**10**	**7**	**71**	**0**
Arkangai	1	0	0	0	0	0	17	2	2	2	5	0
Bayakhonogor	1	0	0	0	0	1	19	1	2	1	12	0
Bulgan	1	0	0	0	0	1	14	1	2	1	7	0
Orkhon	1	0	0	0	0	1	2	0	2	0	30	0
Uvorkhangai	1	0	0	1	0	1	17	1	2	1	7	0
Khuvsgol	1	0	0	0	0	1	21	2	0	2	10	0
WEST	**5**	**0**	**0**	**1**	**0**	**4**	**81**	**6**	**7**	**6**	**27**	**0**
Bayan-Ulgi	1	0	0	0	0	1	12	1	2	1	3	0
Gobi-Alti	1	0	0	0	0	1	16	1	2	1	4	0
Zavkhan	1	0	0	0	0	0	21	1	2	1	5	0
Uvs	1	0	0	0	0	1	17	1	1	1	4	0
Khovd	1	0	0	1	0	1	15	2	0	2	11	0

Aimag Per Capita Expenditures 2002 ('000 tug)

	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi symber	Avg Aim
Aimag Hospital	7.43	8.32	7.34	9.12	9.20	11.48	11.03	7.86	6.66	4.46	8.43	9.68	6.68	7.18	8.76	7.41	6.06	6.53	10.71	11.19	0.00	7.90
Soum Hospitals	6.14	5.54	8.34	8.09	9.95	6.73	4.11	6.35	8.02	7.25	7.75	8.21	5.09	9.07	7.23	5.66	5.96	9.71	2.64	0.62	5.07	6.41
Health Centers	0.99	0.58	1.26	1.17	0.90	0.49	1.11	0.98	0.85	0.36	0.90	0.69	0.46	1.57	1.49	0.70	0.91	0.71	1.39	1.17	17.31	1.05
FGPs	0.52	0.64	0.68	0.49	0.72	0.75	1.24	0.63	0.76	0.76	0.63	0.67	1.51	0.44	0.76	0.81	0.62	0.63	1.82	2.29	0.86	0.87
I-Soum Hosp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Trad Medicine	0.00	0.00	0.00	0.00	0.00	0.74	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.06
Spa/Sanitorium	0.00	0.00	1.02	0.00	0.12	0.32	0.00	0.00	0.33	1.00	0.00	0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
Quaran Dis Stn	0.35	0.28	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.38	0.40	0.37	0.00	0.00	0.00	0.00	0.15
H-Invest	0.50	0.48	0.50	0.50	0.49	0.49	0.50	0.49	0.51	0.51	0.49	0.51	0.52	0.58	0.51	0.48	0.48	0.52	0.48	0.47	0.47	0.50
Nat'l Res Inf Dis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	0.00	0.00	0.00	0.08
Health Supv Dept	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.04
Ctr Dis N-Foci	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.28	0.34	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.09
TOTAL	**15.94**	**15.83**	**19.67**	**19.37**	**22.02**	**21.00**	**18.26**	**16.60**	**17.46**	**14.58**	**18.84**	**19.76**	**17.73**	**20.93**	**20.83**	**15.45**	**14.40**	**21.20**	**17.43**	**15.74**	**23.71**	**17.69**
MMR/ 1000	1.05	1.4	0.6	0.0	0.8	1.1	0.8	0.0	2.6	2.8	0.0	1.0	2.2	3.0	1.6	0.5	0.4	0.7	0.0	0.0	4.5	1.1
PMR/ 1000	15.1	38.0	28.6	16.3	25.7	23.9	29.6	10.9	23.0	20.3	9.5	22.6	19.0	20.0	19.7	27.5	24.6	25.7	10.6	21.8	43.3	23.0
InMR/ 1000	24.6	37.3	44.5	27.3	33.0	29.6	40.6	26.9	39.5	31.7	48.5	32.5	29.5	21.2	30.9	35.0	30.4	41.2	19.9	28.1	57.5	33.0
<5yr MR/1000	30.9	49.0	61.2	38.2	46.1	38.3	50.4	28.9	49.2	40.1	59.1	44.9	39.9	29.2	40.8	42.5	41.0	47.8	27.1	31.9	62.0	42.3
Pop Density	1.7434	0.7273	0.7273	1.2641	0.4578	0.4651	0.5909	0.6874	1.0123	1.7379	0.2840	0.6626	2.3270	1.2997	1.1969	1.1782	1.2252	0.8459	26.6671	94.0524	2.3428	1.033


2002 Per Capita Expenditures with Selected 2002 Outcomes
No Explanatory Relationships
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Arkhangai
Bayan-Olgii
Bayan Khongor
Bulgan
Govi-Altai
Dornogovi
Dornod
Dund govi
Zavhan
Ovork hangai
Omno govi
Sukh baatar
Selenge
Tov
Uvs
Khovd
Khovs gol
Khentii
Darkhan -Uul
Orkhon
Govi symber
Avg Al
TOTAL EXPENDITURE
Aimag Hospital
Soum Hospitals
Health Centers
FGPs
I-Soum Hosp
Trad Medicine
Spa/Sanitorium
Quaran Dis Stn
H-Invest
Nat'l Res Inf Dis
Health Supv Dept
Ctr Dis N-Foci
TOTAL
MMR/ 1000
PMR/ 1000
InMR/ 1000
<5yr MR/1000
Pop Density

Aimag Expenditure by Category 2002 ('000 tug)

ALL AIMAGS 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sgmber	Total Aimags
	1536531	**1552278**	**1659428**	**1192417**	**1425612**	**1069329**	**1333868**	**852224**	**1458565**	**1593296**	**885118**	1077567	1699697	1743269	1735052	1385664	1774571	1440001	1524366	1243277	307671	
TOTAL EXPENDITURE	1536531	1552278	1659428	1192417	1425612	1069329	1333868	852224	1458565	1593296	885118	1077567	1699697	1743269	1735052	1385664	1774571	1440001	1524366	1243277	307671	**28489801**
IV. CURRENT EXPENDITURE	1488431	1505578	1617328	1161517	1394212	1044129	1297268	826924	1415565	1537496	862018	1049967	1649897	1694869	1692252	1342364	1715471	1404801	1482466	1205777	301571	**27689901**
Good and services expenditur	1486781	1505578	1614768	1159605	1392942	1043160	1296718	824214	1410641	1530214	858580	1049178	1645403	1688670	1682571	1339289	1711571	1396482	1481831	1202317	299384	**27619896**
Salary, wages and benefits	560342	488596	586707	412577	486832	263762	475168	339390	538811	564385	281725	358454	485449	592199	565443	429299	648135	512563	536803	350280	92637	**9569557**
Basic Salary	560342	488596	586707	412577	486832	263762	475168	339390	538811	564385	281725	358454	485449	592199	565443	429299	648135	512563	536803	350280	92637	**9569557**
Employers' insurance contribution	147930	128989	154891	108920	128524	69633	125445	89599	142246	148998	74375	94632	128159	156341	149277	113335	171108	135317	141716	92474	24456	**2526363**
Pension and benefit insurance contri	121034	105537	126729	89117	105156	56973	102636	73308	116383	121907	60853	77426	104857	127915	122135	92729	139997	110714	115950	75661	20010	**2067024**
Pension insurance	100301	87459	105021	73851	87143	47214	85055	60751	96447	101025	50429	64163	86895	106004	101214	76845	116016	91749	96088	62700	16582	**1712951**
Benefit insurance	10086	8795	10561	7426	8763	4748	8553	6109	9699	10159	5071	6452	8738	10660	10178	7727	11666	9226	9663	6305	1668	**172252**
Industrial accident and occupational	5603	4886	5867	4126	4868	2638	4752	3394	5388	5644	2817	3585	4855	5922	5654	4293	6481	5126	5368	3503	926	**95696**
Unemployment insurance	5043	4397	5280	3713	4382	2374	4277	3055	4849	5080	2536	3226	4369	5330	5089	3864	5833	4613	4831	3153	834	**86126**
Health insurance contributions from	26896	23453	28162	19804	23368	12661	22808	16291	25863	27091	13523	17206	23302	28426	27141	20606	31111	24603	25767	16814	4447	**459339**
Other goods and services	778509	887992	873170	638107	777586	709764	696105	395225	729584	816832	502480	596092	1031796	940130	967851	796655	892329	748603	803311	759563	182291	**15523976**
Stationery	19905	13460	14202	21317	16280	6056	19804	17636	14295	11751	8235	11575	15813	10433	28004	9915	5104	20048	11025	12215	3886	**290957**
Electricity	33400	27110	56586	21835	40566	24690	49094	13782	34196	55084	22121	50140	49830	71133	51700	39370	29197	34063	42223	33834	9533	**789485**
Heating supply	153329	281146	133290	164367	207275	316253	105239	91881	127281	81237	183567	159421	338629	243683	183018	186083	164743	186006	134518	120510	61368	**3622843**
Fuel and transportation expenses	93229	60474	105070	44187	102320	46878	51632	37313	56603	86564	45584	69418	39570	96383	72110	96145	85142	70966	29852	23650	7341	**1320430**
Postal and telecommunication	8406	4625	11754	9554	5980	4607	5744	5263	5902	10512	4679	4060	9985	10371	7809	5590	8078	8928	6742	5435	2291	**146315**
Water supply and treatment	24051	90790	38270	14125	34329	24807	48472	11695	104241	13059	10046	35375	65399	18738	59850	22050	203121	30542	31554	68347	3213	**951074**
Domestic business trip	10650	6955	19220	10810	16240	5508	8735	5887	14665	15693	10049	7370	9572	11272	18063	13173	16135	17234	3938	5551	1205	**227922**
expenditure of visit to abroad	0	0	0	0	0	0	0	0	0	0	0	0	983	0	0	0	602	0	0	0	0	**1585**
Books and periodicals	778	60	0	1371	322	678	580	276	535	2105	80	315	0	750	1136	525	0	1160	170	670	167	**11677**
Lesson and industry practice	0	0	2090	5630	150	340	245	0	0	1600	0	0	0	0	2860	0	0	50	0	0	0	**12965**
expenditure of research works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Inventories and materials	7777	1690	15155	13560	19215	6319	4459	7580	15620	13724	10197	4120	13561	11566	14263	4900	8436	7837	4750	5527	3700	**193957**
Clothing and bedding	10419	6452	17129	15165	8612	4274	12166	6132	9723	13007	9948	5456	10074	17865	15076	12848	10400	17029	8594	12818	2385	**225571**
Food expenses	60753	41742	117045	62958	35087	53965	67323	35637	108771	95224	28705	34871	71440	115435	68890	56990	72354	72463	82758	52871	15865	**1351146**
Medical drug expenses	278611	270518	250573	192216	216620	159678	208635	116125	137086	289678	119030	159674	216852	259844	341360	256743	186011	206965	270088	213169	50025	**4399500**
Current renovation	7899	3314	18299	14400	13320	7461	6935	4431	16762	14255	11350	7086	22915	15739	16344	4195	6500	16731	4357	9873	3200	**225367**
Charges, fees and other expenses	4350	2466	3600	7142	4973	2568	4988	1578	7186	12784	2150	2116	4243	5565	12510	2496	2566	4797	1045	3031	1872	**94027**
Centralized process	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
expenditure of visitorof abroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Rent of building	0	0	500	9494	0	0	0	0	0	0	0		2970	533	0	0	0	0	0	0	3240	**16736**
Operational expenses of program an	14745	14530	12851	0	9621	7724	11177	7694	13015	17107	7093	8406	15260	14450	12865	13308	18139	10787	12902	11470	1866	**235009**
Allocation according to the standard	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
discount of drug from Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
other expenditure from Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
expenditure of hospital's staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Subsidies and transfers	1650	0	2560	1913	1270	969	550	2710	4924	7283	3438	789	4494	6199	9681	3075	3900	8319	635	3460	2187	**70005**
Transfers to the households	1650	0	2560	1913	1270	969	550	2710	4924	7283	3438	789	4494	6199	9681	3075	3900	8319	635	3460	2187	**70005**
One time benefit and bonus	1650	0	2560	1913	1270	969	550	2710	4924	7283	3438	789	4494	6199	9681	3075	3900	8319	635	3460	2187	**70005**
transfer to abroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Member tax of international intitutio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Capital Expenses	48100	46700	42100	30900	31400	25200	36600	25300	43000	55800	23100	27600	49800	48400	42800	43300	59100	35200	41900	37500	6100	**799900**
Domestic investment	0	0	0	0	0	0	0															**0**
investment of budget	0	0	0	0	0	0	0															**0**
equipment of budget funds	0	0	0	0	0	0	0															**0**
investment of own capital	0	0	0	0	0	0	0															**0**
Capital transfers	48100	46700	42100	30900	31400	25200	36600	25300	43000	55800	23100	27600	49800	48400	42800	43300	59100	35200	41900	37500	6100	**799900**
Capital renovation of Budget entities	48100	46700	42100	30900	31400	25200	36600	25300	43000	55800	23100	27600	49800	48400	42800	43300	59100	35200	41900	37500	6100	**799900**

Aimag Hospital Expenditure by Category 2002 ('000 tug)

	Arkhangai	Bayan-Olgii	ayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Dvork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan -Uul	Orkhon	Govi symber	Total Aimags
Aimag Hospitals 2002	**716628**	**815533**	**619194**	**561628**	**595755**	**584557**	**805777**	**403705**	**555884**	**487514**	**396064**	**527856**	**640393**	**597812**	**729829**	**664209**	**747052**	**443827**	**936793**	**884389**	**0**	**12714399**
II,TOTAL EXPENDITURE	716628	815533	619194	561628	595755	584557	805777	403705	555884	487514	396064	527856	640393	597812	729829	664209	747052	443827	936793	884389	0	**12714399**
IV, CURRENT EXPENDITURE	716628	815533	619194	561628	595755	584557	805777	403705	555884	487514	396064	527856	640393	597812	729829	664209	747052	443827	936793	884389	0	**12714399**
Good and services expenditure	716278	815533	617194	560615	595755	584107	805527	402598	553192	484814	394444	527541	639943	594882	727829	663579	746252	441947	936543	881689	0	**12690262**
Salary, wages and supplementa	210957	206852	198058	169244	174621	104439	302588	153733	167290	177678	105742	170570	174038	201096	214671	194494	225699	150405	373299	290343	0	**3965817**
Basic Salary	210957	206852	198058	169244	174621	104439	302588	153733	167290	177678	105742	170570	174038	201096	214671	194494	225699	150405	373299	290343	0	**3965817**
Employers' insurance contribut	55693	54609	52287	44680	46100	27572	79883	40586	44165	46907	27916	45031	45946	53090	56673	51346	59585	39707	98551	76651	0	**1046976**
Pension and benefit insurance	45567	44680	42781	36557	37718	22559	65359	33206	36135	38378	22840	36843	37592	43437	46369	42011	48751	32488	80633	62714	0	**856617**
Pension insurance	37761	37026	35452	30295	31257	18695	54163	27518	29945	31804	18928	30532	31153	35996	38426	34814	40400	26923	66821	51971	0	**709881**
Benefit insurance	3797	3723	3565	3046	3143	1880	5447	2767	3011	3198	1903	3070	3133	3620	3864	3501	4063	2707	6719	5226	0	**71385**
Industrial accident and occupat	2110	2069	1981	1692	1746	1044	3026	1537	1673	1777	1057	1706	1740	2011	2147	1945	2257	1504	3733	2903	0	**39658**
Unemployment insurance	1899	1862	1783	1523	1572	940	2723	1384	1506	1599	952	1535	1566	1810	1932	1750	2031	1354	3360	2613	0	**35692**
Health insurance contributions	10126	9929	9507	8124	8382	5013	14524	7379	8030	8529	5076	8187	8354	9653	10304	9336	10834	7220	17918	13937	0	**190359**
Expenditure on other goods an	449628	554072	366848	346691	375034	452096	423056	208280	341737	260230	260787	311940	419959	340696	456486	417739	460969	251835	464693	514695	0	**7677469**
Stationery	9540	7650	7002	12600	7200	2250	12000	9640	8303	3880	4140	3780	4500	3718	15750	4050	495	7650	6615	9738	0	**140501**
Electricity	20856	23569	26500	13200	17699	14546	40217	8100	15888	18113	15235	26000	27988	20312	14700	24697	15209	7607	24804	32400	0	**407638**
Heating supply	112015	258238	80261	118000	138160	287704	80234	62136	60775	12100	124646	119819	187339	118909	126299	128000	108629	60879	76270	117980	0	**2378392**
Fuel and transportation expens	21200	13700	19533	13500	23305	10136	19000	8500	9966	18500	8586	16900	9000	2051	15700	26710	12519	22145	23419	17400	0	**311769**
Postal and telecommunication	3228	1317	3306	5400	1700	1405	2000	1600	1464	3300	1620	1577	2862	2862	1546	2160	2950	2710	3960	3561	0	**50529**
Water supply and treatment	20395	90540	32409	12000	32000	21798	45318	11200	98493	8211	8364	33542	36000	14424	46700	22000	189600	26472	21000	67234	0	**837700**
Domestic business trip	4176	2700	5040	5598	6140	2347	3500	3236	4878	6280	4800	3150	2250	3684	4500	6300	2970	6769	2475	3900	0	**84693**
Books and periodicals	200	0	0	765	80	198	50	0	90	1121	80	45	180	90	180	120	162	135	50	360	0	**3906**
Lesson and industry practice	0	0	0	5000	0	250	0	0	0	0	0	0	0	0	360	0	0	0	0	0	0	**5610**
Inventories and materials	2500	0	5480	6900	7200	2880	2489	2272	6500	5295	2475	2500	4500	2250	8100	2000	4500	1250	3500	3878	0	**76469**
Clothing and bedding	4293	4819	7564	9500	3600	1908	8729	3800	4775	4558	4140	2290	4230	11448	3780	7430	4500	3500	7145	10000	0	**112008**
Food expenses	36405	25742	45495	34446	15000	25598	45643	23500	43902	22472	19000	18000	35000	28090	40000	27600	41250	30790	74158	47865	0	**679955**
Medical drug expenses	209081	123098	127520	101112	115000	77385	157735	72696	76693	145023	65000	81878	99360	130099	167000	164423	75500	74593	217997	189956	0	**2471149**
Current renovation	4389	1800	5639	7200	7200	2340	2800	1200	6500	4200	2250	2100	5400	2376	3321	1350	1200	6300	2800	7920	0	**78285**
Charges, fees and other expens	1350	900	1100	1470	750	1350	3341	400	3510	7178	450	360	1350	383	8550	900	1485	1035	500	2502	0	**38864**
Subsidies and transfers	350	0	2000	1013	0	450	250	1107	2692	2700	1620	315	450	2930	2000	630	800	1880	250	2700	0	**24137**
Transfers to the households	350	0	2000	1013	0	450	250	1107	2692	2700	1620	315	450	2930	2000	630	800	1880	250	2700	0	**24137**
One time benefit and bonus	350	0	2000	1013	0	450	250	1107	2692	2700	1620	315	450	2930	2000	630	800	1880	250	2700	0	**24137**
Capital expemditure	0	0	0	0	0	0	**0**	**0**	0	0	**0**	**0**	0	0	0	0	0	**0**	0	0	0	**0**
Domestic investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Investment of own capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
capital transfer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
mentanans work	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
:Financing resource to co	**716628**	**815533**	**619194**	**561628**	**595755**	**584557**	**805777**	**403705**	**555884**	**487514**	**396064**	**527856**	**640393**	**597812**	**729829**	**664209**	**747052**	**443827**	**936793**	**884389**	**0**	**12714399**
From health insurance fund	287175	322810	294544	159579	213010	156628	348025	182917	290017	260556	129326	178302	236014	225734	246521	305889	314496	247483	353214	296728	0	**5048967**
From core activitie's revenue	6166	6944	6299	3424	4589	3341	7422	3942	6270	5604	2758	3835	5096	4862	5284	6538	6769	5584	7512	6278	0	**108518**
From non-core activitie's rever	4000	0	500	3000	1500	900	0	1000	500	3500	500	1500	2500	0	12637	5000	0	2500	2000	15000	0	**56537**
Financed from budget	419287	485779	317850	395625	376656	423688	450330	215846	259097	217855	263480	344220	396783	367216	465388	346782	425787	188260	574066	566383	0	**7500377**
NUMBER OF ENTITIES	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0	**21**
TOTAL EMPLOYEES	288	286	227	211	283	142	412	192	217	231	193	245	225	247	279	288	315	205	465	378	0	**5329**
Management staff	3	2	2	1	2	2	1	2	2	1	1	2	3	3	4	2	4	1	2	3	0	**43**
Specialist staff	198	270	133	158	182	109	295	73	151	170	134	164	172	176	152	192	206	137	326	188	0	**3586**
Support staff	87	14	92	52	99	31	116	117	64	60	58	79	50	68	123	94	105	67	137	187	0	**1700**

Aimag Health Center Expenditure by Category 2002 (‘000 tug)

HEALTH CENTERS 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sgmber	Total Aimags
Health Centers 2002	**95525**	**56809**	**106233**	**72150**	**58509**	**24946**	**80781**	**50339**	**70623**	**39191**	**42155**	**37885**	**43853**	**130791**	**124058**	**62916**	**112538**	**47906**	**121389**	**92207**	**224694**	**1695495**
II.TOTAL EXPENDITURE	95525	56809	106233	72150	58509	24946	80781	50339	70623	39191	42155	37885	43853	130791	124058	62916	166882	47906	121389	92207	224694	**1749840**
IV, CURRENT EXPENDITURE	95525	56809	106233	72150	58509	24946	80781	50339	70623	39191	42155	37885	43853	130791	124058	62916	166882	47906	121389	92207	224694	**1749840**
Good and services expenditures	95325	56809	105673	71700	58509	24896	80661	49689	70173	38921	41885	37735	42953	128891	120058	62796	166282	45836	121389	91647	222657	**1734483**
Salary, wages and supplementary	33504	27636	33701	27656	18369	8981	32232	16439	25107	11328	10790	17139	13027	47905	27783	17221	37692	13038	56409	44487	71777	**592221**
Basic Salary	33504	27636	33701	27656	18369	8981	32232	16439	25107	11328	10790	17139	13027	47905	27783	17221	37692	13038	56409	44487	71777	**592221**
Employers' insurance contribution	8845	7296	8897	7301	4849	2371	8509	4340	6628	2991	2848	4525	3439	12647	7335	4546	0	3442	14892	11745	18949	**146396**
Pension and benefit insurance contri	7237	5970	7279	5974	3968	1940	6962	3551	5423	2447	2331	3702	2814	10348	6001	3720	9951	2816	12184	9609	15504	**129729**
Pension insurance	5997	4947	6032	4950	3288	1608	5770	2943	4494	2028	1931	3068	2332	8575	4973	3083	8142	2334	10097	7963	12848	**107402**
Benefit insurance	603	498	607	498	331	162	580	296	452	204	194	309	235	862	500	310	6747	235	1015	801	1292	**16729**
Industrial accident and occupational	335	276	337	277	184	90	322	164	251	113	108	171	130	479	278	172	679	130	564	445	718	**6224**
Unemployment insurance	302	249	303	249	165	81	290	148	226	102	97	154	117	431	250	155	377	117	508	400	646	**5368**
Health insurance contributions from	1608	1327	1618	1328	882	431	1547	789	1205	544	518	823	625	2300	1334	827	339	626	2708	2135	3445	**26957**
Expenditure on other goods and serv	52977	21876	63075	36742	35290	13544	39919	28910	38438	24602	28247	16071	26487	68339	84940	41028	128590	29357	50088	35415	131931	**995866**
Stationery	4715	2500	527	2250	2250	565	2700	1514	360	792	504	1800	1800	2500	4860	585	64295	2497	1800	2073	3187	**104072**
Electricity	1550	0	2986	506	687	0	2300	1061	4500	0	1490	0	0	0	6600	4500	450	622	2539	0	7463	**37254**
Heating supply	11423	0	12456	9786	8315	0	5442	12707	5160	0	11302	0	0	0	20300	15504	3066	4212	17655	0	45165	**182494**
Fuel and transportation expenses	6030	2100	6100	3000	3950	1608	4500	1180	2238	1847	1980	2376	2500	27426	5000	1608	13080	1748	973	3300	5340	**97883**
Postal and telecommunication	1600	850	2412	1200	1350	1359	1235	1880	1170	1308	850	1240	2862	4376	3600	744	5700	2199	1450	1524	1891	**40800**
Water supply and treatment	3200	0	4644	206	1656	0	2400	0	5500	0	1312	0	0	0	11200	0	2000	877	735	0	2713	**36444**
Domestic business trip	2124	1080	2340	1800	2250	1170	1800	1080	2678	1238	990	1350	1200	1330	5400	2700	12360	1062	450	1401	923	**46725**
Books and periodicals	60	60	0	120	80	90	180	96	118	103	0	180	315	120	270	90	2250	270		270	117	**4789**
Lesson and industry practice	0	0	350	630	150	0	135	0	0	1000	0	0	0	0	2500	0	100	0		0	0	**4865**
Inventories and materials	500	0	675	2700	2700	500	450	250	900	408	1350	0	150	1214	1800	450	0	500	0	650	2500	**17697**
Clothing and bedding	500	80	1620	850	250	250	450	0	270	53	246	150	150	1185	7000	239	1500	387	429	1422	1765	**18796**
Food expenses	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	2700	0	150	0	0	0	11865	**17715**
Medical drug expenses	2000	446	15000	2400	900	150	5500	523	1000	0	700	0	0	11838	845	900	4500	1500	9995	11622	41909	**111728**
Current renovation	810	0	900	1600	900	0	1200	716	900	135	180	135	1350	1935	0	280	1000	2502	900	1260	1000	**17703**
Charges, fees and other expenses	720	231	215	200	231	128	450	209	630	612	250	433	900	1966	0	120	0	195	260	423	987	**9160**
Rent of building	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3240	**3240**
Operational expenses of program an	14745	14530	12851	9494	9621	7724	11177	7694	13015	17107	7093	8406	15260	14450	12865	13308	18139	10787	12902	11470	1866	**244502**
Subsidies and transfers	200	0	560	450	0	50	120	650	450	270	270	150	900	1900	4000	120	600	2070	0	560	2037	**15357**
Transfers to the households	200	0	560	450	0	50	120	650	450	270	270	150	900	1900	4000	120	600	2070	0	560	2037	**15357**
One time benefit and bonus	200	0	560	450	0	50	120	650	450	270	270	150	900	1900	4000	120	600	2070	0	560	2037	**15357**
:Financing resource to cover	**95525**	**56809**	**106233**	**72150**	**58509**	**24946**	**80781**	**50339**	**70623**	**39191**	**42155**	**37885**	**43853**	**130791**	124058	**62916**	**112538**	**47906**	**121389**	**92207**	**224694**	**1695495**
From health insurance fund	0	**0**	0	0	**0**	**0**	**0**	0	**0**	**0**	**0**	0	**0**	0	4884	**0**	0	0	0	0	57460	**62344**
From non core activities revenue	0	0	0	0	0	0	0	0	0	0	450	100	0	0	0	**0**	0	350	3500	500	1690	**6590**
From core activitie's revenue	0	**0**	500	0	300	0	866	540	**0**	0	0	0	0	0	119174	1500	2500	0	0	0	1210	**126590**
Financed from budget	95525	56809	105733	72150	58209	24946	79915	49799	70623	39191	41705	37785	43853	130791		61416	110038	47556	117889	91707	164334	**1499972**
NUMBER OF ENTITIES	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	**21**
TOTAL EMPLOYEES	37	30	58	33	26	13	49	21	31	13	15	23	18	40	38	19	19	19	76	61	104	**741**
Management staff	1	1	3	2	1	1	1	1	1	1	1	1	2	2	3	1	1	1	1	3	1	**30**
Specialist staff	33	21	46	22	23	11	40	18	27	12	13	19	11	35	31	15	15	10	52	54	68	**576**
Support staff	3	8	9	9	2	1	8	2	3	0	1	3	3	3	4	3	3	8	23	4	35	**135**

Aimag Spa/Sanatorium Expenditure by Category 2002 ('000 tug)

SPA SANATORIUMS 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sgmber	Total Aimags
SpaSanitorium	**0**	**0**	**86368**	**0**	**7932**	16213	0	0	27408	**109094**	0	0	0	145630	0	0	0	**0**	0	0	0	**392644**
II,TOTAL EXPENDITURE	0	0	86368	0	7932	16213	0	0	27408	109094	0	0	0	145630	0	0	0	0	0	0	0	**392644**
IV, CURRENT EXPENDITURE	0	0	86368	0	7932	16213	0	0	27408	109094	0	0	0	145630	0	0	0	0	0	0	0	**392644**
Good and services expenditures	0	0	86368	0	7932	16213	0	0	27138	108591	0	0	0	145630	0	0	0	0	0	0	0	**391872**
Salary, wages and supplementary	0	0	30160	0	2296	7873	0	0	8969	31800	0	0	0	32109	0	0	0	0	0	0	0	**113207**
Basic Salary	0	0	30160	0	2296	7873	0	0	8969	31800	0	0	0	32109	0	0	0	0	0	0	0	**113207**
Employers' insurance contribution	0	0	7962	0	606	2079	0	0	2368	8395	0	0	0	8477	0	0	0	0	0	0	0	**29887**
Pension and benefit insurance contri	0	0	6515	0	496	1701	0	0	1937	6869	0	0	0	6936	0	0	0	0	0	0	0	**24453**
Pension insurance	0	0	5399	0	411	1409	0	0	1605	5692	0	0	0	5748	0	0	0	0	0	0	0	**20264**
Benefit insurance	0	0	543	0	41	142	0	0	161	572	0	0	0	578	0	0	0	0	0	0	0	**2038**
Industrial accident and occupational	0	0	302	0	23	79	0	0	90	318	0	0	0	321	0	0	0	0	0	0	0	**1132**
Unemployment insurance	0	0	271	0	21	71	0	0	81	286	0	0	0	289	0	0	0	0	0	0	0	**1019**
Health insurance contributions from	0	0	1448	0	110	378	0	0	431	1526	0	0	0	1541	0	0	0	0	0	0	0	**5434**
Expenditure on other goods and serv	0	0	48245	0	5030	6261	0	0	15801	68396	0	0	0	105045	0	0	0	0	0	0	0	**248778**
Stationery	0	0	270	0	80	80	0	0	110	295	0	0	0	648	0	0	0	0	0	0	0	**1483**
Electricity	0	0	7500	0	0	1550	0	0	2200	10333	0	0	0	11797	0	0	0	0	0	0	0	**33380**
Heating supply	0	0	0	0	200	200	0	0	1010	20236	0	0	0	16272	0	0	0	0	0	0	0	**37918**
Fuel and transportation expenses	0	0	3815	0	600	745	0	0	1546	6500	0	0	0	10641	0	0	0	0	0	0	0	**23846**
Postal and telecommunication	0	0	600	0	100	66	0	0	216	1254	0	0	0	166	0	0	0	0	0	0	0	**2401**
Water supply and treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	2200	0	0	0	0	0	0	0	**2200**
Domestic business trip	0	0	1350	0	300	70	0	0	653	540	0	0	0	360	0	0	0	0	0	0	0	**3273**
Books and periodicals	0	0	0	0	0	50	0	0	60	0	0	0	0	3000	0	0	0	0	0	0	0	**3110**
Inventories and materials	0	0	0	0	0	100	0	0	720	550	0	0	0	1590	0	0	0	0	0	0	0	**2960**
Clothing and bedding	0	0	2500	0	100	0	0	0	900	990	0	0	0	54473	0	0	0	0	0	0	0	**58963**
Food	0	0	32000	0	3500	3000	0	0	6600	25100	0	0	0	566	0	0	0	0	0	0	0	**70766**
Medical drug expenses	0	0	0	0	150	300	0	0	200	200	0	0	0	2300	0	0	0	0	0	0	0	**3150**
Current renovation	0	0	0	0	0	0	0	0	1137	1350	0	0	0	500	0	0	0	0	0	0	0	**2987**
Charges, fees and other expenses	0	0	210	0	0	100	0	0	450	1049	0	0	0	533	0	0	0	0	0	0	0	**2342**
Subsidies and transfers	0	0	0	0	0	0	0	0	270	503	0	0	0	0	0	0	0	0	0	0	0	**773**
Transfers to the households	0	0	0	0	0	0	0	0	270	503	0	0	0	0	0	0	0	0	0	0	0	**773**
One time benefit and bonus	0	0	0	0	0	0	0	0	270	503	0	0	0	0	0	0	0	0	0	0	0	**773**
:Financing resource to cover	**0**	**0**	**86368**	**0**	**7932**	16213	0	0	**27408**	**109094**	0	0	0	**145630**	0	0	0	**0**	0	0	0	**392644**
From health insurance fund	0	0	50000	0	4500	2500	0	0	8000	25000	0	0	0	45000	0	0	0	0	0	0	0	**135000**
From core activitie's revenue	0	0	26368	0	0	2000	0	0	0	35120	0	0	0	65000	0	0	0	0	0	0	0	**128488**
From non core activitie's revenue	0	0	0	0	150	0	0	0	10400	5000	0	0	0	0	0	0	0	0	0	0	0	**15550**
From budget	0	0	10000	0	3282	11713	0	0	9008	43974	0	0	0	35630	0	0	0	0	0	0	0	**113606**
NUMBER OF ENTITIES	0	0	1	0	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	**6**
TOTAL EMPLOYEES	0	0	59	0	9	13	0	0	27	61	0	0	0	63	0	0	0	0	0	0	0	**232**
Management staff	0	0	3	0	1	1	0	0	1	2	0	0	0	1	0	0	0	0	0	0	0	**9**
Specialist staff	0	0	43	0	4	3	0	0	9	47	0	0	0	48	0	0	0	0	0	0	0	**154**
Support staff	0	0	13	0	4	9	0	0	17	12	0	0	0	14	0	0	0	0	0	0	0	**69**

Aimag Expenditure for the National Research of INF Diseases by Category 2002 (‘000 tug)

NAT'L RESEARCH OF INF DISEASES 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi symber	Total Aimags
Nat'l Res Inf Dis	0	0	0	0	0	0	0											135488	0			**135488**
II.TOTAL EXPENDITURE	0	0	0	0	0	0	0											135488	0			**135488**
IV. CURRENT EXPENDITURE	0	0	0	0	0	0	0											135488	0			**135488**
Good and services expenditures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134678	0			**134678**
Salary, wages and supplementary	0	0	0	0	0	0	0											50968	0			**50968**
Basic Salary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50968	0			**50968**
supplementary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13456	0			**13456**
Employers' insurance contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
Pension and benefit insurance contri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11009	0			**11009**
Pension insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9123	0			**9123**
Benefit insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	917	0			**917**
Industrial accident and occupational	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	510	0			**510**
Unemployment insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	459	0			**459**
Health insurance contributions from	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2447	0			**2447**
Expenditure on other goods and serv	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70254	0			**70254**
Stationery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1176	0			**1176**
Electricity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2556	0			**2556**
Heating supply	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30529	0			**30529**
Fuel and transportation expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0			**120**
Postal and telecommunication	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170	0			**170**
Water supply and treatment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	877	0			**877**
Domestic business trip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	896	0			**896**
Books and periodicals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117	0			**117**
Inventories and materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1500	0			**1500**
Clothing and bedding	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1163	0			**1163**
Food expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10000	0			**10000**
Medical drug expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20000	0			**20000**
Current renovation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1056	0			**1056**
Charges, fees and other expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	0			**93**
Tuition fee for one child of the civil s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
Subsidies and transfers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	810	0			**810**
Transfers to the households	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	810	0			**810**
One time benefit and bonus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	810	0			**810**
Capital expemditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
Domestic investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
investment to countryside	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
:Financing resource to cover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135488	0			**135488**
From health insurance fund	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			**0**
From core activitie's revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	800	0			**800**
Financed from budget	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134688	0			**134688**
NUMBER OF ENTITIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			**1**
TOTAL EMPLOYEES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0			**70**
Management staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			**1**
Specialist staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0			**46**
Support staff	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0			**23**

Aimag FGP Expenditure by Category 2002 (‘000 tug)

FGP'S 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sgmber	Total Aimags
FGPs2002	**50209**	**62660**	**57536**	**29977**	46676	37957	90880	32316	**63704**	**83450**	29647	**36690**	144701	36370	**62994**	72325	**75801**	**42998**	**158798**	180592	11134	**1407412**
II,TOTAL EXPENDITURE	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
IV, CURRENT EXPENDITURE	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
Good and services expenditures	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
Expenditure on other goods and serv	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
Allocation according to the standard	50209	62660	57536	29977	46676	37957	90880	32316	63704	83450	29647	36690	144701	36370	62994	72325	75801	42998	158798	180592	11134	**1407412**
:Financing resource to cover	**50209**	**62660**	**57536**	**29977**	**46676**	**37957**	**90880**	**32316**	**63704**	**83450**	**29647**	**36690**	**144701**	**36370**	**62994**	**72325**	**75801**	**42998**	**158798**	**180592**	**11134**	**1407412**
From health insurance fund	30125	37596	34416	17986	28006	22774	54528	19389	38222	50070	17788	22014	86821	21822	37796	43395	45481	25799	95279	108355	6680	**844341**
Financed from budget	20083	25064	23120	11991	18671	15183	36352	12927	25482	33380	11859	14676	57881	14548	25198	28930	30320	17199	63519	72237	4454	**563071**
NUMBER OF ENTITIES	4	5	5	3	4	3	7	3	7	7	3	3	11	4	5	6	6	3	12	15	1	**117**

Aimag Quarantine Health Station Expenditure by Category 2002 ('000 tug)

QUARANTINE HEALTH STATIONS 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sumber	Total Aimags
Quaran Dis Stn	**33929**	**27338**	**44715**	0	0	0	0	0	0	0	30043	0	0	0	**31252**	35580	45568	0	0	0	0	**248426**
II,TOTAL EXPENDITURE	33929	27338	44715	0	0	0	0	0	0	0	30043	0	0	0	31252	35580	45568	0	0	0	0	**248426**
IV, CURRENT EXPENDITURE	33929	27338	44715	0	0	0	0	0	0	0	30043	0	0	0	31252	35580	45568	0	0	0	0	**248426**
Good and services expenditures	33779	27338	44715	0	0	0	0	0	0	0	29863	0	0	0	31072	35460	45368	0	0	0	0	**247596**
Salary, wages and supplementary	14780	16221	18599	0	0	0	0	0	0	0	13455	0	0	0	14416	12060	20069	0	0	0	0	**109600**
Basic Salary	14780	16221	18599	0	0	0	0	0	0	0	13455	0	0	0	14416	12060	20069	0	0	0	0	**109600**
Employers' insurance contribution	3902	4282	4910	0	0	0	0	0	0	0	3552	0	0	0	3806	3184	5298	0	0	0	0	**28934**
Pension and benefit insurance contri	3192	3504	4017	0	0	0	0	0	0	0	2906	0	0	0	3114	2605	4335	0	0	0	0	**23674**
Pension insurance	2646	2904	3329	0	0	0	0	0	0	0	2409	0	0	0	2580	2159	3592	0	0	0	0	**19618**
Benefit insurance	266	292	335	0	0	0	0	0	0	0	242	0	0	0	260	217	361	0	0	0	0	**1973**
Industrial accident and occupational	148	162	186	0	0	0	0	0	0	0	135	0	0	0	144	121	201	0	0	0	0	**1096**
Unemployment insurance	133	146	167	0	0	0	0	0	0	0	121	0	0	0	130	109	181	0	0	0	0	**986**
Health insurance contributions from	709	779	893	0	0	0	0	0	0	0	646	0	0	0	692	579	963	0	0	0	0	**5261**
Expenditure on other goods and serv	15098	6835	21206		0	0	0	0	0	0	12855	0	0	0	12850	20216	20001	0	0	0	0	**109061**
Stationery	2500	350	486	0	0	0	0	0	0	0	720	0	0	0	180	280	854	0	0	0	0	**5370**
Electricity	373	100	500	0	0	0	0	0	0	0	600	0	0	0	191	375	180	0	0	0	0	**2319**
Heating supply	3340	2564	2749	0	0	0	0	0	0	0	4223	0	0	0	1036	12004	5344	0	0	0	0	**31259**
Fuel and transportation expenses	3175	1250	3500	0	0	0	0	0	0	0	1800	0	0	0	1340	3240	4800	0	0	0	0	**19105**
Postal and telecommunication	935	373	855	0	0	0	0	0	0	0	350	0	0	0	315	530	458	0	0	0	0	**3816**
Water supply and treatment	32	0	168	0	0	0	0	0	0	0	100	0	0	0	600	50	354	0	0	0	0	**1304**
Domestic business trip	1550	1200	2840	0	0	0	0	0	0	0	1500	0	0	0	3600	1923	4000	0	0	0	0	**16613**
Books and periodicals	50	0	1740	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	**1840**
Inventories and materials	250	0	2500	0	0	0	0	0	0	0	0	0	0	0	1080	200	0	0	0	0	0	**4030**
Clothing and bedding	400	317	495	0	0	0	0	0	0	0	1278	0	0	0	653	265	1000	0	0	0	0	**4408**
Medical drug expenses	1743	480	3053	0	0	0	0	0	0	0	1390	0	0	0	3000	810	2000	0	0	0	0	**12476**
Current renovation	450	0	1500	0	0	0	0	0	0	0	720	0	0	0	450	360	800	0	0	0	0	**4280**
Charges, fees and other expenses	300	200	320	0	0	0	0	0	0	0	175	0	0	0	405	180	161	0	0	0	0	**1741**
Subsidies and transfers	150	0	0	0	0	0	0	0	0	0	180	0	0	0	180	120	200	0	0	0	0	**830**
Transfers to the households	150	0	0	0	0	0	0	0	0	0	180	0	0	0	180	120	200	0	0	0	0	**830**
One time benefit and bonus	150	0	0	0	0	0	0	0	0	0	180	0	0	0	180	120	200	0	0	0	0	**830**
Rent of building	0	0	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**500**
:Financing resource to cover	**33929**	**27338**	**44715**	0	0	0	0	0	0	0	**30043**	0	0	0	**31252**	**35580**	**45568**	0	0	0	0	**248426**
From core activitie's revenue	0	100	0	0	0	0	0	0	0	0	800	0	0	0	**0**	600	**0**	0	0	0	0	**1500**
From non-core activitie's revenue	300	0	1200	0	0	0	0	0	0	0	0	0	0	0	0	0	1000	0	0	0	0	**2500**
Financed from budget	33629	27238	43515	0	0	0	0	0	0	0	29243	0	0	0	31252	34980	44568	0	0	0	0	**244426**
NUMBER OF ENTITIES	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	**7**
TOTAL EMPLOYEES	18	24	26	0	0	0	0	0	0	0	10	0	0	0	19	19	27	0	0	0	0	**143**
Management staff	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	**7**
Specialist staff	15	18	20	0	0	0	0	0	0	0	7	0	0	0	16	15	23	0	0	0	0	**114**
Support staff	2	5	5	0	0	0	0	0	0	0	2	0	0	0	2	3	3	0	0	0	0	**22**

Aimag Expenditure for the Center of Research of Diseases with Natural Foci by Category 2002 ('000 tug)

CENTER FOR RESEARCH OF DISEASES WITH NATUARAL FOCI 2002	Arkhangai	Bayan-Olgii	Bayan Khongor	Bulgan	Govi-Altai	Dornogovi	Dornod	Dund govi	Zavhan	Ovork hangai	Omno govi	Sukh baatar	Selenge	Tov	Uvs	Khovd	Khovs gol	Khentii	Darkhan - Uul	Orkhon	Govi sumber	Total Aimags
Ctr Dis N-Foci	**0**	**0**	**0**	**0**	**41274**	**0**	**0**	**14514**	**28128**	**26136**	0	0	0	0	0	0	0	39015	0	0	0	**149067**
II,TOTAL EXPENDITURE	0	0	0	0	41274	0	0	14514	28128	26136	0	0	0	0	0	0	0	39015	0	0	0	**149067**
IV, CURRENT EXPENDITURE	0	0	0	0	41274	0	0	14514	28128	26136	0	0	0	0	0	0	0	39015	0	0	0	**149067**
Good and services expenditures	0	0	0	0	41274	0	0	14514	27993	25116	0	0	0	0	0	0	0	38609	0	0	0	**147506**
Salary, wages and supplementary	0	0	0	0	18369	0	0	6143	14992	10089	0	0	0	0	0	0	0	15556	0	0	0	**65149**
Basic Salary	0	0	0	0	18369	0	0	6143	14992	10089	0	0	0	0	0	0	0	15556	0	0	0	**65149**
Employers' insurance contribution	0	0	0	0	4849	0	0	1622	3958	2664	0	0	0	0	0	0	0	4107	0	0	0	**17199**
Pension and benefit insurance contri	0	0	0	0	3968	0	0	1327	3238	2179	0	0	0	0	0	0	0	3360	0	0	0	**14072**
Pension insurance	0	0	0	0	3288	0	0	1100	2684	1806	0	0	0	0	0	0	0	2785	0	0	0	**11662**
Benefit insurance	0	0	0	0	331	0	0	111	270	182	0	0	0	0	0	0	0	280	0	0	0	**1173**
Industrial accident and occupational	0	0	0	0	184	0	0	61	150	101	0	0	0	0	0	0	0	156	0	0	0	**652**
Unemployment insurance	0	0	0	0	165	0	0	55	135	91	0	0	0	0	0	0	0	140	0	0	0	**586**
Health insurance contributions from	0	0	0	0	882	0	0	295	720	484	0	0	0	0	0	0	0	747	0	0	0	**3127**
Expenditure on other goods and serv	0	0	0	0	18055	0	0	6749	9044	12364	0	0	0	0	0	0	0	18946	0	0	0	**65157**
Stationery	0	0	0	0	900	0	0	320	190	350	0	0	0	0	0	0	0	1800	0	0	0	**3560**
Electricity	0	0	0	0	180	0	0	223	143	825	0	0	0	0	0	0	0	550	0	0	0	**1921**
Heating supply	0	0	0	0	5000	0	0	2532	760	0	0	0	0	0	0	0	0	850	0	0	0	**9142**
Fuel and transportation expenses	0	0	0	0	4300	0	0	1148	1120	2600	0	0	0	0	0	0	0	4600	0	0	0	**13768**
Postal and telecommunication	0	0	0	0	380	0	0	228	161	416	0	0	0	0	0	0	0	390	0	0	0	**1575**
Water supply and treatment	0	0	0	0	0	0	0	240	1700	0	0	0	0	0	0	0	0	0	0	0	0	**1940**
Domestic business trip	0	0	0	0	3500	0	0	671	125	2600	0	0	0	0	0	0	0	3950	0	0	0	**10846**
Books and periodicals	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	162	0	0	0	**262**
Lesson and industry practice	0	0	0	0	0	0	0	0	0	600	0	0	0	0	0	0	0	50	0	0	0	**650**
Inventories and materials	0	0	0	0	1800	0	0	460	2500	939	0	0	0	0	0	0	0	250	0	0	0	**5949**
Clothing and bedding	0	0	0	0	180	0	0	273	235	1020	0	0	0	0	0	0	0	2175	0	0	0	**3883**
Medical drug expenses	0	0	0	0	700	0	0	500	550	1499	0	0	0	0	0	0	0	2208	0	0	0	**5457**
Current renovation	0	0	0	0	720	0	0	85	1200	1070	0	0	0	0	0	0	0	1773	0	0	0	**4848**
Charges, fees and other expenses	0	0	0	0	395	0	0	70	360	345	0	0	0	0	0	0	0	187	0	0	0	**1357**
Subsidies and transfers	0	0	0	0	0	0	0	0	135	1020	0	0	0	0	0	0	0	406	0	0	0	**1561**
Transfers to the households	0	0	0	0	0	0	0	0	135	1020	0	0	0	0	0	0	0	406	0	0	0	**1561**
One time benefit and bonus	0	0	0	0	0	0	0	0	135	1020	0	0	0	0	0	0	0	406	0	0	0	**1561**
:Financing resource to cover	**0**	**0**	**0**	**0**	**41274**	**0**	**0**	**14514**	**28128**	**26136**	0	0	0	0	0	0	0	**39015**	0	0	0	**149067**
From non-core activitie's revenue	0	0	0	0	300	0	0	**0**	850	600	0	0	0	0	0	0	0	2000	0	0	0	**3750**
Financed from budget	0	0	0	0	40974	0	0	14514	27278	25536	0	0	0	0	0	0	0	37015	0	0	0	**145317**
NUMBER OF ENTITIES	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	**5**
TOTAL EMPLOYEES	0	0	0	0	36	0	0	8	18	15	0	0	0	0	0	0	0	29	0	0	0	**106**
Management staff	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	**5**
Specialist staff	0	0	0	0	27	0	0	5	14	13	0	0	0	0	0	0	0	21	0	0	0	**80**
Support staff	0	0	0	0	8	0	0	2	3	1	0	0	0	0	0	0	0	7	0	0	0	**21**

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